



Semi-Annual Progress Report Mineta Consortium for Emerging, Efficient, and Safe Transportation

October 1, 2024 – March 31, 2025





Semi-Annual Progress Report for University Transportation Centers Mineta Consortium for Emerging, Efficient, and Safe Transportation (MCEEST) Led by San José State University

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

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Signature of Submitting Official: Kann Philliph

Introduction

The Mineta Consortium for Emerging, Efficient, and Safe Transportation (MCEEST), led by the Mineta Transportation Institute (MTI) at San José State University, conducts research, education, workforce development, and technology transfer activities to improve mobility of people and goods. MCEEST unifies and focuses the efforts of four outstanding institutions that represent and support the geographical, cultural, racial, and socioeconomic diversity that makes our nation strong: Howard University; Navajo Technical University (NTU); San José State University (SJSU); and the University of South Florida (USF).

1. Accomplishments

Major Goals and Objectives of the Program

Evidence-based, people-focused research paves the way for transformative solutions to our nation's most pressing mobility challenges, including expanding the transportation workforce. MCEEST conducts research to achieve the following goal and objectives aligned with improving mobility of people and goods:

Goal: Lead the nation in data-driven, technology-informed research that delivers innovative, efficient, and safe transportation solutions to enhance mobility, strengthen the economy, and improve system performance.

Objective 1: Enhance the safety, reliability, and resilience of the transportation system and expand access to jobs, housing, services, and other opportunities for a broader range of communities and users.

Objective 2: Minimize the environmental impact of transportation by exploring viable alternative travel options and strategies to reduce vehicle miles traveled.

Research Program

MCEEST's research program is designed to contribute to national transportation goals by improving access to transportation options, supporting environmentally responsible practices, and fostering economic growth and global competitiveness.

Ongoing Research

The following table lists projects funded during the current period of performance. Details on all MCEEST projects can be found in the UTC project information sheets.

	Project Title	Industry/Agency Partner
1	Advancing a Low-Stress Network Assessment	Washington Department of
	Methodology Through Expert Consensus	Transportation, Kittelson &
		Assoc.
2	Developing a Replicable, Group-Based Cybersecurity	METROLINK
	Assessment Methodology for Small and Rural Transit	
	Operators	

3	Development and Implementation of Coordinated	Caltrans
	Adaptive Ramp Metering (CARM) in Southern California	
	Interstates for Congestion Mitigation	
4	Educational Videos on Autonomous and Automated	N/A
	Vehicles	
5	Enhancing Mental Health Literacy and Response Training	USF Department of Mental
	for Transit Agency Staff	Health Law & Policy
6	Examining the Role of Class 1 and Freight Rail in	Federal Railroad
	Supporting High-Quality Passenger Rail in the United	Administration
	States: A Case Study Approach	
7	Financial Incentives to Promote Multi-passenger	Caltrans
	Commuting	
8	Improving Transit Agency (Commuter Rail) Performance	MCEEST Advisory Board
	to Attract Riders: What Works?	_
9	Practices to Expand the Transit Workforce through	MCEEST Advisory Board;
	Program Evaluation	Trinity Metro
10	Promoting Connections to Improve Mobility through On-	Mississippi Department of
	Demand Microtransit in Rural Areas	Transportation
11	Regional Transportation Impact Fees: Adoption Factors,	Association of Monterey
	Institutional Mechanisms, Equity Impacts, and Revenue	Bay Area Governments
	Yield	
12	What Do Americans Think About Federal Tax Options to	N/A
	Support Transportation? Results from Year Sixteen of a	
	National Survey	
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Emerging Leader Seed Grant Program

The Emerging Leader Seed Grant Program engages and develops leadership capacity among junior faculty at SJSU. This program supports faculty in the first five years of an academic position who are interested in exploring transportation research problems aligned with MTI's research goals and objectives and encourages multidisciplinary participation.

During this period of performance, 2 new seed grants were approved:

- Adaptive Multi-Robot Path Optimization for Safer and More Efficient Urban Mobility (Start Date, May 1, 2025)
 - PI: Maryam Khazaei Pool, Assistant Professor, Department of Computer Science
- Assessing User Perceptions and Needs for AI-Assisted Micro-Mobility and Teleoperation
 PI: Gaojian Huang, Assistant Professor, Department of Industrial and Systems
 Engineering

One project is in progress:

- <u>Insights for the Future of Car Rental and Ridesharing: Driving Behavior Across Different</u> Levels of Automation
 - PI: Yue Luo, Assistant Professor, Department of Industrial and Systems Engineering

Data Management Plan

MCEEST received approval for the data management plan (DMP) on August 25, 2023. The DMP has been posted to the MCEEST website and is referenced in materials sent to each research team. Research teams must acknowledge compliance with MCEEST's DMP when submitting their research proposals.

Dissemination of Results

MCEEST utilizes a diverse array of dissemination methods and media to ensure research results, conference proceedings, and expert interviews reach those responsible for managing change. These methods include publication, seminars, workshops, websites, social media, webinars, and other technology transfer mechanisms.

MCEEST hosts its #MTIResearchSnaps webinar program. This program provides a diverse audience with access to the latest MTI research during a short, 30-minute period. This "mini" format allows individuals to learn from the researchers for 15-minutes followed by a moderated Q&A for the last 15-minutes. Webinar recording and any related resources shared during the event are available online at https://transweb.sjsu.edu/events/past. These are also widely promoted through social media, newsletters, and other MTI communication opportunities.

Consortium Website

In compliance with the Grant Deliverables and Reporting Requirements for 2023 University Transportation Centers, MCEEST has a website that features all consortium activities: https://transweb.sjsu.edu/mceest. This website is updated regularly with event information, media coverage, and research activities.

Media Coverage

During this reporting period, there were **440 stories featured in print, radio, and television media**, bringing the total number of MCEEST stories to 760 since inception. Links to many of these articles are featured on the <u>Consortium website</u> and below is a snapshot of activity:

Article	Media Outlet
Toyota Invests \$500 Million in Santa Cruz-	KCBS Radio
based Electric Air Taxi Company	
SacRT offering \$10 credit for survey	KXTV-TV - ABC10
participants to help improve rider safety	
Does cracking down on fare evaders help	The Seattle Times
<u>curb violent crime on transit?</u>	
A new tax on Uber and Lyft	Politico
Railway Age Announces Women in Rail	Railway Age
Honorees for 2024	
Vehicle Ramming Attacks: Using Cars and	The New York Times
Trucks as Weapons Has Become Common	
Times Radio Breakfast - Vehicle ramming	Times Radio
attacks	
Vehicle attacks are difficult to prevent —	NBC News
but New Orleans fell short, experts say	

Article	Media Outlet
How Japan keeps its trains safe from	MSN
<u>earthquakes</u>	
A Prolonged Strike Gave Silicon Valley a	The New York Times
Glimpse of Life Without Transit	

Continuing Education: Opportunities for Growth and Engagement

MCEEST provides thought leadership and contributes to solutions for some of our nation's most pressing transportation problems. Through regional forums, national summits, mid-career leadership training, and K-12 workforce development initiatives we help create a connected world. To that end, and during this period of performance, MCEEST sponsored/co-sponsored 22 technology transfer and workforce development activities that reached 3,557 attendees, a select few are highlighted below:

Perfecting Your Scholarship Application November 13, 2024 • Online: MTI Student Association hosted a free virtual event to learn tips for perfecting students' scholarship applications for a better chance at funding their education. Speakers joined from transportation associations such as the Conference of Minority Transportation Officials (COMTO), California Transportation Foundation (CTF), and Women's Transportation Seminar (WTS). Attendees learned about each association's scholarship programs.



Connect for Your Career: An Introduction to Professional Associations in Transportation November 20, 2024 • Online: In partnership with WTS-SF Bay Area chapter, MTI hosted this free virtual event "Connect for Your Career: An Introduction to Professional Associations in Transportation" that introduced university students and emerging professionals to national transportation organizations offering networking, professional development opportunities, and/or scholarship opportunities.

On the Right Track: The Transformative Potential of Rail Various Dates • Online: MTI's newest webinar series explored the secrets behind over 50 years of global high-speed rail innovation. Participants discovered best practices in station planning and design development, along with groundbreaking projects from France, Germany, and Spain. Expert speakers shared actionable insights, helping U.S. professionals learn from international high-speed rail success to shape the future of transit in our communities. Webinars included:

- Webinar #1 | December 11, 2024 | The French Case: Stations as City Boosters
- Webinar #2 | January 15, 2025 | The Spanish Case: Transformacion Rápida
- Webinar #3 | February 12, 2025 | The German Case: Rail Stations to Connect the World
- Webinar #4 | March 5, 2025 | Berlin, Beijing, Bakersfield: Station Design Insights for U.S. Rail

Engineers Week 2025 February 10-14, 2025 • Santa Clara County: During February 10-14, the American Society of Civil Engineers (ASCE) and MTI celebrated and engaged future engineers by conducting outreach to students in elementary, middle, and high schools. Students heard from experts and participated in exciting hands-on activities like building towers and testing the structures' resilience, touring the campus of San Jose State University, San Jose Mineta



International Airport, and Valley Water. MTI's Executive Director Dr. Karen Philbrick gave a keynote address to 150 high school students. Altogether, Engineers Week directly benefited 400 students, inspiring them to hone their critical thinking skills, develop a deeper understanding of STEM, and plan for their future careers.

gmp Insights: Architecture & Community February 11, 2025 • San Jose, CA: Tobias Keyl from renowned Hamburg-founded international architecture firm Gerkan, Marg & Partners (gmp) joined MTI in an exciting in-person discussion of transformative transportation projects from Germany, China, and around the world. Attendees had the opportunity to explore gmp's impressive portfolio of work and hear about how they design transit stations and airports as revolutionary hubs of community and connection that advance safety, sustainability, and economic impact.

Student Scholarships

Each year, MTI hosts an annual awards banquet and convocation celebration to recognize students graduating with their Master of Science in Transportation Management (MSTM) degree. This celebration also serves as a fundraising opportunity whereby MTI secures sponsorships that support scholarships for MSTM students. During this period of performance, MTI awarded \$19,200 to deserving students from proceeds raised during the 2024 celebration. Additionally, and as a result of MTI's leadership team building strong relationships with industry partners, we were thrilled to continue awarding the AECOM Spark scholarship whereby AECOM pays for half (\$6,500) of the MSTM tuition for a student from an underrepresented background. Since MCEEST inception, MTI has also partnered with the American Public Transportation Foundation and the American Road and Transportation Builders Association to award two joint 10K scholarships to deserving MSTM students.

In support of building the transportation pipeline of talent, MTI also contributed modest scholarship funds to the following meaningful organizations:

- COMTO NorCal Norman Mineta Scholarship
- Boys and Girls Club of Silicon Valley Bright Futures Scholarship
- SCE San Jose Branch's 37th Annual Student Scholarship Essay Contest

Plans During the Next Reporting Period to Accomplish the Goals?

No change to the agency-approved application.

2. Participants & Collaborating Organizations

What Organizations Have Been Involved as Partners?

During this period of performance, MCEEST partnered with the 38 organizations listed below.

- 1. Organization Name and Location: Ann Arbor Area Transportation Authority (TheRide)
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 2. Organization Name and Location: Association of Monterey Bay Area Governments (AMBAG)
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Regional Transportation Impact Fees: Adoption Factors, Institutional Mechanisms, Equity Impacts, and Revenue Yield</u>
- 3. Organization Name and Location: American Public Transportation Association (APTA)
 - Partner's Contribution to the Project: In-kind support
 - Project: <u>Elementary Poster Contest</u>, 2024 "Research to Practice" Transit <u>Symposium</u>
- 4. Organization Name and Location: APTA High-Speed & Intercity Passenger Rail Committee.
 - Partner's Contribution to the Project: In-kind support
 - Project: On the Right Track: The Transformative Potential of Rail webinar series
- 5. Organization Name and Location: American Society of Civil Engineers (ASCE) San Jose
 - Partner's Contribution to the Project: Event collaboration
 - Project: <u>ASCE San Jose Branch's 37th Annual Student Scholarship Essay Contest</u>, Engineers Week 2025
- 6. Organization Name and Location: **Association of Collegiate Schools of Planning** (ACSP)
 - Partner's Contribution to the Project: Event collaboration
 - Project: <u>ACSP2024 Annual Conference</u>
- 7. Organization Name and Location: Bay Area Rapid Transit (BART)
 - Partner's Contribution to the Project: Event collaboration
 - Project: BART Jobs & Internships Career Fair: Concord BART Station
- 8. Organization Name and Location: **Boys & Girls Club of Silicon Valley**
 - Partner's Contribution to the Project: Event collaboration

- Project: Boys & Girls Club of Silicon Valley 2024 International Day of the Girl Campaign, Boys & Girls Club - Youth of the Year Gala
- 9. Organization Name and Location: California Department of Transportation (Caltrans)
 - Partner's Contribution to the Project: In-kind support
 - Project: 2024 "Research to Practice" Transit Symposium, Development and Implementation of Coordinated Adaptive Ramp Metering (CARM) in Southern California Interstates for Congestion Mitigation, Financial Incentives to Promote Multi-passenger Commuting
- 10. Organization Name and Location: California High-Speed Rail Authority
 - Partner's Contribution to the Project: In-kind support
 - Project: On the Right Track: The Transformative Potential of Rail webinar series
- 11. Organization Name and Location: California Transit Association
 - Partner's Contribution to the Project: Event collaboration
 - Project: California Transit Association 59th Annual Fall Conference & Expo
- 12. Organization Name and Location: Capital Metro, Austin, TX
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 13. Organization Name and Location: Chicago Transit Authority
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 14. Organization Name and Location: City of Rancho Cordova
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Equity Evaluation of Residents' Transit+Walk Accessibility to</u>
 Sacramento Healthcare Facilities
- 15. Organization Name and Location: Dallas Area Regional Transit
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 16. Organization Name and Location: Federal Railroad Administration
 - Partner's Contribution to the Project: Technical advisors
 - Project: Examining the Role of Class 1 and Freight Rail in Supporting High-Quality Passenger Rail in the United States: A Case Study Approach
- 17. Organization Name and Location: High Speed Rail Alliance
 - Partner's Contribution to the Project: In-kind support

- Project: On the Right Track: The Transformative Potential of Rail webinar series
- 18. Organization Name and Location: Institute of Transportation Engineers at UCLA
 - Partner's Contribution to the Project: Event collaboration
 - Project: <u>2025 ITE Western District Student Leadership Summit</u>
- 19. Organization Name and Location: Keysight Technologies
 - Partner's Contribution to the Project: Donation of equipment and software
 - Project: NTU's Summer STEM & Skills Dual Credit Program
- 20. Organization Name and Location: Kittelson & Associates
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Advancing a Low-Stress Network Assessment Methodology Through</u> <u>Expert Consensus</u>
- 21. Organization Name and Location: Liberty County Transit, Bristol, FL
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 22. Organization Name and Location: Logic Finder
 - Partner's Contribution to the Project: Donation of software and services
 - Project: NTU's Summer STEM & Skills Dual Credit Program
- 23. Organization Name and Location: Los Angeles County Metropolitan Transportation Authority (Metro)
 - Partner's Contribution to the Project: Case study site visit
 - Project: USF Research Projects
- 24. Organization Name and Location: Louis de la Parte Florida Mental Health Institute
 - Partner's Contribution to the Project: In-kind support
 - Project: USF Research Projects
- 25. Organization Name and Location: Metrolink
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Developing a Replicable</u>, <u>Group-Based Cybersecurity Assessment</u>
 <u>Methodology for Small and Rural Transit Operators</u>
- 26. Organization Name and Location: Miami Dade Transit
 - Partner's Contribution to the Project: Case study site
 - Project: USF Research Projects
- 27. Organization Name and Location: Mississippi Department of Transportation

- Partner's Contribution to the Project: Technical advisors and implementation partner
- Project: <u>Promoting Connections to Improve Mobility through On-Demand</u> Microtransit in Rural Areas
- 28. Organization Name and Location: Mountain Line Transit, Missoula, MT
 - Partner's Contribution to the Project: Case study site
 - Project: USF Research Projects
- 29. Organization Name and Location: MTI Board of Trustees
 - Partner's Contribution to the Project: Technical advisors
 - Project: <u>Improving Transit Agency (Commuter Rail) Performance to Attract Riders: What Works?</u>, <u>Practices to Expand the Transit Workforce through Program Evaluation</u>
- 30. Organization Name and Location: MTI Student Association
 - Partner's Contribution to the Project: Event collaboration
 - Project: Perfecting Your Scholarship Application (2024)
- 31. Organization Name and Location: National Alliance to End Homelessness, Washington, DC
 - Partner's Contribution to the Project: In-kind support
 - Project: <u>USF Research Projects</u>
- 32. Organization Name and Location: National RTAP, Woburn, MA
 - Partner's Contribution to the Project: Research collaboration
 - Project: USF Research Projects
- 33. Organization Name and Location: New Jersey Transit
 - Partner's Contribution to the Project: Case study site
 - Project: <u>USF Research Projects</u>
- 34. Organization Name and Location: North Coast Opportunities
 - Partner's Contribution to the Project: Event collaboration
 - Project: Walk and Bike Mendocino (North Coast Opportunities) Bike Safety
 Program Calpella Elementary School
- 35. Organization Name and Location: Next Steps Marketing
 - Partner's Contribution to the Project: Event collaboration
 - Project: Thrive with Bay Area Transportation
- 36. Organization Name and Location: School of Social Work, University of South Florida
 - Partner's Contribution to the Project: Research collaboration
 - Project: USF Research Projects

- 37. Organization Name and Location: SJSU's Institute for Metropolitan Studies
 - Partner's Contribution to the Project: Event collaboration
 - Project: <u>Indigenous Placemaking</u>
- 38. Organization Name and Location: **Southeastern Pennsylvania Transportation Authority**
 - Partner's Contribution to the Project: Case study site
 - Project: USF Research Projects
- 39. Organization Name and Location: Spatial Analytics and Visualization (SAVI) Center
 - Partner's Contribution to the Project: Event collaboration
 - Project: GIS Day 2024
- 40. Organization Name and Location: **Transportation Research and Visualization Laboratory**, **University at Buffalo**
 - Partner's Contribution to the Project: Technical advisors
 - Project: <u>Howard University research projects</u>
- 41. Organization Name and Location: TriMet
 - Partner's Contribution to the Project: Case study site
 - Project: <u>USF Research Projects</u>
- 42. Organization Name and Location: Trinity Metro
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Practices to Expand the Transit Workforce through Program Evaluation</u>
- 43. Organization Name and Location: T-SCORE University Transportation Center
 - Partner's Contribution to the Project: In-kind support
 - Project: 2024 "Research to Practice" Transit Symposium
- 44. Organization Name and Location: University of Florida Transportation Institute
 - Partner's Contribution to the Project: In-kind support
 - Project: 2024 "Research to Practice" Transit Symposium
- 45. Organization Name and Location: USF Department of Mental Health Law & Policy
 - Partner's Contribution to the Project: Research collaborator
 - Project: Enhancing Mental Health Literacy and Response Training for Transit Agency Staff
- 46. Organization Name and Location: US High Speed Rail Association
 - Partner's Contribution to the Project: In-kind support
 - Project: On the Right Track: The Transformative Potential of Rail webinar series

- 47. Organization Name and Location: Valtep
 - Partner's Contribution to the Project: Donation of software and services
 - Project: <u>NTU's Summer STEM & Skills Dual Credit Program</u>
- 48. Organization Name and Location: Washington Department of Transportation
 - Partner's Contribution to the Project: Technical advisors and implementation partner
 - Project: <u>Advancing a Low-Stress Network Assessment Methodology Through</u> <u>Expert Consensus</u>
- 49. Organization Name and Location: WMATA
 - Partner's Contribution to the Project: Case study site
 - Project: <u>USF Research Projects</u>
- 50. Organization Name and Location: WTS San Francisco Bay Area Chapter
 - Partner's Contribution to the Project: Event collaboration
 - Project: <u>Connect for Your Career: An Introduction to Professional Associations in Transportation</u>

Have Other Collaborators or Contacts Been Involved?

Nothing to report.

3. Outputs

Published Research Reports

During this period of performance, one research report featuring the results of MCEEST-funded research, was published on the MCEEST website. All reports are peer-reviewed prior to publication.

1. Luo, Y. (2025, February). <u>Insights for the Future of Car Rental and Ridesharing: Driving Behavior Across Different Levels of Automation</u>.

Conference Presentations (including briefings to elected officials, agency leaders, and other transportation professionals)

During this period of performance, 42 academic and professional presentations/briefings featuring MCEEST-federal or match-funded research and researchers. Two additional presentations occurred in a prior reporting period but had not been included in that report. Details are presented in the table below:

	Presentation Title	Event Title	Date	Location
1		American Public Transit Association Webinar	03/29/24	Online

3	Igniting the Next Generation Workforce	APTA TransFORM Annual Conference	10/01/24	Anaheim, CA
4	Igniting the Spark and Creating Change: Understanding the Most Critical Issues in the Transport Sector	Iowa Public Transportation Association Conference	10/08/24	Des Moines, IA
5	Managing University Transportation Centers: Best Practices, Lessons Learned, and Future Recommendations	CYBER-CARE Annual Symposium 2024: Safeguarding Transportation Cybersecurity in the Digital Age	10/18/24	Houston, TX
6	E-Bike Safety Policy Study	ITE San Francisco Bay Area Section Meeting	10/23/24	Online
7	Sexual Harassment on Public Transportation: A Survey of SJSU Students	SJSU ITE Student Club Meeting	10/24/24	San Jose, CA
8	What does Transformational Transportation in the Bay Area Mean?	Thrive with Bay Area Transportation Summit	10/30/24	San Jose, CA
9	Dynamic Signal Timing Optimization for Left-Turn Maneuvers via V2I and V2V Communication	IEEE International Conference on Green Energy and Smart Systems	11/04/24	Long Beach, CA
10	Impact of Reward Function Selection on DQN-Based Traffic Signal Control	IEEE International Conference on Green Energy and Smart Systems	11/04/24	Long Beach, CA
11	Lifecycle Environmental Assessment of Internally-Cured Concrete for Bridge Deck	ACI Concrete Convention	11/04/24	Philadelph ia, PA
12	"Understanding E-Bike Injuries: An Analysis of NEISS Emergency Room Records"	ACSP Annual Conference	11/07/24	Seattle, WA
13	Understanding E-Bike Injuries: Analysis of NEISS Emergency Room Records	ACSP 64th Annual Conference	11/07/24	Seattle, WA
14	Forecasting Vehicle Miles Traveled (VMT): Time Series Approach.	CSU Fresno Math Department Seminar	11/08/24	Fresno, CA
15	Igniting the Spark and Creating Change: Communication and	PacTrans Seminar "Communications and Leadership"	11/08/24	Seattle, WA

	Leadership Lessons for the Transport Sector			
16	Moving Toward Solutions for Transit Worker Safety	Making Connections Conference, Transit Workforce Center	11/12/24	Baltimore, MD
17	Mental Health, Well-Being, and Resilience for Transit Workers: Current Research, Practical Applications, and Best Practice Guidelines for Workforce Development	ITLC 2024 Making Connections Conference	11/12/24	Baltimore, MD
18	Leadership in Motion	HonorsX 2024-25	11/21/24	Online
19	Creating a Safer System Without More Enforcement (Moderator)	California Transit Association Fall Conference	11/22/24	San Jose, CA
20	Recruitment, Retention and Reinvention: Build a Diverse, Durable Transit Workforce	California Transit Association Annual Conference	11/22/24	San Jose, CA
21	Transit Worker and Rider Assaults – Data and Countermeasure Briefing	APTA Safety and Risk Management Seminar	12/09/24	Atlanta, GA
22	Alternative Project Delivery Methods' Enabling Legislation Trends for California Transportation Agencies	Annual Meeting for the Transportation Research Board 2025	01/05/25	Washingto n D.C.
23	Toward BIM for Infrastructure (BIM4I) Implementation in State Departments of Transportation: Mapping of Practices and Lessons Learned	2025 TRB Annual Meeting	01/06/25	Washingto n D.C.
24	Welcome Address	High Speed Rail Fireside Chat: Insights: Architecture & Community	02/11/25	San Jose, CA
25	Keynote Address	ASCE Engineers Week 2025 - Girl Day	02/13/25	San Jose, CA
26	California Climate Policies: Impacts on State Transportation Funding	CRB Nexus (series organized by the California State Library)	02/21/25	Online
27	Facilitating the board workshop with elected officials for BART	BART Board Workshop	02/27/25	Oakland, CA

28	California Climate Policies: Impacts on State Transportation Funding	Joint Informational Hearing of the California Assembly and Senate Transportation Committees	03/03/25	Sacrament o, CA
29	Welcome Address	ITS/MTI Luncheon	03/03/25	San Jose, CA
30	New Tricks for Old Bureaucracies: Improving Policy Outcomes in the Public Sector	UCLA Institute for Transportation Studies FED Talk	03/05/25	Los Angeles, CA
31	Developing a Replicable, Group-Based Cybersecurity Assessment Methodology for Small and Rural Transit Operators.	Briefing for Illinois DOT, 6 Illinois transit agencies	03/07/25	Online
32	Alternative Project Delivery Methods Enabling Legislation for Transportation Agencies	Fresno International Transportation Innovations / S.T.E.P. Summit 2025	03/07/25	Fresno, CA
33	Local Innovation - Projects & Technologies	Fresno International Transportation Innovations / S.T.E.P. Summit 2025	03/07/25	Fresno, CA
34	The Future of Just Urbanism and Transportation	HONORS X Program	03/10/25	San Jose, CA
35	Toward Building Information Modeling for Infrastructure Implementation in State DOTs: Mapping of Practices and Lessons Learned	Intelligent Transportation Systems (ITS) Midwest Webinar	03/13/25	Online
36	Leading Forward: Vision, Innovation, and Resilience in Modern Leadership	2025 AASHTO Resource Technical Exchange	03/18/25	Bellevue, WA
37	Does the Transit Understand the Risks of Cybersecurity and Are The Risks Being Appropriately Prioritized	NIST-NCCoE Transit CSF Community Profile Development Workshop	03/19/25	Online
38	E-BIke Safety Policy Study	California Emergency Nurses Association - Legislative Day	03/19/25	Sacrament o, CA
39	Does the Transit Understand the Risks of Cybersecurity and Are The Risks Being Appropriately Prioritized	Webinar Utah Transit Association	03/20/25	Online

40	Does the Transit Understand the Risks of Cybersecurity and Are The Risks Being Appropriately Prioritized	Briefing for Joe DeLorenzo, FTA Associate Administrator for Transit Safety and Oversight and Chief Safety Officer	03/21/25	Online
41	Engaging Tribal Colleges & Universities in Transportation Workforce Development Programs	2025 PSR UTC Annual Congress	03/25/25	Berkeley, CA
42	Best Practices in Marketing and Education for Autonomous Vehicles	2025 PSR UTC Annual Congress	03/25/25	Berkeley, CA
43	Driving Change: Advancing Women in Transportation Leadership.	COMTO NorCal's Women's History Month Panel	03/27/25	San Francisco, CA
44	E-Bike Safety Policy Study	Meeting of the Bicycle and Pedestrian Advisory Committee, City/County Association of Governments of San Mateo County	03/27/25	Burlingam e, CA

Journal Publications

During this period of performance, 3 journal articles were published featuring MCEEST-federal or match-funded research and researchers.

- 1. Morsy, A. M., & Helm, P. R. (2024). Failure Prediction of Clay Embankments Subject to Weather-Driven Deterioration. *Journal of Geotechnical and Geoenvironmental Engineering*, 150(12), 04024128.
- 2. Nacir, C., Shrestha, R., Leothacue-Liauburindr, A., Gad, G. and CalahorraJimenez, M. (forthcoming). Alternative Project Delivery Methods' Enabling Legislation Trends for California Transportation Agencies. *ASCE Journal of Legal Affairs and Dispute Resolution*.
- 3. Zandiatashbar, A., Alexander, S., & Tatarevic, B. (2025). What Tackles Vehicle GHG Emissions in California: Regional Plan Adoption or Local Leadership? *Sustainability*, 17(3), 1213. https://doi.org/10.3390/su17031213

Books or other non-periodical, one-time publications

MCEEST documents 4 publications in this category during this period of performance featuring federal or match-funded research and researchers.

MTI Perspectives:

1. Rose, Lisa V. (2025, January). <u>From Play to Pathways: Building Transportation</u>
<u>Awareness in Early Learners</u> (MTI Perspective). The <u>complete set of curriculum</u> is also available to download.

Conference Proceedings:

- 2. Chung, S. (2024). Challenges in Modeling and Forecasting Vehicle Miles Traveled. In 2024 JSM Proceedings. https://doi.org/10.5281/zenodo.13750888.
- 3. Emu, G., Tanvir, S. (2025) Hydrogen Fuel Cell Application for Port Drayage Truck: Integrated Transportation and Energy Modeling. Proceedings for the 2025 International Conference on Transportation & Development (ICTD). American Society of Civil Engineers.
- 4. Zeng, L. and C. Marin-Artieda (2025), "Pedestrian Distraction in the District of Columbia Intersections: Behavior and Prevalence Analysis." In Proceedings of the ASCE Transportation Conferences.

Website(s) or other Internet site(s)

- An MCEEST website is maintained at http://transweb.sjsu.edu/mctm/index.html
- An MCEEST presence has been established, and continues to grow, in conjunction with the existing MTI Facebook page https://www.facebook.com/MinetaTransportation/ and Twitter feed www.twitter.com "@MinetaTrans"

Technologies or Techniques

Nothing to report.

Inventions, Patent Applications, and/or Licenses

Nothing to report.

Other Products:

1. Curriculum: Transportation-focused curriculum for pre-kindergarten.

4. Outcomes

Performance Measures for Research Outcomes

Performance Measures for Research Outcomes	Current Period	Previous Period
Number of technology transfer events (workshops, seminars, webinars, etc.)	11	20
Number of technology transfer event participants	2724	6646

Performance Measures for Research Outcomes	Current Period	Previous Period
Number of organizations participating in consortium activities	50	38

5. Impacts

What is the Impact on the Effectiveness of the Transportation System? Nothing to report.

What is the Impact of Technology Transfer on Industry and Government Entities, on the Adoptions of New Practices, or on Research Outcomes Which Have Led to Initiating a Start-up Company?

- The City of San José's Policy and Legislative Director for Mayor Matt Mahan requested a technical briefing on the autonomous vehicle landscape, specifically on how this emerging technology may impact transit options for city residents. (March 2025)
- MTI's Dr. Frannie Edwards was asked to serve as a subject matter expert for the U.S. Geological Services on providing earthquake aftershock predictions to emergency managers. (November 2024)
- Caltrans has developed a set of General Transit Feed Specification (GTFS) evaluation metrics based on <u>research</u> published by MTI and funded through MTI's FAST Act UTC, the Mineta Consortium for Transportation Mobility. (July 2024, not included in a previous SAPR)
- MTI's Executive Director, Dr. Karen Philbrick, was asked to brief the Senior Policy Advisor for Transportation for the Committee on Environmental and Public works related to surface transportation legislation reauthorization. (February 2024)
- The City of San José reached out to MTI to express appreciation after the publication of a recent report on the City's open streets Viva CalleSJ event. The City is "actively using the data" and included key findings in a press release promoting the next event.

What is the Impact on the Body of Scientific Knowledge?

MTI's Dr. Asha Weinstein Agrawal was appointed to the Federal System Finance
 Alternative Advisory Board, an advisory board established by the Bipartisan
 Infrastructure Law to provide recommendations on a long-term solution for the Highway
 Trust Fund. The board's primary focus is on developing a pilot program for a national
 motor vehicle distance-based fee, exploring the feasibility of this approach for funding
 transportation infrastructure. (January 2025)

What is the Impact on Transportation Workforce Development?

• MTI published <u>transportation-focused pre-kindergarten curriculum</u> that incorporates early literacy and STEAM concepts into developmentally appropriate child-led imaginative

play, open-ended hands-on activities, and engaging field trips to empower children to learn about transportation. This curriculum was developed in partnership with the Bothell Family Cooperative Preschool.

 MTI's nationwide elementary school poster competition draws participants from around the country. Rose Marie M. Tenney, a teacher at Fleet Elementary School in Arlington, VA wrote to MTI expressing appreciation for the program and noting how



enthusiastic the students were about participating. (January 2025)

- MTI's Deputy Executive Director, Dr. Hilary Nixon, was asked to serve on the Regional Workforce Council for the GoMentum Innovation Alliance. The program fosters collaboration among public, private, and academic sectors to drive workforce development in the transportation and mobility industry. (November 2024)
- Two MTI-funded researchers were recognized by San José State University for their research accomplishments. Dr. Gaojian Huang received a 2024 Early Career Investigator Award, while Dr. Anil Kumar received the 2024 Industry-Sponsored Researcher Award. (March 2025)
- MTI has facilitated several opportunities for students to learn more about transportation careers through shadowing experiences with companies such as Fehr and Peers and HNTB. Anton N., a student who participated in a shadow day, wrote that "these have been unforgettable experiences..." and that he "learned so much about what careers in transportation planning entail." (October 2025)
- MTI has partnered with the American Society of Civil Engineers to support a scholarship for a SJSU student. (September 2024, not included in a previous SAPR)
- MTI has partnered with the Northern California Section of the Conference of Minority Transportation Officials to support a scholarship honoring Secretary Norman Y. Mineta's legacy for a student planning to pursue a career in transportation. (September 2024, not included in a previous SAPR)

Other Highlights:

- MTI's Senior Research Associate, Adam Cohen, was recognized as part of the eVTOL Insights "One to Watch Special Report" which showcases talent across the global Advanced Air Mobility (AAM) industry. (December 2024)
- The report <u>Planning for Advanced Air Mobility</u>, published in partnership with the American Planning Association (APA) and funded through MTI's FAST Act UTC, the Mineta Consortium for Transportation Mobility, was the most downloaded report at the APA's website since it was published in March 2024. This report serves as a great example of how UTCs can effectively partner with other entities to ensure that research reaches those responsible for managing change. APA is the largest association of professional planners in the United States with more than 40,000 members. (December 2024)
- MCEEST partner, Navajo Technical University, is launching a PhD program in electrical engineering to begin in Fall 2026. This follows the establishment of NTU Master of Science in Electrical Engineering which admitted it's first cohort of students in Spring

- 2024. NTU electrical engineering students participated in the 2025 Tribal Research Symposium in North Dakota.
- MTI's Deputy Executive Director, Dr. Hilary Nixon, was awarded the 2024/25 WTS SF-Bay Area Chapter's Rosa Parks Diversity Award in recognition of her efforts to facilitate professional opportunities for women and minorities.
- Two MTI student research assistants, Aries Chu and Wei-Hsiang Lo, won the <u>Best Video Award</u> for developing multimodal feedback in automated vehicles for people with hearing impairments at the 16th International ACM Conference on Automotive User Interfaces (AutoUI 24) at Stanford University in September 2024.





Changes/Problems

- Changes in Approach and Reasons for Change: Collectively, our leadership determined that it would be beneficial to request a consortium name change to be more congruent with current research priorities. While we retained the MCEEST acronym we did revise the words. We are now the Mineta Consortium for Emerging, Efficient, and Safe Transportation (rather than the Mineta Consortium for Efficient, Equitable, and Sustainable Transportation). This request was approved by USDOT on March 19, 2025 and immediately implemented.
- Actual/Anticipated Problems or Delays Encountered: Nothing to report
- Changes that Have a Significant Impact on Expenditures: Nothing to report
- Significant Changes in Use or Care of Human Subjects, Vertebrate Animals, and/or Biohazards: Nothing to report
- Change of Primary Performance Site Location from that Originally Proposed: Nothing to report