Program Progress Performance Report for University Transportation Centers

PPPR #4:
July 1 to December 31, 2013

Funded by U.S. Department of Transportation and California Department of Transportation
MINETA TRANSPORTATION INSTITUTE
LEAD UNIVERSITY of MNTRC

The Norman Y. Mineta International Institute for Surface Transportation Policy Studies was established by Congress in the Interstate Surface Transportation Efficiency Act of 1991 (ISTEA). The Institute’s Board of Trustees revised the name to Mineta Transportation Institute (MTI) in 1996. Reauthorized in 1998, MTI was selected by the U.S. Department of Transportation through a competitive process in 2002 as a national “Center of Excellence.” The Institute is funded by Congress through the United States Department of Transportation’s Research and Innovative Technology Administration, the California Legislature through the Department of Transportation (Caltrans), and by private grants and donations.

The Institute receives oversight from an internationally respected Board of Trustees whose members represent all major surface transportation modes. MTI’s focus on policy and management resulted from a Board assessment of the industry’s unmet needs and led directly to the choice of the San José State University College of Business as the Institute’s home. The Board provides policy direction, assists with needs assessment, and connects the Institute and its programs with the international transportation community.

MTI’s transportation policy work is centered on three primary responsibilities:

Research
MTI works to provide policy-oriented research for all levels of government and the private sector to foster the development of optimum surface transportation systems. Research areas include: transportation security; planning and policy development; interrelationships among transportation, land use, and the environment; transportation finance; and collaborative labor-management relations. Certified Research Associates conduct the research. Certification requires an advanced degree, generally a Ph.D., a record of academic publications, and professional references. Research projects culminate in a peer-reviewed publication, available both in hardcopy and on TransWeb, the MTI website (http://transweb.sjsu.edu).

Education
The educational goal of the Institute is to provide graduate-level education to students seeking a career in the development and operation of surface transportation programs. MTI through San José State University offers an AACSB-accredited Master of Science in Transportation Management and a graduate Certificate in Transportation Management that serve to prepare the nation’s transportation managers for the 21st century. The master’s degree is the highest conferred by the California State University system. With the active assistance of the California Department of Transportation, MTI delivers its classes over a state-of-the-art videoconferencing network throughout the state of California and via webcasting beyond, allowing working transportation professionals to pursue an advanced degree regardless of their location. To meet the needs of employers seeking a diverse workforce, MTI’s education program promotes enrollment to under-represented groups.

Information and Technology Transfer
MTI promotes the availability of completed research to professional organizations and journals and works to integrate the research findings into the graduate education program. In addition to publishing the studies, the Institute also sponsors symposia to disseminate research results to transportation professionals and encourages Research Associates to present their findings at conferences. The World in Motion, MTI’s quarterly newsletter, covers innovation in the Institute’s research and education programs. MTI’s extensive collection of transportation-related publications is integrated into San José State University’s world-class Martin Luther King, Jr. Library.

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Karen Philbrick, Ph.D.
Ex-Officio
Program Progress Performance Report for University Transportation Centers

Mineta National Transit Research Consortium (MNTRC)
Led by San Jose State University

- Federal Agency and Organization Element to Which Report is Submitted:
  U.S. Department of Transportation Research and Innovative Technology Administration

- Federal Grant or Other Identifying Number Assigned by Agency: DTRT12-G-UTC21

- Project Title: Tier 1 Transit Focused University Transportation Center Research, Education, and Technology Transfer Activities

- Program Director: Rod Diridon, MNTRC Executive Director, rod.diridon@sjsu.edu, 408.924.7560

- Submission Date: January 31, 2014

- DUNS and EIN Numbers: 0568207150000 and 94-6017638

- Recipient Organization: San Jose State University Research Foundation, 210 N. Fourth Street, 4th Floor, San Jose, CA 95112

- Recipient Identifying Number or Account Number: Not Applicable


- Reporting Period End Date: December 31, 2013

- Report Term or Frequency: This report covers the period from July 1, 2013 to December 31, 2013, per the Grant Deliverables and Requirements for UTCs instructions

- Signature of Submitting Official: [Signature]
1. ACCOMPLISHMENTS

Major Goals and Accomplishments

MNTRC complies with the provisions of the RITA Grant Deliverables and Requirements for University Transportation Centers and any revisions to that document. Each MNTRC-funded project produces a peer-reviewed final report with a complete description of the problem, approach, methodology, findings, conclusions, and recommendations. Final reports are uploaded onto the Consortium and Transportation Research International Documentation Database (TRID) websites. Per RITA guidelines, these reports are also distributed to recipients that the US DOT identifies in the UTC reporting requirements. To drive traffic to the MNTRC website and widely disseminate the results, a news release, coordinated with partner institutions, is issued to regional, national and international media outlets. The reports are also promoted on MTI’s social media sites and through direct email to relevant legislators, transportation leaders, academics, practitioners, and others with an interest in transit research. Media interviews are also pitched to radio, TV, online, and print outlets. MTI is responsible for the final research publication process, which includes formal peer review, professional editing and formatting, distribution and promotion. Furthermore, MTI is responsible for collecting all performance metrics.

MNTRC allows all university partners to provide a higher level of service to the public transportation industry through research, education and workforce development, and technology transfer. MNTRC responds to RITA’s desire for universities to collaborate more effectively, gain greater perspective through geographic diversity, and encourages the participation of minority-serving institutions. Collaboratively, MNTRC addresses both policy and technical challenges. Each Consortium partner realizes the importance of public transit to seniors, low-income people, and those with limited mobility. Often, this is a primary tool for employment and independent living and MNTRC is investigating ways to ensure that transit remains accessible and available for all people.

The major goals identified in the approved MNTRC proposal are listed by category below. Following each goal is the progress that MNTRC has made during this reporting period. Please note that all identified goals are to be fully achieved by the end of the grant period of performance.

Research Goals

- Select 34 transit research projects for funding
  - To date, MNTRC has selected 65 research projects for funding, 35 in calendar year 2012 and 30 during calendar year 2013. Fourteen of these research projects were selected during this period of performance. Fully executed contracts have been issued for these latter projects.

- Submit 34 project descriptions to the RiP database in accordance with the RITA General Deliverables and Requirements
  - During this period of performance, 14 additional research project descriptions were submitted.

- Post to the MNTRC website 34 project descriptions for the transit research projects
  - During this period of performance, 14 additional research project descriptions were posted and all UTC project information sheets were updated (http://transweb.sjsu.edu/mntrc/research/utc-info.html)
- Produce 34 final research reports resulting from the transit research projects
  - During this reporting period, MNTRC completed six final research reports.

- Publish the full text of the 34 final research reports on the MNTRC website
  - The full texts of six final research reports were posted to the MNTRC website (http://transweb.sjsu.edu/mntrc/research/mntrc-publications.html).

- Submit 24 papers reporting transit research project results to peer-reviewed scientific or professional journals – such articles may be categorized as published, accepted, awaiting publication, submitted, or under review
  - During this reporting period, three papers based on MNTRC sponsored research have been submitted to professional journals. These are:


Leadership Goals

- Present transit research project results at 70 academic and professional meetings (name of conference, date, and location will be tracked)
  - The results from MNTRC funded research have been presented at 51 academic and professional meetings. Sixteen of these presentations occurred during the current reporting period.


3. MNTRC Project 1104: Brad Flamm, “Geographic Access to Transit for Bicyclists: Attitudes, Issues, and Options for Improvement.” Association of Collegiate Schools of Planning and Association of European Schools of Planning Conference, Dublin, Ireland (July 18, 2013 - No UTC funds were used to support travel).


- Provide 150 media interviews (media outlet, date, and topic will be provided) related to MNTRC activities and projects
  - There have been 132 media interviews related to MNTRC activities and projects, 30 of which were conducted during this reporting period. A sample includes:
    - *Times Online* (July 1, 2013): No Helmets Required for Bike Share in Busy NYC
    - *California HSR Blog* (July 15, 2013): Is Elon Musk’s Hyperloop Really an Alternative to HSR?
    - *Planetizen* (July 24, 2013): America’s Rail Station Renaissance
    - *Fleet Owner* (August 16, 2013): Tackling Transportation Taxes… Again
    - *MSN Monday* (August 14, 2013): Can High-Speed “Hyperloop” Become Reality?
    - *Mass Transit*, (September 12, 2013): California High-Speed Rail Conference to Draw Government Officials and Business Leaders
    - *San Jose Mercury News* (September 16, 2013): Transit Villages are the Way to Save Farms, Open Space
    - *San Jose Mercury News* (November 10, 2013): Traffic Jams Paralyzing Bay Area
    - *Philadelphia Inquirer* (December 8, 2013): Northeast Corridor High-Speed Rail Plan Slows to 160 mph
• *San Francisco Examiner* (December 29, 2013): Plans Floated for SamTrans BRT along El Camino Real

• *Fleet Owner* (December 31, 2013): Reliability is Fundamental Transport Requirement

- Track an average of 275,000 hits and/or uses per month on the MNTRC/MTI website (Google Analytics will track this information)
  - For the period of performance of July 1 to December 31, 2013, the MNTRC/MTI website had an average of 303,720 hits per month

- Track an average of 75,000 documents downloaded per month from the MNTRC/MTI website (Google Analytics will track this information)
  - For the period of performance of July 1 to December 31, 2013, the MNTRC/MTI website registered an average of 93,491 document downloads per month

- Sponsor 15 MNTRC regional forums and national summits that will reach 3,000 attendees
  - During this period of performance, MNTRC sponsored five technology transfer events that reached 582 attendees; these are:

  1. **Shared-Use Mobility Summit**, San Francisco CA, October 2013 (225 attendees): A collaboration between MTI and the UC Berkeley Transportation Sustainability Research Center.


  3. **Transit Feeder and Distribution Systems for High-Speed and Inter-City Rail**, Chicago, October 2013 (60 attendees): A half-day conference in conjunction with APTA Annual Meeting. The expert panel discussed the linkages between high-speed rail and transit/rail systems. MTI/MNTRC co-sponsored.

  4. **UCLA Lake Arrowhead Symposium on the Transportation – Land Use – Environment Connection**, Lake Arrowhead CA, October 2013 (100 attendees): The Symposium is an annual invitation-only retreat attended by about 125 policy makers and senior policy analysts from around the country. MTI/MNTRC co-sponsored.

  5. **ARTBA’s TransOvation**, San Jose CA, October 2013 (60 attendees): A two-day conference discussing innovations in transportation technology. MTI/MNTRC co-sponsored.

**Education and Workforce Development Goals**

- A 5% increase over 2010-11 figures in the number of undergraduate and graduate students enrolled in transportation-related degree programs
To date, MNTRC partner universities have documented a 13.33% increase in enrollment figures.

- 50 undergraduate and graduate students participating in MNTRC transit research
  - For the period of performance of July 1 to December 31, 2013, 58 students were engaged in MNTRC research projects.

- 10 students participating in internships at transportation-related agencies
  - For the period of performance of July 1 to December 31, 2013, 55 students were participating in transportation-related internships.

- Eight K-12 outreach programs that will reach 400 students
  - Three K-12 outreach events were held during this reporting period. These included:

  1. **Transit Smart Moves**, Detroit MI, July 2013 (19 participants): Hosted by the University of Detroit Mercy, this was a one week summer commuter camp for high school students, currently in the 9th-11th grades, who wanted to learn about the world of transportation engineering. MNTRC sponsored.

  2. **Summer Transportation Institute (STI) at Howard University**, Washington DC, July 2013 (21 participants): This summer camp was designed to attract High School students to careers in transportation. STI provided a stimulating introduction to all modes of transportation through hands-on projects, problem-solving techniques, field trips, and classroom and enrichment activities. MNTRC sponsored.
3. **Transportation Engineering Camp**, Las Vegas NV, July 2013 (20 participants): A two-week hands-on summer camp at University of Nevada Las Vegas for students interested in transportation careers. MNTRC sponsored.

- Four adult workforce development seminars
  - During this period of performance **MNTC co-sponsored the Transit Communications Conference**, Washington DC, October 2013 (220 attendees). This was a three-day international gathering of communications and technology professionals discussing ways to make transit safer, more efficient, and more popular for those entering the workforce.

**Technology Transfer Goals**

- The MNTRC/MTI website will average 275,000 hits and/or uses per month (Google Analytics will track this information)
  - For the period of performance of July 1 to December 31, 2013, the MNTRC/MTI website had an average of 303,720 hits per month

- The MNTRC/MTI website will average 75,000 downloaded documents per month (Google Analytics will track this information)
  - For the period of performance July 1 to December 31, 2013, the MNTRC/MTI website averaged 93,491 downloads per month.
A minimum of 50 research citations based on MNTRC funded work
  - Seven research citations were documents for this period of performance.

A 20% increase in the number of MNTRC/MTI Facebook fans
  - During this reporting period, 51 Facebook fans were added bringing the total to 504 (a 76% increase since contract inception).

A 20% increase in the number of Twitter followers
  - During this reporting period, MNTRC/MTI received 353 new Twitter followers, bringing the total number of followers to 1,341 (a 1036% increase since contract inception).

**Collaboration Goals**

Three MNTRC digital newsletters will be published per fiscal year
  - Two MNTRC digital newsletter was published during this reporting period:
    1. Fall 2013:
       - http://transweb.sjsu.edu/mntrc/about/newsletters/2013/fall/fall13.html
    2. Winter 2013:
       - http://transweb.sjsu.edu/mntrc/about/newsletters/2013/winter/winter13.html

Twelve technology transfer activities (summits/forums; K-12 outreach) will involve more than one partner
  - During this reporting period, MNTRC had one technology transfer activity that involved more than one partner. Specifically, the **Transit Feeder and Distribution Systems for High-Speed and Inter-City Rail**, held in Chicago IL in October 2013 was co-sponsored by MTI and University of Nevada, Las Vegas.

Twenty MNTRC project teams will include researchers from more than one partner university
  - During this reporting period, MNTRC universities partnered on three research projects. These were:
    1. **MNTRC Project 1149** “Transportation Futures”, a jointly funded project between the Mineta Transportation Institute and Rutgers University.
    2. **MNTRC Project 1233** “The Nexus between Infrastructure and Accessibility”, a jointly funded project between the Mineta Transportation Institute and Rutgers University.
    3. **MNTRC Project 1234** “Analysis of the US Transit Bus and Paratransit Vehicle Manufacturing Industry”, a jointly funded project between the Mineta Transportation Institute and Pennsylvania State University.

Ten percent (10%) of MNTRC summits and forums and/or funded research projects will have international collaboration
  - Two of the MNTRC summits and forums had international collaboration during this period of performance. These were the **Transit Communications Conference** which had collaboration with a team in the UK and the **Podcar City: Innovations in Public**
Transportation Summit which involved teams from Sweden, the UK, and other European nations.

- Sixty-seven percent (67%) of MNTRC projects will have interdepartmental research team members
  - Sixteen (30.7%) of MNTRC-funded research projects have interdepartmental research team members.

Dissemination of Results
Six MNTRC-funded projects were completed during this reporting period. The final reports appear on the MNTRC website, and have been distributed per the federal reporting guidelines. These are:

- California Voting and Suburbanization Patterns: Implications for Transit Policy (http://transweb.sjsu.edu/project/1105.html)
- Measuring the Performance of Livability Programs (http://transweb.sjsu.edu/project/1126.html)
- Assessing Importance and Satisfaction Judgments of Intermodal Work Commuters with Electronic Survey Methodology (http://transweb.sjsu.edu/project/1127.html)
- Assessing the Socio-Economic Impacts of Mass Transit Systems on the Small Regional Community and Improving the Transit Service Quality of the Mass Transit Authority in the Small Urban Areas (http://transweb.sjsu.edu/project/1135.html)
- Long Term Trends in Patron Satisfaction of DC Circulator (http://transweb.sjsu.edu/project/1138.html)
- Evaluation of Bus Transit Reliability in the District of Columbia (http://transweb.sjsu.edu/project/1139.html)

What Do You Plan to Do During the Next Reporting Period to Accomplish the Goals?
No change to the agency-approved application

2. PRODUCTS

Publications, Conference Papers, and Presentations
During this reporting period, the results from MNTRC funded research were presented at sixteen academic and professional meetings. Details of these presentations can be found under the heading “Leadership Goals.”

Nine publications have been based on MNTRC work during this time, these are:

Journal publications


Books or other non-periodical, one-time publications


- **Type of Publication**: Final research report
- **Status**: Published
- **Acknowledgement of Federal Support**: Yes

**Website(s) or other Internet site(s)**

- An MNTRC web site has been maintained at [www.transweb.sjsu.edu/mntrc](http://www.transweb.sjsu.edu/mntrc)
- An MNTRC presence has been established, and continues to grow, in conjunction with the existing MTI Facebook page - [www.facebook.com](http://www.facebook.com)
- [www.twitter.com](http://www.twitter.com) - “@MinetaTrans” feed on Twitter
- A LinkedIn page at [www.linkedin.com](http://www.linkedin.com) - “Mineta Transportation Institute”
- A second LinkedIn page for the “MTI Alumni Association” at [www.linkedin.com](http://www.linkedin.com)
- A You Tube Channel - [http://www.youtube.com/user/MinetaTrans](http://www.youtube.com/user/MinetaTrans)

**Technologies or Techniques**

Nothing to report

**Inventions, Patent Applications, and/or Licenses:**

Nothing to report

**Other Products**

- A model capturing lithium-ion battery economics, supply, and demand over a 25 year time horizon has been developed by MNTRC consortium partner, Grand Valley State University.

- Grand valley State University has developed an upper division general education course “EGR 406 - Renewable Energy Systems: Structure, Policy and Analysis” using consortium funds. This course has been approved by the university and is scheduled for the winter 2014 semester.

- The Mineta Transportation Institute, at the request of Caltrans, organized a workshop focused on the management of the FTA Section 5310 Elderly and Disabled Specialized Transit program. This dialogue was designed to promote collaborative decisions that need to be made for the Program as described under MAP-21, which suggests some of the Program’s administrative responsibility could rest with large urban areas. These workshops will help MPO’s and the Division of Mass Transportation at Caltrans to make an informed decision about centralized vs. regional program administration. A white paper titled “*Building Consensus and Partnerships for Implementing MAP-21’s Section 5310 Program in California*” resulting from this work is currently in the publication phase.

- Rutgers University, as part of the work completed for MNTRC project 1141 “*Using GPS Data from Taxis to Understand Public Transit Demand and Mode Choice*” has produced and
continues to refine a large database of geocoded taxi trip data from New York City, which is compatible with GIS for spatial analysis.

3. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

What Organizations Have Been Involved as Partners?
During the period of July 1 to December 31, 2013, MNTRC universities have partnered with the following organizations:

1. **Organization Name and Location:** American Public Transportation Association (APTA-Washington, DC)
   - Partner’s Contribution to the Project: In-kind support (live-streaming broadcast network and conference facilities)
   - Project: MTI Garrett Morgan Competition

2. **Organization Name and Location:** Association of American State Highway and Transportation Officials (AASHTO-Washington, DC)
   - Partner’s Contribution to the Project: Financial support and In-kind support (live-streaming broadcast network and conference facilities)
   - Project: MTI Garrett Morgan Competition

3. **Organization Name and Location:** US Department of Transportation (Washington, DC)
   - Partner’s Contribution to the Project: In-kind support (live-streaming broadcast network and conference facilities)
   - Project: MTI Garrett Morgan Competition

4. **Organization Name and Location:** California Department of Transportation (Caltrans-Sacramento, CA and several district offices)
   - Partner’s Contribution to the Project: In-kind support (live-streaming broadcast network)
   - Projects: MTI Masters of Science in Transportation Management and Garrett Morgan Competition

5. **Organization Name and Location:** International Institute of Sustainable Transportation (INIST) (Sweden)
   - Partner’s Contribution to the Project: Collaboration on the program; site arrangements; program co-management.
   - Project: Podcar City: Innovations in Public Transportation: A two-day international summit at George Mason University, Arlington VA. The program focused on the future of personal rapid transit (PRT), how it can be used within existing systems, and other relevant issues.

6. **Organization Name and Location:** UC Berkeley Transportation Sustainability Research Center (Berkeley CA)
   - Partner’s Contribution to the Project: Collaboration
   - Project: Shared-Use Mobility Summit: This two-day conference in San Francisco brought together experts on shared-use vehicles such as ZipCars and public bicycles.
The program centered on the challenges and opportunities, legislative issues, financial aspects, successes in various communities, and other related issues.

7. **Organization Name and Location:** University of Tokyo (Japan)
   - Partner’s Contribution to the Project: Personnel exchanges
   - Project: **MNTRC Visiting Scholar to SJSU to Study High-Speed Rail Systems:**
     MNTRC consortium member MTI engaged with the University of Tokyo to host a post-doctoral researcher who came to the US for one academic year (2013-14) to study American high-speed rail systems and best practices.

8. **Organization Name and Location:** Northeastern University (Boston, MA)
   - Partner’s Contribution to the Project: Collaborative research
   - Project: **Assessing the Socioeconomic Impacts of Mass Transit Systems on the Small Regional Community, and Improving the Transit Service Quality of the Mass Transit Authority in the Small Urban Areas (MNTRC Project 1135)**

9. **Organization Name and Location:** Federal Transit Administration (FTA: Washington, DC), Michigan Department of Transportation (MDOT: Michigan), Southeast Michigan Council of Governments (SEMCOG: SE Michigan), Transportation Riders United (TRU: Detroit MI), M1 RAIL (Detroit MI), and SMART (SE Michigan)
   - Partner’s Contribution to the Project: Collaborative research
   - Project: **A Study of Factors that Inhibit and Enable Effective Development of Sustainable Regional Transit Systems in Southeastern Michigan (MNTRC Project 1136)**

10. **Organization Name and Location:** Sybesma’s Electronics (Holland, MI)
    - Partner’s Contribution to the Project: Facilities (Remanufacturing processes accessible to a student intern) and personnel exchanges (staff members are providing information needed for recycling model development
    - Project: **Remanufacturing, Repurposing and Recycling of Lithium-ion Batteries Used in Public Transit Vehicles (MNTRC Project 1137)**

11. **Organization Name and Location:** Downtown DC Business Improvement District (DCBID: Washington, DC)
    - Partner’s Contribution to the Project: Facilities (Used for student training) and Collaborative research (staff members are contributing to student training, quality control, schedule development, and are providing general information on the planning and development of the DC Circulator)
    - Project: **Long-Term Trends in Patron Satisfaction of DC Circulator (MNTRC Project 1138)**

12. **Organization Name and Location:** District Department of Transportation (DDOT: Washington, DC)
    - Partner’s Contribution to the Project: Financial support
    - Project: **Long-Term Trends in Patron Satisfaction of DC Circulator (MNTRC Project 1138)**
13. **Organization Name and Location**: New Jersey Department of Transportation (NJDOT: Trenton, NJ)
   - Partner’s Contribution to the Project: Financial support
   - Project: Evaluating the Impacts of Transit-oriented Development in New Jersey: Economic, Environmental, Public Health, and Overall Community Cohesion (MNTRC Project 1142)

14. **Organization Name and Location**: New Jersey Transit (NJTransit: Ewing, NJ)
   - Partner’s Contribution to the Project: Financial support
   - Project: Evaluating the Impacts of Transit-oriented Development in New Jersey: Economic, Environmental, Public Health, and Overall Community Cohesion (MNTRC Project 1142)

15. **Organization Name and Location**: Toledo Area Regional Transit Authority (TARTA: Toledo, OH)
   - Partner’s Contribution to the Project: In-kind support (transit buses are made available for testing), Facilities, and Collaborative research (a staff member helps the project team select buses for experimentation).
   - Project: Combustion Chemistry of Biodiesel for the Use in Urban Transport Buses: Experiment and Modeling (MNTRC Project 1146)

16. **Organization Name and Location**: HDR Engineering (Las Vegas, NV)
   - Partner’s Contribution to the Project: Financial Support
   - Project: Developing Seamless Connections in the Urban Transit Network: A Look Toward High-Speed Rail Interconnectivity (MNTRC Project 1148)

17. **Organization Name and Location**: Ecole Nationale des Travaux Publics de l’Etat (ENTPE: Lyon, France)
   - Partner’s Contribution to the Project: Collaborative research
   - Project: Developing Seamless Connections in the Urban Transit Network: A Look Toward High-Speed Rail Interconnectivity (MNTRC Project 1148)

18. **Organization Name and Location**: Proterra (Greenville, SC)
   - Partner’s Contribution to the Project: In-kind support (a battery pack and associated wiring, and cooling and monitoring systems to support the battery pack)
   - Project: Electrical and Thermal Management of a Lithium Titanate Prismatic Cell Battery System (MNTRC Project 1150)

19. **Organization Name and Location**: Ride Solution, Inc. (Palatka, FL)
   - Partner’s Contribution to the Project: In-kind support (prototype transit vehicle and vehicle spare parts)
   - Project: Advanced Low-Floor Vehicle (ALFV) Specification Research (MNTRC Project 1151)

20. **Organization Name and Location**: Florida Department of Transportation (Tallahassee, FL)
   - Partner’s Contribution to the Project: Financial support
- Project: **Advanced Low-Floor Vehicle (ALFV) Specification Research** (MNTRC Project 1151)

21. **Organization Name and Location:** California Department of Transportation (Caltrans-Sacramento, CA and several district offices)
- Partner’s Contribution to the Project: Financial support and collaborative research (project staff)
- Project: **Legislation Implementation Assistance** (MNTRC Project 1229)

**Have Other Collaborators or Contacts Been Involved?**
- Several organizations have participated as experts in MNTRC summits, conferences and other events. These include but are not limited to the Federal Transit Administration; Federal Railroad Administration; International Union of Railways; Office of the Secretary of Transportation; Transportation Research Board; and the California High-Speed Rail Authority.

4. IMPACT

**What is the Impact on the Development of the Principal Disciplines of the Project?**
- The results of MNTRC-sponsored research programs continue to improve the content of undergraduate senior level logistics courses as well undergraduate and graduate engineering and urban planning courses.
- Based on MNTRC funding, the University of Nevada, Las Vegas is developing a second course on public transportation planning and policy in the Department of Civil Engineering.
- The MTI/MNTRC web sites have become a repository for scholarly transportation research, available to anyone for free download. They are also a resource for attracting and enrolling students into the transportation education programs.

**What is the Impact on Other Disciplines?**
Nothing to report

**What is the Impact on the Development of Transportation Workforce Development?**
- In September 2013, MTI began working with middle-schools on the 14th annual Garrett Morgan Sustainable Transportation Competition. This competition (set for March 2014) helps to develop and inspire transportation workforce capacity by introducing students to transportation careers and connecting them with industry mentors. Students from participating schools were provided free workbooks to study the science and math involved in transportation. This education will culminate in a group project from each school that focuses on sustainable transportation. It will be presented at a national videoconference, where Secretary of Transportation Anthony Foxx and other industry and government leaders will address the teams. This project includes participation from Caltrans, University of Nevada Las Vegas, AASHTO, and APTA.

- MTI/MNTRC has been part of the CUTC Transportation Workforce Development Committee. The MTI Director of Communications and Technology Transfer is the lead on a work team developing a guidebook for bringing real-world work experience to university students. The results will be presented at the 2014 CUTC Summer Meeting in Lincoln NE.
MNTRC partners (University of Detroit Mercy, Howard University, and University of Nevada Las Vegas) sponsored three 2013 summer camps for high-school students, which introduced them to practical careers in transportation. These programs are intended to build a sense of hope in youth, giving them a “stake” in their communities, cities, states and nation, building the necessary skills to become active participants in the engineering and workforce development pipelines. It is MNTRC’s goal to encourage traffic safety, a clean environment, and livable, viable, sustainable neighborhoods and communities. Meeting these goals requires the participation of informed citizens working together. Building awareness of the relevance of transit and transit related issues will engage participants in educational opportunities, expanded transit related career choices and provide the opportunity for participants to network, shadow and potentially intern with industry leaders in the field of transit.

What is the Impact on Physical, Institutional, and Information Resources at the University or Other Partner Institutions?
The MNTRC and MTI web sites provide an online resource for professionals and the public to access a repository of transportation-related research.

What is the Impact on Technology Transfer?
MNTRC and/or its partners transfer the results of research and outreach activities through news releases, all of which include active links, and through media interviews, which are actively pitched. News releases are issued through PR Newswire’s national media distribution and are sent directly to MTI/MNTRC’s proprietary list of approximately 300 email addresses that include policy makers, transportation professionals, research associates, students and alumni, and others. This list is continually updated as new contacts are made. Additionally, an electronic newsletter, published three times a year, promotes MNTRC work, and is distributed to an MTI/MNTRC proprietary list of nearly 9,000 email addresses.

What is the Impact on Society Beyond Science and Technology?
The long-range purpose of MNTRC research and outreach activities is to help legislators, policy leaders, transportation professionals, and others to understand the issues facing the nation’s mobility infrastructure and to make optimum decisions based on factual data.

5. CHANGES/PROBLEMS

Changes in Approach and Reasons for Change
Nothing to report

Actual or Anticipated Problems or Delays Encountered
Nothing to report

Changes that Have a Significant Impact on Expenditures
Nothing to report

Change of Primary Performance Site Location from that Originally Proposed
Nothing to report

ADDITIONAL INFORMATION REGARDING PRODUCTS AND IMPACTS
**Outputs**

- **Research projects awarded:** Fourteen new research projects were awarded during this period of performance. A complete description of each project can be found on the MNTRC website: [http://transweb.sjsu.edu/mntrc/research/utc-info.html](http://transweb.sjsu.edu/mntrc/research/utc-info.html)

- **Publications, conference papers, and presentations:** Sixteen presentations were based on MNTRC funded research projects during this reporting period.

- **Websites:** MNTRC maintains a website to document consortium-related activity ([http://transweb.sjsu.edu/mntrc/index.html](http://transweb.sjsu.edu/mntrc/index.html))

- **Technologies or Technology Assessments; Databases, Software or Models:** During this period of performance, and as part of the “Remanufacturing, Repurposing, and Recycling of After Vehicle Life Lithium Ion Batteries for Transit Vehicles” research project, Grand Valley State University, has developed:
  - An effective recycling process for A123 batteries.
  - A first prototype of a fail-safe work bench for lithium battery remanufacturing.
  - A model capturing lithium-ion battery economics, supply, and demand over a 25 year time horizon.

- **Outreach activities:** MNTRC sponsored nine outreach activities during this period of performance. Details of these events can be found under the heading “Leadership Goals”.

**Outcomes**

Nothing to report

**Impacts**

Nothing to report
MTI FOUNDER
Hon. Norman Y. Mineta

MTI/MTNC BOARD OF TRUSTEES

MINETA TRANSPORTATION INSTITUTE
LEAD UNIVERSITY IN MNTRC

The Norman Y. Mineta International Institute for Surface Transportation Policy Studies was established by Congress in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The Institute’s Board of Trustees renamed the site to Mineta Transportation Institute (MTI) in 1996. Reauthorized in 1998, MTI was selected by the U.S. Department of Transportation through a competitive process in 2002 as a national “Center of Excellence.” The Institute is funded by Congress through the United States Department of Transportation’s Research and Innovative Technology Administration, the California Legislature through the Department of Transportation (Caltrans), and by private grants and donations.

The Institute receives oversight from an internationally respected Board of Trustees whose members represent all major surface transportation modes. MTI’s focus on policy and management resulted from a Board assessment of the industry’s unmet needs and led directly to the choice of the San José State University College of Business as the Institute’s home. The Board provides policy direction, assists with needs assessment, and connects the Institute and its programs with the international transportation community.

MTI’s transportation policy work is centered on three primary responsibilities:

Research
MTI works to provide policy-oriented research for all levels of government and the private sector to foster the development of optimum surface transportation systems. Research areas include: transportation security; planning and policy development; interrelationships among transportation, land use, and the environment; transportation finance; and collaborative labor-management relations. Certified Research Associates conduct the research. Certification requires an advanced degree, generally a Ph.D., a record of academic publications, and professional references. Research projects culminate in a peer-reviewed publication, available both in hardcopy and on TransWeb, the MTI website (http://transweb.sjtu.edu).

Education
The educational goal of the Institute is to provide graduate-level education to students seeking a career in the development and operation of surface transportation programs. MTI, through San José State University, offers an AACSB-accredited Master of Science in Transportation Management and a graduate certificate in Transportation Management that serve to prepare the nation’s transportation managers for the 21st century. The master’s degree is the highest conferred by the California State University system. With the active assistance of the California Department of Transportation, MTI delivers its classes over a state-of-the-art videoconferencing network throughout the state of California and via webcasting beyond, allowing working transportation professionals to pursue an advanced degree regardless of their location. To meet the needs of employers seeking a diverse workforce, MTI’s education program promotes enrollment to under-represented groups.

Information and Technology Transfer
MTI promotes the availability of completed research to professionals and organizations and journals and works to integrate the research findings into the graduate education program. In addition to publishing the studies, the Institute also sponsors symposia to disseminate research results to transportation professionals and encourages Research Associates to present their findings at conferences. The World in Motion, MTI’s quarterly newsletter, covers innovation in the Institute’s research and education programs. MTI’s extensive collection of transportation-related publications is integrated into San José State University’s world-class Martin Luther King, Jr. Library.

DISCLAIMER
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Program Progress Performance Report for University Transportation Centers

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