

# FTA RESEARCH

FEDERAL TRANSIT ADMINISTRATION

## FTA Annual Report on Technical Assistance and Workforce Development for FY 2019

FEBRUARY 2020

FTA Report No. 0168  
Federal Transit Administration

**PREPARED BY**  
Federal Transit Administration



U.S. Department of Transportation  
Federal Transit Administration

## COVER PHOTO

*Courtesy of Edwin Adilson Rodriguez, Federal Transit Administration*

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

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U.S. Department  
of Transportation

**Federal Transit  
Administration**

Dear Colleague:

I am pleased to provide the Federal Transit Administration (FTA) Annual Report on Technical Assistance and Workforce Development for FY 2019 as required by Federal Public Transportation Law (49 U.S.C. § 5314(a)(3)). This report describes eligible activities in the areas of technical assistance, standards development, training, and workforce development.

FTA's Technical Assistance and Workforce Development Program has four major functional areas for eligible projects: Technical Assistance, Standards, Workforce Development, and Training. This report notes the results of these projects.

Projects funded by FTA continued to provide technical assistance to improve access to public transportation and employment through economic development and improved the mobility of people with disabilities and older adults. FTA's standards development activities promoted systemic safety approaches with voluntary standards based on feedback from a broad consortia of industry experts. FTA's training and workforce activities supported the infrastructure goal and the commensurate strategic objective of economic competitiveness.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Jane Williams".

K. Jane Williams  
Acting Administrator



## Abstract

This annual Report to Congress provides information on FTA's Technical Assistance and Workforce Development Program (49 U.S.C. § 5314) for Fiscal Year (FY) 2019. The primary goals for these technical assistance, standards development, human resources, workforce development, and training projects are to more effectively and efficiently provide public transportation service and to improve public transportation. The report includes a section on frontline workforce activities and trends and notes expectations and processes for allocating funding for FY 2020.

## EXECUTIVE SUMMARY

This Federal Transit Administration (FTA) report is required by Federal Public Transportation Law (49 U.S.C. § 5314(a)(3)). It provides information on projects active during Fiscal Year (FY) 2019. Active projects typically are funded from earlier fiscal years; this is a retrospective report on the results of prior investments. There are four major types of eligible projects for this FTA program: Technical Assistance, Standards Development, Human Resources/Workforce, and Training. This report is organized into three sections:

- **Section 1** provides detailed information on technical assistance, standards development, human resources, and training projects, including descriptions and key results of each project.
- **Section 2** discusses frontline workforce development trends as required by Federal Public Transportation Law (49 U.S.C. § 5314(b)(2)(E)).
- **Section 3** provides information on expectations, directions, and processes for allocating FY 2020 funding.

FTA has a long history of investments in training, technical assistance, standards, and workforce development. The major goals for these programs include more effectively and efficiently providing public transportation service, training the public transportation workforce, and fielding innovative frontline workforce projects.

**Table 1** Active Projects by Eligible Areas

Program/Project Name	Eligible Activities *											Amount		
	Technical Assistance (TA)								Std*	HT**				
	1	2	3	4	5	6	7	8	9	10	11			
Transit Automation Technical Assistance								x					\$450,000	
Mobility on Demand (MOD) On-Ramp Program								x					\$499,342	
Multimodal Public Transportation System Connectivity Performance Measures					x								\$300,000	
Transportation Research Board Core (TRB) Program Support								x					\$250,000	
Safety Awareness Technical Assistance								x					\$350,000	
Mobility on Demand (MOD) Technical Assistance and Outreach Support	x	x	x										\$585,000	
National Aging and Disability Transportation Center (NADTC)	x	x	x										\$6,900,000	
National Center for Mobility Management (NCMM)		x	x										\$2,500,000	
Predicted vs. Actual Studies								x					\$300,000	
Transit Research Analysis Committee (TRAC)						x		x					\$1,725,000	
Simplified Trips-on-Project Software (STOPS) – Accessibility and Mobility Impacts				x	x								\$199,713	
Transportation Capacity Building Program (TCBP)				x	x								\$100,000	
National Public Transportation/Transit-Oriented Development (TOD) Technical Assistance Initiative								x					\$2,000,000	
Transit Standards Development Program – Center for Urban Transportation Research (CUTR)									x				\$6,500,000	
Transit Standards Development Program – American Public Transportation Association (APTA)									x				\$1,000,000	
National Transit Institute											x		\$5,000,000	
FY 2015 Innovative Transit Workforce Development Projects										x			\$5,603,047	
													<b>TOTAL</b>	<b>\$34,262,102</b>

**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

## Requirements for This Report

Federal Public Transportation Law (49 U.S.C. § 5314(a)(3)) 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 and the Committee on Appropriations of the U.S. Senate, and 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 not 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 process to determine allocations for the FTA Technical Assistance and Workforce Development Program for the subsequent fiscal year
- Measurable outcomes and impacts of the Human Resources & Training and NTI programs

# Active Projects Results

Section I groups projects by the authorized program areas: Technical Assistance, Standards, Human Resources, Training, and Workforce Development. Each project provides information on the recipient; a detailed description of each funded activity, including its purpose and goal(s); relevant project results listing pertinent activities, measurable outcomes, and impacts to the industry and the community; the year the project was awarded; the total amount funded; remaining funds for the project; and the anticipated completion date in each section. The projects are ordered by when they were awarded, with the most recent awards noted first.

## Technical Assistance

Technical Assistance (TA) investments furthered the mobility of older adults and people with disabilities, expanded mobility management awareness, supported the Americans with Disabilities Act (ADA) of 1990, and expanded access to human services transportation through coordination initiatives.

**Title:** *Transit Automation Technical Assistance*

**Recipient:** The Volpe Center

**Project Description:**

The purpose of this program is to provide technical assistance on bus transit automation for eligible organizations. This project supports the Department of Transportation (DOT) strategic goal of Innovation by advancing the adoption of automation technologies and related practices to improve the safety and performance of transit systems.

**Results:**

This program was awarded funding in September 2018 and is expected to finish in late 2021. In FY 2019, the program produced transit automation resources for the industry including a Transit Bus Automation Benefit-Cost Analysis Factsheet that can be accessed at <https://www.transit.dot.gov/automation-research>.

Through this program, FTA developed a greater understanding of the state of transit bus automation and the potential opportunities transit bus automation may provide to transit service in the U.S.

**FTA Funding:** \$450,000

**Title: *Mobility on Demand (MOD) On-Ramp Program*****Recipient:** Shared-Use Mobility Center (SUMC)**Project Description:**

The MOD On-Ramp Program enhances mobility by providing technical assistance to public transportation agencies advancing innovative MOD projects. The goal of this effort is to support the successful development of MOD ideas and business plans as well as the planning process for their implementation as pilot projects.

**Results:**

This program was awarded in September 2017 and is expected to conclude in early 2020. Through the MOD Learning Center, accessible at <https://learn.sharedusemobilitycenter.org/>, the program provides an online resource giving a wealth of information to those seeking to implement MOD solutions, including policy documents, case studies, and related materials. The program hosts a community of practice, webinars, conference calls with participant agencies, site visits, and various local and national workshops.

**FTA Funding:** \$499,342**Title: *Multimodal Public Transportation System Connectivity Performance Measures*****Recipient:** The University of Texas at Austin**Project Description:**

Researchers at the University of Texas at Austin and Arizona State University are developing new performance measures to support public transportation system efforts to assess network connectivity and accessibility with a focus on disadvantaged population groups.

**Results:**

This project was awarded in October 2017 and is expected to end in mid-2020. In FY 2019, project outreach included presentations at national conferences and convening a community advisory group. The final deliverable will be a guidebook that outlines a variety of replicable system characteristic measures ranging from institutional structures and partnerships to data-sharing and geo-spatial analysis. Recommended measures and methods will explicitly incorporate community goals so transit providers can quickly determine how their decisions are affecting greater connectivity for all users, especially disadvantaged populations.

**FTA Funding:** \$300,000

**Title:** *TRB Core Program Support***Recipient:** Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine (NAS)**Project Description:**

The purpose of this project is to provide FTA with access to TRB's core technical activities such as the TRB Annual Meeting, standing committees and task forces, a field visit program offered to the states on request, and research archival and dissemination tools such as TRB's extensive library, online database, and webinars. Additionally, core support to TRB helps to facilitate the exchange of transit research information and results at the national level.

**Results:**

This project received FTA assistance in multiple fiscal years. The latest award was in February 2020, and the project is scheduled to conclude in early 2021. Key outcomes in FY 2019 included FTA involvement in the TRB Annual Meeting, support for specialty conferences, and access to TRB reports and webinars. Through membership provided by this project, FTA staff also have free access to all online TRB resources including the Transportation Research International Documentation (TRID) database, a bibliographic system that collects information and provides literature searches for researchers, governments, the transit community, and the private sector. Research sponsors such as FTA use TRID to avoid costly duplication and ensure timely dissemination of results. TRB processes approximately 30,000 new transportation-related publications into TRID per year, and TRB staff regularly conduct TRID searches.

**FTA Funding:** \$250,000**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 will accomplish this objective by funding the development of training and educational materials and the dissemination of information to assist transit agencies to make the public aware of transit-related rail safety issues.

**Results:**

The current project funding was awarded in September 2016 and is expected to end in early 2020. OLI disseminated a variety of training and educational materials, reaching millions of people through in-person, online, and social media outreach. During FY 2019, OLI funded rail transit safety awareness campaigns at 10 transit agencies (a list of agencies can be found at <https://oli.org/about-us/passenger-rail-safety/>), maintained a website with materials for transit safety campaigns accessible at <https://oli.org/rail-safety/transit-materials>, held the 3rd Annual Rail Safety Week, and published reports on rail transit safety, including Best Practices for Rail Transit Safety Education ([https://s3.us-east-2.amazonaws.com/downloads.oli.org/Passenger+Rail+Safety/OLI\\_TransitGrantReport\\_FINAL.pdf](https://s3.us-east-2.amazonaws.com/downloads.oli.org/Passenger+Rail+Safety/OLI_TransitGrantReport_FINAL.pdf)). OLI also presents on rail transit safety to a variety of audiences, which directly supports the goal of disseminating safety information to the public and benefits both individuals and transit agencies by increasing awareness of safe behavior.

**FTA Funding:** \$350,000

**Title:** *Mobility on Demand (MOD) Technical Assistance and Outreach Support*

**Recipient:** Intelligent Transportation Society of America (ITSA)

**Project Description:**

The purpose of this program is to provide targeted support to transit agencies, local governments, and vendors involved in MOD services.

**Results:**

This program was initially awarded in November 2016 and will end in early 2020. In FY 2019, the program produced newsletters and a toolkit, held a meeting, and helped promote the results of MOD projects. Services included conventional peer-to-peer car and bikeshare, conventional and on-demand rideshare, public-private partnerships with Transportation Network Companies (TNCs), and microtransit. Through this program, FTA developed a greater understanding of the opportunities, trends, and impacts of MOD services on regions, transit agencies, and communities across the nation. It also facilitated dialogue among the U.S. government, transit agencies, and MOD service providers.

**FTA Funding:** \$585,000



**Title: *National Aging and Disability Transportation Center (NADTC)*****Recipient:** Easter Seals, Inc.**Project Description:**

NADTC is a partnership between Easter Seals and the National Association of Area Agencies on Aging (n4a). Its purpose is to promote the mobility of people with disabilities and older adults, ensuring that public transportation supports independent living in communities. The Center provides training, technical assistance, best practice resources, partnerships with other national centers and industry organizations, and seed funding for targeted local projects.

**Results:**

The multi-year technical assistance program was initially awarded in September 2015 and is expected to operate through late 2020. NADTC was awarded \$4,400,000 from previous fiscal years and received an additional \$2,500,000 from FY 2019 appropriations. Activities in FY 2019 included launching online courses, holding webinars, providing targeted technical assistance, publishing a newsletter, and developing useful resources.

NADTC's activities achieved broad outreach in FY 2019. Approximately 550 people participated in NADTC online courses and webinars, and more than 1,400 attended conference presentations given by NADTC staff from January–June 2019. From January–June 2019, there were more than 7,500 downloads of NADTC documents, webinars, and other resources from the NADTC website at <https://www.nadtc.org/>.

**FTA Funding:** \$6,900,000**Title: *National Center for Mobility Management (NCMM)*****Recipient:** Community Transportation Association of America (CTAA)**Project Description:**

NCMM is a partnership among CTAA, the American Public Transportation Association (APTA), and Easter Seals, Inc.. It supports communities and mobility management professionals in developing and implementing transportation strategies that improve access to essential destinations for all community residents, including older adults, people with disabilities, and low-income individuals and families.

**Results:**

In FY 2019, NCMM completed the last year of its initial five-year agreement (NCMM I initially began in May 2013 and ended in December 2018) and began the initial year of its second five-year agreement (NCMM II began in March 2019 and is expected to end in early 2020). Relevant activities for NCMM in this reporting period included issuing planning grants, holding webinars and information sharing sessions, developing training, developing useful materials/guides, and providing technical assistance. NCMM helped train mobility management practitioners on emerging technology and service models that increase mobility.

**Project/Program Evaluation:**

NCMM uses an external evaluator to measure its achievement of project objectives on a quarterly and annual basis. As noted in the independent evaluation conducted between July 2018 and June 2019, 78–95% of respondents who had received technical assistance indicated that the assistance was timely, accurate, useful, and relevant to their work. In addition, there was a 33% increase in downloads of NCMM-written briefs from the previous year, and 96–100% of respondents who had attended NCMM in-person training indicated that training was accurate.

**FTA Funding:** \$2,500,000

**Title:** *Predicted vs. Actual Studies*

**Recipient:** Connecticut Transportation Group (CTG), Inc.

**Project Description:**

The goal of this project is to examine the accuracy of the predictions of project scopes, capital costs, transit service levels, operating and maintenance costs, and ridership made by project sponsors during the planning and development of proposed transit capital projects. FTA uses the predictions to support the evaluation, rating, and recommendations for each project proposed for funding through the Capital Investment Grants (CIG) program.

**Results:**

This project was awarded in September 2017 and is expected to end in early 2020. CTG developed an overall analysis framework focused on 21 New Starts projects funded through the CIG program that determined the impact these projects have on transit services and ridership, evaluated the consistency of predicted and actual project characteristics and performance, and identified differences between predicted and actual outcomes. These New Starts projects

are described on FTA's public website at <https://www.transit.dot.gov/before-and-after-studies>.

**FTA Funding:** \$300,000

**Title:** *Transit Research Analysis Committee (TRAC)*

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

**Project Description:**

TRAC is an interdisciplinary committee of experts from industry, academia, and the private and public sectors that provides independent recommendations 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:**

The current project was awarded in June 2018 and concludes in mid-2020. TRAC met during FY 2019 as part of a joint meeting with the Research and Technology Coordinating Committee (RTCC), a sister committee to TRAC that provides advice to the Federal Highway Administration (FHWA). The two groups reviewed joint research efforts involving the highways and transit.

**FTA Funding:** \$1,725,000

**Title:** *Simplified Trips-on-Project Software (STOPS) – Accessibility and Mobility Impacts*

**Recipient:** Resource Systems Group, Inc.

**Project Description:**

STOPS software uses readily-available General Transit Feed Specification (GTFS) data to describe detailed zone-to-zone transit services for a region. These data represent the most detailed and accurate representation of the transit operations available. A natural extension of STOPS' existing capabilities is to use GTFS data and STOPS ridership forecasting models to calculate mobility improvements. The resulting mobility benefits from the enhanced version of STOPS are more accurate and significantly faster to obtain than traditional regional forecasting model approaches.

**Results:**

This program started in December 2016 and is expected to end in early 2020. In FY 2019, this project expanded the current capabilities of FTA's STOPS package to quantify the mobility benefits of a planned or implemented transit investment or transit service change. Specifically, STOPS enhanced project planning, enhanced oversight of CIG forecasts, and improved understanding of the impacts of CIG projects.

**FTA Funding:** \$199,713

**Title:** *Transportation Capacity Building Program (TCBP)*

**Recipients:** The Volpe Center

**Project Description:**

The purpose of this program and the related performance-based planning roundtables is to bring metropolitan planning organizations (MPOs), transit agencies, and State DOTs together to discuss how to implement requirements within their specific region and to share best practices and local experiences. The goal is to provide technical assistance and training to states, transit agencies, and MPOs to implement the performance-based planning requirements described in Federal Public Transportation Law (49 U.S.C. § 5303, 5304, 5305).

**Results:**

This program started in September 2018 and ended in October 2019. FTA and FHWA jointly undertook a new round of training and technical assistance activities using TCBP resources fielding workshops and developing technical assistance resources. Based on this effort, state DOTs, MPOs, and transit providers are more prepared to establish performance targets for transit asset management and safety and to work with their local MPOs to develop Metropolitan Transportation Plans and Transportation Improvement Programs that reflect a performance-based planning process.

**FTA Funding:** \$100,000

**Title: *National Public Transportation/Transit-Oriented Development (TOD) Technical Assistance Initiative***

**Recipient:** Smart Growth America (SGA)

**Project Description:**

The TOD Technical Assistance Initiative provided technical assistance to improve access to public transportation and employment with a focus on economic development and innovative financing.

**Results:**

The project was awarded in September 2015 and ended in FY 2019. Key results for FY 2019 included public outreach, research analysis, and holding a summit and a technical tour.

**FTA Funding:** \$2,000,000

## Standards Development

FTA provided funding for the development of voluntary and consensus-based standards and best practices by 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 supports FTA in collecting information required to develop transit standards by identifying and suggesting new or revised voluntary standards, guidelines, and best practices.

**Results:**

The program was awarded in September 2016 and will end in late 2021. In FY 2019, the program conducted research and analysis in safety areas recommended by the National Transportation Safety Board (NTSB) and provided a mechanism for FTA to engage closely with stakeholders, standards development organizations (SDOs), and industry standards working groups. The program produced internal reports that help to guide and support FTA's safety program.

**FTA Funding:** \$6,500,000

**Title:** *Transit Standards Development Program – APTA***Recipient:** American Public Transportation Association (APTA)**Project Description:**

This project supports FTA in its leadership role to coordinate with the transit industry and SDOs to develop and maintain voluntary standards and best practices to help improve the performance, reliability, efficiency, and safety of transit systems.

**Results:**

The project was awarded in September 2017 and is expected to end in early 2020. In FY 2019, APTA reviewed and updated 33 of 77 standards documents. This includes a new standard, defined as a recommended practice in the area of Inward-Outward Facing Cameras for Rails, published in April 2019, accessible at <https://www.apta.com/research-technical-resources/standards/rail/>. APTA worked with multiple working groups of transit stakeholders who reviewed, commented, updated, and approved standards documents for publication.

**FTA Funding:** \$1,000,000

## Human Resources and Training

This section reviews the results of FTA-funded projects that addressed human resource needs as they apply to public transportation activities. This includes a discussion of the training activities of the National Transit Institute.

**Title:** *National Transit Institute (NTI)***Grantee:** Rutgers University**Project Description:**

Federal Public Transportation Law (49 U.S.C. § 5314(c)) authorizes FTA to fund the National Transit Institute (NTI) at Rutgers University to develop and conduct instructor-led 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 advertises, develops, and delivers high-quality courses across the country in partnership with regional transit agencies, state DOTs, municipal governments, MPOs, and state and national transit-related associations. NTI plans and develops its work in close alignment with FTA's respective offices and with the public transit industry. This planning approach ensures that NTI courses and activities are tied to FTA's strategic goals and address the training needs of the public transit industry.

**Results:**

In FY 2019, NTI delivered 272 training courses throughout the U.S. to 8,010 participants at an average cost per course of approximately \$16,845 and an average cost per participant of approximately \$572, below the average annual expenditure per adult learner of around \$800 and the average cost per college credit hour of \$594.46. At the end of FY 2019, NTI delivered a total of 6,824 courses and had 194,485 total participants. NTI continues to significantly enhance the public transportation industry by offering high-quality courses and educational programs while serving as a highly efficient training partner to FTA.

**FTA Funding:** \$5,000,000

## FY 2015 Innovative Transit Workforce Development (ITWD) Projects

In October 2015, FTA awarded funding to sponsors of FY 2015 Innovative Transit Workforce Development (ITWD) projects. Previously-awarded workforce grants were completed. In FY 2019, 8 of the 11 remaining FY 2015 ITWD projects were completed, leaving 3 projects active. It is expected that all projects will be completed in FY 2020.

FTA established seven priorities for the FY 2015 ITWD projects:

1. Targeting areas with high rates of unemployment.
2. Helping local communities benefit directly from employment opportunities created by the construction and operation of new transit capital projects or other public transportation activities within their region.
3. Providing career pathways that support the movement and employment of traditionally disadvantaged communities or those who were under-represented in transit and transit construction.
4. Helping to increase target recruitment of minorities, including Tribal citizens, women, veterans, returning citizens, persons with disabilities, and low-income individuals.
5. Addressing gaps in job areas in which current or projected workforce shortages in fields related to public transportation exist.
6. Pre-employment training/preparation/tracking.
7. Recruitment and hiring.

**Table 2** Active FY 2015 Innovative Transit Workforce Development (ITWD) Projects

Project Name	Grantee Name	City and State	Investment Area*					Funds Awarded	Status in FY 2019
			1	2	3	4	5		
Workforce Development Training Program	Jersey City Employment Training Program, Inc.	Jersey City, NJ	x			x		\$604,896	Completed in FY 2019
Workforce Initiative Now! 2.0	Regional Transportation District (RTD)	Denver, CO		x				\$663,256	Completed in FY 2019
Back-2-Work!	Jacksonville Transportation Authority (JTA)	Jacksonville, FL					x	\$200,000	Active in FY 2019
Second Chance	Chicago Transit Authority (CTA)	Chicago, IL	x			x		\$750,000	Active in FY 2019
Integrating Career Pathways in Public Transportation: Rail Car Maintenance and Beyond	International Transportation Learning Center	Silver Spring, MD		x			x	\$750,000	Completed in FY 2019
Signaling Career Pathways: Putting Veterans and Women on Track and Advancing Signals Technicians Grantee	International Transportation Learning Center	Silver Spring, MD		x			x	\$574,182	Completed in FY 2019
Career Pathways Program	Greater Cleveland Regional Transit Authority (GCRTA)	Cleveland, OH		x				\$407,780	Completed in FY 2019
Nation-2-Nation (N2N) Automotive University	Grand Gateway Economic Development Association (EDA)	Big Cabin, OK	x			x		\$399,933	Completed in FY 2019
Institute for Advanced Transportation Technology Training (IATTT)	Los Angeles Trade-Technical College	Los Angeles, CA				x		\$750,000	Completed in FY 2019
Skilled Laborer Job Training Program	Niagara Frontier Transportation Authority	Buffalo, NY				x		\$303,000	Active in FY 2019
Village Vans Program	Intercity Transit	Olympia, WA				x		\$200,000	Completed in FY 2019
<b>Total Active FY 2015 Projects</b>							<b>\$5,603,047</b>		

\* Types of Workforce Development grants:

1. New Entrants (e.g. veterans, women, re-entrants, etc.)
2. Incumbent Worker Training (e.g., frontline (bus/rail operators), supervisors/managers, etc.)
3. Youth Engagement & Outreach
4. Internship, Apprenticeship, Work-Based Skills Training or New Technology Training
5. Curriculum Development



In FY 2019, FTA sponsored the Innovative Transit Workforce Development Program: Key Lessons Learned report, accessible at <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/133661/innovative-transit-workforce-development-program-key-lessons-learned-ftareportno0139.pdf>. The report showcases lessons learned from the FY 2015 ITWD projects and prior ITWD projects.

In addition to the summary report, a workforce grants evaluation was finalized for the FY 2015 ITWD projects. The evaluation found that those ITWD projects focused primarily on new entrants to transit, including skills and leadership or supervisory training. Based on the evaluation, the conclusions and implications were as follows:

- The projects met and often exceeded their goals.
- The program was successful in identifying promising approaches for workforce development.
- Transit, workforce, and education together made very strong partnerships.
- Established projects offered a safe route to outcomes.
- Pre-apprenticeship programs must be flexible to accommodate transit construction.
- Employees should be included early in recruitment and training projects.
- Applicants needed to better define outcomes and metrics.
- Support is critical when expanding the talent pool to disadvantaged or under-represented populations.
- Participant selection was critical to project outcomes.

The evaluation used the same criteria used to assess FY 2011 (<https://rosap.ntl.bts.gov/view/dot/39029>) and FY 2012 (<https://www.transit.dot.gov/research-innovation/innovative-transit-workforce-development-projects-2012-summative-evaluation>) workforce projects.

## Active Projects in FY 2019

Below is detailed information on active projects in FY 2019, including the title of the project, grantee, project description, relevant results, and FTA funding amount.

**Title:** *Workforce Development Training Program*

**Recipient:** Jersey City Employment Training Program, Inc. (JCETP)

**Project Description:**

JCETP operated an evidence-based re-entry program in close partnership with the Hudson County Department of Corrections Community Reintegration Program. It provided wrap-around case management services, sober housing,

connection to insurance and benefits, substance abuse treatment, and therapy from licensed onsite social workers. JCETP developed the Workforce Development Training Program to address the shortage of trained workers needed for massive ongoing regional transportation and infrastructure projects.

**Results:**

JCETP started the Workforce Development Training program in November 2015, and it was closed in December 2018. JCETP reached 700 people with its outreach and orientation sessions. It reached out to major building trades, transportation, and construction-related companies, held a series of meetings with transit agencies such as New Jersey Transit, and sponsored a series of job fairs. Through the outreach efforts, JCETP enrolled 469 individuals who met the program's requirements, including returning citizens and individuals in transition from incarceration to society. Reintegrating returning citizens prevents unnecessary costs for the correctional system, healthcare systems, social safety nets, and taxpayers.

**FTA Funding:** \$604,896

**Title:** *Workforce Initiative NOW (WIN) 2.0!*

**Recipient(s):** Regional Transportation District (RTD), Denver

**Project Description:**

WIN 2.0 expanded upon Denver's highly successful FY 2011 WIN project. Drawing on a network of 58 local partners, the program successfully capitalized on investments in public transportation infrastructure to generate high-quality employment and training opportunities for local area residents. As RTD approaches completion of several major transit projects, jobs in operations and maintenance are expected to be in high demand.

**Results:**

The project started in October 2015 and closed in September 2019. WIN had 347 participants enrolled during WIN 2.0 activities. There were 139 craft or transit operations positions created for FasTracks expansion projects such as the North Metro Rail Line, the Southeast Extension, and the Civic Center Station project, with an average starting wage of \$17.21. The total number of new placements was 431. The WIN program had a 90-day retention rate of at least 90% for its new hires.

**FTA Funding:** \$663,256

**Title:** *Back-2-Work!***Recipient(s):** Jacksonville Transportation Authority (JTA)**Project Description:**

The Back-2-Work! program ties workforce needs with major construction project bids. JTA will fund more than \$100 million for 27 transportation projects over a 5-year period as part of its Mobility Works Initiative, with staff working with prime contractors to develop a listing of subcontractor and labor opportunities and addressing Disadvantaged Business Enterprise (DBE) goals. By working with strategic partners such as the Florida Small Business Development Center, Jacksonville Job Corps, and Duval County Public Schools, this innovative program helps workers and small business owners from minority communities gain training that will enable them to better provide their services to the transit industry and address the workforce needs for major transportation construction projects. Each prime contractor bidding on transportation projects must develop a required workforce utilization program, which enables them to bid on future transit construction projects.

**Results:**

JTA started the Back-2-Work! project in October 2015 and completed it in February 2019. JTA trained 150 participants and a total of 270 small and disadvantaged business partners benefiting from the program. Back-2-Work! enabled 125 participants to obtain employment with contractors, with 75 retained after 90 days (exceeding the goal of 55). Back-2-Work! provided employment services and assistance to approximately 125 participants (exceeding the goal of 98). An additional 185 individuals/participants and business owners received small business training (exceeding the goal of 150).

**FTA Funding:** \$200,000**Title:** *Second Chance***Recipient(s):** Chicago Transit Authority (CTA)**Project Description:**

This grant expands CTA's currently-existing Second Chance program, which provides individuals who face barriers to employment, such as ex-felons, abuse survivors, and the homeless, with an opportunity to obtain full-time, temporary employment and training through 265 CTA bus and rail car servicer positions. This nationally-recognized program is a 12-month program designed to provide participants with job skills training, real-life work experience, and career coaching to assist them in reaching their goal of self-sufficiency through

permanent employment. CTA's Second Chance Priority Careers Program provides participants with the opportunity to acquire certificates of completion from recognized programs through a partnership with City Colleges of Chicago, including the Customer Service for Transit Professionals and Basic Mechanical Skills training programs. Other certifications eligible to program participants include FEMA's Incident Command System 100 (ICS 100) certification, OSHA 10-HR General Industry Certification, State of Illinois Department of Motor Vehicles Commercial Driver's License Permit (CDLP) credentials, and many more. Partnerships with 14 local social services agencies ensure that enrollees receive the support they need on the way to self-sufficiency.

**Results:**

The Second Chance Priority Careers Program started in August 2015 and is expected to end in mid-2020. As of August 2019, CTA had enabled 278 participants to participate in the program's expansion, and 241 successfully completed training in fields such as maintenance, operations, and customer service. Second Chance provided permanent frontline and entry-level transit jobs at CTA for 95 program participants in positions including bus servicers, rail car servicers, rail car repairers, customer service representatives, and bus operators, and another 15 found employment elsewhere. The training program has a 91% success rate.

**FTA Funding:** \$750,000

**Title:** *Integrating Career Pathways in Public Transportation: Rail Car Maintenance and Beyond*

**Recipient(s):** International Transportation Learning Center (ITLC)

**Project Description:**

The goal of this project was to enable ITLC to integrate two sets of training initiatives in rail car maintenance to create and connect two related but often disconnected pathways activities—pre-employment education and post-employment training. Building on the Transit Core Competencies Curriculum (TC3) that prepares participants with the skills needed to start a career in transit, ITLC added higher levels of technical training in the Rail Car Training Consortium.

**Results:**

This project started in October 2015 and ended in November 2018. The recipient surveyed 16 participating transportation agencies to identify their training needs, core locations, and partners. As of 2018, 17 courses were developed in critical areas such as heating, ventilation and air conditioning (HVAC), propulsion, and dynamic braking. Nine courses were pilot tested on

60 participants, with an average of 40% learning gains on pre-test/post-test assessments. The courses are available to all partnering transit agencies. In addition, two apprenticeships were developed at participating agencies. In total, there were 182 training participants at a cost of approximately \$4,120 per participant, reflecting the depth and extensive set of courses.

**FTA Funding:** \$750,000

**Title:** *Signaling Career Pathways: Putting Veterans and Women on Track and Advancing Signals Technicians Grantee*

**Recipient(s):** International Transportation Learning Center (ITLC)

**Project Description:**

This project addressed the need for highly-skilled signals technicians by enhancing existing Signals Training coursework and developing new training courses through a consortium of agency and union partners. ITLC recruited women and veterans for these courses to address public transportation's need for highly-skilled signals technicians and enhance workforce diversity.

**Results:**

This program started in September 2015 and ended in November 2018. ITLC and the consortium partners developed 26 signals training courses and piloted 13 with 89 participants to allow agencies to test and identify needed changes. ITLC reported pre-test/post-test skill gains of 80% in these pilot tests. In addition to courseware, ITLC's Veterans Task Force created a Veterans Outreach and Skills Guide and a Women's Toolkit that were distributed to consortium members. ITLC directly assisted 150 individuals but trained a total of 97 participants at an approximate cost of \$5,919 per participant, thereby reflecting the depth and extensive set of courses.

**FTA Funding:** \$574,182

**Title:** *Career Pathways Program*

**Recipient(s):** Greater Cleveland Regional Transit Authority (GCRTA)

**Project Description:**

Faced with retirements and the lack of a skilled workforce of qualified candidates, GCRTA created the Career Pathways Program (CPP) to provide economic growth for Greater Cleveland residents. CPP was designed for new transit entrants and focused on low-income, minority, veteran, and female recruits and

builds a pathway to long-term transit careers in four ways: (1) introduction of career opportunities to frontline worker positions, (2) hiring college students as interns, (3) developing recent college graduates in a Management Development program, and (4) enhancing skill development for existing middle managers. Upon completion of these programs, GCRTA offered internships and on-the-job training to prepare successful participants for careers at the agency.

**Results:**

This program started in September 2015 and ended in August 2019. In total, 146 participants were trained, with 32 completing mechanical and electronic repair training provided through Cuyahoga Community College and 24 completing 12-week internships. Of the participants selected for the training, 89 obtained employment. GCRTA assisted 152 individuals at a cost of \$2,683 per participant, with 110 obtaining full-time employment.

**FTA Funding:** \$407,780

**Title:** *Nation-2-Nation (N2N) Automotive University*

**Recipient(s):** Grand Gateway Economic Development Association (EDA)

**Project Description:**

The Grand Gateway EDA established the N2N Automotive University in partnership with the Eastern Shawnee Tribe of Oklahoma. N2N University, through its specialized automotive repair training and CDL driver training, was designed to attract students to the transportation and automotive service industries through a fast-track job certification program. This program included on-the-job training, job placement, and business development services made available through sponsorships of workforce programs with tribal nations and social services as well as outreach to potential students. The goal was to create career opportunities and training for tribal members in the public transportation and automotive services industries. The N2N program is the first automotive and CDL vocational training program in Indian Country that accepts students with no high school equivalency or required college entrance exam.

**Results:**

N2N University launched in October 2015, became fully operational in late 2017, and ended in May 2019. The project successfully launched the automotive program, service advisory training, compressed natural gas (CNG) training, and CDL/Transit Driver program with each offering fast-track job certifications. The development of these courses helped N2N create training and career opportunities for Native American program participants. Overall, 44 individuals were reached through outreach and orientation and 39 were trained and

obtained employment at a cost per direct participant of \$4,307 due to the training and support services provided to each person who entered the program and the hands-on nature of the training.

**FTA Funding:** \$399,933

**Title:** *Institute for Advanced Transportation Technology Training (IATTT)*

**Recipient(s):** Los Angeles Trade-Technical College (LATTC)

**Project Description:**

This project, also known as the Transportation Workforce Institute: A New Workforce Training Model (TWI), was the first institute of its kind established at a community college and focused on workforce development for middle-skill occupations in the transportation industry. TWI, affiliated with a community college, acted as an incubator to pilot innovative ideas, develop a competency-based curriculum, and garner support to take these and other workforce development activities to scale. The project's overall aim was to create an institute designed to meet the specific capacity challenges of community colleges, which trained the majority of workers in the transportation and transit industries.

**Results:**

This project started in September 2015 and ended in April 2019. TWI developed the Transportation Youth Academy (TYA) to increase high school student awareness of the transportation industry and career opportunities while gaining fundamental technical and teamwork skills. A total of 47 students participated, with 84% rating their experience in the academy as a 4 or 5 on a scale of 1 to 5 (1 = poor and 5 = excellent). In addition, a TYA toolbox was developed and serves as a resource for students and educators who would like to implement similar programming. The toolbox can be found at <http://twi.lattc.edu/tya/>. The incumbent workforce training series, part of the LA Metro apprenticeship program, consisted of a one-week orientation and 15 training modules with lecture and practical lab or field exercises. Thirty incumbent workers at Metro completed the apprenticeship program to be promoted to Maintenance Specialists, with their average salaries increasing from \$33.21 per hour to \$40.80 per hour. Through its outreach efforts and strategy, TWI introduced 1,802 individuals to various career options in transportation, trained 154 incumbent workers, 30 of whom were Metro employees in the Joint Apprenticeship Committee (JAC) program, and held 12 additional incumbent worker training offerings. A total of 2,225 individuals were trained at a cost per direct recipient of \$302.

**FTA Funding:** \$750,000

**Title: *Skilled Laborer Job Training Program*****Recipient(s):** Niagara Frontier Transportation Authority (NFTA)**Project Description:**

The Skilled Laborer Job Training Program recruited, trained, and provided career pathways for traditionally underserved populations and semi-skilled incumbent NFTA workers in areas such as industrial electricity, programmable logic controls, mechanical drives, hydraulics, pneumatics, sheet metal, pipefitting, welding, machining, and CDL bus training. The Skilled Laborer Job Training Program addressed current and pending skilled-job vacancy and diversity issues at NFTA.

**Results:**

This training program started in February 2016 and is expected to end in early 2020. The program trained six groups in the areas of electricity, hydraulics, pneumatics, machining, mechanical drives, pipefitting, welding, CDL bus training, and OSHA safety. An NFTA training bus was retrofitted as a mobile classroom to assist in teaching lower-skilled applicants and employees to work on a vehicle in a controlled environment to improve their mechanical skills. The program sponsored 50 participants through the first six training groups, 48 of whom completed the 18-week training program. A total of 13 participants who completed the training had obtained employment as of June 2018.

**FTA Funding:** \$303,000**Title: *Village Vans Program*****Recipient(s):** Intercity Transit**Project Description:**

The Village Vans Program addressed barriers faced by low-income job seekers related to transportation and provided job training and work experience to individuals interested in transportation-related careers. Intercity Transit created the program and partnered with WorkSource Thurston County, the Pacific Mountain Workforce Development Council, and the Washington State Department of Social and Human Services. Participants are selected for training as volunteer drivers and/or administrative assistants for the program or as clients who use the service. Three vans are used to operate transportation services for clients and their dependents to reach jobs, job search activities, employment training, or other employment support destinations, such as child care, medical appointments, etc., that would be difficult or impossible for them to access otherwise.



**Results:**

This project started in September 2015 and ended in September 2018. More than 2,075 trips transported clients and their families to job interviews, work, school and daycare; 39 volunteer drivers were trained to provide rides for employment support, and 7 participants had achieved employment as of March 2019. In addition, Village Vans staff attended 13 meetings and forums with strategic partners who were instrumental in getting volunteer drivers interested in job training and clients that need rides to jobs together. More than 3,100 potential drivers and riders were reached through Village Vans' strategic partnerships.

**FTA Funding:** \$200,000

SECTION  
2

## Frontline Workforce Development Program Trends and Next Steps

Federal Public Transportation Law (49 U.S.C. § 5314(b) (2)(E)) requires the Secretary of Transportation to make publicly available a report on the Frontline Workforce Development Program 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.

FTA plans to release a new solicitation for technical assistance to agencies for workforce development projects in calendar year 2020. One objective of the project will be to respond to the three recommendations made by the Government Accountability Office (GAO) in its report *Transit Workforce Development: Improved Strategic Planning Practices Could Enhance FTA Efforts* (GAO-19-290). The report, accessible at <https://www.gao.gov/assets/700/697562.pdf>, recommends that FTA:

1. Determine if additional transit workforce data are needed to identify potential future occupational shortages in the transit industry.
2. Develop and document a strategy that outlines how FTA will help address future transit workforce needs.
3. Develop and document clearly defined performance goals and measures for its transit workforce development efforts.

FTA is also continuing activities that support frontline workforce development through specific projects with NTI. In December 2018, NTI held an “Advancing Transit Frontline Workforce Development” meeting that gathered input from more than 75 individuals representing the public transportation industry and labor union organizations and identified major issues and trends relating to frontline worker training. During the two-day meeting, participants held discussions in three key aspects of the workforce development life cycle: attract/recruit, develop, and retain. In addition, many ideas were shared on the strategies, best practices, and recommended action items to take at the national, state, and regional levels to address transit workforce challenges. NTI developed FTA Report No. 0154, *Advancing Frontline Workforce Development Meeting: Synthesis*, capturing the findings of the frontline workforce needs as experienced by the transit industry discussed in the two-day meeting. The report was published by FTA in February 2020 and is available to the public at <https://www.transit.dot.gov/research-innovation/advancing-frontline-workforce-development-meeting-synthesis-report-0154>.

NTI is now in Phase Two of the Training & Workforce Needs Assessment Transit Industry Survey. Phase One gathered initial feedback on the creation of a survey via conferences. Phase Two commenced with the release of the NTI Training and Workforce Needs Assessment Transit Industry Survey on May 20, 2019, which was distributed to 10,782 unique addresses and received 1,720 responses from all 50 states, plus the District of Columbia and U.S. territories. NTI interviewed 33 individuals representing 21 organizations as key stakeholders. All data gathering revealed insights on skill gaps, recruitment, and retention issues. NTI is working on finalizing the report summarizing the survey results.

### Emerging Workforce Trends – Transit Automation Workforce Needs

Since the publication of the FTA Strategic Transit Automation Research (STAR) Plan in January 2018, FTA embarked on a plan to conduct research in the areas of safety and security, operations and economics, passenger experience, and policy associated with fielding transit automation. The STAR Plan developed a road map that not only provides suggested projects and investments in transit automation, but looks at the impacts of automation on the transit workforce.

SECTION

3

## FY 2020 Expected Activities and Program Planning Process for Technical Assistance and Workforce Development Allocations

FTA was appropriated \$14 million for technical assistance and workforce development projects for FY 2020. Of those funds, \$5 million is for the statutorily-required NTI program and \$9 million is available for technical assistance, standards development, human resources, and frontline workforce development projects. FTA will plan activities in compliance with the Further Consolidated Appropriations Act, 2020 (P.L. 116-94).

## Acronyms and Abbreviations

ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
CTAA	Community Transportation Association of America
FAST	Fixing America's Surface Transportation Act
FTA	Federal Transit Administration
ITSA	Intelligent Transportation Society of America
JARC	Job Access and Reverse Commute
MOD	Mobility on Demand
NADTC	National Aging and Disability Transportation Center
NAS	National Academy of Sciences, Engineering, and Medicine
NCMM	National Center for Mobility Management
OLI	Operation Lifesaver, Inc.
SDO	Standards Development Organizations
TCRP	Transit Cooperative Research Program
TOD	Transit-oriented Development
TRACS	Transit Advisory Committee for Safety
TRB	Transportation Research Board
TRI	FTA Office of Research, Innovation and Demonstration
TRIS	Transportation Research Information Services
DOT	U.S. Department of Transportation



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