

FTA Report No. 0262



Federal Transit Administration's Annual Report to Congress on Technical Assistance and Workforce Development for Fiscal Year 2023

PREPARED BY
Federal Transit Administration



U.S. Department of Transportation
Federal Transit Administration

MARCH
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Courtesy of Edwin Adilson Rodriguez, Federal Transit Administration

FTA Annual Report on Technical Assistance and Workforce Development for FY 2023

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PREPARED BY

Federal Transit Administration
Office of Research, Demonstration, and Innovation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

AVAILABLE ONLINE

<https://www.transit.dot.gov/about/research-innovation>

Metric Conversion Table

SYMBOL	WHEN YOU KNOW	MULTIPLY BY	TO FIND	SYMBOL
LENGTH				
in	inches	25.4	millimeters	mm
ft	Feet	0.305	meters	m
yd	Yards	0.914	meters	m
mi	Miles	1.61	kilometers	km
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft³	cubic feet	0.028	cubic meters	m ³
yd³	cubic yards	0.765	cubic meters	m ³
NOTE: volumes greater than 1000 L shall be shown in m ³				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
TEMPERATURE (exact degrees)				
°F	Fahrenheit	$5 (F-32)/9$ or $(F-32)/1.8$	Celsius	°C

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14. ABSTRACT This statutorily required annual report provides information on FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314). It includes information on technical assistance, standards development, training, human resources, and workforce development projects active in FY2023. The report concludes with information on FTA's process for making upcoming allocations for FY 2024.					
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TABLE OF CONTENTS

ix	Abstract
9	Introduction
11	Section 1: Active Projects Results
11	Technical Assistance
11	Transit Workforce Development Technical Assistance Center (TWC)
12	Crime Prevention and Public Safety Awareness
13	National Center for Applied Transit Technology (N-CATT)
13	Bus Exportable Power System (BEPS) Standards
14	Research to Practice (R2P) Initiative
15	Accelerating Innovative Mobility (AIM) National Network (AIM-NNet)
16	Transportation Research Board (TRB) Core Program Support
16	Safety Awareness Technical Assistance
17	National Aging and Disability Transportation Center (NADTC)
17	National Center for Mobility Management (NCMM)
18	Transit Research Analysis Committee (TRAC)
18	Transit Survey Data Archiving and Analysis
18	Transportation Capacity Building Program and Planning Methods
19	Innovative Uses of Simplified Trips on Project Software (STOPS)
20	Public Safety Awareness Technology Evaluation (PSATE) Project
21	Standards Development
21	Transit Standards Development Program – CUTR
22	Training
22	National Transit Institute (NTI)
23	Section 2: Frontline Workforce Development Program Trends and Next Steps
28	Section 3: FY 2024 Expected Activities and Program Planning Process for Technical Assistance and Workforce Development Allocations
29	Acronyms and Abbreviations

LIST OF TABLES

10	Table 1: Active Projects by Eligible Areas
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U.S. Department
of Transportation

**Federal Transit
Administration**

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Colleague:

The Federal Transit Administration (FTA) is pleased to provide its Annual Report on Technical Assistance and Workforce Development for Fiscal Year (FY) 2023 as required by Federal public transportation law (49 U.S.C. § 5314(a)(3), (b)(2)(E)). This report describes the results from FTA's FY 2023 active projects in technical assistance, standards, workforce development, and training, totaling \$62,344,099.

The projects noted in this report provide support to public transit agencies in many areas, including expanding accessible transportation, implementing mobility management activities, and providing training to the transit industry. Significant highlights for FY 2023 included continued support of human services through the National Aging and Disability Transportation Center (NADTC); the empowerment of transit agencies to address human trafficking through the Crime Prevention and Public Safety Awareness; and delivery of training and education programs for the public transit industry by the National Transit Institute (NTI).

The report also includes information on the workforce development technical assistance activities carried out by FTA's Transit Workforce Development Technical Assistance Center (TWC). The mission of the TWC is to help transit agencies recruit, hire, train, and retain the diverse transit workforce needed today and tomorrow. In FY 2023, FTA and the TWC published the first National Transit Workforce Development six-year Strategic Plan, outlining goals and objectives to address workforce challenges and opportunities in the public transportation industry. The plan has six overarching goals: ensuring worker safety and health, investing in workforce development, driving workforce recruitment, ensuring worker retention, developing worker skills, and tracking success through appropriate metrics.

FTA is grateful for the excellence and work of our technical assistance, standards development, workforce, and training partners. I hope you enjoy learning more about these programs by perusing this report. Thank you for your support and interest in public transportation.

Sincerely,

A handwritten signature in blue ink that reads "Veronica Vanterpool".

Veronica Vanterpool
Acting Administrator

Abstract

This annual Report to Congress provides information on the Federal Transit Administration (FTA) Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) for Fiscal Year (FY) 2023. The primary goals of this program are to provide technical assistance, standards development, human resources, training, and workforce development, and training projects to provide public transportation services and improve public transportation effectiveness and efficiency. The report includes separate sections on frontline workforce activities and trends, and a proposed FY 2024 funding allocation.

Introduction

This report is required by Federal public transportation law (49 U.S.C. § 5314(a)(3), (b)(2)(E)), which requires the Secretary of Transportation to submit a Report to Congress for all projects active under this section during the previous fiscal year. This annual report must be submitted to the Committee on Banking, Housing, and Urban Affairs, the Committee on Appropriations of the U.S. Senate, the Committee on Transportation and Infrastructure, the Committee on Science, Space, and Technology, and the Committee on Appropriations of the U.S. House of Representatives, no later than the first Monday of February in the following year.

This annual report must include:

- A description of each project that received assistance under this program during the preceding fiscal year.
- An evaluation of the technical assistance and standards activities carried out by each organization that received assistance during the preceding fiscal year.
- A proposal for allocation amounts for the FTA Technical Assistance Program for the subsequent fiscal year.
- Measurable outcomes and impacts of the Human Resources & Training (Section 5314(b)) and National Transit Institute (NTI) (Section 5314(c)) programs.

Section 5314(b)(2)(E) requires the Secretary to submit a report on the Frontline Workforce Development Program, to include a detailed description of activities carried out, an evaluation of the program, and policy recommendations to improve program effectiveness. Given that this report is partially duplicative of the report required by Section 5314(a)(3), in 2016, FTA's House and Senate authorizing committees approved FTA's request to submit one combined report.

Active projects refer to projects and programs that involved Federal Transit Administration (FTA) resources during the fiscal year. This is a retrospective report on the results of prior investments, and projects are typically funded from appropriations enacted by Congress in earlier fiscal years. There are four types of eligible projects for this FTA program: technical assistance, standards development, human resources and training, and workforce development. This report is organized into three sections:

- **Section 1** provides detailed information on technical assistance, standards development, human resources and training, and workforce development, and training projects, including key results of each project.
- **Section 2** discusses frontline workforce development projects, including key results of each project, and recommendations to improve program effectiveness.
- **Section 3** provides information on proposed allocations for FY 2024 funding.

Table 1 Active Projects by Eligible Areas

Program/Project Name	Eligible Activities											FTA Funding
	Technical Assistance (TA)								Std*	HT**		
	1	2	3	4	5	6	7	8	9	10	11	
Transit Workforce Development Technical Assistance Center (TWC)								x			x	\$7,500,000
Crime Prevention and Public Safety Awareness						x		x				\$2,000,000
National Center for Applied Transit Technology (N-CATT)								x				\$4,500,000
Bus Exportable Power System (BEPS) Standards Development								x	x			\$1,000,000
Research to Practice (R2P) Initiative								x				\$545,000
Transit Automation Technical Assistance								x				\$450,000
Accelerating Innovative Mobility (AIM) National Network (AIM-NNet)								x				\$2,000,000
Transportation Research Board (TRB) Core Program Support								x				\$635,000
Safety Awareness Technical Assistance								x				\$800,000
National Aging and Disability Transportation Center (NADTC)	x	x	x									\$4,400,000
National Center for Mobility Management (NCMM)		x	x									\$5,760,507
Transit Research Analysis Committee (TRAC)						x		x				\$1,725,000
Transit Survey Data Archiving and Analysis								x				\$300,000
Transportation Capacity Building Program and Planning Methods								x				\$150,000
Transit Standards Development Program – Center for Urban Transportation Research (CUTR)									x			\$4,000,000
National Transit Institute (NTI)											x	\$26,578,592
											Total	\$62,344,099

TECHNICAL ASSISTANCE (TA)

1. Americans with Disabilities Act (ADA) of 1990
2. Human Services Transportation Coordination
3. Transportation Needs of Elderly Individuals
4. Increase Transit Ridership in Coordination with Metropolitan Planning Organizations
5. Improve Transportation Equity and Efficient Public Transportation Planning for Low-income and Minority Individuals
6. Facilitate Best Practices in Bus Driver Safety
7. Meet Buy America and Rolling Stock Purchase Requirements
8. Other technical assistance activity that advances the interests of public transportation

***STANDARDS (Std)**

9. Standards

****HUMAN RESOURCES AND TRAINING (HT)**

10. Human Resources
11. Training

Section 1

Active Projects Results

This section describes the technical assistance, standards, workforce development, and training projects active in FY 2023 and their results.

Technical Assistance

Technical Assistance (TA) activities support public transportation agencies in many ways, including furthering the mobility of older adults and people with disabilities, expanding mobility management awareness, enhancing public safety awareness, and supporting workforce development.

Title: *Transit Workforce Development Technical Assistance Center (TWC)*

Recipient: International Transportation Learning Center (ITLC)

Project Description:

The TWC supports public transit agencies' workforce development needs for all modes of public transit across urban, tribal, and rural entities. Its overall mission is to help transit agencies recruit, hire, train, and retain the diverse workforce needed for today and the future. The TWC performs two main functions: 1) conduct technical assistance activities within and for transit agencies that promote more effective and efficient training of frontline workers involved in public transportation maintenance and operations; and 2) implement technical assistance activities through collaborative partnerships between transit agency management and labor, including apprenticeship development and implementation.

Results:

The TWC advanced technical assistance through a range of activities, including workforce strategic planning and support; analysis of industry trends and data; provision of expertise on collaborative partnerships; collection, development, and dissemination of resources and best practice materials; facilitation of forums for peer-to-peer learning and exchanges on workforce development; and targeted training development in a variety of substantive areas, such as workforce transition to zero emission buses. Relevant activities for FY 2023 include:

- FTA and the TWC co-hosted three listening sessions to gather feedback on FTA's workforce challenges in the public transportation industry. The sessions featured topics including recruitment and retention, training, mentoring and apprenticeships, new technologies, preparing today's and tomorrow's workforce, and advancing diversity, equity, inclusion, and access. The information from the three sessions were used to help FTA develop the first FTA National Workforce Development Strategic Plan.
- FTA and the TWC completed and published FTA's National Transit Workforce Development Strategic Plan 2023 to 2028 on August 17, 2023 (<https://www.transit.dot.gov/research-innovation/federal-transit-administration-national-transit-workforce-development-strategic>). The plan outlines goals and objectives to address

workforce challenges and opportunities in the public transportation industry. The plan has six overarching goals: ensuring worker safety and health, investing in workforce development, driving workforce recruitment, ensuring worker retention, developing worker skills, and tracking success through appropriate metrics.

- From October 1, 2022, to June 30, 2023, the TWC reached 3,790 participants through participation in industry events, including conferences and webinars. The TWC also received and resolved 358 targeted technical assistance requests, with 250 of those requests from transit locations (agencies and unions).
- The TWC maintained its Resource Center with case studies, training materials, research reports, and other materials of interest, including publications produced by Federal government agencies, transit organizations, and independent research entities. Resources may be filtered by topic, resource type, and transit mode and are available at <https://www.transitworkforce.org/resource/>.
- The TWC created and maintained the Transit Workforce Data Dashboard, presenting quantitative, descriptive data about the composition of the public transit and broader transportation workforce and trends in employment using a series of charts and graphics. This information is relevant for industry discussions in a range of contexts, including strategic workforce planning in recruitment, retention, and other areas; examining and addressing opportunities and challenges related to diversity, equity, inclusion, and access; and identifying training and funding needs. The dashboard is available at <https://www.transitworkforce.org/data-dashboard/>.
- The TWC created and maintained the Road to Zero Emission Buses (ZEB) — National Coordinated Effort to Prepare Frontline Technicians. The resources page, available at <https://www.transitworkforce.org/zeb-workforce-transition-plan-guide-and-resources/>, is critical nationally to help prepare frontline technicians with the training needed to meet the challenges and demands of this new technology.
- The TWC also created and promoted a set of workforce development recruitment tools that transit agencies can use to tailor workforce development activities for their unique needs.

FTA Funding: \$7,500,000

Title: *Crime Prevention and Public Safety Awareness*

Recipients: The Council of State Governments (CSG), the Community Transportation Association of America (CTAA), and End Child Prostitution and Trafficking (ECPAT-USA)

Project Description:

This technical assistance is part of FTA’s Human Trafficking Awareness and Public Safety Initiative. The program will develop and disseminate technical assistance materials supporting public safety awareness campaigns that address public safety in transit systems, including crime prevention, human trafficking, and operator assault.

Results:

In FY 2023, the program continued to empower transit agencies and other organizations to develop local solutions to address human trafficking on buses, trains, and other forms of public transportation. Examples include the development of a resource toolkit, available at <https://safety4transit.org/>, designed to increase awareness and prevention of human trafficking in American Indian/Alaska Native (AIAN) communities and populations. The program also hosted a webinar, attended by 269 people, to increase awareness of the toolkit. The webinar increased awareness on how trafficking impacts AIAN populations, the role transportation and public transportation have in trafficking, how transit agencies can prevent trafficking, and how drivers and other front-line transit employees can intervene if trafficking is identified.

FTA Funding: \$2,000,000

Title: *National Center for Applied Transit Technology (N-CATT)*

Recipient: Community Transportation Association of America (CTAA)

Project Description:

The Consolidated Appropriations Act, 2019 (Pub. L. 116-6), provided \$1,500,000 under FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) for a cooperative agreement to assist small urban, rural, and tribal public transit recipients and planning organizations with applied innovation and capacity-building. FTA provided an additional \$1,500,000 in FY 2021, \$1,500,000 in FY 2022, and \$1,500,000 in FY 2023 for this effort. N-CATT provides practical, replicable resources that help solve local challenges by applying technological solutions. N-CATT accomplishes its mission through collecting, understanding, communicating, planning, encouraging, and spurring implementation of cost-effective, value-adding technologies.

Results:

N-CATT provided small-urban, rural, and tribal transit agencies with practical resources for replicable technological solutions and innovations. In FY 2023, N-CATT developed resources to help rural, small-urban, and tribal transit providers understand the benefits of emerging technology, and how to use the technology in their own transit systems. The resources developed included training, online tools, podcasts, webinars, and promising practices workshops. N-CATT also provided direct technical assistance at the State, regional, and local levels to help transit providers address transit technology issues.

FTA Funding: \$4,500,000

Title: *Bus Exportable Power System (BEPS) Standards Development*

Recipient: Inventev, LLC

Project Description:

BEPS enables public transportation agencies, communities, and States to access resilient and flexible power options through hybrid electric bus fleet vehicles during major power disruptions. The goal is to develop a national interoperable BEPS standard – working with FTA, industry stakeholders, and technical partners

– so that different manufacturers’ systems can use the same technology base and applications for BEPS solutions.

Results:

This program advanced the development of standards for exportable power systems, so that communities can take advantage of the power stored by high-tech transit buses to keep the lights on during natural disasters and other emergencies. In FY 2023, BEPS completed a review and selection of potential industry standards for Bus to Grid and Bus to Building power transfer. In addition, the project developed initial specifications and hardware requirements for power converter design to demonstrate a complete BEPS system. FTA developed findings from literature search, redesigned FTA’s BEPS website, and included a link to capture stakeholder inputs in Hubspot (<https://www.transit.dot.gov/funding/grants/BEPS>). FTA also participated in panel discussions at the Intelligent Transportation Society of America (ITSA) Conference and the Advanced Clean Transportation Expo.

FTA Funding: \$1,000,000

Title: *Research to Practice (R2P) Initiative*

Recipient: CALSTART

Project Description:

The purpose of this competitively awarded project is to develop a research-to-practice strategy to expand awareness of promising research results so transit agencies can adopt them. The goals of this project are to: 1) identify high impact research to practice methods for the public transit industry; 2) assess and evaluate the adoptability and effectiveness of the methods derived from the literature review for use in public transportation; 3) develop an R2P plan; and 4) create an outreach program for FTA’s research results to increase adoption of proven solutions.

Results:

CALSTART performed a literature review to identify effective R2P strategies in transportation, education, and occupational safety and health. Findings from the investigation were documented in a literature review report. The report identified high impact research to practice methods for the public transit industry. Based on the literature review results, CALSTART shared recommendations to FTA for R2P strategies that would benefit the transit industry. The main findings include:

- Integrate and coordinate R2P activities throughout the research process, starting at the agenda-setting stage.
- Rely on designated R2P brokers with expertise and capacity to manage research translation and dissemination efforts.
- Track and evaluate the impacts of research and the effectiveness of R2P investments on changing the state of the practice.

CALSTART developed an implementation plan based on the recommendations to provide a starting point for further outreach and stakeholder engagement.

FTA Funding: \$545,000

Title: *Transit Automation Technical Assistance*

Recipient: John A. Volpe National Transportation Systems Center (Volpe Center)

Project Description:

The purpose of this program is to provide technical assistance on transit bus automation to public transit providers. This project advances the adoption of automation technologies and related practices to improve the safety and performance of transit systems.

Results:

The program continued to facilitate Transit Bus Automation Community of Practice (COP). In FY 2023, FTA held quarterly meetings with COP members, including an in-person convening on June 30, 2023. The convening focused on issues and challenges related to introducing automated transit buses in revenue service, such as considerations related to the Federal Motor Vehicle Safety Standards (FMVSS), Buy America, Americans with Disabilities Act (ADA), Bus Testing, and Workforce. Through convening the COP, FTA assisted members in sharing information and resources with each other, helping them more effectively manage their demonstrations and overcome challenges. Additional technical assistance support included document reviews for individual FTA grantees (e.g., planning documents and evaluation reports), as well as one-on-one meetings to provide tailored information. The program also led to the publication of the “Considerations for Partnering on Emerging Public Transportation Technology Projects” paper, available at <https://www.transit.dot.gov/research-innovation/considerations-partnering-emerging-public-transportation-technology-projects>, which documented the challenges and lessons learned related to working with private sector technology companies on public sector-led transit bus automation demonstrations. Through this program, FTA is developing a greater understanding of the state of transit bus automation and the potential opportunities for transit bus automation to improve safety and performance.

FTA Funding: \$450,000

Title: *Accelerating Innovative Mobility National Network (AIM-NNet)*

Recipient: Shared-Use Mobility Center (SUMC)

Project Description:

The purpose of this national technical assistance effort is to assist public transportation agencies, communities, and regions in the development, selection, deployment, and oversight of innovative service delivery models, creative financing, novel partnerships, and integrated payment solutions. Key activities planned for AIM-NNet include workshops, peer exchanges, trainings, and creation of online knowledge sharing tools.

Results:

In FY 2023, AIM-NNet supported peer to peer group learning, problem-solving, quarterly meetings to exchange information in different areas of mobility innovation. AIM-NNet hosted the Second Mobility Innovation Collaborative national workshop featuring live demonstrations from Integrated Mobility Innovation (IMI) and Accelerating Innovative Mobility (AIM) projects with over 90 participants. AIM-NNet launched the Mobility Innovation Collaborative website, accessible at <https://sumcmic.org/>, to

share updates, challenges, solutions, and news. In FY 2023, the website recorded 9,700 page views and 6,400 unique visitors.

FTA Funding: \$2,000,000

Title: *TRB Core Program Support*

Recipient: Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine (NAS)

Project Description:

This project supports FTA staff participation in TRB's activities, including TRB Annual Meeting attendance, access to transportation research reports and publication, and meetings. It ensures access for all interested FTA staff to attend the TRB Annual Meeting and utilize TRB research databases and dissemination tools. Additionally, this activity facilitates the exchange of transit research information and results at the national level.

Results:

Key outcomes in FY 2023 included strong FTA staff attendance at the 102nd TRB Annual Meeting and providing FTA staff with access to all online TRB resources, including the Transportation Research International Documentation (TRID) database. Research sponsors use TRID to avoid costly duplication and assure timely dissemination of results. Following the TRB annual meeting, 32 reports published by TRB were added to TRID. TRB processes approximately 30,000 new transportation-related publications into TRID per year. Over 420 committee and subcommittee meetings took place during the 2023 Annual Meeting.

FTA Funding: \$635,000

Title: *Safety Awareness Technical Assistance*

Recipient: Operation Lifesaver, Inc. (OLI)

Project Description:

The objective of this project is to reduce grade crossing, trespassing, and related incidents on transit systems by increasing public awareness of safe behavior around tracks and trains. The project funds transit safety education grants for the development of training and educational materials, and the dissemination of information to assist transit agencies in making the public aware of transit-related rail safety issues.

Results:

In FY 2023, OLI directly impacted individuals and transit agencies by increasing public awareness of safe behavior around tracks through safety outreach projects at eight transit agencies across the country. FTA and OLI executed new activities directly supporting the goal of disseminating safety information to the public through Rail Safety Week, an annual outreach campaign to raise awareness about safe behaviors around tracks and trains. OLI also disseminated outreach materials targeted to children and youth.

FTA Funding: \$800,000

Title: *National Aging and Disability Transportation Center (NADTC)*

Recipient: Easterseals

Project Description:

The NADTC is a partnership between Easterseals and USAging (formerly the National Association of Area Agencies on Aging) that promotes the mobility of people with disabilities and older adults, ensuring that public transportation supports independent living in communities. It provides training, technical assistance, best practice resources, partnerships with other national centers and industry organizations, and seed funding for targeted local projects.

Results:

In FY 2023, NADTC released findings from the national diversity, equity, and inclusion survey that was conducted in 2021. This survey included 2,435 older adults, younger adults with disabilities and caregivers from all 50 States and the District of Columbia. The purpose of the survey was to document the transportation experiences and perceptions of diverse older adults, younger adults with disabilities and caregivers in accessing and using public and private transportation services in their communities. Among the results from the survey, the top changes both diverse older adults (31%) and younger adults with disabilities (48%) want to see in the future are more free or less expensive rides and better public transportation. NADTC also convened focus groups of diverse older adults, people with disabilities, and caregivers; created a new educational method of Learning Shorts; provided online courses, webinars, and targeted technical assistance; hosted a learning collaborative and provided technical assistance for FTA direct grantees; published a monthly newsletter and monthly blogs; actively participated on social media; maintained an updated website and added a multimedia resource page and learning center page; and developed useful resources including an annual trends report. Lastly, NADTC provided \$490,000 in grant assistance to local communities in seven States for planning and implementation of innovative transportation solutions and creating replicable models of excellence and coordination.

FTA Funding: \$4,400,000

Title: *National Center for Mobility Management (NCMM)*

Recipient: Community Transportation Association of America (CTAA)

Project Description:

The NCMM is a partnership among CTAA, the American Public Transportation Association (APTA), and Easterseals. It supports mobility management professionals in developing and implementing strategies that improve transportation access for older adults, people with disabilities, and low-income individuals and families.

Results:

The current active projects were awarded funding in March 2019 and March 2023; they are expected to operate through December 2024. In FY 2023, NCMM began supporting the Coordinating Council on Access and Mobility (CCAM) with implementation of the 2023–2026 CCAM Strategic Plan, to include planning the first State roundtable with State-level CCAM grantees (e.g., State Agency on Aging, State DOT, State Offices of Rural Health, etc.),

and hosting events that bring CCAM grantees together, such as webinars and lunch-and-learns. These events highlight Federal programs that may fund transportation, examples of Federal fund braiding, and best practices in cross-sector transportation coordination. NCMM activities have resulted in new, sustainable services in eight communities, benefiting individuals seeking behavioral health services, older adults, rural residents, and underserved city residents, among others.

FTA Funding: \$5,760,507

Title: *Transit Research Analysis Committee (TRAC)*

Recipient: National Academies of Sciences, Engineering, and Medicine (NAS)

Project Description:

TRAC is an interdisciplinary committee of experts spanning the transit industry, academia, and the private and public sectors, that provides independent perspective to FTA on future investments in transit research, development, and innovation. Its goal is to examine and recommend actions FTA can take to ensure that its research and innovation program is relevant, timely, and effective in meeting the diverse and changing needs of the public transportation community.

Results:

TRAC ensures that FTA research and innovation program is relevant, timely, and effective in meeting the diverse and changing needs of the public transportation community. On November 30, December 1, and December 2, 2022, TRAC convened a meeting with FTA, the Federal Highway Administration (FHWA), and the TRB's Research and Technology Committee (RTCC), which advises FHWA on its research as TRAC advises FTA. The meeting provided an overview of FTA and FHWA research programs, including funding levels, connections across modes, and the tie to DOT strategic goals. The TRAC Committee submitted a letter to FTA on March 14, 2023, summarizing the meeting's content. The letter report did not include recommendations for FTA, as this was the first meeting in four years. TRAC also met on July 25 – 26, 2023. TRAC members provided a strategic overview of FTA's research program, plans, priorities, and goals. The meeting also discussed the Bipartisan Infrastructure Law (BIL) and its application to FTA research funds. TRAC delivered a letter report to FTA on September 26, 2023, providing potential research topics to FTA supporting its innovation initiatives that are a focus of the administration's research plan. Proposed topics include vehicle electrification, ridership and safety, homelessness and mental health, and fare payment systems.

FTA Funding: \$1,725,000

Title: *Transit Survey Data Archiving and Analysis*

Recipient: U.S. Department of Energy National Renewable Energy Laboratory (NREL)

Project Description:

The project will obtain transit rider survey data from agencies and convert it to a standardized format for archival purposes. The objective of this project is to prevent valuable transportation datasets from becoming lost or destroyed and to make these data available for legitimate research while simultaneously

safeguarding survey participant privacy. The project will also include public summaries of the available databases. These efforts will help researchers and others gain a better understanding of the people who are riding public transit. The data will be archived on NREL's Transportation SecureData Center (TSDC), accessible at <https://www.nrel.gov/transportation/secure-transportation-data/>.

Results:

In FY 2023, the project focused on identifying and obtaining transit surveys from transit providers throughout the United States. The project team added almost 100 transit surveys to the database. For the first half of 2023, more than 400 survey datasets have been downloaded by the public through the TSDC. Through this project, FTA has provided opportunities for researchers and others with a focus on transit to better understand the demographic characteristics and travel patterns of the users of public transit.

FTA Funding: \$300,000

Title: *Transportation Capacity Building Program and Planning Methods*

Recipient: John A. Volpe National Transportation Systems Center (Volpe Center)

Project Description:

This project provides technical assistance with peer learning activities, effective practices and applied research, information development and dissemination, and program planning. The project supports peer-based events and technical assistance to build the capacity of transportation professionals via the sharing of experiences and lessons learned around specific planning-related topics. The goals of the project are to research and document best practices, synthesize information, and conduct other targeted research on planning-related topics.

Results:

In FY 2023, FTA and the Volpe Center completed a Planning and Environment workshop and started interviewing stakeholders for a Transportation Planning Capacity Building case study focusing on Transit Oriented Development (TOD) planning and implementation. The deliverables for these activities are underway.

FTA Funding: \$150,000

Title: *Innovative Uses of Simplified Trips on Project Software (STOPS)*

Recipient: Cambridge Systematics

Project Description:

STOPS is a stand-alone methodology for producing transit ridership forecasts for projects under consideration for funding in FTA's Capital Investment Grant (CIG) program. Approximately 90% of CIG projects requiring a travel forecast currently use the STOPS model. The objective is to identify innovative and novel applications of the STOPS program beyond CIG project evaluation. The study will develop and published case studies in two different metropolitan areas, helping FTA showcase innovative uses of STOPS. It will also result in the development of public presentations and presentation materials on the

identified innovative uses of STOPS. This work, along with the subsequent feedback from the presentation, will help FTA identify future enhancements for the STOPS program.

Results:

In FY 2023, the project focused on identifying and procuring novel and innovative uses for the STOPS program throughout the United States.

FTA Funding: \$150,000

Title: *Public Safety Awareness Technology Evaluation (PSATE) Project*

Recipient: Pipeline and Hazardous Materials Safety Administration (PHMSA)

Project Description:

The purpose of this effort is to identify, test, evaluate, and document technologies to help address pedestrian fatalities within and around rail systems with the potential to apply to a larger environment. In addition to demonstrations of the safety technologies, the project will develop an evaluation framework that outlines an evidence-based process to test new and emerging technologies. The goals of the project are to 1) provide technical direction and support of the contract award, administration, and execution of the evaluation project; 2) review and approve any documents, materials, and technologies resulting from the agreement effort; 3) provide guidance and technical assistance to PHMSA and the project contractor on transit riders' safety perspective and specifically on pedestrian safety for this project; and 4) post information resulting from this partnership on the FTA website.

Results:

In FY 2023, PHMSA completed Phase 1 of the PSATE project, produced three interim internal reports, and recommended potential technologies for testing on a test bed which includes railway tracks with exposures to trespassers, vulnerable road users, pedestrians, bicyclists, etc.

FTA Funding: \$100,000

Standards Development

FTA funds the development of voluntary and consensus-based standards and best practices for the public transportation industry in the areas of safety, fare collection, intelligent transportation systems, accessibility, procurement, security, and asset management to maintain a state of good repair, operations, maintenance, vehicle propulsion, communications, and vehicle electronics.

Title: *Transit Standards Development Program – CUTR*

Recipient: University of South Florida (USF) Center for Urban Transportation Research (CUTR)

Project Description:

This program collects, reviews, and analyzes transit industry data. The program also reviews literature; conducts scans, surveys, and case studies; and generates findings and recommendations for the development of voluntary standards, guidelines, and best practices. The goals of the program are to 1) create meaningful standards to address specific challenges or emerging requirements; and 2) help transit agencies provide the safest, most reliable, and efficient public transportation.

Results:

In FY 2023, the project completed development of five safety-focused project reports and presented them to the Transit Standards Working Group members. The project also organized a live demonstration hosted by the Metropolitan Atlanta Rapid Transit Authority (MARTA) in Atlanta, GA, to showcase an FTA-sponsored Autonomous Track Inspection System project with transit stakeholders. To date, the program has published 29 standards reports available on FTA webpages (<https://www.transit.dot.gov/research-innovation/standards-development-program>).

FTA Funding: \$4,000,000

Training

FTA funds a national public transportation training program that develops and conducts training and educational programs for transportation employees at the local, State, and national levels.

Title: *National Transit Institute (NTI)*

Recipient: Rutgers, The State University of New Jersey

Project Description:

FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) funds NTI (49 U.S.C. § 5314(c)), which is housed at Rutgers, The State University of New Jersey. This program develops and conducts courses, educational programs, and webinars for Federal, State, and local government employees and non-profit leaders engaged in government-funded public transportation work. NTI strategically develops and delivers courses across the country in partnership with regional transit agencies, State DOTs, municipal governments, metropolitan planning organizations (MPOs), and State and national transit-related associations. NTI plans and develops its work with FTA's respective offices and the public transit industry to ensure that NTI courses and activities are in alignment to FTA's strategic goals and the training needs of the public transit industry.

Results:

NTI continued to provide training, education, and clearinghouse services in support of public transportation. The Bipartisan Infrastructure Law (BIL) authorized \$6,716,026 in FY 2023 to carry out NTI activities. The FY 2023 funds are aggregated to active projects from previous fiscal years, totaling \$26,578,592 for ongoing NTI activities. In FY 2023, NTI achieved broad reach across the industry:

- Delivered 149 individual training courses from 24 topic areas to 4,252 transit and transportation professionals. NTI continued to expand and enhance its course delivery including both virtual and in-person training. NTI's virtual training continues to grow and is in high demand.
- Of the 24 topics, NTI offered five new topics: Advanced Title VI and Public Transit, FTA Uniform Act Basics for Transit Agency Personnel, Overview of Title VI and Public Transit, Public Involvement in Transportation Decision-Making, and Rural National Transit Database (NTD) Reporting, meeting the evolving needs of the transit industry.
- Resumed in-person training, starting with the procurement series courses: Procurement I – Orientation to Transit Procurement and Procurement II – Risk Assessment and Basic Cost or Price Analysis.
- Participated in over 32 industry events including conferences, convenings, summits, forums, workshops, and seminars outreach purposes, to learn about the challenges and needs of the industry and remain at the forefront of industry trends.

NTI continued to meet its mission to identify needs, promote, develop, and deliver high quality programs and materials through cooperative partnerships with industry, government, institutions, and associations.

FTA Funding: \$26,578,592

Section 2

Frontline Workforce Development Program Activities, Trends, and Next Steps

Federal public transportation law (49 U.S.C. § 5314(b)(2)(E)) requires the Secretary of Transportation to make the report on the Frontline Workforce Development Program publicly available for each fiscal year, not later than December 31 of the calendar year in which that fiscal year ends. The report must include a detailed description of activities carried out under this section, an evaluation of the program, and policy recommendations to improve program effectiveness.

Program Activities

Transit Workforce Center (TWC)

Since its September 15, 2021, inception, FTA's Transit Workforce Development Technical Assistance Center (TWC) has sponsored activities designed to support public transit agencies' workforce development needs for all modes of public transit across urban, tribal, and rural entities. The TWC is managed by the International Transportation Learning Center (ITLC). TWC has two key functions: 1) conducting technical assistance activities within and for transit agencies that promote more effective and efficient training of frontline workers involved in public transportation maintenance and operations; and 2) implementing technical assistance activities through collaborative partnerships between transit agency management and labor, including apprenticeship development and implementation.

The TWC assists agencies in recruiting, hiring, training, and retaining the diverse transit workforce needed today and, in the future, by providing guidance on best practices and implementing technical assistance activities, such as developing apprenticeships through collaborative partnerships between transit agency management and the labor force. The TWC supports public transit agencies' workforce development needs for all modes of public transit across urban, tribal, and rural entities.

In FY 2023, the TWC provided significant support to transit agencies to further workforce development, including these key accomplishments:

- FTA and the TWC co-hosted three listening sessions to gather feedback on workforce challenges in the public transportation industry. The sessions featured topics including recruitment and retention, training, mentoring and apprenticeships, new technologies, preparing today's and tomorrow's workforce, and advancing diversity, equity, inclusion, and access. An average of 93 registrants participated in each session. The information from the sessions were aggregated with TWC's inaugural National Transit Workforce Conference – Making Connections 2022 held in Washington, DC, on December 13-14, 2022. The information from the three sessions and the conference were used to write FTA's National Workforce Development Strategic Plan.
- FTA and the TWC completed and published FTA's National Transit Workforce Development Strategic Plan 2023 to 2028 on August 17, 2023 (<https://www.transit.dot.gov/research-innovation/federal-transit-administration-national-transit-workforce-development-strategic>). The plan outlines goals and objectives to address workforce challenges and

opportunities in the public transportation industry. The plan has six overarching goals: ensuring worker safety and health, investing in workforce development, driving workforce recruitment, ensuring worker retention, developing worker skills, and tracking success through appropriate metrics.

- From October 1, 2022, to June 30, 2023, the TWC 1,582 reached 3,790 participants through participation in industry events, including conferences and webinars. The TWC also received and resolved 358 targeted technical assistance requests, with 250 of those requests from transit locations (agencies and unions).
- The TWC maintained its Resource Center with case studies, training materials, research reports, and other materials of interest, including publications produced by Federal government agencies, transit organizations, and independent research entities. Resources can be filtered by topic, resource type, and transit mode and are available at <https://www.transitworkforce.org/resource/>.
- The TWC created and maintained the Transit Workforce Data Dashboard, presenting quantitative and descriptive data about the composition of the public transit and broader transportation workforce and employment trends using a series of charts and graphics. This information is relevant for industry discussions in a range of contexts including strategic workforce planning in recruitment, retention, and other areas; examining and addressing opportunities and challenges related to diversity, equity, inclusion, and access; and identifying training and funding needs. The dashboard is available at <https://www.transitworkforce.org/data-dashboard/>.
- The TWC created and maintained the Road to Zero Emission Buses (ZEB) — National Coordinated Effort to Prepare Frontline Technicians. The resources page, available at <https://www.transitworkforce.org/zeb-workforce-transition-plan-guide-and-resources/>, is a critical resource to coordinate efforts to help prepare frontline technicians with the training needed to meet the challenges and demands of this new technology.
- The TWC launched three pilot train-the-trainer sessions of its Battery Electric Bus (BEB) Familiarization course with Los Angeles County Metropolitan Transportation Authority (LA Metro), the Washington Metropolitan Area Transit Authority (WMATA), and Austin’s Capital Metropolitan Transportation Authority (CapMetro). These sessions helped build internal capacity to prepare instructors to deliver courses on BEB fleet unique to their transit agencies.
- The TWC hosted a meeting on bus operator apprenticeships as part of a continuing series on apprenticeship for frontline transit occupations. The meeting consisted of peer group discussion of labor-management presentations with a total of 113 attendees. The series of meetings provides information on how to develop an apprenticeship in transit, with subsections that focus on the details of the two most widely implemented apprenticeships in transit: bus operator and bus maintenance.
- The TWC co-hosted a webinar titled “Youth Careers in Transit - Exploring a World of Opportunity,” with Introducing Youth to American Infrastructure. The purpose of webinar was to create an educational tool on career pathways for young people. A total of 19 individuals attended the webinar.
- TWC co-hosted a webinar titled “Transit-Community Partnerships: Advancing Workforce Diversity, Equity, Access, and Inclusion,” with Transportation Equity Caucus. A total of 78 individuals attended the webinar. The webinar focused on diversity, equity, inclusion, and access.
- TWC developed the Transit Operator Mentoring Data Fact Sheet. The fact sheet provides an overview of four of the country’s most robust bus

operator mentoring programs and preliminary data on the success of these programs. The Mentoring Fact Sheet provides insight into the role mentorship programs can play to improve retention rates of workers, decrease unexcused absences, reduce rates of recorded violations, and lower complaints.

- The TWC supported and collaborated with other Federal agencies on various programs and initiatives, including:
 - With the U.S. Department of Health and Human Services (HHS), Office of Refugee Resettlement, the TWC connected locally-based, federally funded refugee programs in Iowa with Iowa agencies interested in adding to their workforce.
 - With the HHS Office of Community Services, Administration for Children and Families, the TWC led conversations examining possible career pipeline programs for Head Start parents and others served by Community Action Programs.
 - With U.S. Department of Labor (DOL), Employment and Training Administration (ETA), the TWC developed and presented at two different forums on labor-management partnerships and led a session at the convening in Philadelphia, PA.

Frontline Workforce Trends

The aftermath of COVID-19 further emphasizes the need to recruit and retain a diverse workforce for today and for the future while prioritizing worker health and safety. Trends in the following areas continue to emerge:

1. Frontline worker shortages
2. Worker safety, including assaults on bus operators
3. Transit employee skill gaps
4. Knowledge transfer and succession planning
5. Youth recruitment
6. Emerging technology needs, such as the emerging digital infrastructure-based technologies and the need for new workers in these areas
7. Shift to zero-emission vehicles requiring significant retraining of the frontline workforce, including technicians and operators
8. Worker well-being, including addressing new worker interests in more flexible work environments including telework
9. Expanding worker health and safety initiatives post Covid
10. Funding, including investing more in training, wraparound services, mentorship, and apprenticeship initiatives

FTA and TWC are working to address those trends through strengthened partnerships and collaborations with labor, educational institutions, community organizations, and workforce development entities.

Next Steps

National Transit Workforce Development Strategic Plan 2023 to 2028

FTA and the TWC developed a National Workforce Development Strategic Plan through extensive communication and engagement with numerous stakeholders in the public transportation industry. Over 18 months, FTA and the TWC facilitated dialogues at conferences, meetings, webinars, and other events to assess needs and understand the industry's challenges and opportunities. Data collected through TWC's ongoing technical assistance work and collaborations with industry partners were used to enhance the knowledge base.

FTA and the TWC also co-hosted three listening sessions to gather feedback from key public transportation stakeholders on workforce challenges in the industry. These sessions resulted in a readjustment of the initial goals, while providing general and detailed input on objectives and activities that should be pursued to help achieve the goals outlined in the strategic plan. The Strategic Plan encompasses six overarching Goals:

1. Worker Safety & Health
2. Workforce Investment
3. Recruitment & Outreach
4. Retention
5. Skills Development & Career Advancement
6. Workforce Metrics

Each goal represents a comprehensive, achievable, long-term, and durable outcome that FTA and TWC strives to accomplish. FTA collaborated extensively with DOL to establish these goals and define performance measures. The plan was published on FTA's website on August 15, 2023, and it is accessible at <https://www.transit.dot.gov/research-innovation/federal-transit-administration-national-transit-workforce-development-strategic>. FTA will manage an ongoing process of refining these goals and measures as necessary. FTA and the TWC will work together in meeting each of the six goals, tracking the indicators and measures, keeping in mind the timeframe for this strategic plan.

Strengthening Partnerships

FTA and the TWC will also conduct regular dialogues with strategic partners, including the DOL's Employment & Training Administration (ETA) and the U.S. Bureau of Labor Statistics (BLS). ETA's mission is to contribute to the more efficient functioning of the U.S. labor market by providing high-quality job training, employment, labor market information, and income maintenance services primarily through State and local workforce development systems. ETA's focus on workforce development is parallel to FTA's, and a strong working relationship can be beneficial for both agencies. FTA also participated in the ETA Workforce Regional Convenings: Vision 2030 – Expanding Access to Quality Jobs and Ensuring Job Equity. The convenings leveraged active engagement, including dedicated time for discussions with regional and program leaders, and networking. FTA, the TWC, and BLS will work together to gather information relevant to the public transportation industry and identify gaps, and address workforce development trends. The cooperation between DOL and FTA will assist in evaluating the effectiveness of FTA goals and measures and ensure alignment with relevant DOL programs.

To continue to address the needs of the transit industry, FTA will also create two new programs in FY 2024 to assist with youth recruitment. One program will establish national partnerships with high schools and transit entities to introduce careers in transportation to 9th-12th grade students. These partnerships will prepare students for current and future career opportunities in transit and explore skills needed to obtain a career in public transportation, to include college courses, apprenticeship opportunities, and high school education pathways to entry-level jobs. Students will also be introduced to the recruitment, hiring, and training requirements of transit careers. In FY 2024, FTA will support Introducing Youth to American Infrastructure (IYAI+) Sustainable Mobility Career Awareness & Innovation Challenge Program. This program supports youth 18-25 years of age

and builds on IYAI+'s core infrastructure career awareness. The results of this input will inform plans for a 2024 Future Workplace Summit.

Section 3

FY 2024 Proposed Technical Assistance and Workforce Development Allocations

Each year, FTA's funding priorities include competitively selected technical assistance centers, safety technical assistance, planning activities, and mobility related technology transfer initiatives. When finalizing annual allocations, FTA considers priorities and funding requests identified during the Presidential and Congressional Budget process and also ensures that any Congressional requirements from yearly Appropriations legislation are addressed. FTA also asks each of its program offices to note key technical assistance projects and activities to implement priorities of the Administration. For FY 2024, FTA will prioritize technical assistance, standards, and workforce development activities that further DOT's strategic goals of Safety, Economic Strength and Global Competitiveness, Equity, Climate and Sustainability, Transformation, and Organizational Excellence.

Acronyms and Abbreviations

ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
CTAA	Community Transportation Association of America
DOT	U.S. Department of Transportation
FTA	Federal Transit Administration
NADTC	National Aging and Disability Transportation Center
NAS	National Academy of Sciences, Engineering, and Medicine
NCMM	National Center for Mobility Management
NTI	National Transit Institute
OLI	Operation Lifesaver, Inc.
SDO	Standards Development Organizations
TCRP	Transit Cooperative Research Program
TRAC	Transit Research Analysis Committee
TRB	Transportation Research Board
TRI	FTA Office of Research, Demonstration, and Innovation
TWC	Transit Workforce Center



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