



FEDERAL TRANSIT ADMINISTRATION

FTA Annual Report on Technical Assistance and Workforce Development for FY 2018

FEBRUARY 2019

FTA Report No. 0132
Federal Transit Administration

PREPARED BY
Federal Transit Administration



U.S. Department of Transportation
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

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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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13. ABSTRACT This statutorily required annual report provides information on FY 2018 technical assistance, standards, human resources, and training projects as authorized by Federal public transportation law (49 U.S.C. § 5314). The primary goal for projects in Technical Assistance and Workforce Development is to improve public transportation. The report also includes information on FTA's process for making upcoming allocations for FY 2019.			
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U.S. Department
of Transportation

**Federal Transit
Administration**

Dear Colleague:

I am pleased to provide the Federal Transit Administration's (FTA) Annual Report on Technical Assistance and Workforce Development for FY 2018 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.

In FY 2018, FTA's active projects in these eligible areas totaled \$30,913,595. The summary of funding in each major area is: \$13,104,713 (42%) for projects providing technical assistance; \$4,500,000 (15%) for standards development; \$8,308,882 (27%) for workforce projects; and \$5,000,000 (16%) for the training activities of the National Transit Institute (NTI).

These projects and programs funded by FTA improved public transportation in the United States and aligned with the Department of Transportation's strategic goals to further innovation, promote safety, and invest in infrastructure to stimulate economic growth. Examples of the impacts of these projects included helping agencies innovate to increase mobility for older adults and persons with disabilities; and developing standards that improved public transportation safety. This report provides descriptions for each project and lists outcomes and impacts. Technical assistance activities enhanced FTA mobility on demand sandbox grantees' ability to develop and deploy innovations. FTA's standards project expanded systemic safety approaches to improve worker, rider, and pedestrian safety. FTA's workforce grantees led projects to promote economic competitiveness through workforce development.

FTA is proud of the accomplishments of these projects, and how they advanced efficient and effective public transportation for America's communities. I hope this report demonstrates the significant value of these important programs. Thank you for your continued support of a viable and robust public transportation system.

Sincerely,

A handwritten signature in blue ink, reading "K. Jane Williams".

K. Jane Williams
Acting Administrator

Abstract

This annual report to Congress provides information on Fiscal Year (FY) 2018 technical assistance, standards development, human resources, and training projects as authorized under Federal public transportation law (49 U.S.C. § 5314) – the FTA Technical Assistance and Workforce Development Program. The primary goals for these projects are to more effectively and efficiently provide public transportation service, and to improve public transportation. The report includes a section on frontline workforce and discusses expectations and processes for allocating funding for FY 2019. In FY 2018, FTA's active technical assistance, standards development, training and workforce development projects totaled \$30,913,595. This report includes descriptions and key results for all projects that were active in FY 2018.

EXECUTIVE SUMMARY

This report provides information on projects active during Fiscal Year (FY) 2018 as authorized by Federal public transportation law (49 U.S.C. § 5314) Technical Assistance and Workforce Development. This section of the law authorizes four major types of eligible projects: 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 2019 funding.

In FY 2018, FTA's active technical assistance, standards development, human resources/workforce, and training projects totaled \$30,913,595, including FY 2018 and prior year funds, as shown in Table I. The percentage allocations across the eligible areas are \$13,104,713 (42%) for projects providing technical assistance; \$4,500,000 (15%) for standards development activities; \$8,308,882 (27%) for workforce projects; and \$5,000,000 (16%) for the National Transit Institute (NTI) as displayed in Figure I.

In FY 2018, FTA received the yearly authorized Highway Trust Fund (HTF) appropriation of \$9 million, and an additional \$5 million in general fund (GF) appropriations for other discretionary projects. Of the \$9 million in HTF funds, \$5 million continued the NTI statutory program, and \$4 million was allocated to technical assistance and standards projects. The additional \$5 million is targeted to technical assistance and standards activities that advance public transportation for America's communities, and maintain a world-class public transportation system with access and mobility for all.

Table 1 Projects Active by Functional Area, Authorized by Federal Public Transportation Law (49 U.S.C. § 5314)

Program/Project Name	Eligible Activities *											Amount
	Technical Assistance (TA)								Std*	HT**		
	1	2	3	4	5	6	7	8	9	10	11	
National Aging and Disability Transportation Center (NADTC)	x	x	x									\$3,950,000
National Center for Mobility Management (NCMM)		x	x									\$3,300,000
Transit-Oriented Development (TOD)								x				\$3,000,000
Mobility on Demand (MOD) Technical Assistance and Outreach Support	x	x	x									\$585,000
Transportation Research Board Core Program Support								x				\$250,000
Transit Research Analysis Committee (TRAC)						x		x				\$200,000
Evidentiary Protection of Transit Safety Program Information Study								x				\$600,000
Transit Advisory Committee for Safety (TRACS)						x		x				\$175,000
Safety Awareness Technical Assistance								x				\$350,000
Simplified Trips-on-Project Software (STOPS) – Accessibility and Mobility Impacts				x	x							\$199,713
Transportation Capacity Building Program (TCBP)				x	x							\$100,000
Performance-Based Planning Technical Assistance: A Report to Congress				x	x							\$75,000
Transportation Research Board (TRB) Conference on Transportation Asset Management 2018								x				\$20,000
Multimodal Public Transportation System Connectivity Performance Measures					x							\$300,000
Transit Standards Development – Center for Urban Transportation Research (CUTR)									x			\$3,500,000
Transit Standards Development – American Public Transportation Association (APTA)									x			\$1,000,000
National Transit Institute											x	\$5,000,000
FY 2015 Innovative Transit Workforce Development Projects										x		\$8,308,882
TOTAL												\$30,913,595

* Eligible Functional Areas as authorized by Federal public transportation law (49 §U.S.C. 5314 (a) (1) (A) (B) and (2) (A-I))

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 Bus Driver Safety
7. Meet Buy America and Rolling Stock Purchases Requirements
8. Other technical assistance activity that advances the interests of public transportation

***STANDARDS (Std)**

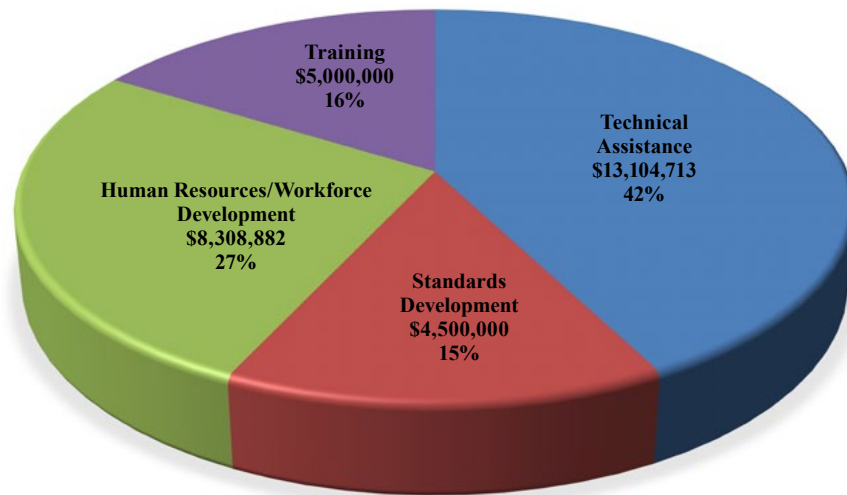
9. Standards

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

10. Human Resources
11. Training

Figure 1

*Percentage Allocations for
FY 2018 Active Projects
Across Eligible Areas as
Authorized by Federal Public
Transportation Law (49
U.S.C. § 5314)*



FTA continued to effectively and efficiently provide public transportation service and to improve public transportation through these active projects in accordance with the Department of Transportation's (USDOT) strategic goals of innovation, safety, and infrastructure. FTA awarded projects to academic institutions, public transportation associations, non-profit organizations, public transportation agencies, and other organizations in various public transportation disciplines. This mix of grantees with specific expertise in key functional areas ensures a spectrum of perspectives and collaboration that enhances the efficacy of technical assistance, workforce, standards development, and training projects.

In this report, FTA notes outcomes and impacts from these projects, and how they furthered strategic goals. FTA's standards activities promote systemic safety approaches with voluntary standards based on feedback from a broad consortia of industry experts. FTA's workforce grantee activities support the infrastructure goal and the commensurate strategic objective of economic competitiveness and workforce development. Across the projects, key strategies for meeting project outcomes and impacts also align with the USDOT's strategic plan strategies including building partnerships, expanding stakeholder collaboration, identifying risks, and increasing coordination across public, private, and other organizations. Projects funded by FTA continued to promote the mobility of people with disabilities and older adults, as demonstrated by the efforts by the National Aging and Disability Transportation Center (NATDC). The National Center for Mobility Management (NCMM) advanced mobility management – an innovative approach for managing and delivering coordinated transportation services to customers. FTA also provided technical assistance to improve access to public transportation and employment through economic development, by the activities of the Transit Oriented Development (TOD) Technical Assistance Project. The activities carried out by FTA in FY 2018 have a real impact on the public transportation industry and the communities it serves by providing tools for more effective and efficient public transportation service delivery.

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 on technical assistance 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 as authorized by Federal public transportation law (49 U.S.C. § 5314(a)) 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 (49 U.S.C. § 5314) for the subsequent fiscal year.
- Measurable outcomes and impacts of the programs as authorized by Federal public transportation law (49 U.S.C. § 5314(b) and (c)), Human Resources & Training and NTI, respectively.

Active Projects Results

Section I groups projects by the authorized program areas: technical assistance, standards, and training. Each description provides information on the recipient; a detailed account of each funded activity, including its purpose and goal(s); relevant project results, listing pertinent activities, measurable outcomes, and impact to the industry and the community; and the total amount funded for the project.

Technical Assistance

Technical Assistance projects promoted the mobility of older adults and people with disabilities, furthered mobility management, supported the Americans with Disabilities Act (ADA) of 1990; expanded access to human services transportation coordination; met the transportation needs of elderly individuals; increased transit ridership in coordination with metropolitan planning organizations; addressed transportation equity; and conducted other technical assistance activities necessary to advance the interests of public transportation. This report shows how these FTA investments in technical assistance furthered public transportation across our nation.

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

Recipient: Easter Seals, Inc., with subrecipient National Association of Area Agencies on Aging (n4a)

Project Description:

NADTC promoted the mobility of people with disabilities and older adults, ensuring that public transportation supports independent living in our communities. It does so by serving transportation, disability, aging, human services, and caregiving professionals. The center provides training, technical assistance, best practice resources, partnerships with other national centers and industry organizations, and seed funding for targeted local projects. The center's goals include:

1. Promoting the role of accessible transportation in economic inclusion, healthcare access, access to education, connection to recreation/leisure activities, and other life necessities for people with disabilities and older adults.
2. Increasing the effectiveness, efficiency, and quality of coordinated human service transportation activities and assisting in promoting new or enhanced coordination between public and human service transportation services.

3. Ensuring that the planning of transportation services for older adults, people with disabilities, and caregivers is done in conjunction with broader planning activities at all levels.
4. Highlighting and assisting in the development of innovative practices, program models, and new service delivery options and making best practice resources available to solve transportation challenges.

The program is a partnership of Easter Seals and the National Association of Area Agencies on Aging (n4a). This work is assisted by stakeholder review committees and evaluated by an independent program evaluator. It is conducted in close cooperation with FTA and with guidance from the Administration for Community Living of the U.S. Department of Health and Human Services (HHS). FTA recognizes that the need for accessible transportation to support independent community living is continuing to grow in the U.S. NADTC assists transportation providers who are using funding from the FTA Enhanced Mobility of Seniors and Individuals with Disabilities Program (49 U.S.C § 5310).

Results:

NADTC started in September 2015 and is expected to operate under Cooperative Agreements with FTA through December 2020. NADTC received a total of \$3,950,000 to date, not including an additional allocation of \$1,900,000 approved at the end of FY 2018. Since this amount was not obligated at the time this report was written, the funding is not included in the total funds awarded to date. Relevant activities in FY 2018 include the following:

- Online courses and mini-courses: NADTC launched online courses and mini-courses to assist in the development of innovative practices. The online course titled “On Transportation and Caregiving” was launched in November 2017, with 138 registered. This course discussed the broader human services transportation field. Information on the course is available at https://www.nadtc.org/wp-content/uploads/Dementia-Caregiving-and-Transp-Toolkit-_FINAL.pdf. The mini-course titled “Driver Safety and Transition: Understanding Shared Interests, Challenges and Opportunities for Collaboration in Supporting Transportation Independence” was held from June 8 to July 9, 2018, with 53 participants. The course topic was selected based on information gathered from Year 2 surveys, FTA guidance, and input from and key stakeholder groups. Information on the mini-course is available at <https://www.nadtc.org/event/driver-safety-and-transition-understanding-shared-interests-challenges-and-opportunities-for-collaboration-in-supporting-transportation-independence/>. These met the goal of NADTC to highlight and assist in the development and documentation of innovative practices, program models, and new service delivery options.
- Webinars: NADTC presented three webinars addressing driver safety and planning for driving transition as keys to independent living and personal

empowerment. They also included the importance of increasing awareness of driving solutions and driver safety, and in-depth information for developing a personal transportation plan. In April 2018, NADTC hosted a webinar on “Disability Sensitivity and the ADA Complaint Process.” It addressed questions on Federal requirements and initiatives pertaining to USDOT and FTA requirements on the complaint process, service animals, and correct application of ADA law (<https://www.nadtc.org/event/disability-sensitivity-and-the-ada-complaint-process-webinar/>). Also hosted was a webinar on “Safe Pedestrian Crossings at Transit Stops” (<https://www.nadtc.org/event/nadtc-and-fhwa-safe-pedestrian-crossings-webinar/>) that highlighted an innovative, best-practice local project implementation of the Federal Highway Administration’s (FHWA) Safe Transportation for Every Pedestrian program. Both webinars supported NADTC goals of increasing the effectiveness and quality of transportation services.

- **Panel Sessions:** NADTC presented a panel session at the 2018 National Association of Area Agencies on Aging annual conference on July 29, 2018. It also presented a toolkit, available at <https://www.nadtc.org/resources-publications/dementia-caregiving-and-transportation-toolkit/>. Subsequent educational sessions provided an in-depth look at the transportation needs and concerns experienced by family caregivers, particularly individuals with dementia, an often overlooked and underserved population. The toolkit ties directly to the goal of the center related to innovative practices and program models. More information can be found in the Resources section of the NADTC website at <https://www.nadtc.org/resources-publications/>.
- **Technical Assistance:** NADTC provided targeted technical assistance on an array of topics as requests were received. This included assistance on handrails on transportation vehicle lifts, and how to create a volunteer driver program. It also provided information on the grants and funding available to purchase an accessible vehicle. The technical assistance provided met the goal of increasing the effectiveness, efficiency, and quality of coordinated human service transportation activities, and assisting in promoting new or enhanced coordination between public and human service transportation services.
- **Monthly e-newsletters and social media accounts:** from January–June 2018, the monthly e-newsletters reached an average of 1,309 subscribers, with an open rate of 35%, which has held steady since January 2017. NADTC’s social media accounts have experienced significant growth; for example, in January 2017, NADTC had 157 Twitter followers, which increased by June 2018 to 414. NADTC used communication tools such as its website, newsletters, and social media to support all strategic goals of the center by informing and sharing innovative practices and model programs. A broad range of learning styles is being accommodated through various social media venues including: a YouTube channel (https://www.youtube.com/channel/UCAZ2yI_Cbl-N8kMEXApeNxA); a Facebook page (<https://www.facebook.com/National-Aging-and-Disability-Transportation-Center-NADTC-1667830173495820/>);

Twitter (<https://twitter.com/NADTCmobility>); and LinkedIn account (<https://www.linkedin.com/company/national-aging-and-disability-transportation-center/>). These online platforms allowed NADTC to engage with the field beyond traditional media.

- **Funding Opportunities:** in 2018, NADTC announced the 2018 Getting Ready to Innovate Grant Funding Opportunity (<https://www.nadtc.org/grants-funding/nadtc-grant-opportunities/current-nadtc-funding-opportunities/>). This competitive grant solicitation sought innovation incubators through planning projects that would build community support and commitment for increasing the availability and accessibility of community transportation services for people with disabilities and older adults. A total of 48 applications from 28 states representing all 10 Federal regions were received, and grants of up to \$20,000 each were awarded to 10 communities for a six-month period beginning in August 2018. Previous NADTC grants made a significant impact in communities, with six programs funded in 2017. An example of how 2017 grant funding was applied by recipient Mountain Empire Older Citizens is described at <http://www.meoc.org/>.

The NADTC's activities achieved broad outreach in FY 2018. Approximately 350 people participated in NADTC online courses and webinars, and more than 1,450 attended conference presentations given by NADTC staff during January–June 2018. From January to June 2018, there were 7,498 downloads of NADTC documents, webinars, and other resources from the NADTC website at <https://www.nadtc.org/>. In addition, the Eldercare Locator, in affiliation with NADTC, fielded 199,286 calls inquiring about transportation. Through technical assistance, NADTC promoted accessible transportation, assisted industry professionals in providing service effectively and efficiently, and disseminated information on innovative practices and new service delivery options.

Project/Program Evaluation:

NADTC conducts a yearly independent, comprehensive program evaluation with an annual report and interim quarterly reports submitted to FTA to ensure the Center's effectiveness; guide decision-making using indicators established in consultation with FTA on output, efficiency, and return on investment; evaluate the success of the Center; and inform future planning. The results from NADTC's Year 2 evaluation, reporting on activities that occurred between October 1, 2016 and December 31, 2018, were submitted to FTA during FY 2018, and the report on activities will be available in early 2019 after work that runs through the end of December 2018 is completed. As stated by the independent evaluator, "NADTC's creative staff can be complimented on the reach and breath of their efforts to educate the consumer and stakeholders and appreciated for their deep knowledge and understanding of the transportation needs of older adults and persons with disabilities."

FTA Funding: \$3,950,000

Figure 2 *Impact of NADTC*

NADTC promotes the mobility of people with disabilities and older adults, ensuring that public transportation supports independent living in our communities. An example is the Mountain Empire Older Citizens (MEOC) in Big Stone Gap, Virginia, serving Lee, Wise, and Scott counties, and the city of Norton. The goal is to provide same-day, on-time specialized transportation service to dialysis patients and individuals with chronic care needs. As these individuals often need additional assistance to travel, a Care Coordinator works with the Transportation Call Center to ensure that their transportation and related needs are met. Trained Volunteer Transportation Aides also are available to educate riders on how to use the transit system and provide additional passenger assistance when needed. During this grant period, 902 one-way trips for individuals with chronic care conditions to medical appointments were provided, 194 trips included assistance from a Transportation Aide, 17 volunteer aides were recruited and trained, and 4 consumer members were added to the Project Advisory Committee. The project resulted in a 20% increase in one-way medical trips for chronic care patients assisted by transportation aids over the previous year. Lessons learned included the need to develop close working relationships with healthcare and disability organizations to ensure that community residents recognized the potential benefits of, and were willing to use the new program. Project staff found that collaboration and identifying and engaging a broad set of stakeholders, including community leaders, were essential to promote the project.



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

Recipients: Easter Seals, Inc., with subrecipients Community Transportation Association of America (CTAA) and American Public Transportation Association (APTA)

Project Description:

The National Center for Mobility Management (NCMM) supported communities and mobility management professionals to develop and implement transportation strategies that improve access to essential destinations for community residents. Faced with changing demographic and lifestyle trends and continuing economic pressures, the public transportation industry is adopting mobility management to more efficiently use existing resources and create new options to meet a growing demand for services. The goals for NCMM are to: 1) increase access to mobility management best practices and resources; 2) provide technical assistance and training; 3) increase the professional capacity of mobility management professionals; 4) enhance networking among mobility management professionals; and 5) promote understanding of the benefits of transportation coordination and fostering activities that achieve those benefits.

NCMM is assisted by stakeholder review committees and evaluated by an independent program evaluator. It also supports FTA's role in the Coordinating Council on Access and Mobility (CCAM), an interagency Federal council charged with advancing transportation coordination.

Results:

NCMM started in June 2013 and ended in December 2018. Current NCMM funding for active projects is \$3,300,000. Relevant activities for NCMM in FY 2018 included:

- Conferences, webinars, and trainings: NCMM presented multiple webinars on mobility management topics. In October 2017, NCMM presented the “Mobility Management to Support Access to Health Care” at the National Rural Transit Assistance Program bi-annual conference. Participants learned about best practices and resources for mobility managers. Other webinars included a “Conversation with Leaders” series, introduction to a Transportation Cooperative Research Program (TCRP) report on mobility management in rural areas, and a webinar on FTA's Mobility on Demand (MOD) opportunities. Webinars can be found at <https://nationalcenterformobilitymanagement.org/?s=conversation+with+leaders>. NCMM also developed a training program for Lutheran Social Service (LSS) of Minnesota to build the capacity of LSS staff to coordinate mobility services in their communities and conducted regional webinars for the American Cancer Society to build staff knowledge on mobility management.
- Website and E-newsletters: NCMM regularly maintained and added content to its website. The site includes a “By Topic” section, current news on evolving mobility strategies, and a Mobility Management in Practice series of briefs. The site saw an 18% increase in visitors between July 2017 and July 2018, reaching 23,000 unique visits annually. Information on NCMM's resources can be found at <https://nationalcenterformobilitymanagement.org/by-topic/>. NCMM published three monthly e-newsletters summarizing valuable resources for mobility management professionals. It included information on mobility management and transportation for vulnerable populations during and following emergencies; the U.S. Department of Labor's national online dialogue addressing autonomous vehicles for vulnerable populations; and different approaches to hyperloop and actual projects in Colorado and Maryland. E-newsletters can be found at <https://nationalcenterformobilitymanagement.org/newsletter-archives/>. NCMM designed and tested an online community of practice platform (e-mentoring) to provide space for mentoring, resource exchange, and problem solving across new and seasoned mobility management professionals. The platform is accessible at <https://nationalcenterformobilitymanagement.org/e-learning/>.
- Written materials, evaluations, and guides: NCMM developed several written briefs and other information disseminated at the American Public

Transportation Association (APTA) Legislative Conference in Tampa, TRB's Bus Rapid Transit Conference in Los Angeles, and the Massachusetts DOT Innovation & Tech Transfer Exchange Conference in Boston. NCMM developed a root-cause analysis tool to assess transportation challenges for the Vermont State Administration on Community Living and USDOT, which enables mobility professionals to correct service issues and implement new options where appropriate. NCMM implemented an evaluation tool to assess the impact of mobility management with Arrowhead Transit in rural Minnesota that enables program administrators to refine activities based on the needs of participants. It developed an implementation guide for the national Employment First Community related to participating in state mobility management networks (<http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=1442&z=5>).

- Peer exchanges and stakeholder groups: NCMM facilitated development of diverse stakeholder groups to lead efforts to implement coordinated mobility services. It built networking opportunities, including helping to organize and convene the Chicagoland Health Care Transit Consortium. A plan was outlined to address transportation challenges and access to health care in Maine by organizing a mobility management network that resulted in the Transportation Commissioner identifying state resources to support the ongoing work. Peer exchanges were held in Los Angeles, Atlanta, Tampa, and Washington, DC to encourage transit agencies to begin thinking of themselves as mobility authorities and mobility integrators to better serve customers and communities in a more cost-effective and efficient manner. The Greater Portland Mobility Management Network and peer-to-peer learning forum was launched in Portland, Maine, that included representation from more than 20 human service and transit professionals and policymakers. This was so successful that it resulted in the state identifying personnel supports to sustain the network.
- Technical assistance: NCMM provided technical and problem-solving support regarding case-specific challenges. It enabled transportation administrators to improve or implement transportation options for a range of riders, especially those with disabilities, older adults, or people with lower incomes. Staff supported FTA's Transit and Health Access demonstration grant recipients by clarifying project activities. Staff provided strategies to the Massachusetts Human Services Transportation Network to improve coordination at the regional level through resource materials and peer examples, and provided the Bay Area Transportation Authority with examples of coordination strategies to address access to employment.
- Planning and dissemination: NCMM launched eight 11-month planning grants in seven diverse communities that focused on improving health care access. Communities received intensive facilitation assistance and used a strategic human-centered design process to create innovative solutions. Grants ended in October 2018 with communities developing business plans to launch their

solutions. A statewide effort in Iowa launched to support the Coordinating Council on Access and Mobility (CCAM). This effort provided greater understanding of the components that contribute to the development and sustainment of a CCAM effort at the state, regional, and local level. NCMM served as a catalyst for the launch of a health care–transit initiative in Illinois to bridge the gap among more than 25 transit, health care, government and human services organizations to address mobility challenges. A national survey was disseminated to identify promising practices and remaining obstacles in transportation coordination to help inform CCAM work.

NCMM continued to expand awareness of mobility management promising practices, and its products, briefs, resources and e-learning modules continue to be valuable to the field. Technical assistance activities in FY 2018 continued to drive partnerships and coordinated planning among state and local governments and social, human service and transportation providers. These activities improved planning and delivery of workforce development, training, education and basic services to veterans, older adults, youths and other disadvantaged populations.

Project/Program Evaluation:

NCMM uses an external evaluator on performance monitoring and evaluation activities to measure its achievement of project objectives. Data collected are used continuously to modify technical assistance practices via quarterly reports and to develop an end-of-the-year project evaluation report shared with FTA to improve project performance. As noted in the independent evaluation conducted between July 2017 and July 2018, 88% to 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 23% increase in downloads of NCMM written briefs from the previous year, and 96% to 100% of respondents who had attended NCMM in-person training indicated that training was accurate.

FTA Funding: \$3,300,000

Figure 3 *Building a Mobility Management Network in Maine*



Through targeted and customized technical assistance, NCMM helped Maine regional and state transportation officials and providers develop a strategy to implement a statewide mobility management network. This network brought together providers such as ShuttleBus-Zoom and human services organizations to identify root causes of transportation challenges. Critical to Maine's work to advance a mobility management network, was the engagement of riders with disabilities and older adults to identify potential solutions. Thus, the Maine DOT Commissioner and other transit officials expressed interest in allocating resources to

continue to grow the mobility management network.

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

Grantee: Smart Growth America (SGA)

Project Description:

The Transit-Oriented Development (TOD) Technical Assistance Initiative provided technical assistance to improve access to public transportation and employment through TOD with a focus on economic development and innovative financing. The goals of the project are to: 1) promote economic development; 2) promote quality of life; and 3) provide outreach, education, and facilitation. To achieve project goals, SGA coordinates with various stakeholders, including public sector stakeholders beyond FTA's traditional public transportation agencies.

Results:

TOD technical assistance activities started in January 2017 and were active in FY 2018. Key results for FY 2018 included:

- Technical assistance activities: completed on-site technical assistance for Birmingham, Alabama; Omaha, Nebraska; Charlotte, North Carolina; Albuquerque, New Mexico; and Tacoma Washington. These sites were selected through a competitive process. SGA identified challenges and noted solutions for promoting TOD and economic development at the community level. For example, in Charlotte, SGA identified a local ordinance in the technical assistance study area that inhibits TOD and economic development potential. SGA conducted a scenario plan that adopted modifications to the local ordinance and indicated notable economic development potential. The scenario plan identified 2.6 million square feet of mixed-use development, including 2,000 units of multi-family housing, 500,000 square feet of commercial office space, and nearly 170,000 square feet of retail space. The technical assistance efforts supported the goal of promoting economic development for this project.
- Workshops: in Omaha, held a two-day workshop with the city to highlight national TOD best practices and educate local officials and government staff on how those practices can be applied to the technical assistance study area. In addition, SGA brought local stakeholders to the workshop who had yet to coalesce around the bus rapid transit (BRT) project to engage them in transit and economic development conversations. FTA Region 7 also attended the workshop, resulting in developing familiarity with local grantees and stakeholders.
- Technical tour: conducted a tour of Silver Spring, Maryland, prior to the 2018 LOCUS Leadership Summit and TOD Peer Convening that included remarks from current local elected officials about the upcoming Purple Line, a 16-mile light rail line that will traverse Silver Spring. The discussion provided a real-

world example for summit attendees on how to educate local stakeholders about the effect transit has for promoting TOD and economic development, supporting the goals of promoting quality of life, and providing education for this project.

- **Summit:** planned, organized, and held the 2018 LOCUS Leadership Summit and TOD Peer Convening in Washington, DC on April 22-23, 2018, with more than 100 conference attendees. In total, 29 attendees from the 13 communities that received TOD technical assistance since the launch of the project in October 2015 attended the summit and convening, which included presentations from the public and private sectors on various economic and social tools to support TOD and economic development within their communities, supporting the goal of outreach for this project. Information on the summit is available at <https://smartgrowthamerica.org/seen-heard-2018-locus-leadership-summit/> for more details. The summit met the goals for TOD of promoting economic development, promoting quality of life, and providing outreach, education and facilitation.

The TOD Technical Assistance Initiative provided direct assistance to communities seeking to advance TOD and economic development around a Federally-funded transit project. FTA will use the results from this project to advance the agency's role in creating complete communities.

FTA Funding: \$3,000,000

Figure 4 *TOD National Leadership Summit*

Professionals working on TOD in cities across the country met at the 2018 National Leadership Summit and TOD Peer Convening in Washington, DC on April 22–23, 2018. The summit was attended by more than 100 participants, with 29 attendees from the 13 communities that received TOD technical assistance since the launch of the project in October 2015. The summit provided a venue to discuss Federal policy changes, the future of transit infrastructure and real estate finance, and the impact of technology on mobility. The summit enabled professionals from public and private industries to engage in economic development conversations, learn about the latest policy strategies and financing tools for TOD and transit, and connect with like-minded professionals working on economic development. FTAs attendance and participation in this conference led to relationships with organizations beyond FTA's traditional public transportation agencies.



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

Grantee: Intelligent Transportation Society of America (ITSA)

Project Description:

This program provided targeted support to transit agencies, local governments, and vendors involved in Mobility on Demand (MOD) services such as conventional peer-to-peer car and bikeshare, conventional and on-demand rideshare, public/private partnerships with Transportation Network Companies (TNCs), and Microtransit. A key goal is to provide communications, outreach, and stakeholder engagement to raise awareness and share information about MOD research efforts, roles, and partnerships. Another goal of the program is to explore relationships between transit agencies and MOD service providers and their impacts. Associated activities include gathering and sharing information via meetings, workshops, and educational and training materials and producing market research materials and state-of-practice materials (assessments, case studies, synthesis reports, etc.).

Results:

The MOD Technical Assistance and Outreach Program started in September 2015 and is scheduled to conclude in December 2020. In FY 2018, the program produced the following relevant outputs:

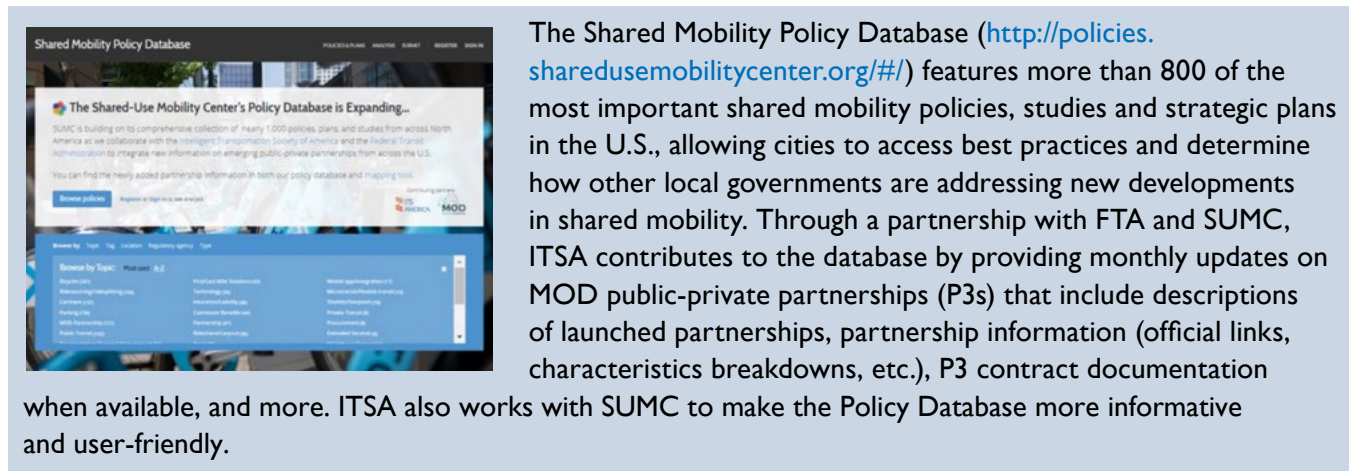
- Listening session: held a listening session during the TRB Annual Meeting in January 2017 with 118 attendees. The session's primary objectives were to inform attendees about the developments of the MOD Sandbox 1.0 projects. It also provided an opportunity for open dialogue between FTA and those interested in MOD Sandbox 2.0. During the first half of the listening session, FTA's MOD team gave an overview of lessons learned from MOD Sandbox 1.0 applications. They noted key MOD activities, including outreach and knowledge sharing initiatives. The second half offered an opportunity for attendees to share their thoughts and questions. Several themes prevailed throughout the question and answer session, including the need for resources for identifying and contacting potential partners. Representatives of small and rural communities expressed that pre-planning funds and technical assistance during deployment is beneficial. Another suggestion was that the period of performance could be longer to allow the deployments to mature. Finally, many expressed that the grant structure could be more flexible to allow acceleration of promising projects.
- Newsletters: produced *Mobility Rush*, a newsletter distributed twice monthly that highlights some of the latest MOD partnerships. It included public-private partnerships (P3) between local governments/transit agencies and MOD service providers. A total of 47 newsletters have been produced, 17 of which were published since October 2017. Issues of the newsletter are

available at <https://www.itsa.org/mobility-rush/>. The newsletter allows for open and up-to-date communication of MOD partnerships and serves as a venue to engage in relevant issues of the MOD community.

- **Toolkits:** ITSA partnered with the Shared-Use Mobility Center (SUMC) to add information on MOD partnerships in the U.S. to a collaboratively-developed Mapping Tool and Policy Database, accessible at <http://maps.sharedusemobilitycenter.org/sumc/> and the Policy Database at <http://policies.sharedusemobilitycenter.org/#/>. To learn more about the above-mentioned Toolkits, see: <http://sharedusemobilitycenter.org/tools/>. The toolkit launched in March 2017. To date, 129 P3 agreements were established that include Transit Agencies, State DOTs, local governments, non-profits and transportation commissions.
- **Interactive forum:** developed an interactive forum to discuss the challenges of MOD in collaboration with FTA and in partnership with the NCMM and APTA. This event occurred on October 11, 2017, in Atlanta, GA, with 111 attendees and was the opening portion of a MOD Sandbox workshop, jointly hosted by SUMC and FTA. Participants included representatives from state DOTs, transit agencies, and a range of MOD service providers. Presentations and discussions included the successes and challenges encountered in past and existing partnerships and how to better deploy MOD solutions.

All the outputs in FY 2018 met the goals of the program by providing a venue for communications, outreach, and stakeholder engagement. They raised awareness and shared information about MOD research efforts, roles and partnerships. The measurable outputs also provided ways for relationships between transit agencies and MOD service providers to highlight their results and impacts. Through this program, FTA developed a greater understanding of the opportunities and impacts of MOD services on cities, transit agencies, and communities across the nation. It also facilitated dialogue among the U.S. government, transit agencies and MOD service providers. This project provided a better understanding of the impact of MOD on the public transportation industry and engages public entities, such as transit agencies, state DOTs, etc. It identified a better understanding of the public transportation community's needs, as well as opportunities for MOD and MOD P3 partnerships to improve mobility.

FTA Funding: \$585,000

Figure 5 Shared Mobility Policy Database**Title: TRB Core Program Support**

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

Project Description:

The NAS, through TRB, provides personnel, facilities, services, and materials to assist FTA in carrying out and fulfilling its mission and obligations mandated by legislation and regulations. The purpose of this project is to provide access to FTA staff from TRB's core technical activities such as the 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: 1) the exchange of transit research information and results at the national level; and 2) to provide technical assistance for transit entities working at the state, regional, and local levels. This project also supports TRB's goals to stimulate transportation research, correlate such research, and disseminate its results. Under this project, TRB brings together experts in all areas of the public transportation industry, including FTA, to improve the overall safety, security, effectiveness and sufficiency of transit services and to provide for a centralized, widely-accessible abstracting service for transportation innovation.

Results:

FTA provided support to TRB in FY 2018, resulting in the following measurable outcomes:

- TRB Annual Meeting support: this project supported TRB's Annual Meeting in Washington, DC in January 2018. The meeting was attended by more

than 13,000 attendees, allowing FTA a high level of visibility with a large cadre of diverse industry stakeholders through participating on panels, attending sessions, and conducting three executive-level lecture sessions. FTA participation in the TRB Annual Meeting enables engagement with the public transportation industry and stakeholders through networking, discovery of new research, and exchange of research ideas. More than 30 FTA staff serve on TRB standing committees in their areas of expertise as committee members or friends. FTA representatives are involved with key committees and can gather and give critical information on important trends and issues through these committees. TRB also reviewed 616 public transit-related papers, conducted 37 lecture sessions on transit issues, held 49 committee meetings, and hosted three Sunday workshops addressing issues of significance for FTA and the public transit industry.

- Site visits: TRB held a site visit to the Massachusetts Department of Transportation (MassDOT) in April 2018. TRB presented at the MassDOT Innovation and Mobility Exchange for the State Transportation Innovation Council on TRB's public transportation activities. TRB presented on its forum on Automated Vehicles and Shared Mobility. This level of highly-tailored outreach fosters relationships in the transportation community to disseminate research findings and move research into practice.
- Webinars: TRB conducted eight webinars in FY 2018—three with the Transit Cooperative Research Program, two through the National Cooperative Highway Research Program, two through the Airport Cooperative Research Program, and one through two TRB Standing Committees. These webinars addressed public-private partnerships and the MOD Sandbox Program, one of FTA's flagship initiatives. The broad spectrum of multi-modal platforms described demonstrates public transportation's complementary role to a broader transportation network. This program supports the exchange of transit research information and results at the national level and access to information through TRB membership. Through membership provided by this project, FTA staff are also able to have free access to all online TRB resources. One of those resources is the Transportation Research International Documentation (TRID) database, a bibliographic system. It 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 assure timely dissemination of results. TRB processes approximately 30,000 new transportation-related publications into TRID per year, and TRB staff regularly conduct TRID searches for FTA staff. This is a beneficial investment as it would be extremely expensive in both staff time and travel costs to have the same level of access to people and resources provided by TRB.

FTA Funding: \$250,000

Figure 6 TRB Annual Meeting, 2018

researchers, and representatives of government, industry, and academic institutions. Information on the annual meeting can be found at www.trb.org/AnnualMeeting.

The 2018 TRB Annual Meeting attracted more than 13,000 attendees, and TRB's Public Transportation Committees reviewed 616 public transit-related papers, conducted 37 lecture sessions on transit issues, held 49 committee meetings, and hosted three Sunday workshops addressing issues of significance for FTA such as the USDOT MOD Initiative, Transit Asset Management, and Achieving Safety and Security in Today's Resource-constrained Environment. Participants explored topics of interest to policymakers, administrators, practitioners,

Title: *Transit Research Analysis Committee (TRAC)*

Grantee: 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. Its goal is to examine and recommend actions FTA can take to ensure its research and innovation program is relevant, timely, and effective in meeting the diverse and changing needs of the public transportation community. It provides an independent review and assessment of public transportation needs that could be met through future investment in a national transit research, development, and innovation program. TRAC has advised FTA on the appropriate Federal role in transit research and on stakeholder involvement in the program.

TRAC operates through a cooperative agreement with the National Academies of Sciences, Engineering, and Medicine through TRB. FTA awarded funds to TRAC most recently in June 2016, with an expected project conclusion slated for June 2020. TRAC membership comprises a group of 12 nationally recognized public transportation experts serving two-year terms who meet periodically to review FTA research activities and discuss key industry issues. Each meeting produces a Letter Report of findings and feedback on the issues covered in the meeting.

Results:

TRAC met twice in FY 2018 and provided FTA with feedback on the efficacy of FTA's research program in specific areas, as requested by FTA prior to the meeting in a letter outlining questions for the meeting. Below are the areas

of focus and a high summary of feedback received by FTA from the respective TRAC meetings:

- Met with FTA in November 2017 to discuss key FTA research initiatives in the areas of transit automation, next generation public transportation vehicle technology, and workforce development in an era of emerging technology. The TRAC committee was given the charge to review the new Department of Transportation Strategic Plan and FTA's commensurate areas of focus to gather thoughts and feedback on FTA's strategic initiatives, and any other emerging research areas the Committee felt FTA should consider. Specifically, the Committee was asked to focus its deliberations on the following questions:
 - What needs, issues, or opportunities does the Committee envision in the public transportation arena related to these topics?
 - Are there any other emerging public transportation innovation areas the Committee recommends that FTA consider exploring for upcoming FY 2018 projects?

After the meetings presentations and discussions, TRAC drafted a formal response to FTA. The February 2018 TRAC's Letter Report advised FTA to ensure that automation research is driven by a desire to meet existing needs and not future needs that may or may not materialize. Regarding the rise of ride-hailing services and the possible impacts on transit ridership, TRAC encouraged FTA and, by extension, FTA recipients to advance a variety of policies that ensure new mobility services complement public transportation. Overall, TRAC was supportive of FTA's approach and highlighted a series of considerations, which FTA acknowledged in a formal response delivered in advance of TRAC's June 2018 meeting.

- TRAC met with FTA in June 2018 to discuss USDOT and FTA activities in automation, with a request for TRAC members to review and provide comments on FTA's Strategic Transit Automation Research Plan. TRAC then drafted a formal response to FTA in a Letter Report based on the discussions held after FTA's presentations. TRAC encouraged FTA to look outside of the transit industry for relevant opportunities to apply transportation automation practices to a transit context and advised FTA to focus first on retrofitting existing vehicles with new technologies that would make these tools more readily accessible to transit providers. TRAC also suggested that FTA work to ensure that the definition of "transit" is not outdated but reflects changing developments in the transit industry while ensuring that vulnerable populations' equitable access to service remains a top priority.

The meetings and feedback provided by TRAC met FTA's main goals for each meeting. The Letter Reports are available at <http://www.trb.org/Publications/PubsPolicyStudiesLetterReports.aspx>. FTA evaluates TRAC recommendations to

determine which are most appropriate and implementable for the FTA research program. Thus far, FTA has typically acted on most of the suggestions included in the recent letter reports.

FTA Funding: \$200,000

Figure 7 *TRAC Meeting, 2017*



FTA Acting Administrator Jane Williams and FTA Executive Director Matt Welbes met with members of TRAC in November 2017.

Title: *Evidentiary Protection of Transit Safety Program Information Study*

Grantee: National Academy of Sciences, Engineering, and Medicine (NAS)

Project Description:

The goal of this study is to respond to the mandate in Federal public transportation law (U.S.C. 49 § 3021) regarding evidentiary safety data. FTA was required to contract with the NAS to convene a committee of experts to provide recommendations to Congress on whether it is in the public interest to withhold from discovery or admission into evidence any plan, report, data, or other information, submitted to, developed, produced, collected, or obtained by FTA for purposes of complying with FTA's Public Transportation Safety Program (49 U.S.C. § 5329). This included information related to a recipient's safety plan, safety risk, mitigation measures, etc. Under current Federal law, documents related to safety and collected by FTA must be disclosed upon request under the Freedom of Information Act, and many states have open records laws. Some public transportation agencies have expressed concern that creating safety plans, setting safety performance goals, and instituting programs such as close-call reporting would be subject to public disclosure and facilitate tort litigation in personal injury cases. The protection of safety data could encourage public transit agencies to collect critical safety data, develop meaningful safety plans, and set bolder safety performance targets. FTA believes that the agency can carry out the safety program more effectively if it can protect the safety data collected from transit agencies to comply with the implementation of the safety program.

Results:

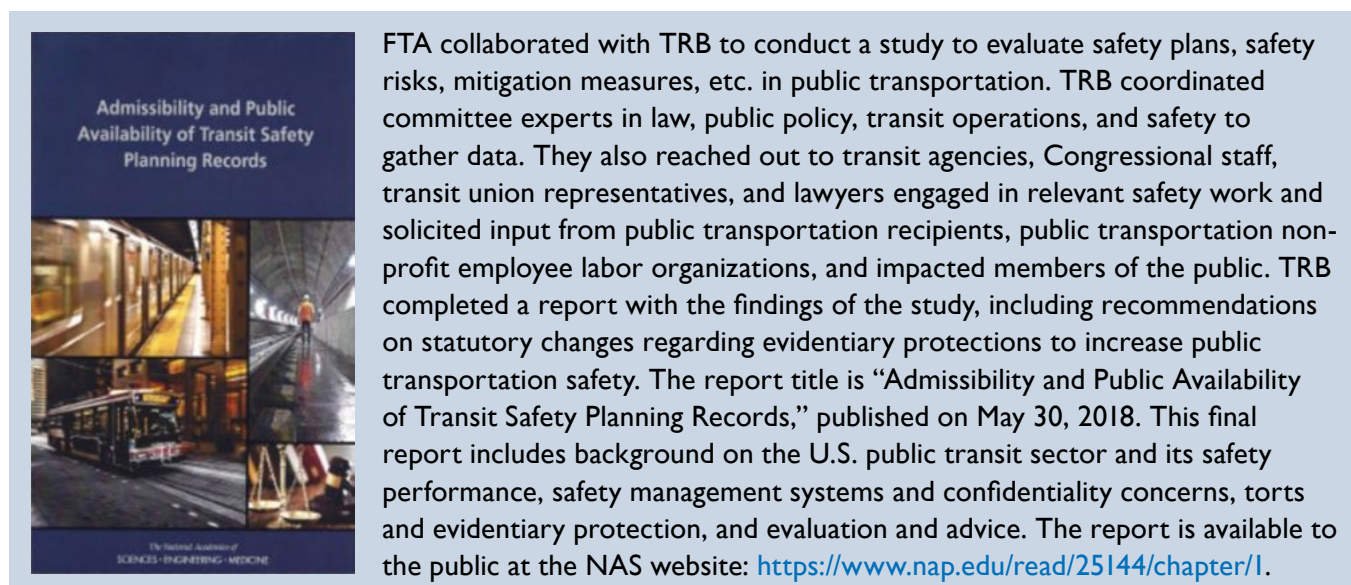
The activities for this project started in September 2016 and were completed in June 2018. For FY 2018, NAS completed the following activities:

- **Public meetings:** NAS conducted three public meetings with committee members responsible for writing the report to provide them with necessary background information. The meetings included input from public transportation recipients and public transportation labor organizations who provided relevant information to complete the report with recommendations to Congress.
- **Meetings with government officials:** NAS staff and committee members met with FTA staff and leadership on May 24, 2018, and with Congressional staff on May 25, 2018, to debrief on the findings and recommendations of the report. These meetings provided final clearance and approval of the report.
- **Final report:** NAS staff completed the Evidentiary Safety Data Protection Study in May 2018. The report contains impartial recommendations from NAS for Congress to consider statutory changes regarding evidentiary protections that will increase public transit safety and reduce burdens on transit agencies. The final report was released to the public on May 30, 2018, as TRB Special Report 326 (<https://www.nap.edu/read/25144/chapter/1>).

This study responded to the Congressional request for an impartial set of recommendations from NAS to Congress regarding the need for statutory changes associated with evidentiary protection of safety data collected by FTA for the implantation of the safety program.

FTA Funding: \$600,000

Figure 8 *Admissibility and Public Availability of Transit Safety Planning Records*



Title: *Transit Advisory Committee for Safety (TRACS)***Grantee:** The Volpe Center**Project Description:**

The purpose of TRACS is to gather information, advice, and recommendations on transit safety and other issues as determined by the Secretary of Transportation and the FTA Administrator. The goals of TRACS are to: 1) provide a mechanism to gather broad input to address transit safety and other issues; 2) seek out the best solutions based on agreed-upon facts; and 3) identify potential regulatory provisions to implement those solutions. TRACS includes members from the public transportation safety community who serve two-year terms, and are subject to reappointment by the Secretary. Members are knowledgeable on trends or issues related to rail transit and bus transit safety, and represent leadership and organizational skills, as well as geographic, industry, gender and racial diversity.

TRACS was established in 2009. The operation of TRACS is in the public interest and supports FTA in performing its duties and responsibilities under Federal public transportation safety law (49 U.S.C. § 5329). TRACS provides the FTA Administrator and the USDOT Secretary with information, advice, and recommendations to improve safety in public transportation across the nation.

Results:

The current agreement with the Volpe Center to facilitate TRACS started in June 2016 and ended in May 2018. TRACS evaluated economic, technological, and institutional developments related to transit safety and submitted safety recommendations to the FTA Administrator and USDOT Secretary. Recommendations included innovative ideas and approaches for Federal policies and programs that improve safety culture and define safety data needs. The most recent reports submitted by TRACS were published in March 2018 and can be accessed at <https://www.transit.dot.gov/regulations-and-guidance/safety/tracs-work-groups>. These reports were on the following topics:

- Recommendations for processes, practices, tasks, and individual employee responsibilities to support a strong safety culture.
- Recommendations to define the functional requirements and data elements of a comprehensive safety data collection and analysis framework to support improvements in the transit industry's safety performance.

These reports met TRACS' goals of gathering input to address transit safety issues and benefit FTA by providing guidance to the industry as it implements Safety Management System (SMS) methods and principles through the Public Transportation Agency Safety Plan Rule (49 C.F.R. Part 673) and other safety regulations.

The TRACS Charter expired in March 2018. FTA evaluated each TRACS report to determine which recommendations to undertake in future rulemakings, guidance, and programs. FTA has used many past TRACS recommendations in rulemaking efforts, bringing its recommendations and work to a nationwide audience.

FTA Funding: \$175,000

Title: *Safety Awareness Technical Assistance*

Grantee: Operation Lifesaver, Inc. (OLI)

Project Description:

This project supports rail transit safety awareness by educating communities in which rail transit systems operate across the U.S. The objective of this project is to fund the development of training materials, marketing strategies, and dissemination of information to assist transit agencies in making the public aware of transit related rail safety issues. This program supports a variety of outreach activities to transit agencies, community-based organizations and schools. The goal of the project is to enhance awareness of safety issues associated with the use of public transit. The program focused on issues of grade crossing safety, trespass, and platform safety.

Results:

In FY 2018, OLI produced the following results:

- Rail Safety Week (RSW): OLI released a report on the results of the first RSW (https://s3.amazonaws.com/download.oli.org/Rail+Safety+Week/RSW+Report/OLI_USRailSafetyWeek_Report.pdf) in February 2018, including digital ads strategically placed at 12 transit markets. Transit markets were selected based on factors such as population, system type, size, and the number of grade crossings and trespassing incidents. Ads were placed in many cities across the U.S.: Los Angeles, Boston, Minneapolis-St. Paul, New Orleans, Sacramento, San Francisco, Seattle, Phoenix, Baltimore, Long Island, Chicago and South Florida. The digital platforms used were Facebook and Twitter, with a total impression of 7,000,277 and a total engagement of 288,771. The largest demographic reached was males ages 25-34. The activity was directed toward the goal of direct public education, in which transit agencies, railroads, law enforcement agencies, and others were partners with OLI. More information on RSW can be found at <https://oli.org/about-us/news/rail-safety-week-2017>.
- Survey: in April 2018, a survey of Rail Transit Safety Education Grant recipients was sent out to 25 grantees to gain a better understanding of the

impact their grant-funded safety programs have had on the riding public. The survey yielded a 60% response rate (15 recipients responded) and indicated the intended impact went far beyond the initial goals of the grant. After the grant closed, 93% of the respondents reported they are still utilizing the grant-funded materials. The survey report, which includes a set of best practices for transit safety education campaigns, was posted on the OLI website under the rail transit section, https://s3.us-east-2.amazonaws.com/downloads.oli.org/Passenger+Rail+Safety/OLI_TransitGrantReport_FINAL.pdf in October 2018. OLI hopes this report will benefit transit agencies by helping them design effective rail safety campaigns.

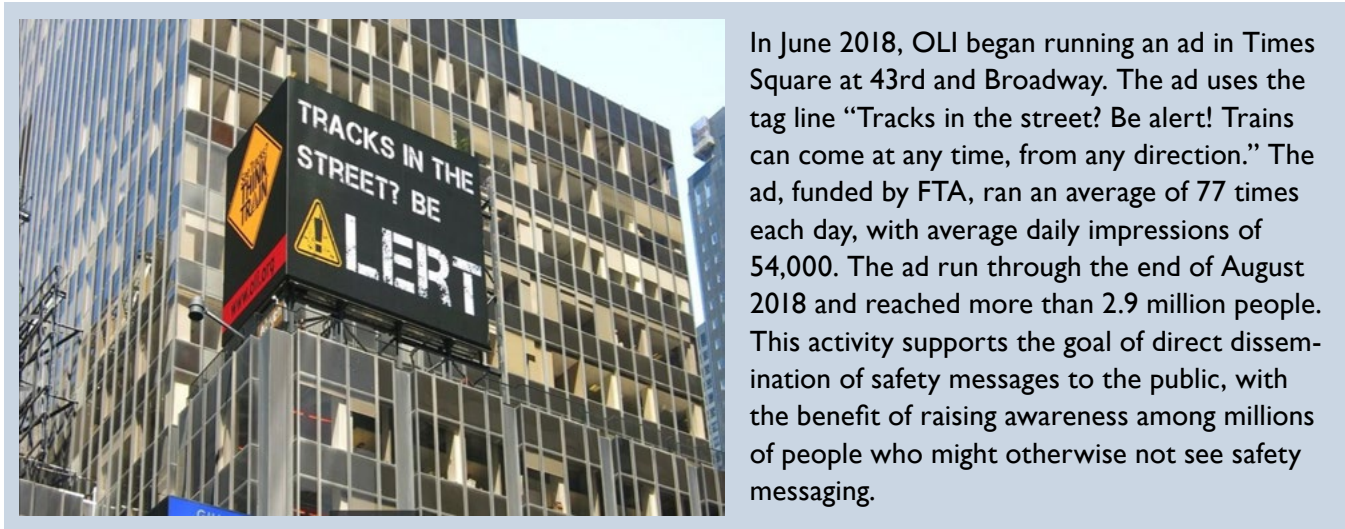
- **Training video:** a new training video was released for new drivers (<https://oli.org/video/view/how-to-drive-near-trains>) with targeted messages on driver behaviors near rail transit and demonstrations of safe driving scenarios to combat the behavior. The final video included a segment on light rail safety tips (<https://oli.org/video/view/light-rail>) and a lesson plan on light rail and transit safety (https://downloads.oli.org/New+Driver/Light-Rail_LessonPlan.pdf) specifically designated for driver educators. The final video is available for viewing on the OLI website at <https://oli.org/video>. The video was played 994 times since its release and the OLI website page has 1,200 visits to date. This video benefits drivers' education instructors and beginning drivers by providing clear, compelling examples of what to do when driving near tracks.
- **Workshop:** in May 2018, FTA held a State Safety Oversight Program Managers Workshop, where OLI led a panel of representatives from Hampton Roads Transit (HRT) and HDR (Washington, DC's Department of Transportation) detailing an overview of their public safety campaigns funded through the FTA/OLI grant. At that panel, state safety oversight managers heard presenters from transit agencies explain how they went about educating the public about new rail service (the Tide and DC Streetcar). Information on the workshop can be found at <https://www.transit.dot.gov/regulations-and-guidance/safety/2018-ssop-program-managers-training-workshop-presentations>.
- At the end of June 2018, OLI ran a digital ad campaign in four transit markets: Houston, Denver, Salt Lake City, and Portland (OR). The ad used a short video showing a distracted pedestrian (<https://oli.org/video/view/distracted-pedestrian-psa>) and was shared via Facebook. The ad received 2,486,145* impressions, with 227,437* video views and 777* reactions, comments, and shares. This activity also supported the goal of direct dissemination of safety messages to the public, with the benefit of raising awareness about the dangers of distracted walking among pedestrians in cities with light rail.

Throughout the year, OLI's network of volunteers spoke about rail safety to school groups, driver's education students, professional drivers, law enforcement officers and others. They produce yellow diamond-shaped signs with bright illustrations that say, "See Tracks? Think Train!" and, "Think you'll always HEAR

an oncoming train? Think again.” These presentations directly support the goal of disseminating safety information to the public, and benefit both individuals and transit agencies by increasing awareness of safe behavior.

FTA Funding: \$350,000

Figure 9 *Example of Safety Information by OLI*



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

Grantee: Resource Systems Group, Inc.

Project Description:

This project expanded the current capabilities of FTA’s Simplified Trips-on-Project Software (STOPS) package used for predicting passenger ridership on transit projects. One of the goals of this project was to showcase the quantification of the mobility benefits of a planned or implemented transit investment or transit service change. These benefits can be further stratified using an on-board rider survey to identify impacts on communities of interest including, but not limited to, minority, low-income, and transit-dependent transit customers. Another goal of the project was to provide quantification of transit accessibility to jobs, healthcare, education, and other locations of interest to existing and future transit users. The resulting mobility benefits measure captured inclusive travel time savings resulting from changes to the transit system that benefit existing and new transit riders, including:

- Measurable service-related improvements – faster speeds, higher frequencies, fewer transfers, and shorter access/egress times

- Qualitative improvements – visibility, reliability, ride comfort, etc.

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.

The enhanced capabilities of STOPS provide better analytical insights to FTA and grantees in evaluating projects. FTA will improve before-after studies of Capital Investment Grant (CIG) projects by identifying the actual project mobility benefits for recently completed CIG projects. The transit industry will benefit because these mobility benefits will be calculated directly using STOPS forecasting platform, allowing transit agencies and FTA to readily identify the mobility benefits of projects during project planning. These capabilities will lead to better planned projects with more accurate identification of impacts to customers both in the aggregate and for community of interests.

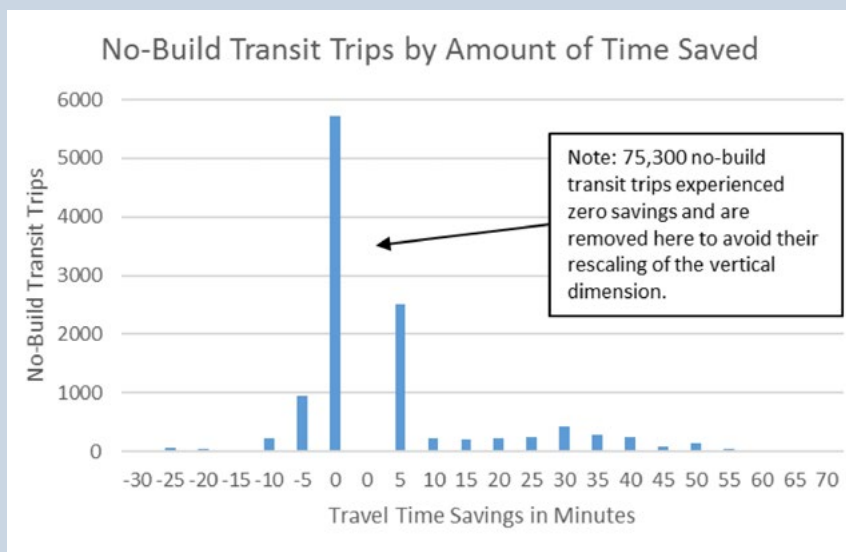
Results:

Research for this project began June 2017, with expected completion by December 2018. In FY 2018, this project had the following outputs:

- Updated STOPS to write the files needed by FTA's Summit software to compute mobility benefits of improvements to a transit network, comparing base-case and alternative-case GTFS files. This update allowed the STOPS forecasting platform to quickly and accurately identify the mobility impacts of a project or service change.
- Conducted early implementations for recently-completed projects in Phoenix, Orlando, and Houston. This work demonstrated the usefulness of the quantification of mobility benefits for before-after studies and service plan changes.

The outputs of FY 2018 met both goals of this project. The STOPS software program produces all reporting needed by FTA and grantees to develop mobility benefits associated with a transit project or service change.

FTA Funding: \$199,713

Figure 10 STOPS Update

STOPS was updated to write the files needed to compute mobility benefits of improvements to a transit network. The graphic depicts the distribution of mobility benefits (travel time savings) associated with the Northwest Phase I Light Rail extension in Phoenix. GTFS data before and after project implementation combined with an on-board rider survey were used to quantify the mobility benefits of this project. Shown are the number of no-build transit trips and the travel time savings by range.

STOPS produces all reporting needed by FTA and grantees to develop mobility benefits associated with a transit project or service change.

Title: *Transportation Capacity Building Program (TCBP)*

Grantee: The Volpe Center

Project Description:

The purpose of this program and the related performance-based planning roundtables was to bring metropolitan planning organizations (MPOs), transit agencies, and state DOTs together to discuss how to implement the requirements within their specific region and to share best practices and local experiences. The goal was 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). Transit agencies, MPOs, and state DOTs are required to adopt performance management practices to prioritize investment in infrastructure and services to meet national goals for safety, state of good repair, reliability, congestion reduction, economic benefits, environmental benefits and other national goals.

Results:

TCBP began in August 2016 and was completed in March 2018. Relevant results for this project included:

- In April 2018, FTA, in partnership with APTA, published an updated summary of the “Performance-Based Planning and Programming (PBPP) Roundtable Series” that described the lessons learned during the 11 PBPP peer-exchange workshops and 2 national webinars conducted during FY 2016, FY 2017, and FY 2018. The summary report is available at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/Performance%20Based%20Planning_SummaryReport.pdf.
- In June 2017 and January 2018, FTA hosted two national PBPP webinars that explored legislative requirements for performance-based planning, and featured speakers from MPOs and transit agencies working to develop transit asset management plans and set state of good repair performance targets. In total, 11 roundtable exchanges and 2 national webinars were held, with active participation by representatives of MPOs, transit providers, and state DOTs from throughout the U.S., 9 of which were targeted towards small and medium-size MPOs and transit agencies that requested additional technical assistance and training to meet the new requirements.
- In April 2018, FTA made available additional technical assistance resources to improve the capacity of transit agencies, MPOs, and state DOTs on FTA’s Performance-Based Planning webpage at <https://www.transit.dot.gov/performance-based-planning>. The webpage has frequently asked questions, links to new training courses, and recorded webinars and presentations made during the PBPP peer exchanges.

This program achieved significant outreach impacts. In addition to 1,000 participants in roundtables and webinars, training and technical assistance reached more than 200 representatives of transit agencies, MPOs, and state DOTs. Based on this effort, transit agencies and MPOs 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

Figure 11 *FTA Performance-Based Planning Roundtables*

PBPP roundtables engaged transit agencies, MPOs, and state and Federal leaders in discussions about performance-based planning, the metropolitan planning process, transit asset management, and safety. Information and insights were shared about what is working, where there is room for improvement, and how to establish regional and statewide performance targets and prioritize investment priorities as part of a performance-based approach to transportation planning. Key

themes included recognition of the benefits of PBPP, existing familiarity with performance management, staff and resource constraints, competition among highway and transit projects for funding, cultural challenges and concerns about setting performance targets in a financially constrained environment, data collection and availability, and timelines associated with FTA rulemaking. Transit agency and metropolitan planning organization (MPO) executives and technical staff benefitted from the opportunity to voice concerns and interact in an open, collaborative forum with FTA leadership, regional staff, and peers. These networking opportunities will further expand development and sharing of best practices as local and regional practitioners implement Federal requirements for performance-based planning processes.



Title: *Performance-Based Planning and Programming: A Report to Congress*

Grantee: The Volpe Center

Project Description:

This project assisted FTA with the development of “Performance-Based Planning and Programming: A Report to Congress.” The goal of this project was to collect materials needed for FTA’s report, and to write the draft for FTA approval. State DOTs and MPOs are required to develop a PBPP approach to transportation planning so that greater emphasis is placed on performance outcomes for safety, infrastructure condition, congestion, system reliability, emissions, and freight movement.

Results:

This project began in August 2016 and was completed in December 2017. In FY 2018, Volpe produced the following outputs:

- Reviewed information on all state DOT websites and a random sample of websites for 40 MPOs to identify progress made on PBPP. Findings were summarized and presented to FTA for review and final concurrence by USDOT.
- Submitted a final draft of “Performance-Based Planning: A Report to Congress” to FTA in December 2017. FTA reviewed the report and submitted it to Congress on January 8, 2018. The report is posted at: <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance/transportation-planning/69421/performance-based-planning-report-congress-12018.pdf>.

This report serves as a baseline for the implementation of a PBPP process for state DOTs, MPOs, and transit agencies.

FTA Funding: \$75,000

Title: *Transportation Research Board (TRB) Conference on Transportation Asset Management 2018*

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

Project Description:

This project assisted TRB in organizing the 12th National Conference on Transportation Asset Management (TAM). The conference was held on July 15–17, 2018, in San Diego, California. The conference covered a broad range of topics on transportation modes of interest to agencies in the late implementation stage of asset management regulation. It also provided tools for the industry to leverage asset management principles and TAM plans.

The goals of the TAM Conference were: 1) for transit professionals to share strategies for developing practical solutions for asset management; 2) to discuss all aspects of the FTA TAM program from TAM plan development, implementation and institutionalization of Asset Management principles, to empirical applications and data governance details; and 3) to discuss ways in which data was converted to information that helped to make improvements to transit organizations’ business processes, managing performance, mitigating risk, and improving the customer experience. Attendees not only heard best practices for achieving regulatory compliance, but also learned how to create sustainable asset management programs at their own organizations.

TRB’s audience extended beyond FTA grantees to engage academia, international subject matter experts, consultant experts as well as those from other modes and fields implementing asset management. FTA’s sponsorship helped generate

greater interest by transit stakeholders, thereby expanding the industry's understanding of asset management principles and applications while providing tangible resources to aid with implementation.

Results:

Significant outputs of the Transportation Asset Management Conference included:

- Assistance for the Conference on Transportation Asset Management: took place in San Diego, California July 16-17, 2018 with 487 conference attendees. 12% of the attendees represented transit. The transit presence at the conference grew from previous years and provided an opportunity for more transit-centric sessions and transit grantee interaction during the conference which was the first goal for this project.
- Transit presentations: in addition to the sessions, TRB added other types of presentations to take advantage of the multimodal attendees. TRB included transit representation in the opening session to set the stage for the conference. This year's opening session featured a keynote from LA County Metropolitan Transit Authority (Metro), Mr. Gregory Kildare the Chief Risk Safety and Asset Management Officer. Overall, 31 individual presentations discussed transit throughout the conference. There was also a poster session during a reception hour, which included more analytic and data centric information. The Metropolitan Transportation Commission (MTC) co-authored a third of the posters selected for presentation. In addition to the transit agency speakers, many of the private sector presentations used examples from their work on transit projects to illuminate problem solving and how transit agencies have approached solving data problems. This helped integrate transit in the broader asset management discipline, supporting the second project goal of institutionalizing asset management principles.
- Transit issues: approximately 30% of sessions were dedicated to transit issues, including presentations of challenges and opportunities, tools for communicating with executives, and TAM plan development. This supported the second goal for this effort by fostering more tactical discussion among FTA grantees for ways to implement TAM concepts. The program of the conference is posted at: <http://onlinepubs.trb.org/onlinepubs/Conferences/2018/AssetManagement/Agenda.pdf>.

FTA played a significant leadership role in this conference by actively participating on the planning committee, presenting and moderating sessions and being an official scribe for sessions. FTA regional offices were also in attendance at the conference, resulting in stronger ties to their grantees and an increase in technical knowledge. FTA facilitated the "Tools for Communicating with Transit Executives" session with over 80 attendees.

FTA Funding: \$20,000

Figure 12 *Conference on Transportation Asset Management 2018*

FTA sponsored and participated in the Conference on Transportation Asset Management 2018. The conference was held in San Diego, California on July 15 – 17, 2018. The conference was attended by 487 participants, of which 12% represented the transit industry. This conference led to the mainstreaming of transit initiatives in the asset management genre, providing opportunities for transit

agencies to learn from other modes and expand the expertise beyond the traditional peers. It also allowed FTA to direct the asset management conversation and provide leadership to the industry.

Title: *Multimodal Public Transportation System Connectivity Performance Measures*

Grantees: University of Texas at Austin

Project Description:

Researchers at The University of Texas at Austin and Arizona State University are developing new performance measures and tools to support public transportation system efforts to assess network connectivity and accessibility with a focus on disadvantaged population groups. This project supports FTA's implementation of the USDOT Strategic Plan objectives for the development and deployment of innovation to improve connectivity, accessibility, safety, and convenience for all users.

The goal of the project is to provide decision makers at transit agencies and metropolitan planning organizations, as well as interested citizens, with step-by-step methods that illustrate how transit system connectivity, access to opportunities, and other performance measures, such as travel time and user benefits, can assess current and future conditions in a region. Conditions could include both proposed service changes and expected changes in land use.

Two key aspects of this work make it different from existing tools and methods. First, recognizing the varying levels of resources and sophistication that exist across public transit agencies, the tools and recommendations will be tailored for different community capabilities, sizes, and needs, ranging from small rural to large urban organizations. To enable this level of tailoring for different

communities, diverse data sources will be considered, depending upon available agency resources. These resources might include, but are not limited to, geographic proximity to public transit infrastructure, the Census Transportation Planning Package, and on-board survey data. Second, in locations where such data are available, information on current and projected public transit system users will be integrated into the analyses to more precisely identify how changes will affect different demographic groups. More commonly, analyses of public transit rely upon measures of “access to opportunities” without considering existing or projected transit market shares or users.

Results:

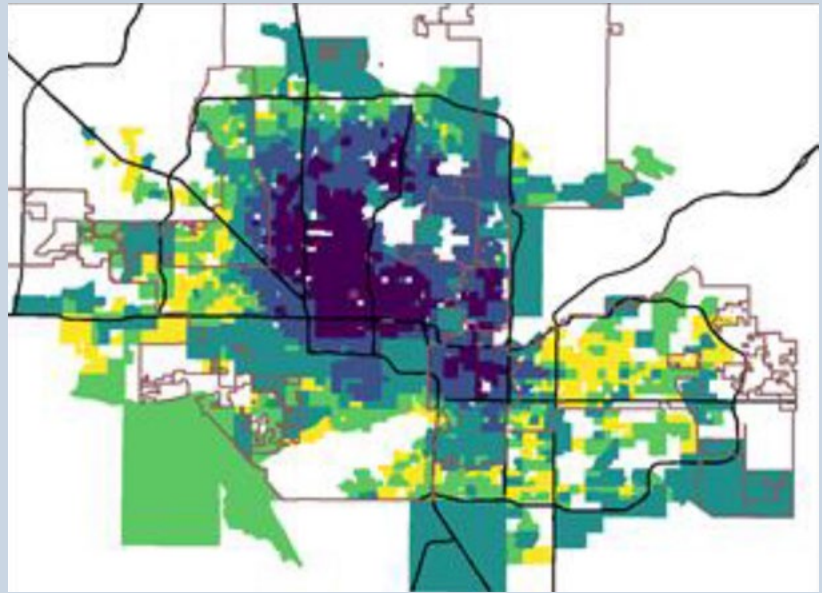
This project achieved the following outputs in FY 2018:

- Formation of two Advisory Groups: a Technical Advisory Group and a Community Advisory Group were launched to provide input and feedback on the project to ensure that final deliverables are relevant and useful to both public transit providers and system users.
- Outreach efforts: the research team conducted extensive outreach to public transportation agencies to identify beta testers of the performance framework in large urban, small urban, and rural contexts. These local communities will be important partners for developing and calibrating the tools to real-world, varied communities.
- Literature review: the project team completed an initial literature review to inform the development of a white paper on the project slated for completion in September 2018.
- Research paper: the project team submitted a research paper, *Revealed Behavior and Access to Opportunities: Comparing Two Measures of Public Transit User Benefits* to the Transportation Research Board for consideration for inclusion in their Annual Meeting in January 2019. Once completed, the project will feature detailed examples from case study regions selected to represent diversity in terms of land use characteristics, transit ridership, demographics, modes, and the level of community involvement. 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 that transit providers can quickly determine how their decisions are affecting greater connectivity for all users, especially disadvantaged populations.

FTA Funding: \$300,000

Figure 13 *Visualization Tool*

Visualizations are a powerful tools for helping decision-makers and the public understand existing public transportation service, and proposed service changes. This project draws heavily on Geographic Information System (GIS)-based analytical tools to identify where public transportation currently exists and to gauge how well it connects riders with key destinations including jobs, medical services, educational institutions, and fresh food. Geo-spatial tools are especially valuable for evaluating the impacts of proposed services changes as well as reinforcing the value of key destinations in places already well-served by existing public transportation.



The image above shows the amount of time it takes to reach low-wage jobs in public transportation in the Phoenix metropolitan area. Concentrations of public transportation service are highest in the darker purple area and less dense in areas of lighter green and yellow.

Standards

FTA provided funding for the development of voluntary and consensus-based standards and best practices by the public transportation industry. Authorized efforts included standards and best practices for 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*

Grantee: University of South Florida, Center for Urban Transportation Research (CUTR)

Project Description:

This project supported FTA to develop and collect information required to develop transit standards by identifying and adopting new or revised voluntary standards, guidelines, and best practices. The goals of the research project are to guide the standards development program in high risk safety areas; leverage the findings and recommendations of the Safety Standards, Strategic Plan, and Data Collection

Project; and other related standards research projects and programs, and coordinate with the transit industry. The project conducted research and analysis in the safety standard areas as 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 received input on new standard needs identified by FTA research, and the industry during the execution of the program.

Results:

CUTR completed and provided research and analysis reports on needs, gaps, and recommendations for new safety standards or to modify existing safety standards in 10 high-risk areas as listed for consideration in the Safety Standards Strategic Plan and internal documents. The following internal reports were delivered to FTA in FY 2018:

- Track Standards for Inspection and Maintenance: delivered May 31, 2018. This internal report reviewed the state of inspection and maintenance practices for rail transit agencies and described the causes of previous track-induced derailments, existing inspection and maintenance standards used by agencies within the U.S., and gaps in the standards or practices currently used. This internal report met the safety goal of this program by providing recommendations to FTA on how to improve rail transit inspection and maintenance through new or revised standards or guidelines.
- Crashworthiness of Less than 30 Ft Buses: delivered on July 31, 2018. This internal report conducted background research and analysis on crashworthiness and crash energy management (CEM) for less than 30 ft paratransit body-on-chassis buses (cutaways). The report identified gaps in existing standards and guidelines, and needs for new standards and guidelines. It also reviews detailed findings and recommendations on the development of standards, protocols, guidelines, or recommended practices related to the safety of paratransit body on chassis buses.
- Light Rail Technology Scan and Case Studies: delivered on November 30, 2018. This internal report conducts a review and analysis of the operations of light rail and streetcar systems, often within shared corridors, presenting a safety risk for vehicles, pedestrians, and bicycles. The report includes case studies of existing systems and safety data for injuries and fatalities, a scan of existing technologies, and an analysis of mitigation measures. The report also has recommendations of new technologies to improve safety with reduced injuries and fatalities.

Reports on additional topic areas, including six prioritized National Transit Safety Board (NTSB) recommendations to FTA, will be available in FY 2019. FTA will use the results and recommendations in each of these reports to prioritize and make decisions on the development and implementation of new standards and

protocols for transit agencies that can make public transportation safer and more reliable; and ensure that transit systems are in a state of good repair. The goal of this program is to further systemic safety systems that increase safety by reducing injuries and fatalities.

FTA Funding: \$3,500,000

Title: *Transit Standards Development Program*

Grantee: American Public Transportation Association (APTA)

Project Description:

This project supported FTA in its leadership role to coordinate with the transit industry and standards development organizations (SDO) to develop and maintain standards and best practices to help improve the performance, reliability, efficiency, and safety of transit systems. The goal is to support APTA to review and update public transportation standards in five specific areas: Bus Transit Systems, Passenger Rail Equipment Safety Standards (Commuter Rail), Rail Transit Systems, Sustainability and Urban Design, and Technology. APTA Standards are reviewed periodically and reaffirmed; they are revised or withdrawn as necessary based on developments in transit operations and/or when new technical information is available. The review period varies but is generally no longer than five years. Concurrently, APTA is working with CUTR to develop new voluntary standards or protocols for the six safety areas recommended by the NTSB to FTA, including Crashworthiness, Electronic Data Recorders, Inward-Outward Facing Camera, Emergency Egress in Tunnels, Tunnel Design and Inspection, and Transmission-Based Train Control. The goal of the project is to provide direct response to NTSB recommendations requiring new standards and protocols to mitigate safety issues and incidents as listed by NTSB. The transit industry will see improved safety and operational benefits with the new standards.

Results:

Over the last fiscal year (October 2017 to September 2018), APTA completed initial review of 77 standards documents with the working groups that review and manage each focus area. The standards reviewed were:

- **Bus Transit Systems:** these standards relate to brake, chassis, electrical, procurement, bus operation, and bus rapid transit. The transit industry will benefit from new and revised standards that define operation, performance, and testing requirements reflecting the emergence of new technologies and innovations. These bus standards provide a comprehensive set of guidelines and best practices for transit, resulting in improved bus operations and maintenance.

- Passenger Rail Equipment Safety Standards (PRESS): these are standards on commuter rail. These standards require revisions due to age and the emergence of new technologies by standardizing commuter rail car safety and addressing technical issues with rolling stock.
- Rail Transit Systems: these standards are for heavy-vehicle transit systems and include fixed assets such as escalators, hours of service, track, signals, inspection, maintenance, and the emergency path. The transit industry will benefit from an update of these standards with expected improvement in crashworthiness, maintenance, and asset management.
- Sustainability & Urban Design for Transit Systems (SUDS): this area relates to social and economic sustainability, greenhouse gas emissions, and facility designs. The transit industry will benefit from updated best practices for livability and community partnerships.
- Technology for Transit Systems: this relates to on-board cameras, chip cards, and other technical innovations. The transit industry will benefit from revised best practices for technologies applicable to multi-modes, and the standards will help the transit industry improve security and operational efficiency.

These new and updated standards are meeting the goals of the project to provide a direct response to NTSB recommendations. APTA expects to complete a final review of 41 standard documents in FY 2018, and the remaining documents by FY 2019. FTA will use the results from this project to help APTA disseminate the standards information to the transit industry. Additionally, APTA will receive background research reports from CUTR beginning in FY 2018 for the development of six new standards for NTSB recommendation. APTA expects to complete new standards development by the end of FY 2019.

The program requires an independent evaluation during the project performance period. An independent evaluator from North Dakota State University, under an FTA funded cooperative agreement with CUTR, will perform the independent evaluation on U.S. Transit Standards developed at the recommendation funded by FTA. The evaluator will work with APTA and FTA and submit an evaluation report in June 2019.

FTA Funding: \$1,000,000

Human Resources and Training

This section of the Technical Assistance and Workforce Development Report to Congress reviews 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, a statutory program in Federal public transportation law. NTI developed and conducted training and

educational programs for Federal, State, and local transportation employees engaged in public transportation work.

Title: *National Transit Institute (NTI)*

Grantee: Rutgers University

Project Description:

NTI is operated through an agreement with Rutgers University, a public four-year degree-granting institution of higher education, as authorized in Federal public transportation law (49 U.S.C. § 5314(c)). NTI developed and conducted training and educational programs for Federal, state and local transportation employees, U.S. citizens, and foreign nationals engaged or to be engaged in government-aid public transportation work. NTI promoted, developed, and delivered high-quality programs and materials through cooperative partnerships with industry, government, institutions, and associations. One of NTI's core operating philosophies is to plan and develop its work in close alignment with FTA's respective offices and with the public transit industry. This proactive planning process ensures that NTI courses and activities are strategically tied to FTA's strategic goals as well as to the needs of the public transit industry. One significant shift in the program over the last few years, is the increased role of NTI as a strategic workforce development partner. NTI has the following four program goals and objectives:

Goals:

1. *Training Delivery Excellence* – continue as the lead provider of public transportation industry training courses, doing so efficiently and effectively with year-over-year improvement in all indicators.
2. *Course Development and Revision* – developing new and revised current NTI courses to reflect current best practices, Federal regulations, and public transportation industry needs. Courses requiring revisions will vary in each fiscal year.
3. *Operational Excellence* – operate an efficient program by maintaining a high level of fiduciary responsibility in the management of the program. The program's performance will improve each year across all indicators as needed and will be maintained where performance has reached the desired performance level. FTA coordination includes new courses and specific activity identified through the planning process with the FTA program manager and FTA program offices.
4. *Special Studies and Projects* – provide overall assistance and support to identify and connect solidarity training activities of workforce careers and needs in public transportation, especially as it relates to facilitating frontline workers.

Objectives:

1. Maintain NTI as the primary resource and lead developer and deliverer of training in public transportation.
2. Support FTA's workforce development efforts by integrating training and collaborating with key partners to develop and field courses and workshops.
3. Continuously improve the cost-effectiveness of the NTI program to provide the best stewardship of public funds.
4. Demonstrate the ongoing need for public transportation training efforts, course redesign, and program implementation.

Results:

NTI training needs were developed and identified through an open process representative of the public transportation industry's needs as defined by the industry and FTA, and it supported the development of the current and future transit workforce. NTI outputs in FY 2018 included the following:

- Training courses: NTI delivered 263 training courses throughout the U.S. to 7,340 participants at an average cost per course of approximately \$14,000 and an average cost per participant of approximately \$502. Available data show that the average annual expenditure per adult learner is \$800 and the average cost per college credit hour is \$594, indicating that NTI's cost averages are very efficient, especially since NTI also supports other activities from its yearly funding allocations. The course names and subject areas are in Table 2.
- Revision of courses: NTI revised and delivered a pilot course on Transit Asset Management (TAM) for Tier I providers and sponsors to support implementation of FTA's TAM rule in compliance with Federal transit law. The value in revising and delivering all NTI courses supported NTI's mission to provide training to improve the administration of FTA grant programs and the provision of public transportation service. This also met NTI's goal to revise courses to reflect current best practices, Federal regulations, and public transportation industry needs. Courses that were updated to reflect current Federal transit law and regulation, included:
 - Understanding ADA
 - Disadvantaged Business Enterprise
 - FTA Real Estate Requirements
 - Management of Transit Construction Projects
 - National Transit Database
 - Public Involvement in Transportation Decision-Making
 - Transit-Oriented Development.

- No-show policy: implemented a “no-show” policy for course attendance, which takes effect when attendees do not notify the NTI person responsible for the course if they are unable to attend a class at least two weeks prior to the start of the class; at minimum, attendees are expected to give a one-week notice with a valid excuse, and/or if they encounter travel disruptions, they must notify the NTI program coordinator as soon as possible and provide adequate documentation of the delay (e.g., screen shot from an airline website showing the delay). This policy is very promising, as the no-show rate decreased by half from 12% to 6%. As NTI’s course completion rate is approximately 95%, the no-show policy results in more seats being available and more individuals being trained. This policy met NTI’s goal of training delivery excellence.
- Pilot courses: developed and delivered pilot courses on PBPP, Transportation Planning Process, and Transit Fare Policy and created a course on new requirements for MPOs and State DOT’s. FTA staff participated in a pilot trial course to review the materials being delivered and ensure that instructor delivery of the material is adequate and accurate. This supported NTI’s goal to develop and revise courses to reflect current Federal regulations.
- New courses: commenced development of new courses to be delivered in the upcoming program year, including Advanced Mobility Management and Procuring Technology, created at the request of FTA to reflect new Federal regulations for transit agencies. This met NTI’s goal to develop courses to reflect current regulations.
- Transit academy: conducted an additional Transit Academy at the request of FTA, which was used specifically for FTA to orient its staff on the operations of a transit agency. FTA made the request due to a large increase in new hires (about 50 employees) within an 18-month period. This supported NTI’s goal of training delivery excellence, and FTA’s goal to educate its workforce on the business of public transportation.
- Gaps and future needs: commenced an assessment to determine current gaps and future needs in transit workforce training at the request of FTA. Federal transportation law requires FTA to develop an Innovative Public Transportation Frontline Workforce Development Program that includes activities to support employment training programs, outreach to specific under-represented populations in the workforce, research on public transportation personnel and training needs, training and assistance for veteran and minority business opportunities and consensus-based national training standards and certifications in partnership with industry stakeholders. NTI is helping FTA with this effort. This effort supports NTI’s goal of special studies and projects relating to public transportation industry training and workforce readiness.

NTI is a key partner for FTA and the public transit industry – NTI courses reach a large audience of public transit workers across a wide geographic area. NTI

seeks to hold courses as close as possible to where the greatest needs exist. The NTI team is highly flexible and supportive of special FTA and industry requests. The current initiative to develop and gather input in an industry training survey is the first time that a formal outreach process was used to inform industry training needs for this program. FY 2018 activities informed the development of that survey, and FY 2019 will be the year the survey is released and analyzed. NTI's impact is that public transportation continues to have a world class and highly efficient training partner with a broad swath of topical courses to meet the growing demand for highly trained public transportation workers.

FTA Funding: \$5,000,000

Table 2 *NTI Courses Offered in FY 2018*

Program	Current Courses Offered
Intermodal and Public Transportation Planning	• State and Metropolitan Transportation Programming • Title VI and Public Transit • Transit-Oriented Development • Ridership Forecasting with STOPS • Performance Based Planning and Programming* • Public Involvement in Transportation Decision Making • Transportation Planning Process*
Management	• Effective Supervision in Transit • Fundamentals of Transit Supervision • Leading as a Mid-Manager in Today's Public Transportation • Project Management for Transit Professionals • Senior Leadership for Public Transportation • Transit Academy • Transit Trainers' Workshop
Environmental Factors	• Advance Environmental Justice • Introduction to Environmental Justice • Introduction to Transportation Conformity • Managing the Environmental Review Process Seminar • Transit Noise and Vibration Impact Assessment
Acquisition and Joint Use Rights-of-Way	• Advance FTA Real Estate Requirements
Procurement Strategies for Public Transportation Systems	• Overview of Transit Procurement for Senior Leadership. • Overview of Transit Procurement for Transit Board Members • Procurement for Small and Medium Transit Systems • Procurement Series I – Orientation to Transit Procurement • Procurement Series II – Risk Assessment and Basic Cost or Price Analysis • Procurement Series III – RFPs and Competitive Contract Negotiations • Procurement Series IV – Contract Administration
Approaches to Delivering Public Transportation Systems	• Transit Fare Policy* • Introduction to Transit Service Planning
New Technologies	• Implementing Rural Transit Technology • Systems Engineering for Technology Projects • Using Regional ITS Architecture(s) • Best Practice Seminars/Workshops

Program	Current Courses Offered
Transit Reporting and Compliance	• Disadvantaged Business Enterprise • Introduction to Transit Asset Management (Tier I Agencies) • National Transit Database (Urban Reporting) • National Transit Database Webinars • Using the Transit Economic Requirements Model (TERM Lite) – Computer Lab • Using the Transit Economic Requirements Model (TERM-Lite) – Laptop Required • Transit Asset Implementation for Tier II Providers & Sponsors
Ways to Make Public Transportation Accessible to Individuals with Disabilities and Improve Mobility for Everyone	• Advanced Mobility Device Securement Skills Development Workshop • Comprehensive ADA Paratransit Eligibility • Managing Community Mobility • Paratransit Management and Operations • Understanding ADA
Construction, Construction Management, Insurance and Risk Management	• Management of Transit Construction Projects • Project Management for Transit Professionals • Risk Assessment for Transit Capital Projects
Maintenance	• Transit Maintenance Leadership Workshop
Innovative Finance	• Financial Planning in Transportation
Workplace Safety	• All-Hazards Awareness and Preparedness for Transit Employees (Direct Delivery) • All-Hazards Awareness and Preparedness for Transit Employees (Train-the-Trainer) • Assault Awareness and Prevention for Transit Operators (Train-the-Trainer) • Assault Awareness and Prevention for Transit Operators (Direct Delivery) • Building Diversity Skills in the Transit Workplace (Direct Delivery) • Building Diversity Skills in the Transit Workplace (Train-the-Trainer) • Crisis Communication for Transit Employees (Direct Delivery) • Crisis Communication for Transit Employees (Train-the-Trainer) • Developing a Transit Emergency Management Plan • Harassment Prevention (Train-the-Trainer) • Harassment Prevention for Transit Employees (Direct Delivery) • Infectious Disease Awareness and Prevention (Direct Delivery) • Infectious Disease Awareness and Prevention (Train-the-Trainer) • Musculoskeletal Disorder Awareness and Prevention (Direct Delivery) • Musculoskeletal Disorder Awareness and Prevention (Train-the-Trainer) • National Incident Management System and Incident Command System: An Introduction for Public Transit Personnel • Rail Signaling (Online) • Robbery: Pick Pocket and Identity Theft • Toolbox for Transit Operator Fatigue: Putting the Report into Action • Violence in the Transit Workplace – Prevention, Response and Recovery • Violence in the Transit Workplace – Prevention, Response and Recovery

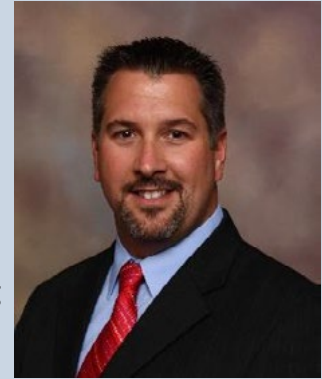
**New course in 2018; NOTE: This table does not reflect new courses under development as no deliveries have taken place as of this time.*

Figure 14 *NTI Testimonials*

Kristen Joyner, Executive Director for the South West Transit Association (SWTA) in Eden Prairie, Minnesota, sees the impact of NTI in the transit industry: “SWTA is an eight-state transit association focused on attaining and implementing the best training possible for our members who are large urban, small urban, rural, and tribal transit providers. We have hosted NTI classes for the last 11 years because they are well-planned and expertly produced. Key personnel from our member transit agencies regularly attend NTI courses because class participants are encouraged to interact with peers and ask questions, and receive course certifications. The broad range of courses NTI delivers allows us to provide specific classes as our members request them, in a fiscally responsible manner while responding to the rapidly-changing regulatory

environment of public transportation. Our hope is to always have access to NTI courses and their professional, industry-experienced instructors so that we can continue offering the high-level of instruction our members require.”

Richard Farr, Executive Director of the Central Pennsylvania Transportation Authority (aka Rabbittransit) in York, Pennsylvania, sees the value of NTI: “NTI courses are an incredibly valuable resource for our organization, particularly as a smaller-sized agency. We rely on their subject matter experts to communicate their experiences and educate our employees, helping to overcome knowledge gaps and strengthening the industry. From management development to planning and technology, the NTI course selection is robust and challenges us to keep pace as the transportation landscape rapidly transforms for the future.”



FY 2015 Innovative Transit Workforce Development Projects

At the beginning of FY 2018, FTA had 17 active projects under the Innovative Transit Workforce Development Program begun in FY 2015. These projects built upon earlier workforce development grants. Currently, most of the FY 2015 grants are close to completion and most met their goals. Almost all of FTA’s workforce development grant projects will be completed by the end of FY 2019. The primary purpose of these Innovative Workforce Initiative projects was to pilot various creative workforce activities across the US in various settings – rural, urban, suburban, and tribal – to see which solutions were the most effective in addressing workforce shortages and needs. Once all the grants are closed and the final evaluation completed, FTA will embark on a marketing initiative to promote the most effective practices developed by these grantees across the five focus areas:

- Recruiting new entrants to public transportation jobs;
- Incumbent worker training;
- Conducting youth outreach and engagement;
- Creating internships, apprenticeships, work-based skills training; and
- Curriculum development.

As of August 2018, 3 of the 17 projects were completed and closed. Of the remaining 14 projects, 8 are more than 98% complete, with the remaining 6 projects expected to be completed in FY 2019. Grantees are tracking qualitative and quantitative outcomes, including the number of direct participants they expect to serve through their programs. Of the \$8.3 million awarded in FY 2015, approximately 77% (\$6.9 million) goes directly to serving program participants; the remaining \$1.3 million is for investments in curriculum development, program start-up and planning activities.

All the FY 2015 projects were working to provide opportunities for traditionally disadvantaged communities or those who were underrepresented in transit and transit construction. Various projects target recruitment of minorities, including Tribal citizens, women, veterans, returning citizens, persons with disabilities and low-income individuals. In addition, many programs provided support services to overcome barriers to employment for targeted groups including case management, coaching, or assistance with various program or registration fees.

To date, workforce development programs have trained 4,933 individuals, and 8,159 individuals were selected and able to participate in their local programs. Of those successfully trained, so far, 1,257 people obtained employment, 94 obtained internships and 157 obtained or were placed in apprenticeships in a variety of transit careers and jobs at transit properties, suppliers, or other transportation-providing entities. Table 3 provides a summary of key performance metrics for these grants.

Table 3 FY 2015 Innovative Transit Workforce Development Projects

Project Name	Grantee Name	City and State	Investment Area*					Funds Awarded
			1	2	3	4	5	
Discover Opportunities – In Transit! (DO IT!)	Santa Clara Valley Transportation Authority	Santa Clara, CA			x			\$200,000
Institute for Advanced Transportation Technology Training	Los Angeles Trade-Technical College	Los Angeles, CA				x		\$750,000
Moving Employees into Transit Related Opportunities (METRO)	Community Career Development, Inc.	Los Angeles, CA		x				\$331,313
Transit Career Ladders Training Program	Bay Area Rapid Transit District (BART)	San Francisco Bay Area, CA				x		\$750,000
Workforce Initiative Now! 2.0	Regional Transportation District (RTD)	Denver, CO		x				\$663,256
Back-2-Work	Jacksonville Transportation Authority (JTA)	Jacksonville, FL					x	\$200,000
Second Chance	Chicago Transit Authority (CTA)	Chicago, IL	x			x		\$750,000
Massachusetts Construction Career Development	Mass DOT	Hopkinton, MA				x		\$744,536
Integrating Career Pathways in Public Transportation: Rail Car Maintenance and Beyond	International Transportation Learning Center	Silver Spring, MD		x			x	\$750,000
Signaling Career Pathways: Putting Veterans and Women on Track and Advancing Signals Technicians	International Transportation Learning Center	Silver Spring, MD		x			x	\$574,182
Metro Transit – Mass Transit Technician Program	Metropolitan Council	Minneapolis-St. Paul, MN		x		x		\$203,210
Workforce Development Training Program	Jersey City Employment Training Program, Inc.	Jersey City, NJ	x			x		\$604,896
Skilled Laborer Jobs Training Program	Niagara Frontier Transportation Authority	Buffalo, NY				x		\$303,000
Career Pathways Program	Greater Cleveland Regional Transit Authority (GCRTA)	Cleveland, OH		x				\$407,780
N2N Automotive University	Grand Gateway Economic Development Association (EDA)	Big Cabin, OK	x			x		\$399,933
Puget Sound Region Ladders to Opportunity Initiative	Workforce Development Council of Snohomish Co.	Puget Sound, WA	x					\$476,776
Village Vans Program	Intercity Transit	Olympia, WA				x		\$200,000
Total FY 2015 Projects Funded								\$8,308,882

* 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

Table 4

*Status of FY 2015 Innovative
Transit Workforce
Development Projects
as of April 30, 2018*

Funds awarded	\$8,308,882
Funds expended	\$6,249,367
Percentage of total grant funding expended	75%
Number of people trained	4,933
Total number of direct participants	7,473
Number who of people who achieved employment	1257
Number who of people who received an internship	94
Number who of people of received an apprenticeship	157

Once the FY 2015 Innovative Transportation Workforce Development Projects are completed, more than 7,473 people will have been reached and 4,933 trained, resulting in 1366 participants obtaining part- or full-time employment, 113 obtaining an internship and 193 obtaining an apprenticeship in transportation careers and jobs. With public transportation jobs paying \$40,000–\$100,000 annually, and an average yearly wage of approximately \$40,000 this program is expected to result in at least \$54 million in yearly wages (\$40K*1366). By contrast, the expected average cost from these projects for each job achieved is \$6,083 (\$8,308,882/1366). Table 5 presents the expected and current major outputs and outcomes of the active grantees.

Table 5

*Outputs and Outcomes
of FY 2015 Innovative
Workforce Development
Projects*

Indicator	Target	Results to Date	% of Target
Number of people trained	4,861	4,933	101%
Number of people who achieved employment	1,366	1257	92%
Number of people who received an internship	113	94	83%
Number of people who received an apprenticeship	193	157	81%
Total number of direct participants	6,925	7,473	107%
Total cost per direct participant	\$996	\$923	93%

To date, the program has exceeded many of its performance targets. 1% more people were trained than expected and 7% more people were reached overall. As noted in the wage outcomes vs. Federal funding, the efficiency of the program is also evidenced by the lower cost per direct participant – at an average of \$923 per person served (\$6.9M/7473), 7% lower than the target of \$996 (\$6.9M/6925). The projects are close to achieving internship goals but are running 8% under the employment target and 19% under the apprenticeship target. However, with more than 548 additional individuals reached and 251 in either an internship or apprenticeship thus far; it is highly likely the employment target of an additional 109 jobs will be generated from these projects by their completion or soon thereafter. The program is averaging a 17% conversion rate between direct participants and those who get a job. The program is a highly efficient generator of economic value for both workers, transit agencies, and their communities. Final wage averages and other outcomes will be calculated when the grants are completed.

Formal program evaluations for these projects began in Spring 2018. The evaluation is utilizing the same criteria used to assess the first two rounds (FY 2011 and FY 2012) of grants issued over the last six years. This will provide additional critical information to assess the impact of these investments and provide a framework for promoting research to practice so that other agencies can benefit from the accomplishments of the workforce grantees. A final evaluation report that summarizes results of all grantees from the six years of investment in workforce development is also being developed. This report will serve as an industry resource to assess what projects are replicable to help public transit agencies meet their workforce needs.

FTA continues to support national workforce development activities and efforts with a goal to foster relationships, collaboration and support frontline workforce recruitment, retention and succession planning. FTA plans to host and develop a consortium with our industry partners, Federal partners and various transit entities.

Title: *Workforce Development Training*

Grantee: 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. An example of an infrastructure project is the New Jersey DOT's \$240 million Bayonne Bridge project, which will recruit participants from impoverished target groups who would otherwise rely on public social benefits and train them, thus creating a pool of highly skilled workers. The goals of this projects were to: 1) assist economically disadvantaged persons to develop the critical work skill-set required by the construction and public transportation industries; 2) invest in Hudson County's regional economic growth; and 3) design and execute an innovative nationally and regionally significant building trades and public transportation workforce development model. The program provided support services to help participants acquire the certifications and education needed to secure apprenticeships and jobs. This grant relied on a strong network of partners, including U.S. Department of Labor One Stop Centers, labor unions, and county and city governments, by working with the social services provider Jersey City One Stop to ensure that participants will earn both relevant general

accreditations (such as a GED) and access to transit jobs, internships and training through local unions and workforce boards.

Results:

JCETP started the Workforce Development Training in November, 2015 and it ended in December, 2017. The project is closed and a final report was received. JCETP outreach efforts were implemented for both the recruitment and job placement of participants that successfully enrolled in and completed the training program. JCETP reached 700 people with its outreach and orientation sessions. JCETP reached out to major building trade unions, 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 reach out efforts, JCETP enrolled 469 individuals who met the programs requirements, including Returning Citizens, individuals in the transition from incarceration to society. Reintegrating returning citizens prevents unnecessary costs for the correctional system, healthcare systems, social safety nets, and taxpayers.

JCETP partnered with transportation related training programs to offer participants training such as Commercial Driver's License (CDL) permit classes, Occupational Safety and Health Administration (OSHA) training, apprenticeships, and pre-apprenticeship training. JCETP enrolled 188 participants in its partner training programs with 134 completing training programs, enhancing job placements within the transportation and construction trades. JCETP helped 144 participants obtain employment with 66 individuals obtaining apprenticeships. JCETP helped 210 participants obtain employment at a cost per direct participant of \$538.

Overall, the program developed a training pipeline, guiding participants through the various steps in the pre-employment process and barriers that might arise through a full array of wrap-around services, increasing the overall employability of each participant.

FTA Funding: \$604,896

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

Grantees: 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 capitalizes 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. The WIN program continued to have a 90-day retention rate of at least 90% for its new hires, and the program serve almost 2,000 people and trained more than 350 in programs such as SkillUP and the Transit Tech Institute. SkillUP is a 45-hour pre-employment boot camp that helps participant assess career interests and aptitudes and the Transit Tech Institute provides three career-ladder training programs designed to expand the pipeline of entry-level transportation workers.

Results:

As of July 2017, WIN had not expended any of the workforce grant funds. RTD has decided to stop the project and return any remaining funds. The program did achieve many goals in training and placing participants from underserved communities on large construction projects and for operations and maintenance positions. RTD trained 350 people and helped 200 obtain employment. WIN 2.0 has also achieved a position advancement rate of 15%.

FTA Funding: \$663,256

Title: *Back-2-Work!*

Grantee: 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 five-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 provide their services to the transit industry and address the workforce needs for major transportation 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 it continues to work until September 2018. JTA identified labor needs and potential employees and trainees and trained 189 participants, with 215 small and disadvantaged business partners benefiting from the program.

As of July 2017, JTA had expended 51% of its workforce total grant funding. Of the \$200,000 awarded, JTA will use 79% of its funds to assist program participants. This will further enable JTA to impact 75% of the individuals and businesses that enter and complete its Back-to-Work Business Development Academy. Currently, the Back-to-Work Program has enabled 113 participants to obtain employment, with 60% of trainees being placed with contractors and an expected 45% retained after 90 days. The Back-to-Work Program will provide employment services and assistance to approximately 98 participants. An additional 300 individuals/participants and business owners will receive small business training. The expected cost per participant of \$527, is more than 40% below the average cost per participant for all 2015 workforce grants of \$986.

FTA Funding: \$200,000

Title: *Ladders of Opportunity – Moving Employees into Transit-Related Opportunities (METRO)*

Grantees: Community Career Development, Inc. (CCD)

Project Description:

The Bus Operator Training Academy (BOTA), the main component of METRO, is an innovative public-private partnership developed to recruit and address the shortcomings of potential Bus Operator applicants. The project served low-income communities to meet the hiring needs of the Los Angeles County Metropolitan Transportation Authority (LACMTA). BOTA recruited and trained individuals from underserved groups in communities as potential bus operators and rail car assemblers. It also prepared current rail/bus operators for promotion. The goals of METRO are to: 1) deliver demand-driven training program that responds to LACMTA's needs; 2) increase local employment in underserved communities; 3) increase regional economic growth and competitiveness; and 4) help the people of Los Angeles by contributing to the transit system that people use to travel to work, school, medical appointments, and other destinations.

Results:

This project started in September 2015 and ended in December 2017. The project was closed and a final report was received. BOTA provided pre-employment training to 13 cohorts, totaling 220 participants, in areas such as customer service, critical thinking, pre-trip bus inspections, assisting persons with disabilities, and various other topic areas. Providing training to these participants helped the BOTA project deliver training in response to the metro needs of Los Angeles County. Approximately 61% of the participants that were selected by Metro to receive Operation Central Instruction (OCI) were hired. OCI is a

four-week paid on-the-job training that participants must successfully complete before becoming regular Metro employees. Because of OCI training, CCD could deliver demand-driven training in response to Metro's needs and increase local employment to participants from underserved communities.

To ensure success in the program, each participant was provided support and case management services. Services included interview clothes, transportation assistance, and child care. These services are provided by project partners and are critical to success during training and assist with job performance and retention. Overall, the project goal was to employ at least 93 people and it exceeded this goal by helping 191 participants obtain employment, at a cost per direct participant of \$1,499, which includes a full complement of training and support services to aid in retention and job success.

FTA Funding: \$331,313

Title: *Second Chance*

Grantee: Chicago Transit Authority (CTA)

Project Description:

This grant expands the Chicago Transit Authority's currently existing Second Chance program. The original Second Chance Program provides individuals who face barriers to employment 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 that is 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. With the FTA funds, CTA can increase job skills training and career coaching, thereby allowing the program to develop and implement the Second Chance Priority Careers Program (SCPCP). The program prioritizes reaching and supporting individuals with barriers to employment including ex-felons, abuse survivors, and the homeless. The CTA's Second Chance Priority Careers Program provides participants 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. Participants receive training and cross-training in software and other skills needed to thrive in the transit workforce of the future. Partnerships with local social services agencies ensure that enrollees receive the

support they need on the way to self-sufficiency. Fourteen social service agencies were selected to work with qualified job seekers.

Results:

The Second Chance Priority Careers Program commenced in August 2015 and completed the training tasks of the project in January 2018. As of May 2018, CTA had enabled 268 participants to participate in the program's expansion, and 236 successfully completed training in fields such as maintenance, operations and customer service. Second Chance provided permanent frontline and entry level transit jobs at the 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 completed with a 91% success rate.

CTA applies 70% of grant funding to direct services and expects to achieve a projected cost of \$1,747 per participant, which equates to about \$125 per month per person per support session. By April 2019, CTA will provide employment opportunities within its property or skills to gain employment at other surrounding transit properties for at least 300 individuals.

FTA Funding: \$750,000

Title: Massachusetts Construction Career Development

Grantee: Massachusetts Department of Transportation (MassDOT)

Project Description:

MassDOT is developing the Massachusetts Construction Career Development (MCCD) Program to improve existing and successful pre-apprenticeship programs in the construction trades, focusing on underrepresented groups such as women and minorities. To support the enhancement of these programs, MassDOT worked with four existing anchor programs—Community Works, Building Pathways, Worcester-Fitchburg Building Pathways Programs, and Youth Build Boston. Transportation employers in Massachusetts indicated support for working with hiring sources that refer trained, screened employees through proven pre-apprenticeship programs.

Results:

This career development program started in August 2015 and ended in June 2017. In total, 1,194 people attended outreach and orientation sessions, and 139 individuals were trained. Significant planning and development activities were completed with each partner; overall, 10% of grant funding was used to refine and develop the four anchor programs and 90% of the funding was used to directly

benefit program participants. FTA received the final report for this project in December 2017 and the project was closed.

The program met its employment target. In total, 95 people were employed because of the program, 34 individuals received internships, and 31 individuals entered registered apprenticeship programs.

FTA Funding: \$744,536

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

Grantee: 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 training and training for employees after they are hired. 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. Key strategic partners were from the Amalgamated Transit Union, the American Federal of Teachers, APTA, CTAA, the Corps Network, the National College Credit Recommendation Service, and the U.S. Department of Education.

Results:

This project started in October 2015 and ended in April 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 of the 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.

ITLC expended 100% of its total funding as of April 30, 2018. There were 182 training participants at a cost of approximately \$4,120 per participant, reflecting the depth and extensive set of courses. The broad reach already achieved ensures long-term sustainability of these new curricula.

FTA Funding: \$750,000

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

Grantee: International Transportation Learning Center (ITLC)

Project Description:

This project addressed the need for highly skilled signals technicians by enhancing existing Signals Training coursework through a consortium of agency and union partners. The ITLC anticipated developing 13 new courses, including an extensive introductory course and courses in inspection, maintenance and troubleshooting for signaling, interlocking, power distribution, and control panels with classroom and on-the-job training. 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 it ended in April 2018. ITLC and the consortium partners developed 26 signals training courses and piloted 13 of them 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 was distributed to consortium members.

The ITLC expected to train 150 individuals by providing pre-employment education and training and core training needed to obtain and maintain a job in rail car maintenance. 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. The broad reach already achieved ensures long-term sustainability of these new curricula, and the coursework prepared them with core and specialized skills that equipped them for essential positions in public transit agencies.

FTA Funding: \$574,182

Title: *Metro Transit Technician (MTT) Program*

Grantee: Metropolitan Council/Metro Transit, Minneapolis-St. Paul, Minnesota

Project Description:

To address the workforce needs of Metro Transit, this grant developed a pool of future bus mechanic technicians to help them meet the Twin Cities' transportation needs. The MTT program recruited low-income, underemployed and other disadvantaged groups and provided complementary social services, as needed, to help ensure participant success.

Results:

MTT started in October 2015 and ended in September 2016. Of more than 401 applicants reached through outreach and orientation, 40 participants began a 12-week empowerment training and academic readiness program. Of those, 22 successfully completed the course, which led to acceptance into Hennepin Technical College's two-year Associate's degree program and paid job shadowing to become Medium/Heavy Truck Technician; of these, 19 obtained employment as interns at Metro Transit. A final report was developed and provided to FTA in 2017.

During their internship period, the interns worked side by side with existing technicians learning the various hands-on applications of the job. At the same time, these interns attended Hennepin Technical College full-time to earn their degrees. In July 2018, the interns were anticipated to graduate from Hennepin Technical College and begin their tenure at Metro Transit as full-time Mechanic Technicians. At the end of the grant period, MTT expected to have 40 people trained with a cost per person served of approximately \$1,676. As with many other projects under the Innovative Transit Workforce Development Program, this initiative included phases and services over almost a year. This project completed its tasks ahead of schedule and assisted the urgent need and secured sufficient technically-skilled workers to support the transportation needs of the Twin Cities.

FTA Funding: \$203,210

Title: *Career Pathways Program*

Grantee: 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 targets 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. The program addressed all aspects of the transit workforce, from student internships to upper-level management. A partnership with El Barrio Workforce Development Center is recruiting and training women, minorities, and veterans to join the GCRTA workforce, especially in low-income communities. Upon

completion of these programs, GCRTA will offer internships and on-the-job training to prepare successful participants for careers at the agency.

Results:

This program started in November 2015 and ended in September 2018. In total, 146 participants were trained to date, 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 have obtained employment.

At the conclusion of the grant, GCRTA expects to have 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*

Grantee: 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. The N2N University program, through its specialized automotive repair training and its 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. They were made available through sponsorships of workforce programs with tribal nations and social services as well as reaching out to potential students through outreach programs. The goal was to create career opportunities and training for member of tribal groups in the public transportation and automotive service 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 May 2016, becoming fully operational in late 2017, and the project ended in July 2018. A final report is expected to be submitted in Fall 2018. In FY 2018, the project successfully launched the automotive program, service advisory training, compressed natural gas (CNG) training, and CDL/Transit Driver program. Each program offered fast-track job certification programs for career paths in transit and automotive industries such as Automotive Technician, Automotive Technician (CNG and Diesel) and Transit Driver/Safety. The development of these courses helped N2N create training

and career opportunities for American Indian 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 enters the program and the hands-on nature of the training.

FTA Funding: \$399,933

Title: *Puget Sound Region Ladders to Opportunity Initiative*

Grantee: Workforce Development Council of Snohomish County, WA

Project Description:

The Puget Sound Region Ladders to Opportunity Initiative enhances and streamlines existing training programs with the help of regional partners. The initiative was designed to develop and provide comprehensive career training, including mechanical and technical skills and offer support services to create a pipeline of skilled workers across Snohomish, King, and Pierce counties, that are ready to enter the construction and public transit industry. Initiative training is delivered by the Tulalip Tribal Employment Rights Office (TERO) Vocational Training Center, Apprenticeship and Nontraditional Employment for Women (ANEW), and the Seattle Vocational Institute (SVI). The goal of the project is to: 1) collaborate with system partners to articulate engagement; 2) strengthen instructional materials in credit-based and competency-based formats; 3) assist participants through support services; and 4) solidify ties with committed employers for participant job placement. The project conducted targeted outreach to groups such as women, minorities, and native tribes, connecting new recruits to apprenticeships, social services, and job placement programs to address the skilled transit worker needs for the more than \$30 billion in transportation construction projects in the three regions.

Results:

The Puget Sound Region Ladders to Opportunity Initiative started in September 2015 and ended in December 2017. The project is closed, and a final report was submitted by the Workforce Development Council of Snohomish County in Summer 2018. The Apprenticeship and Non-Traditional Employment for Women (ANEW) training program conducted outreach through career fairs, online advertising, and distribution of flyers to community-based organizations, and government agencies. Through outreach, the program increased the annual number of cohorts from 4 to 7. Each participant received apprenticeship training and soft-skills training, increasing their attractiveness to employers and apprenticeship programs. Overall, the ANEW program placed 205 individuals in apprenticeships with 126 of those individuals receiving support services in

the form of boots, work clothing, and initiation fees related to apprenticeships, solidifying its partnerships with employers for participant job placement and assisting participants through support services.

The Tulalip TERO Vocational Training Center (TVTC) completed five pre-apprenticeship training classes. TVTC is a 16-week hands-on training that helps participants gain competitive skills to enter a construction career. Over the course of the training, 108 Native Americans enrolled in the training with 85 individuals completing the program, in which 60 TVTC graduates started work with an average wage of \$20.32 per hour. This result is a perfect example of solidifying partnerships with employers and placing participants into jobs.

This project exceeded all milestone goals regarding outreach, training, support services, and job placement. The project reached 3,768 people, trained 444 participants, and provided 218 with support services; 235 participants obtained employment at a cost per participant of \$1,930. Through improving targeted outreach and increasing the quality and breadth of program instruction, this project successfully strengthened the career pipeline into in-demand construction and transportation jobs in the region while facilitating stronger collaborations and pathways for students between multiple job readiness and pre-apprenticeship programs.

FTA Funding: \$476,776

Title: *Transit Career Ladders Training Program*

Grantee: Bay Area Rapid Transit (BART) District, CA

Project Description:

The Transit Career Ladders Training (TCLT) Program was developed to streamline direct and accessible pathways to employment for traditionally underrepresented individuals in the transit industry. Collaboration was the major strategy used, and key partners included Workforce Investment Boards and community colleges in the Bay Area in three activity areas—community outreach, technical training, and non-technical training—to address public transit workforce shortages in the Bay Area. The Program focused on technical trades in the electrical and electronic fields and highlighted three key workforce recruitment issues: high vacancy rates in three technician-level classifications, gaps in technical knowledge, and limitations to internal promotions. The goal of the project is to: 1) expand community outreach to create opportunities for new transit entrants; 2) close gaps in knowledge through technical training; and 3) support incumbent employee training through back-filling with temporary jobs.

Results:

The project started in September 2015 and was completed in December 2017. The project was closed, and a final report was submitted by BART in Summer 2018. BART reached more than 1,600 applicants through outreach and orientation, at a cost per direct recipient of \$5,556. Applications were sourced from various outreach efforts such as primary and secondary partnerships with community colleges, which made up 22% and program partners and secondary networks comprised of 38%. Women accounted for 25% of the poll, Black/African American applicants accounted for more than 40%, and Hispanic/Latino applicants more than 15%. Out of the 1,600 applicants, 1,556 were invited to initial testing, of which 418 reported. This effort helped BART expand community outreach to create opportunities for new entrants which is the first step in providing direct and accessible pathways to employment for underrepresented populations.

TCLT's Academic Bridge Program enrolled 135 students over the course of three semesters, with a total of 77 students (67%) of enrolled students successfully graduating the program. The Academic Bridge program served as a transitional phase for participant to receive basic Math and English support, academic counseling, introductory instruction to electronic and electrical fields, and college readiness and study tips in preparation of technical training courses. Students earned between 19 to 31 college credits for completing technical courses. Electrical and Electronics Certificates were awarded to 77 graduates from their respective colleges. The Academic Bridge program provided an opportunity for traditionally underrepresented individuals to receive technical and non-technical training which met the goal of closing the knowledge gap.

BART successfully hired 10 students throughout the programs duration, with 3 students receiving full-time Train Control Electronic Technician positions, 2 Communications Electronic Technician positions, 1 Transit Vehicle Mechanic, 1 Systems Service Worker, and 1 Custodian. BART expanded opportunity for non-technical careers by providing 3 temporary part-time paid positions to backfill workers who participated in the TCLT program. Three participants were hired into temporary part-time positions such a Cash Handler, Utility Worker, and System Service Worker, each starting at \$25.46 per hour. Providing part-time work to individuals that were not selected for the Technical Phase of Program not only provided a pathway into a transit career for those participants but helped meet the goal of supporting incumbent employee training through back-filling with temporary jobs.

Through the various phases of the project, from outreach through selection and final graduation, the program demonstrated a retention rate of 67%. BART continued to engage TCLT graduates beyond the project to help support their entry or advancement in transit employment.

FTA Funding: \$750,000

Title: *Institute for Advanced Transportation Technology Training (IATTT)***Grantee:** Los Angeles Trade-Technical College**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. This project was developed to address forecasted workforce shortages for transportation workers in the Los Angeles area, bringing together a diverse set of partners to create the IATTT/TWI. The existence of an institute, 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 address a need for an institute designed to meet the specific capacity challenges of community colleges, which train the vast majority of workers in the transportation and transit industries.

Results:

The TWI (formerly known as IATTT) project started in September 2015 and was completed in December 2017. The project is closed, and a final report was submitted by LATTC in April 2018. TWI developed the Transportation Youth Academy (TYA) with the intent to increase high school student's awareness of the transportation industry and career opportunities while gaining fundamental technical and teamwork skills. Curriculum and activities were offered in intensive 5-week formats. 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 resource for educators who would like to implement similar programming. The toolbox can be found at <http://twi.lattc.edu/tya/>. The TYA allowed TWI to be an incubator for innovative ideas with the development of curriculum and programming centered around youth. The Incumbent workforce training series was developed, which consisted of a one-week orientation and 15 training modules with lecture and practical lab or field exercises that were developed as part of the LA Metro apprenticeship program. There were 30 incumbent workers at Metro who completed the apprenticeship program. Previous salaries of incumbent workers averaged \$33.21 per hour; after successful completion, workers were promoted to Maintenance Specialist Job classification with a salary of \$40.80 per hour.

Through its outreach efforts and strategy, 1,802 individuals were introduced to various career options in transportation, with a total of 154 individuals who participated in incumbent working trainings, 30 of whom were Metro employees in the Joint Apprenticeship Committee (JAC) program. In addition, there were 12 incumbent worker trainings, including Introduction to Programmable Logic

Controller with a total of 17 participants and Electronic/Electrical Schematics with 20 participants. Overall, 2,225 individuals were trained at a cost per direct recipient of \$302.

FTA Funding: \$750,000

Title: *Discover Opportunities – In Transit! (DO IT!)*

Grantee: Santa Clara Valley Transportation Authority (VTA)

Project Description:

The DO IT! program recruited low-income and minority youth in the Santa Clara Valley and provided training for a career in transportation planning. VTA found it was challenging to find qualified local candidates for its transportation planner series of jobs and created this program in partnership with the San Jose Job Corps, the Mineta Transportation Institute (MTI), Foothill College, and Independence High School to provide training and classroom instruction. Successful candidates who completed the transportation planner training were given an opportunity to apply for internships. VTA expected to train 172 students and to provide 5 paid internships, with one 12-month internship position and 4 six-month internships. Both classroom learning and hands-on training was provided. Upon completion of the educational program and the internship, participants were qualified for Transportation Planning Aide or Transportation Planner I positions.

Results:

VTA started this project in October 2015, and it ended in March 2018. The two-year program selected and assisted low-income and minority youth with training courses. The program reached its goal to train 172 participants and reach 200 people through outreach and orientation. VTA successfully completed five paid internships to underserved, underemployed and minority youth that prepared them for a career path as a transportation planner. Three out of the five youth attained full-time positions in a planning-related field after the completion of their internships, including one intern that was hired by VTA as a Transportation Planning Aide.

VTA made significant progress to develop potential workers through transportation training at a cost per direct participant of \$837. Approximately 72% of the award is being used to directly serve participants.

FTA Funding: \$200,000

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

The Skilled Laborer Job Training Program was developed to recruit, train, and provide career pathways for traditionally underserved populations and semi-skilled incumbent NFTA workers. NFTA created the Skilled Laborer Job Training Program and partnered with the Buffalo and Erie County Workforce Investment Board, U.S. Veterans Affairs, Western New York Healthcare System, and Erie I Board of Cooperative Educational Services to address current and pending skilled-job vacancy and diversity issues at NFTA. NFTA combined several levels of community involvement to recruit and train prospective program applicants. Prospective applicants are being recruited through these partnerships, and NFTA identifies candidates who possess the core competencies to successfully complete the program and provide continuing education to them and incumbent workers for additional career advancement. NFTA expects to train 40 incumbent and new participants in courses on industrial electricity, programmable logic controls, mechanical drives, hydraulics, pneumatics, sheet metal, pipefitting, welding, machining, and others, including CDL bus training.

Results:

This training program started in February 2016 and is expected to end in July 2019. As of June 2018, the program had trained six groups in the areas of electricity, hydraulics, pneumatics, machining, mechanical drives, pipefitting, welding, CDL bus training, and OSHA safety. A NFTA training bus is currently being retrofitted as a mobile classroom and was due to be completed in August 2018 to assist in teaching lower-skilled applicants and employees to work on a vehicle in a controlled environment to improve their mechanical skills.

NFTA will use approximately 95% of its project funding to directly serve participants. The program has 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 obtained employment as of June 2018.

FTA Funding: \$303,000**Title: *Village Vans Program*****Grantee:** Intercity Transit**Project Description:**

The Village Vans Program was developed to address barriers that low-income job seekers face related to transportation and to provide 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 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 October 2017 and will end in October 2019. The number of volunteer drivers trained to provide rides for employment support is currently 35. The program is reaching its target to teach skills in the transportation field while also providing space and training for volunteer drivers to complete 322 job applications and 42 resumes. A total of 5 participants achieved employment as of March 2018, more than 2,000 trips transported clients and their families to job interviews, work, school and daycare. 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 3,000 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 (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 shall include a detailed description of activities carried out under this section, an evaluation of the program, and policy recommendations to improve program effectiveness. In FY 2018, FTA did not solicit or award any new grants; however, it continued to advance innovative workforce development by monitoring current competitive grants that were selected and awarded in FY 2015, as previously mentioned in Section I. FTA is also continuing activities that support frontline workforce development through specific projects with the National Transit Institute. NTI is now a strategic partner with FTA in workforce development since this statutory program is the primary training resource for public transportation employees at all levels of government. In early FY 2019, NTI will hold a working session to gather input from representatives across public transit and labor union organizations, among others, to identify major issues and trends relating to frontline worker training.

As noted earlier in the discussion on the results of the NTI program, FTA began collaborating with the NTI to conduct an industry workforce needs assessment in late FY 2017. NTI's national workforce needs assessment is in Phase Two. Phase One gathered initial feedback via conferences to help inform the creation of a survey on public transportation worker training needs. A survey is planned for release in Winter 2019.

In addition, FTA is learning from the results from completed evaluations of its Innovative Transportation Workforce Development Program conducted in FY 2011 and FY 2012. The independent evaluation report for FY 2011 can be accessed at https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Report_No._0094.pdf. FTA finalized the evaluation report for the FY 2012 programs in September 2018. The independent evaluation report for FY 2012 is available on FTA's public site at <https://www.transit.dot.gov/research-innovation/innovative-transit-workforce-development-projects-2012-summative-evaluation>.

FTA's next steps in frontline worker programs are to collaborate with NTI in its yearly Transit Trainers workshop, publicize the best success stories from

workforce grants, and study to potential effects of transit automation. FTA published the Strategic Transit Automation Research Plan (STAR), which includes a detailed roadmap of suggested projects and investments. Funded research projects will help FTA understand the potential value proposition and any issues related to the use of automated resources to further transit safety and mobility. The workforce implications of transit automation are an area of strong concern for public transit agencies – especially the impact on frontline workers. FTA intends to research and partner with a broad range of stakeholders to seek greater understanding of this important area. FTA also plans to create a consortia of national workforce partners to help transit agencies identify the most promising workforce projects and implement those projects using their funding and accessing the half of one percent available from Federal transit formula grants associated with workforce development.

SECTION

3

FY 2019 Expected Activities and Program Planning Process for Technical Assistance and Workforce Development Allocations

FTA requested \$9 million for technical assistance and workforce development projects for FY 2019. A total of \$5 million of the \$9 million authorized from the Highway Trust Fund is for the statutorily required NTI program. The remaining \$4 million is available for technical assistance, standards development, and human resource and frontline workforce development projects. Additionally, Congress appropriated \$5 million from the general fund for 49 U.S.C. § 5314 on February 15, 2019. FTA will plan activities in compliance with the Division G of the Consolidated Appropriations Act, 2019.

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
USDOT	U.S. Department of Transportation



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Federal Transit Administration

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