

2023 TCRP

ANNUAL REPORT OF PROGRESS

TRANSIT COOPERATIVE RESEARCH PROGRAM

Sponsored by the Federal Transit Administration



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2023
TCRP
ANNUAL REPORT OF PROGRESS

TRANSIT
COOPERATIVE
RESEARCH
PROGRAM

Research sponsored by the Federal Transit Administration
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RESEARCH BOARD

TRANSIT COOPERATIVE RESEARCH PROGRAM

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, adapt appropriate new technologies from other industries, and introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in TRB Special Report 213—Research for Public Transit: New Directions, published in 1987 and based on a study sponsored by the Urban Mass Transportation Administration—now the Federal Transit Administration (FTA). A report by the American Public Transportation Association (APTA), *Transportation 2000*, also recognized the need for local, problemsolving research. TCRP, modeled after the successful National Cooperative Highway Research Program (NCHRP), undertakes research and other technical activities in response to the needs of transit service providers. The scope of TCRP includes various transit research fields including planning, service configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA; the National Academies of Sciences, Engineering, and Medicine, acting through the Transportation Research Board (TRB); and APTA. APTA is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Commission.

Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the TOPS Commission to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Commission defines funding levels and expected products.

Once selected, each project is assigned to an expert panel appointed by TRB. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in manag-

ing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired effect if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA, in collaboration with the Conference of Minority Transportation Officials, will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

TCRP provides a forum where transit agencies can cooperatively address common operational problems. TCRP results support and complement other ongoing transit research and training programs.

For additional information, go to www.trb.org/TCRP.

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NATIONAL ACADEMIES

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The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, non-governmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. John L. Anderson is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the **National Academies of Sciences, Engineering, and Medicine** to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The National Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at www.nationalacademies.org.

The **Transportation Research Board** is one of seven major program divisions of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to mobilize expertise, experience, and knowledge to anticipate and solve complex transportation-related challenges. The Board's varied activities annually engage about 8,500 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

Learn more about the Transportation Research Board at www.TRB.org.

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TRANSIT COOPERATIVE RESEARCH PROGRAM

Annual Report of Progress

DECEMBER 31, 2023

INTRODUCTION

The Transit Cooperative Research Program (TCRP) was established in 1992 to provide a continuing program of applied research on transit issues. The program is sponsored by the Federal Transit Administration (FTA) and carried out under a three-way agreement among the National Academies of Sciences, Engineering, and Medicine (the National Academies), acting through its Transportation Research Board (TRB); the American Public Transportation Association (APTA); and the FTA.

TCRP focuses on issues significant to the public transportation industry, with emphasis on developing near-term research solutions to a variety of transit problems involving facilities, vehicles, equipment, service concepts, operations, policy, planning, human resources, maintenance, and administrative practices.

TCRP is a unique undertaking. Anyone with an interest in public transportation may play a role in setting the research agenda for the program by submitting research problem statements to TRB at any time. Problem statements are solicited annually from individuals representing the public transportation industry, metropolitan planning organizations (MPOs), universities, and federal agencies. In addition, to complement the open solicitation process, conferences are held to address research needs or small consultant studies are commissioned to develop research problem statements on topics of special interest.



Maryland's Purple Line light rail estimated to be operational by Fall of 2026.

photo credit: Maryland Transit Administration

The selection of research projects is the responsibility of the TCRP Oversight and Project Selection (TOPS) Commission. The TOPS Commission consists of industry executives, representing the primary beneficiaries of TCRP research. The TOPS Commission functions as the TCRP governing board and sets research priorities.

HOW TCRP PROGRAMS ARE FORMULATED

The annual research program is the foundation of TCRP. Formulating the annual program—that is, identifying the highest priority projects to be researched in a given fiscal year—is the primary duty of the TOPS Commission. Projects to be funded are based on the TOPS Commission’s assessment of current problems facing the public transportation industry. The programming process encompasses a series of five steps.

First, problem statements that describe problems in the industry are solicited annually by TCRP staff, but they may be submitted to TRB by anyone at any time. Approximately 3,232 research problem statements have been submitted since program inception. Research problem statements are typically submitted by individuals representing the following:

- Transit Agencies,
- State Departments of Transportation (DOTs),
- FTA/U.S. DOT,
- APTA Committees,
- TRB Committees,
- Industries,
- Universities,
- Consultants, and
- Others

Table 1 shows the origin of problem statements submitted to date.

TABLE 1 ORIGIN OF PROBLEM STATEMENTS

ORGANIZATION	FY 1992–FY 2021		FY 2022		FY 2023		FY 2024	
	NO.	%	NO.	%	NO.	%	NO.	%
Transit Agencies	748	26.9	8	17.8	1	2.3	1	2.4
State DOTs	163	5.9	1	2.2	0	0	0	0
FTA/U.S. DOT	247	9.0	0	0	2	4.6	0	0
APTA Committees	154	5.5	0	0	1	2.3	0	0
TRB Committees	312	11.2	5	11.1	9	20.9	10	23.8
Industries	86	3.1	4	8.9	4	9.0	1	2.4
Universities	352	12.7	7	15.6	7	16.0	4	9.5
Consultants	484	17.5	10	22.2	14	32.6	14	33.3
Others	227	8.1	10	22.2	5	11.6	12	28.6
Total	2,773	100.0	45	100.0	43	100.0	42	100.0

Note: There were 35 additional problem statements developed by a consultant regarding COVID-19 problems and studies for FY 2021.

In addition to this process, the TOPS Commission authorizes special efforts to develop problem statements around specific themes. Projects to aid in increasing transit ridership were developed by the TCRP Project H-5 workshop, "Identification of Research Needs to Increase U.S. Transit Ridership." TCRP Project H-4, "Transit Policy-Related Research," generated five projects in the policy area. Problem statements were developed under TCRP Project J-8, "New Paradigms for Public Transit," and TCRP Project H-15, "Projects to Support 'Mobility for the 21st Century.'" Problem statements were developed on public transportation security under TCRP Project J-10, "Public Transportation Security Research," in response to the attacks of September 11, 2001. Consultants have also been retained to develop problem statements in the areas of human resources and transit bus improvements.

Second, screening workshops are conducted to evaluate and recommend problem statements for consideration by the TOPS Commission. The screening panels consider, in addition to FTA strategic research goals, five strategic priorities adopted in the TCRP strategic plan:

1. Place the customer first,
2. Enable transit to operate in a technologically advanced society,
3. Continuously improve public transportation,
4. Flourish in the multimodal system, and
5. Revitalize transit organizations.

TCRP revises its strategic plan periodically and adjusts selection criteria to be consistent with the plan.

The problem statements are screened to determine the following:

- Whether the problem supports the FTA strategic research goals and/or the TCRP strategic plan,
- Whether the problem is important to transit agencies,
- Whether the problem is researchable,
- Whether the contemplated research is timely,
- Whether successful research will produce significant benefits,
- Whether the probability of success of the proposed study is sufficiently high,
- Whether the proposed study can be designed to avoid undesirable duplication of other completed or ongoing research, and
- Whether the proposed study is appropriate for TCRP or whether it should be performed elsewhere.

Third, the short list of problem statements is presented to the TOPS Commission for consideration in formulating each year's program.

Fourth, the technical merits of the problem statements that survive the screening are further evaluated by the TOPS Commission at an annual meeting held for this purpose. Based on the comments and discussions, the TOPS Commission selects the projects for the next program year.

Finally, each year's program is referred to TRB for review, acceptance, and execution.



Veronica Vanterpool, Deputy Administrator, FTA, shares insights on how FTA effectively carries out the agency's mission and focus.

RESEARCH PROGRAM

TCRP was established by memorandum agreement in 1992. Since then, the TOPS Commission has generally met twice each year, a total of 66 times, to select the research program for the next fiscal year and to review TCRP procedures and performance.

Most problem statements selected by the TOPS Commission become research projects, but some are treated as syntheses. Research projects involve original research, which includes data collection, analysis, and preparation of materials for use by the transit industry. Syntheses search out and assemble useful knowledge from all available sources, especially from practitioners, and report on current practices in the subject area. In addition to these two types of studies, TCRP also conducts IDEA (Innovations Deserving Exploratory Analysis) investigations, legal studies, and quick-response studies. IDEA investigations are intended to develop commercially viable products; legal studies examine legal issues facing the transit industry; and quick-response studies address a variety of issues that require a short-term response.



The TOPS Commission met on October 27, 2023, to select the TCRP FY 2024 Program.



Attendees at the October 27, 2023, TOPS Commission meeting.

The distribution by research field of all projects and syntheses through December 2023 is shown in Table 2.

TABLE 2 DISTRIBUTION OF PROJECTS AND SYNTHESSES BY FIELD THROUGH DECEMBER 31, 2023

RESEARCH FIELDS	NUMBER OF PROJECTS	NUMBER OF SYNTHESSES
Operations	68	63
Service Configuration	61	42
Engineering of Vehicles and Equipment	29	9
Engineering of Fixed Facilities	46	8
Maintenance	18	7
Human Resources	32	21
Administration	21	20
Policy and Planning	78	24
Special Projects	11	0

FINANCING THE PROGRAM

TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and reauthorized by the Transportation Equity Act for the 21st Century (TEA-21); by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); by Moving Ahead for Progress in the 21st Century (MAP-21); by Fixing America's Surface Transportation Act (FAST); and by the Bipartisan Infrastructure Law. Funding for each year of the program is provided below:

- FY 1992 \$8.92 M
- FY 1993 \$7.75 M
- FY 1994 \$8.475 M
- FY 1995 \$8.475 M
- FY 1996 \$7.61 M
- FY 1997 \$8.25 M
- FY 1998 \$4.00 M
- FY 1999 \$8.25 M
- FY 2000 \$7.15 M
- FY 2001 \$6.73 M
- FY 2002 \$8.25 M
- FY 2003 \$8.196 M
- FY 2004 \$8.196 M
- FY 2005 \$8.184 M
- FY 2006 \$8.91 M
- FY 2007 \$9.30 M
- FY 2008 \$9.30 M
- FY 2009 \$10.00 M
- FY 2010 \$10.00 M
- FY 2011 \$9.98 M
- FY 2012 \$6.50 M
- FY 2013 \$3.50 M
- FY 2014 \$3.00 M
- FY 2015 \$6.00 M
- FY 2016 \$5.00 M
- FY 2017 \$5.00 M
- FY 2018 \$5.00 M
- FY 2019 \$5.00 M
- FY 2020 \$5.00 M
- FY 2021 \$5.00 M
- FY 2022 \$6.58 M
- FY 2023 \$6.72 M
- FY 2024 \$6.89 M (anticipated)

HOW TCRP IS ORGANIZED TO ADMINISTER RESEARCH PROGRAMS

Nine research fields and 45 problem areas are used to classify TCRP research.

RESEARCH FIELDS	PROBLEM AREAS
RESEARCH FIELD A Operations	Scheduling Vehicle Operations Control Systems Fare Collection User Information Systems Safety and Security
RESEARCH FIELD B Service Configuration	System Planning Specialized Service Planning Service Performance Marketing
RESEARCH FIELD C Engineering of Vehicles and Equipment	Buses Vans Heavy Rail Cars Commuter Rail Vehicles Light Rail Cars People-Mover Vehicles Vehicle Components
RESEARCH FIELD D Engineering of Fixed Facilities	Buildings Rail Operating Facilities Passenger Stations and Terminals Bus Stop Facilities
RESEARCH FIELD E Maintenance	Vehicle Servicing Vehicle Inspections and Maintenance Vehicle Corrective Repairs Overhaul and Rebuilding Non-Vehicle Maintenance Maintenance Management
RESEARCH FIELD F Human Resources	Recruitment Training Employee Reviews Job Classification Salary Administration Labor Relations Performance Improvement Programs
RESEARCH FIELD G Administration	Financial Management Procurement and Inventory Control Risk Management Law Management Information Systems Transit Organizations
RESEARCH FIELD H Policy and Planning	Policy Analysis Planning Economics Environmental Analysis
RESEARCH FIELD J Special Projects	Areas Not Covered Elsewhere

PROJECT PANELS

Each project is assigned to a panel appointed by TRB. Panel membership must be balanced in terms of professional qualifications, geography, age, gender, and ethnicity. Nominations for members of new panels are solicited through an annual solicitation process. Information about panel nominations is also available on the TCRP website. For most panels, more than four nominees are received for each available slot. Emphasis on selection of well-balanced panels has resulted in membership that reflects the diversity in the transit industry. To ensure that research is relevant to the industry, about one-third of the members of most panels are employed by transit systems.

Panels have four important responsibilities:

1. Defining the scope of the study in a research project statement (request for proposals),
2. Selecting a contractor from among the agencies submitting proposals,
3. Monitoring the research over the duration of the contract, and
4. Reviewing the final research deliverables.

HOW PROJECTS ARE PLACED UNDER CONTRACT

TCRP concentrates on applied research projects. The program is directed at problems of an immediate, near-term nature that can be undertaken with moderate research funds. TCRP project funding levels are typically \$200,000 to \$300,000 per project. As TCRP initiates each year's program, the panels meet for the first time to write research project statements based on the problem statements referred by the TOPS Commission. Research project statements are only available on the TCRP website. Proposals are submitted according to fixed deadlines; extensions are not granted. An average of six to eight proposals are received per project.

It is important to note that the opportunity to propose is open to anyone. Agency selection is based on the following factors: (1) understanding of the problem, (2) research approach, (3) experience of the research team, (4) application of results and implementation plan, (5) plan for participation by disadvantaged business enterprises, and (6) facilities and equipment. Note that the fifth factor was added in 1997 to supplement ongoing TCRP outreach efforts to encourage greater participation in the program by disadvantaged business enterprises. Staff and panel members evaluate all proposals based on these criteria.

The funds available for a project are specified in the research project statement, and contract awards cannot exceed this amount. Line item costs in proposal budgets are examined to determine the reasonableness of the allocation of funds and staffing to the various tasks. The unit costs of the research proposed and elements such as compensation for key personnel, distribution of effort for key tasks, overhead rate, size of any fixed fee, and those expenditures included in direct costs are evaluated. Agency selection is made when the panels meet for the second time, typically about 30 days after the panel members have received the proposals. Panel members candidly discuss all aspects of each agency's

known performance on other research projects. These panel deliberations are privileged. Agency selection is made by all panel members excluding staff and liaison representatives. Successful proposals are retained by the panel members for use in monitoring the research.

Following the selection meeting, TCRP staff notifies the selected agency. After the National Academies' Office of Contracts and Grants completes a financial investigation, a contract between the National Academies and the agency is executed, and the research commences.

The policy of TCRP is to provide a debriefing to unsuccessful proposers upon request. The debriefing is intended to indicate to the proposers the strengths and weaknesses of their proposal based on the panel review.

The National Academies' research contract is normally one of the following types:

- Cost reimbursement,
- Cost reimbursement plus fixed fee, or
- Fixed price.

The National Academies decides, in agreement with the agency, which type of contract will be executed in each case. The research agency's proposal is made a part of the contract with the National Academies. Thus, in addition to the specific objectives outlined in the contract, the research agency's cost estimates are also recognized as being part of the agreement. However, the principal investigator does have flexibility in conducting the research, if it is consistent with the general scheme of the proposal.

MONITORING RESEARCH IN PROGRESS

Once research begins, TCRP staff monitors the administrative and technical progress of the project in accordance with the approved proposal and amplified research plan to ensure conformance with contractual obligations. The project panel maintains control over the research process during execution of the study. Its first involvement is the approval of the researcher's amplified research plan. This amplified plan is due 15 days after the contract start date. It provides a detailed expansion of the research plan and furnishes a complete description of the activities to be pursued in conducting the research. The purpose of the amplified plan is to assist the staff in its monitoring activities and to provide further technical panel guidance to the researcher.

TCRP staff reviews quarterly progress reports and monthly progress schedules and maintains contact with the principal investigators. TCRP project managers visit their assigned research agencies throughout the contract period and discuss with each principal investigator the project's status to learn whether the research is being pursued in accordance with the approved research plan. Finally, the project manager and the corresponding project panel evaluate the completed research to determine the degree of technical compliance with the contract.

PROMOTING DISSEMINATION AND APPLICATION OF RESEARCH RESULTS

In an applied research program such as TCRP, research results must be not only accurate but also usable. In “Information and Instructions for Preparing Proposals,” available at <https://onlinepubs.trb.org/onlinepubs/crp/docs/ProposalPrep.pdf>, proposers are encouraged to include a section in their proposals on the applicability of their research results to transit practices. This section should clearly describe how the anticipated research results can be used to improve transit practices and should indicate the expected audience. This measure is taken to ensure that final research reports are presented in language that is understandable to transit managers, professionals, and administrators.

Thus, research agencies for TCRP are required to report their results in a form that succinctly summarizes the findings for the busy administrator and likewise informs the transit practitioner of the application of the findings. The program specifies style and organization of all research reports so that maximum use by the practitioner may be obtained. Appendix A lists all TCRP publications issued to date.

In addition to publication, measures are taken to ensure that useful research results are made immediately available to the appropriate personnel.

After publication, products are publicized in *TRB Weekly*, TRB’s electronic newsletter; on TRB’s social-media channels; and on TRB’s website (www.trb.org). All TCRP publications are available on the National Academies Press website (nap.nationalacademies.org) for immediate and free electronic access.

Further dissemination of the research reports and support products is carried out according to the Dissemination Plan developed by APTA under TCRP Project J-1, “Dissemination and Implementation of TCRP Research Findings.” The purpose of TCRP Project J-1 is to ensure that TCRP products reach the appropriate transit industry audience. For each product, APTA identifies a target audience and ensures that these individuals receive the material. APTA staff also promotes the program and disseminates products at 10 major conferences each year, including the Community Transportation Association of America (CTAA) Annual Meeting, the Conference of Minority Transportation Officials (COMTO) Annual Meeting, and the TRB Annual Meeting. Announcements of products are routinely published in *Passenger Transport*. APTA includes sessions on research in its conferences, and researchers are encouraged to present findings at the APTA, TRB, CTAA, and other conferences. To aid in the dissemination of findings, APTA’s website (www.apta.com) includes a section listing and describing TCRP research products (click on the “Research Technical Resources” tab and scroll down the menu to “TCRP.”)

Under TCRP Project J-1, a TCRP Ambassador Program has been established with the assistance of COMTO to create a network of geographically distributed transit professionals who are briefed on TCRP products and who represent TCRP at transit agencies and at national, state, and regional conferences. See page 11 for current ambassadors.

THE AMBASSADOR PROGRAM

The TCRP Ambassador Program was developed in 1998 as a joint effort among TCRP, APTA, COMTO, and FTA.

The Ambassador Program assists TCRP in reaching an expanded segment of the transportation community that would otherwise have limited access to TCRP resources. TCRP Ambassadors participate in industry events and visit transportation providers to educate the public transit industry on the variety of solution-based research available from TCRP.

Through peer-to-peer collaboration, Ambassadors place TCRP research information into the hands of transportation professionals, managers, and other personnel who utilize the program's research products in the field. They also educate transportation properties about TCRP's research process and how their transportation professionals can become involved.

Ambassadors serve a 2-year term and are asked to identify opportunities to educate the industry. The program reimburses the Ambassadors' travel expenses.

For additional information on the program or to request a visit from a TCRP Ambassador, contact COMTO National at Comtonational.org/tcrp.

CURRENT AMBASSADORS

The Ambassadors are a diverse group representing various professions and transportation communities in the United States.



Nelly Cubahiro
Executive Assistant
National RTAP
Alexandria, VA



Hugh A. Mose
Transportation Consultant
State College, PA



Jarrett B. Davis
Manager of Bus Operator
Training and Emerging Training
Programs, Greater Cleveland
RTA Cleveland, OH



Samuel Odom, Jr.
National Traffic
Management Officer
Air Traffic Control System
Command
Warrenton, VA



Kate Ko
Director and Service
Area Manager
WSP USA
Washington, DC

The essential role of an Ambassador is to be a liaison between TCRP, its member organizations, the research community, and transportation properties. Participants in the TCRP Ambassador Program are identified through a nomination process and are selected by a designated panel. Each TCRP ambassador serves a 2-year term. There are currently five ambassadors. Requests for nominations are issued to the transit industry on a periodic basis.

TCRP publications, starting with *Report 166*, *Synthesis 111*, *Legal Research Digest 45*, and *Research Results Digest 109*, are only published electronically as PDFs. However, TRB provides a “print-on-demand” option for a fee to cover expenses for those preferring a hard copy.

CURRENT STATUS

In the period from August 1992 (when the first TCRP grant was received) through December 2023, approximately 873 study activities have been authorized and nearly 780 publications have been issued. Appendices B through E, starting on page 41, provide a summary of the status of each project authorized.



ACCOMPLISHMENTS IN 2023

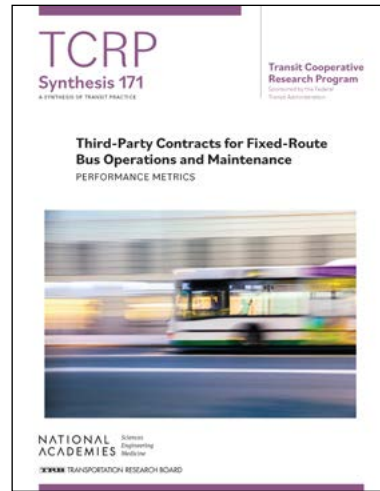
In Fiscal Year 2023, TCRP produced 18 publications, including 5 research reports, 7 syntheses of practice, 1 legal research digest, 1 web-only document, 1 *Transportation Insights* publication, and 3 IDEA reports, bringing the total to nearly 780 publications since the inception of the program. These publications are available at <http://www.trb.org/Publications/PubsTCRPPublications.aspx>.

The following TCRP publications of particular interest were completed during the year.

Administration

[TCRP Synthesis 171: Third-Party Contracts for Fixed-Route Bus Operations and Maintenance: Performance Metrics](#)

continues the work of [TCRP Synthesis 136: Contracting Fixed-Route Bus Transit Service](#) and documents current performance metrics used to contract out bus operations and maintenance in North America. The synthesis looks at all situations where operations and maintenance services are contracted out (i.e., the entire network is contracted out or divisions or sections of the network are contracted out). This synthesis documents the reasons for outsourcing and the metrics used by agencies for evaluating whether to self-operate or contract out bus operations and maintenance in North America. In addition, the synthesis addresses how agencies are holding their third-party providers accountable for meeting contractual terms, as well as methodologies that agencies use to monitor and oversee contractors.



Law

[TCRP Legal Research Digest 60: Transit Mega Projects: Legal Issues](#)

includes lessons learned from transit agencies that have overseen federally funded, complex mega projects, including insights from reviewing third-party contracts and intergovernmental agreements, FTA guidance, pertinent legal decisions, and other valuable references. This digest summarizes the legal issues these transit mega projects faced, including funding, environmental challenges, contracts, design, insurance, dispute resolution, and intergovernmental coordination.

This digest will be useful to lawyers representing public transportation agencies of all sizes that are planning transit mega projects or are considering applying for federal funding to design and/or construct transit mega projects. This digest will also be helpful to all non-attorneys involved in the development, design, construction, funding, or management of transit mega



projects, including engineers, insurance providers, state and federal personnel, consultants, contractors, and students.

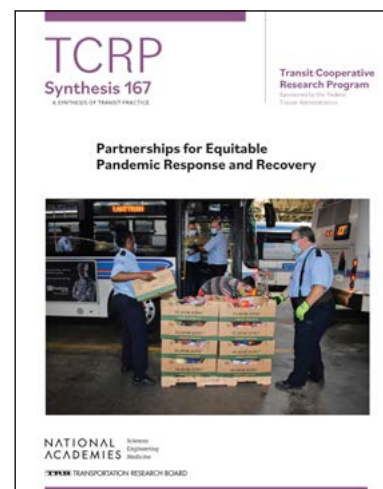
Planning—Equity and Inclusion

TCRP Research Report 241: Inclusive Virtual Public Involvement for Public Transit will help public transit agencies enhance public engagement through virtual public involvement. Virtual tools can enable transit agencies throughout the United States to obtain more inclusive public input; build meaningful, enduring relationships; and better serve the community. This report will be of immediate use to public transit agencies and many stakeholders.

The report examines how virtual public involvement has been quickly adopted and has rapidly evolved, not only within the public transit realm but also within community-based organizations that seek to address the needs of underserved populations. Virtual tools and techniques facilitate two-way communication with the community, potential passengers, and current riders.

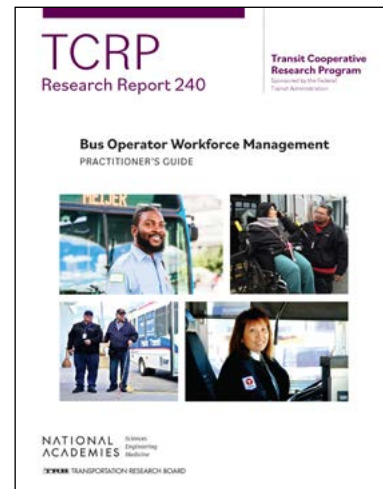
Themes are synthesized and presented in *TCRP Research Report 241: Inclusive Virtual Public Involvement for Public Transit* as potential strategies transit agencies can use to make their virtual public involvement efforts more inclusive, reach new audiences, and connect with traditionally underserved groups. Virtual public engagement can help inform decision-making for transit agencies and encourage expanded community support.

TCRP Synthesis 167: Partnerships for Equitable Pandemic Response and Recovery documents COVID-19 public transportation incidental use and other cross-sector partnerships for providing essential services to vulnerable populations, examining how the partnerships developed and what critical services were provided to the community. A literature review was completed and survey responses on the practices of 113 transit agencies were collected. Additionally, four transit agencies were interviewed for the case examples. These agencies provided information on the state of the practice and emphasized lessons learned and challenges.



Workforce Development

[TCRP Research Report 240: Bus Operator Workforce Management: Practitioner's Guide](#) is a guide for practitioners that provides recommendations and resources to enable transit agencies to better assess, plan, and implement their bus operator workforce management programs. This guide addresses workforce concerns for bus operators who provide fixed-route, flexible-route, and on-demand services and will be of immediate use to transit agencies throughout the United States, since bus operators comprise more than 60 percent of the public transit workforce, and transit agencies must continually carry out the various elements of bus operator workforce management.



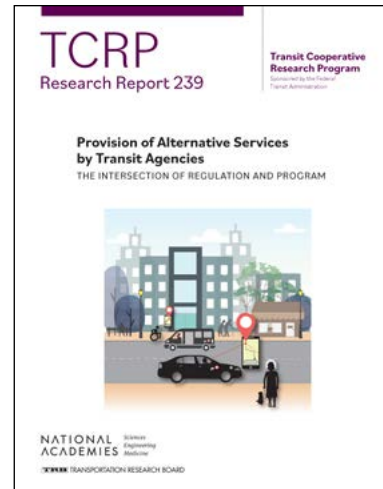
TCRP Research Report 240 is structured around seven elements of bus operator workforce management: workforce needs assessment; recruitment; compensation; hiring processes; training; safety, health, and working conditions; and retention and motivation. The report also includes three appendices that document key elements of the research:

- Appendix A: Case Studies. Seven case studies are presented on transit agencies and their bus operator workforce management practices: Dallas Area Rapid Transit, Texas; Fairmont-Marion County Transit Authority, West Virginia; Greater Cleveland Regional Transit Authority, Ohio; New Jersey Transit, New Jersey; Pinellas Suncoast Transit Authority, Florida; River Cities Public Transit, South Dakota; and Santa Clara Valley Transportation Authority, California.
- Appendix B: Methodology. This appendix summarizes the research methodology, including the literature review, interviews with stakeholders and industry experts, a focus group, an industry survey, and case studies.
- Appendix C: Additional Methodology Materials. This appendix contains the following materials: Interview Guide for Stakeholders and Industry Experts, Industry Survey Questions, Case Study Selection Criteria, and Case Study Interview Guide.

Service Configuration

[TCRP Research Report 239: Provision of Alternative Services by Transit Agencies: The Intersection of Regulation and Program](#)

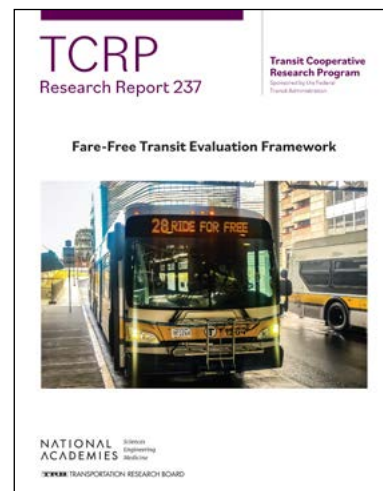
describes how taxis, ride-sourcing services, and other non-dedicated service providers are being used by transit agencies to provide alternative services for individuals with disabilities. This report provides alternative services implementation strategies to transportation agencies to help in the deployment of their service. The report is organized into three parts: Part 1 provides guidelines for planning, implementing, and evaluating an alternative service; Part 2 documents and synthesizes the findings of the research project; and Part 3 contains the appendices, which include the full write-ups of the five case studies conducted for the project, sample materials for planning and deploying an alternative service, and the full survey results. A spreadsheet-based estimation tool, a workshop curriculum, and a technical memorandum on implementation of research findings and products were also prepared as part of this research. The report and the associated estimation tool will be of immediate use to public transit agencies as they deploy or refine their alternative service programs.



Operations

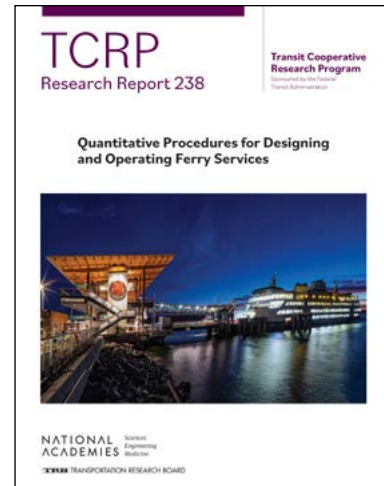
[TCRP Research Report 237: Fare-Free Transit Evaluation Framework](#)

presents a framework to evaluate the potential benefits, costs, and trade-offs of implementing fare-free transit. The framework will be of immediate use to public transit practitioners and community partners, including staff from related organizations (e.g., municipal departments, MPOs, or neighboring transit agencies). This timely report provides examples of public transit agencies throughout the United States that have evaluated fare-free transit, to demonstrate how the framework works in practice, and identifies opportunities to engage relevant stakeholders and the public in the process.



[TCRP Research Report 238: Quantitative Procedures for Designing and Operating Ferry Services](#) provides

guidance for assessing and planning ferry system capacity for fixed-route ferry services and facilities serving either passengers-only or passengers and vehicles. Guidance looks at overall system capacity, as well as the design and operation of ferry system elements, including vessels, facilities, service schedules, and terminal operations. The report also identifies gaps in this and previous reports where additional data collection and research are needed to more fully develop capacity guidance and quantitative procedures for ferry passenger services. The report will be of immediate use to ferry operators or transit decision-makers with an existing ferry service.



Webinars

Communicating results is a necessary first step to facilitate the research-to-practice pipeline. Webinars offer a resource-efficient and interactive environment where attendees can hear directly from authors, ask clarifying questions, and receive feedback that might make a proposed solution more relevant to their particular environment. In addition to publication downloads from the National Academies Press website, webinar attendance is a key indicator of how many people are accessing TCRP products.

Webinar attendance in 2023 was as follows:

- 190 attendees for [Fare-Free Transit Policies and Programs – An Evaluation Framework](#) (based on *TCRP Research Report 237*) in January 2023
- 135 attendees for [Bus Operators – New Strategies for Maintaining the Workforce](#) (based on *TCRP Research Report 240*) in March 2023
- 58 attendees for [Planning and Assessing Ferry System Capacity](#) (based on *TCRP Research Report 238*) in April 2023
- 99 attendees for [Improving Access, Quality, and Management of Public Transit ITS Data](#) (based on *TCRP Research Report 235* and *TCRP Synthesis 153*) in June 2023
- 120 attendees for [Increasing Customer Awareness and Understanding of On-Demand Transit](#) (based on *TCRP Research Report 165*) in June 2023
- 130 attendees for [Legal Issues and Emerging Technologies in Public Transit](#) (based on *TCRP Legal Research Digest 59*) in June 2023
- 245 attendees for [Pedestrian and Bicycle Safety in BRT and High-Priority Bus Corridors](#) (based on *TCRP Synthesis 169*) in October 2023
- 115 attendees for [Next Stop—Inclusive Virtual Public Involvement](#) (based on *TCRP Research Report 241*) in December 2023



On September 21, 2023, TRB, in cooperation with FTA and APTA, held TCRP Day. TCRP Day aims to raise awareness of TCRP, highlight its research in action, and encourage transit professionals to become involved.

Organizations accepting the invitation to participate in TCRP Day were asked to host a brown bag lunch and invite their colleagues to join to learn more about TCRP. Host groups were provided a toolkit that included the following:

- A TCRP Day poster to hang in prominent locations to help spread the word;
- A sample TCRP Day email announcement to invite their colleagues;
- Suggested interactive activities;
- Social media suggestions;
- A PowerPoint presentation detailing the work that TCRP does, the benefits of participating in it, how to become involved, and examples of research;
- Flyers with lists of TCRP's most popular publications and popular publications by topic area; and
- A list of upcoming reports and webinars.

Partners and participants included

- COMTO
- FTA
- National Rural Transit Assistance Program (RTAP)
- National Transit Institute (NTI)
- TRB
- Akron Metro
- Broward County
- CapMetro
- Chicago Transit Authority
- MxV Rail
- Shared-Use Mobility Center
- Southeastern Pennsylvania Transportation Authority

Cheers to TCRP Day

A fun-loving, transit-loving group in Kansas City put their two passions together! The Young Professionals in Transit—Kansas City organized a transit-friendly bar crawl complete with a presentation on TCRP. About a dozen professionals joined in.

In addition, the Women’s Transportation Seminar (WTS), whose mission is to attract, sustain, connect, and advance women’s careers in the transportation industry, had a social to celebrate TCRP Day.

The TCRP Day presentation for 2023 is available at: <https://lnkd.in/eEhKuQsg>



Celebrating TCRP Day at the WTS Social.

FISCAL YEAR 2024 PROGRAM

In October 2023, the TOPS Commission allocated funds for fiscal year 2024. Appendix B lists the new projects, continuations of existing projects, and special projects that were selected, contingent on available funding.

POLICIES ON BIAS AND CONFLICT OF INTEREST

In the administration of TCRP, it is essential to maximize both the substance and the appearance of fairness in the selection and management of contractors while simultaneously ensuring the quality of and expanding the number of potential researchers as much as possible. Because it is in the interest of TCRP to use the expertise of the best-qualified individuals and organizations available to conduct research while avoiding actual or apparent conflicts of interest, TRB’s Cooperative Research Programs has developed and enforces policies on bias and conflicts of interest for the TOPS Commission and TCRP project panels. Information on these policies can be found on the [Conflict of Interest Resource Page](#) on the TCRP website.

SUMMARY

TCRP focuses on issues significant to the public transportation industry, emphasizing the development of near-term research solutions to a variety of transit problems involving facilities, service concepts, operations, policy, planning, human resources, maintenance, and administrative practices.

TCRP processes ensure maximum exposure of the research efforts while they are in progress in the hope that research results will find their way more quickly into practice in the form of policies, procedures, and specifications by the public transportation industry.



APPENDIX A PUBLICATIONS OF THE TRANSIT COOPERATIVE RESEARCH PROGRAM (1994–2023)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
1	E-02	Artificial Intelligence for Transit Railcar Diagnostics, 64 p. (1994)
2	C-02	Applicability of Low-Floor Light Rail Vehicles in North America, 174 p. (1995)
3	B-03	Workbook for Estimating Demand for Rural Passenger Transportation, 124 p. (1995)
4	A-03	Aids for Rail Car Side-Door Observation, 130 p. (1995)
5	E-04	Guidelines for Development of Public Transportation Facilities and Equipment Management Systems, 56 p. (1995)
6	A-02	Users' Manual for Assessing Service-Delivery Systems for Rural Passenger Transportation, 240 p. (1995)
7	D-04	Reducing the Visual Impact of Overhead Contact Systems, 90 p. (1995)
8	F-03	The Quality Journey: A TQM Roadmap for Public Transportation, 80 p. (1995)
9	B-01	Transit Operations for Individuals with Disabilities, 118 p. (1995)
10	A-01	Fare Policies, Structures, and Technologies, 182 p. (1996)
11	C-05	Impact of Radio Frequency Refarming on Transit Communications, 42 p. (1996)
12	A-09	Guidelines for Transit Facility Signing and Graphics, 64 p. (1996)
13	A-08	Rail Transit Capacity, 178 p. (1996)
14	H-04C	Institutional Barriers to Intermodal Transportation Policies and Planning in Metropolitan Areas, 212 p. (1996)
15	C-04	Procurement Specification Guidelines for Mass Transit Vehicle Window Glazing, 46 p. (1996)
16	H-01	Transit and Urban Form, Volumes 1 and 2, 452 p. (1996)
17	A-05	Integration of Light Rail Transit into City Streets, 270 p. (1996)
18	A-06	A Handbook for Acquiring Demand-Responsive Transit Software, 82 p. (1996)
19	A-10	Guidelines for the Location and Design of Bus Stops, 218 p. (1996)
20	H-02	Measuring and Valuing Transit Benefits and Disbenefits, 46 p. (1996)
21	B-07	Strategies to Assist Local Transportation Agencies in Becoming Mobility Managers, 142 p. (1997)
22	H-04D	The Role of Transit in Creating Livable Metropolitan Communities, 184 p. (1997)
23	C-03	Wheel/Rail Noise Control Manual (distributed through APTA), 212 p. (1997)
24	B-05	Attracting Paratransit Patrons to Fixed-Route Services, 392 p. (1997)
25	F-04	Bus Operator Workstation Evaluation and Design Guidelines, 22 p. (1997)
26	A-07	Operational Analysis of Bus Lanes on Arterials, 70 p. (1997)
27	H-04A	Building Transit Ridership, 156 p. (1997)
28	H-04B	Transit Markets of the Future: The Challenge of Change, 194 p. (1998)
29	F-05	Closing the Knowledge Gap for Transit Maintenance Employees: A Systems Approach, 56 p. (1998)
30	A-11	Transit Scheduling: Basic and Advanced Manuals, 148 p. (1998)
31	H-07	Funding Strategies for Public Transportation, Volumes 1 and 2, 83 p. (1998)
32	A-14	Multipurpose Transit Payment Media, 132 p. (1998)
33	H-04D(02)	Transit-Friendly Streets: Design and Traffic Management Strategies to Support Livable Communities, 72 p. (1998)
34	H-11	Assessment of the Economic Impacts of Rural Public Transportation, 209 p. (1998)
35	H-09	Economic Impact Analysis of Transit Investments: Guidebook for Practitioners, 196 p. (1998)
36	B-09	A Handbook: Using Market Segmentation to Increase Transit Ridership, 194 p. (1998)
37	B-02	A Handbook: Integrating Market Research into Transit Management, 207 p. (1998)
38	C-08	Guidebook for Evaluating, Selecting, and Implementing Fuel Choices for Transit Bus Operations, 164 p. (1998)
39	H-10	The Costs of Sprawl—Revisited, 229 p. (1998)
40	H-03	Strategies to Attract Auto Users to Public Transportation, 105 p. (1998)
41	C-10C	New Designs and Operating Experiences with Low-Floor Buses, 103 p. (1998)
42	H-13A	Consequences of the Interstate Highway System for Transit: Summary of Findings, 64 p. (1998)
43	C-10A	Understanding and Applying Advanced On-Board Electronics, 102 p. (1999)
44	E-02A	Demonstration of Artificial Intelligence Technology for Transit Railcar Diagnostics, 72 p. (1999)
45	A-12	Passenger Information Services: A Guidebook for Transit Systems, 52 p. (1999)
46	B-10	The Role of Transit Amenities and Vehicle Characteristics in Building Transit Ridership: Amenities for Transit Handbook and the Transit Design Game Workbook, 240 p. (1999)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
47	B-11	A Handbook for Measuring Customer Satisfaction and Service Quality, 212 p. (1999)
48	H-12	Integrated Urban Models for Simulation of Transit and Land Use Policies: Guidelines for Implementation and Use, 31 p. (1999)
49	H-08	Using Public Transportation to Reduce the Economic, Social, and Human Costs of Personal Immobility, 133 p. (1999)
50	B-13	A Handbook of Proven Marketing Strategies for Public Transit, 182 p. (1999)
51	B-08	A Guidebook for Marketing Transit Services to Business, 50 p. (1999)
52	A-17	Joint Operation of Light Rail Transit or Diesel Multiple Unit Vehicles with Railroads, 482 p. (1999)
53	J-08B	New Paradigms for Local Public Transportation Organizations, Task 1 Report: Forces and Factors That Require Consideration of New Paradigms, 94 p. (1999)
54	G-05	Management Toolkit for Rural and Small Urban Transportation Systems, 375 p. (1999)
55	B-06	Guidelines for Enhancing Suburban Mobility Using Public Transportation, 81 p. (1999)
56	A-19	Integrating School Bus and Public Transportation Services in Non-Urban Communities (& WOD 11), 400 p. (1999)
57	D-06	Track Design Handbook for Light Rail Transit, 352 p. (2000)
58	J-08B	New Paradigms for Local Public Transportation Organizations, 59 p. (2000)
59	C-10B	Hybrid-Electric Transit Buses: Status, Issues, and Benefits, 98 p. (2000)
60	H-20	Using Geographic Information Systems for Welfare to Work Transportation Planning and Service Delivery, 83 p. (2000)
61	B-14	Analyzing the Costs of Operating Small Transit Vehicles: User's Guide STVe, 42 p. (2000)
62	B-18	Improving Public Transportation Access to Large Airports, 148 p. (2000)
63	B-20	Enhancing the Visibility and Image of Transit in the United States and Canada, 320 p. (2000)
64	H-15A	Guidebook for Developing Welfare-to-Work Transportation Services, 190 p. (2000)
65	A-10A	Evaluation of Bus Bulbs, 69 p. (2001)
66	A-18	Effective Practices to Reduce Bus Accidents, 96 p. (2001)
67	C-03A	Wheel and Rail Vibration Absorber Testing and Demonstration, 45 p. (2001)
68	F-07	Part-Time Transit Operators: The Trends and Impacts, 134 p. (2001)
69	A-13	Light Rail Service: Pedestrian and Vehicular Safety, 141 p. (2001)
70	A-21	Guidebook for Change and Innovation at Rural and Small Urban Transit Systems, 262 p. (2001)
71	D-07/Tasks 01, 03, 04	Track-Related Research, Vol. 1: Broken Rail Detection, Control of Wheel/Rail Friction, and Wide-Gap Welding Techniques, 108 p. (2001)
71	D-07/Task 02	Track-Related Research, Vol. 2: Transit-Switch Design Analysis (Phase I), 40 p. (2003)
71	D-07/Task 06	Track-Related Research, Vol. 3: Exothermic Welding of Heavy Electrical Cables to Rail and Applicability of AREMA Track Recommended Practices for Transit Agencies, 30 p. (2004)
71	D-07/Task 07	Track-Related Research, Vol. 4: Friction Control Methods Used by the Transit Industry, 108 p.
71	D-07/Task 08	Track-Related Research, Vol. 5: Flange Climb Derailment Criteria and Wheel/Rail Profile Management and Maintenance Guidelines for Transit Operations, 140 p. (2005)
71	D-07/Task 11	Track-Related Research, Vol. 6: Direct-Fixation Track Design Specifications, Research, and Related Material (& CD 61), 12 p. (2005)
71	D-07/Task 16	Track-Related Research, Vol. 7: Guidelines for Guard/Restraining Rail Installation, 34 p. (2010)
72	A-22	Simulators and Bus Safety: Guidelines for Acquiring and Using Transit Bus Operator Driving Simulators, 60 p. (2001)
73	B-15	Characteristics of Urban Travel Demand (& CD 17), 56 p. (2002)
74	H-10	Costs of Sprawl—2000, 620 p. (2002)
75	B-16	The Role of the Private-for-Hire Vehicle Industry in Public Transit (& CD 16), 81 p. (2002)
76	B-17	Guidebook for Selecting Appropriate Technology Systems for Small Urban and Rural Public Transportation Operators, 73 p. (2002)
77	F-09	Managing Transit's Workforce in the New Millennium, 146 p. (2002)
78	H-19	Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners (& CD 18), 144 p. (2002)
79	B-21	Effective Approaches to Meeting Rural Intercity Bus Transportation Needs, 184 p. (2002)
80	A-24	A Toolkit for Self-Service, Barrier-Free Fare Collection (& CD 19), 220 p. (2002)
81	F-10	Toolbox for Transit Operator Fatigue (& CD 21), 234 p. (2002)
82	B-19	Improving Public Transit Options for Older Persons, Vol. 1: Handbook, 59 p. (2002)
82	B-19	Improving Public Transit Options for Older Persons, Vol. 2: Final Report, 204 p. (2002)
83	B-18A	Strategies for Improving Public Transportation Access to Large Airports, 137 p. (2002)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
84	J-09/Task 01	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 1: Supply Chain: Parts and Inventory Management, 31 p. (2002)
84	J-09/Task 03	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 2: Application Service Provider Implementation Guidelines, 34 p. (2002)
84	J-09/Task 06	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 3: Using the Internet for Transit Training and Certification (& CD 27), 10 p. (2003)
84	J-09/Task 04	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 4: Advanced Features of Transit Websites (& CD 34), 10 p. (2003)
84	J-09/Task 08	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 5: Concept for an e-Transit Reference Enterprise Architecture, 44 p. (2004)
84	J-09/Task 10	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 6: Strategies to Expand and Improve Deployment of ITS in Rural Transit Systems, 20 p. (2005)
84	J-09/Task 09	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 7: The Successful Adoption of Web-Based Collaborative Software, 66 p. (2005)
84	J-09/Task 12	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 8: Improving Public Transportation Technology Implementations and Anticipating Emerging Technologies, 76 p. (2008)
84	J-09/Task 13	e-Transit: Electronic Business Strategies for Public Transportation, Vol. 9: Transit Enterprise Architecture and Planning Framework, 148 p. (2011)
85	H-24	Public Transit Board Governance Guidebook, 30 p. (2002)
86	J-10B(04)	Public Transportation Security, Vol. 1: Communication of Threats: A Guide, 42 p. (2002)
86	J-10B(05)	Public Transportation Security, Vol. 2: K9 Units in Public Transportation: A Guide for Decision Makers, 120 p. (2002)
86	J-10B(03)	Public Transportation Security, Vol. 3: Robotic Devices: A Guide for the Transit Environment, 23 p. (2003)
86	J-10A(03)	Public Transportation Security, Vol. 4: Intrusion Detection for Public Transportation Facilities Handbook, 162 p. (2003)
86	J-10A(02)	Public Transportation Security, Vol. 5: Security-Related Customer Communications and Training for Public Transportation Providers (& CD 43), 8 p. (2004)
86	J-10B(02)	Public Transportation Security, Vol. 6: Applicability of Portable Explosive Detection Devices in Transit Environments, 36 p. (2004)
86	J-10B(01)	Public Transportation Security, Vol. 7: Public Transportation Emergency Mobilization and Emergency Operations Guide, 126 p. (2005)
86	J-10F	Public Transportation Security, Vol. 8: Continuity of Operations (COOP) Planning Guidelines for Transportation Agencies (Joint: NCHRP Rep. 525, Vol. 8), 84 p. (2005)
86	J-10C	Public Transportation Security, Vol. 9: Guidelines for Transportation Emergency Training Exercises (Joint: NCHRP Rep. 525, Vol. 9), 146 p. (2006)
86	J-10D	Public Transportation Security, Vol. 10: Hazard and Security Plan Workshop: Instructor Guide (& CD 64), 208 p. (2006)
86	J-10H	Public Transportation Security, Vol. 11: Security Measures for Ferry Systems, 72 p. (2006)
86	J-10G	Public Transportation Security, Vol. 12: Making Transportation Tunnels Safe and Secure (Joint: NCHRP Rep. 525, Vol. 12), 182 p. (2006)
86	J-10J	Public Transportation Security, Vol. 13: Public Transportation Security Inspections: A Guide for Policy Decision Makers (& WOD 38), 68 p. (2007)
87	H-25	Strategies for Increasing the Effectiveness of Commuter Benefits Programs, 70 p. (2002)
88	G-06	A Guidebook for Developing a Transit Performance-Measurement System (& CD 25), 368 p. (2003)
89	J-06/Task 29	Financing Capital Investment: A Primer for the Transit Practitioner, 172 p. (2003)
90	A-23	Bus Rapid Transit, Vol. 1: Case Studies in Bus Rapid Transit (& CD 31), 54 p. (2003)
90	A-23	Bus Rapid Transit, Vol. 2: Implementation Guidelines, 224 p. (2003)
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92	A-20A(02)	Strategies for Improved Traveler Information, 112 p. (2003)
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94	A-25	Fare Policies, Structures and Technologies: Update, 232 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 1: Introduction, 90 p. (2013)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 2: HOV Facilities, 127 p. (2006)

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95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 3: Park-and-Ride/Pool, 96 p. (2004)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 5: Vanpools and Buspools, 55 p. (2005)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 6: Demand Responsive/ADA, 52 p. (2004)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 9: Transit Scheduling and Frequency, 41 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 10: Bus Routing and Coverage, 74 p. (2004)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 11: Transit Information and Promotion, 71 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 12: Transit Pricing and Fares, 59 p. (2004)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 13: Parking Pricing and Fees, 60 p. (2005)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 14: Road Value Pricing, 67 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 15: Land Use and Site Design, 140 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 16: Pedestrian and Bicycle Facilities, 490 p. (2012)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 17: Transit Oriented Development, 136 p. (2007)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 18: Parking Management and Supply, 86 p. (2003)
95	B-12A	Traveler Response to Transportation System Changes, 3rd Edition (19-Chapter Series), Ch. 19: Employer and Institutional TDM Strategies, 184 p. (2010)
96	A-20B(02)	Determining Training for New Technologies: A Decision Game and Facilitation Guide, 44 p. (2003)
97	J-08B, J-08C	Emerging New Paradigms: A Guide to Fundamental Change in Local Public Transportation Organizations, 110 p. (2003)
98	B-23	Resource Requirements for Demand-Responsive Transportation Services (& CD 40), 42 p. (2003)
99	B-22A	Embracing Change in a Changing World: Case Studies Applying New Paradigms for Rural and Small Urban Transit Service Delivery, 27 p. (2004)
100	A-15A	Transit Capacity and Quality of Service Manual, 2nd Edition (& CD 42), 600 p. (2003)
101	B-24	Toolkit for Rural Community Coordinated Transportation Services (with brochure), 448 p. (2004)
102	H-27	Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects, 552 p. (2004)
103	F-11	Public Transportation Operating Agencies as Employers of Choice (& CD 45), 12 p. (2004)
104	H-24A	Public Transportation Board Effectiveness: A Self-Assessment Handbook, 46 p. (2004)
105	H-30, H-30A	Strategies to Increase Coordination of Transportation Services for the Transportation Disadvantaged (& CD 51), 80 p. (2005)
106	H-29A	Practitioner's Handbook—From Handshake to Compact: Guidance to Foster Collaborative, Multimodal Decision Making (& CD 52) (Joint: NCHRP Rep. 536), 68 p. (2005)
107	H-25A	Analyzing the Effectiveness of Commuter Benefits Programs (& WOD 27), 74 p. (2005)
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109	E-05	Guidebook for Developing and Sharing Transit Bus Maintenance Practices, 120 p. (2005)
110	J-06/Task 55	Commuting in America III (Joint: NCHRP Rep. 550), 196 p. (2006)
111	H-32	Elements Needed to Create High-Ridership Transit Systems (& CD 66; & WOD 32), 136 p. (2007)
112	D-08	Improving Pedestrian Safety at Unsignalized Crossings (& WOD 30) (Joint: NCHRP Rep. 562), 112 p. (2006)
113	H-28	Using Archived AVL-APC Data to Improve Transit Performance and Management (& WOD 23), 96 p. (2006)
114	C-16	Center Truck Performance on Low-Floor Light Rail Vehicles, 76 p. (2006)
115	A-26	Smart Card Interoperability Issues for the Transit Industry, 99 p. (2006)
116	B-25	Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services (& WOD 34), 44 p. (2006)
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118	A-23A	Bus Rapid Transit Practitioner's Guide (& WOD 39), 242 p. (2007)
119	B-28	Improving ADA Complementary Paratransit Demand Estimation, 104 p. (2007)

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121	B-30	Toolkit for Integrating Non-Dedicated Vehicles in Paratransit Service, 59 p. (2008)
122	B-32	Understanding How to Motivate Communities to Support and Ride Public Transportation, 81 p.
123	H-31	Understanding How Individuals Make Travel and Location Decisions: Implications for Public Transportation, 137 p. (2008)
124	B-31	Guidebook for Measuring, Assessing, and Improving Performance of Demand-Response Transportation, 123 p. (2008)
125	A-28	Guidebook for Mitigating Fixed-Route Bus-and-Pedestrian Collisions, 65 p. (2008)
126	B-29	Leveraging ITS Data for Transit Market Research: A Practitioner's Guidebook, 82 p. (2008)
127	F-12	Employee Compensation Guidelines for Transit Providers in Rural and Small Urban Areas, 204 p. (2008)
128	H-27A	Effects of TOD on Housing, Parking, and Travel, 64 p. (2008)
129	H-34	Local and Regional Funding Mechanisms for Public Transportation, 71 p. (2009)
130	A-27	Shared Use of Railroad Infrastructure with Noncompliant Public Transit Rail Vehicles: A Practitioner's Guide, 120 p. (2009)
131	G-08	A Guidebook for the Evaluation of Project Delivery Methods (& WOD 41), 102 p. (2009)
132	C-15	Assessment of Hybrid-Electric Transit Bus Technology (& CD 71), 86 p. (2009)
133	B-33	Practical Measures to Increase Transit Advertising Revenues, 112 p. (2009)
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135	A-29	Controlling System Costs: Basic and Advanced Scheduling Manuals and Contemporary Issues in Transit Scheduling, 412 p. (2009)
136	B-31A	Guidebook for Rural Demand-Response Transportation: Measuring, Assessing, and Improving Performance, 98 p. (2009)
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138	G-10	Estimating Soft Costs for Major Public Transportation Fixed Guideway Projects, 148 p. (2010)
139	F-14	Guidebook for Recruiting, Developing, and Retaining Transit Managers for Fixed-Route Bus and Paratransit Systems (& CD 77), 208 p. (2010)
140	B-35	A Guide for Planning and Operating Flexible Public Transportation Services, 102 p. (2010)
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142	F-13	Vehicle Operator Recruitment, Retention, and Performance in ADA Complementary Paratransit Operations (& WOD 50), 140 p. (2010)
143	B-34	Resource Guide for Commingling ADA and Non-ADA Paratransit Riders, 112 p. (2011)
144	G-09	Sharing the Costs of Human Services Transportation, Vol. 1: The Transportation Services Cost Sharing Toolkit (& CD 86), 80 p. (2011)
144	G-09	Sharing the Costs of Human Services Transportation, Vol. 2: Research Report, 140 p. (2011)
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146	C-19	Guidebook for Evaluating Fuel Charges for Post-2010 Transit Bus Procurements, 252 p. (2011)
147	B-37	Toolkit for Estimating Demand for Rural Intercity Bus Services (& CD 100), 196 p. (2011)
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157	E-09	State of Good Repair: Prioritizing the Rehabilitation and Replacement of Existing Capital Assets and Evaluating the Implications for Transit, 132 p. (2012)
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160	A-37	Paratransit Emergency Preparedness and Operations Handbook, 110 p. (2013)

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161	B-36	Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook (& WOD 58), 80 p. (2013)
162	F-16A	Building a Sustainable Workforce in the Public Transportation Industry—A Systems Approach, 216 p. (2013)
163	B-40	Strategy Guide to Enable and Promote the Use of Fixed-Route Transit by People with Disabilities, 194 p. (2014)
164	B-42	Community Tools to Improve Transportation Options for Veterans, Military Service Members, and Their Families, 228 p. (2014)
165	A-15C	Transit Capacity and Quality of Service Manual—3rd Edition (& CD 138), 808 p. (2013)
166	H-37	Characteristics of Premium Transit Services that Affect Choice of Mode, 398 p. (2014)
167	H-42	Making Effective Fixed-Guideway Transit Investments: Indicators of Success, 262 p. (2014)
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171	C-20	Use of Mobility Devices on Paratransit Vehicles and Buses, 75 p. (2014)
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173	H-49	Improving Transit Integration Among Multiple Providers, Vol. I: Transit Integration Manual, 94 p. (2015)
173	H-49	Improving Transit Integration Among Multiple Providers, Vol. II: Research Report, 70 p. (2015)
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183	A-39	A Guidebook on Transit-Supportive Roadway Strategies (& WOD 66), 208 p. (2016)
184	E-10	Maintenance Technician Staffing Levels for Modern Public Transit Fleets, 40 p. (2016)
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224	H-57	Guide to Joint Development for Public Transportation Agencies (& WOD 73), 192 p. (2021)
225	20-116	A Pandemic Playbook for Transportation Agencies (& NCHRP Rep. 963), 86 p. (2021)
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1	B-01	Transit Operations for Individuals with Disabilities, 4 p. (1994)
2	J-07	Synthesis of Information Related to Transit Problems, 4 p. (1994)
3	F-03	Total Quality Management in Public Transportation, 40 p. (1994)
4	J-06/Task 02	Transit Ridership Initiative, 48 p. (1995)
5	A-04	Electronic On-Vehicle Passenger Information Displays (Visual and Audible), 6 p. (1995)
6	H-05	Research Agenda for Increasing Transit Ridership, 16 p. (1995)
7	H-01	An Evaluation of the Relationships Between Transit and Urban Form, 56 p. (1995)
8	J-07	Synthesis of Information Related to Transit Problems, 6 p. (1995)
9	C-04	Responding to Vandalism of Transit Bus and Rail Vehicle Passenger Windows, 5 p. (1996)
10	J-06/Task 06	Integrating Americans with Disabilities Act Paratransit Services and Health and Human Services Transportation, 13 p. (1997)
11	G-03	Guidelines for the Consistent Collection, Categorization, and Dissemination of Bus Transit Loss Data, 9 p. (1996)
12	G-03	Transit Risk Manager: Risk Management Software for Bus Transit Systems (& CD 13), 4 p. (1996)
13	E-01	Leveraging Information for Better Transit Maintenance, 21 p. (1996)
14	H-06	Coordinated Intermodal Transportation Pricing and Funding Strategies, 30 p. (1997)
15	D-02	Derailment of Transit Vehicles in Special Trackwork, 4 p. (1997)
16	A-14	Multipurpose Fare Media: Developments and Issues, 56 p. (1997)
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31	J-03	International Transit Studies Program: Applications of Intelligent Transportation Systems to Public Transit in Europe, 18 p. (1998)
32	J-07/ Topic SA-09A	Accessibility of Automated Fare Vending and Collection for Customers with Disabilities, 12 p. (1998)
33	J-03	International Transit Studies Program: Private Urban Transit Systems and Low-Cost Mobility Solutions in Major Latin American Cities, 40 p. (1999)
34	A-13	Light Rail Service: Vehicular and Pedestrian Safety, 56 p. (1999)
35	A-15	Highlights of the Transit Capacity and Quality of Service Manual: First Edition, 36 p. (1999)
36	J-03	International Transit Studies Program: Revitalizing Urban Public Transport in Australia and New Zealand, 21 p. (1999)
37	J-07	Synthesis of Information Related to Transit Problems, 8 p. (2000)
38	A-07A	Operational Analysis of Bus Lanes on Arterials: Application and Refinement, 52 p. (2000)
39	C-11	Alternative-Fuel Transit Bus Hazard Assessment Model, 7 p. (2000)
40	E-03A	Revised Inventory Management Desk Guide, 42 p. (2000)

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41	F-06A	Guidelines for Collecting, Analyzing, and Reporting Transit Crime Data, 20 p. (2001)
42	J-03	International Transit Studies Program, 34 p. (2001)
43	A-17A	Supplementing and Updating TCRP Report 52, 60 p. (2001)
44	G-04A	Consensus Standards for the Rail Transit Industry, 30 p. (2001)
45	J-06/Task 38	Identification of the Critical Workforce Development Issues in the Transit Industry, 23 p. (2001)
46	J-06/Task 39	Supplemental Analysis of National Survey on Contracting Transit Services, 35 p. (2002)
47	J-03	International Transit Studies Program: Germany's Track-Sharing Experience, 40 p. (2002)
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50	J-05	Legal Aspects of Transit and Intermodal Transportation Programs, 3 p. (2002)
51	A-05A(01)	Second Train Coming Warning Sign: Demonstration Projects, 68 p. (2002)
52	H-27	Transit-Oriented Development and Joint Development in the United States: A Literature Review, 144 p. (2002)
53	J-03	International Transit Studies Program: Design-Build Transit Infrastructure Projects in Asia and Australia, 31 p. (2002)
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55	J-08B	Support for Fundamental Change in Public Transportation, 13 p. (2002)
56	G-06	A Summary of TCRP Report 88: A Guidebook for Developing a Transit Performance-Measurement System, 25 p. (2003)
57	J-06/Task 42	Developing a Recommended Standard for Automated Fare Collection for Transit: Scoping Study—Regional Fare Management Programs, 26 p. (2003)
58	J-03	International Transit Studies Program: Safety and Security Issues at All-Bus Systems in Small- to Medium-Sized Cities in Western Europe, 25 p. (2003)
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61	B-12	Traveler Response to Transportation System Changes: An Interim Introduction to the Handbook, 23 p. (2003)
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65	H-29	A New Vision of Mobility: Guidance to Foster Collaborative Multimodal Decision Making (Joint: NCHRP RRD 288), 10 p. (2004)
66	J-03	International Transit Studies Program: Transit Design, Construction, and Operations in the Mediterranean Region, 28 p. (2004)
67	J-07	Synthesis of Information Related to Transit Problems, 8 p. (2004)
68	J-03	International Transit Studies Program: Vehicle Design Standards and Procurement Practices in Europe, 26 p. (2004)
69	J-06/Task 51	Evaluation of Recent Ridership Increases, 40 p. (2005)
70	J-03	International Transit Studies Program: Innovations in Bus, Rail, and Specialized Transit Operations in Latin America, 28 p. (2005)
71	J-03	International Transit Studies Program: New Technologies in Maintenance Systems and Departments in Europe, 20 p. (2005)
72	D-07/Task 05	Guidelines for a New Transit Switch Design, 6 p. (2005)
73	J-07	Synthesis of Information Related to Transit Problems, 10 p. (2005)
74	J-06/Task 62	Train Door Systems Analysis (& WOD 28), 16 p. (2006)
75	B-27	Executive Summary: Cost-Benefit Analysis of Providing Non-Emergency Medical Transportation (& WOD 29), 8 p. (2006)
76	D-07/Task 10	Acoustic Rail-Break Detection Demonstration at MTA—New York City Transit, 8 p. (2006)
77	J-03	International Transit Studies Program: Innovative Techniques in the Planning and Financing of Public Transportation Projects, 20 p. (2006)
78	G-07	Managing Capital Costs of Major Federally Funded Public Transportation Projects (& WOD 31), 12 p. (2006)
79	D-07/Task 15	Design of Track Transitions, 40 p. (2006)
80	J-07	Synthesis of Information Related to Transit Problems, 10 p. (2006)
81	J-03	International Transit Studies Program: Coordinated Approaches to Expanding Access to Public Transportation, 24 p. (2007)

Research Results Digests

No.	Proj. No.	Title, Pages, Publication Year
82	D-07/Task 12	Use of Guard/Girder/Restraining Rails, 38 p. (2007)
83	D-07/Task 13	Performance and Testing Requirements for Portable Track Geometry Inspection Systems, 20 p. (2007)
84	D-10	Audible Signals for Pedestrian Safety in LRT Environments (& WOD 35), 22 p. (2007)
85	J-03	International Transit Studies Program: Rail Passenger Safety: Equipment and Technologies, 40 p. (2007)
86	J-07	Synthesis of Information Related to Transit Practices, 10 p. (2007)
87	J-03	International Transit Studies Program: Emergency Preparedness, Response, and Recovery in the Transit Industry, 38 p. (2008)
88	J-03	International Transit Studies Program: Innovative Practices in Transit Workforce Development, 36 p. (2008)
89	J-03	International Transit Studies Program: Public Transportation's Role in Addressing Global Climate Change, 22 p. (2009)
90	J-10E	A Guide to Planning Resources on Transportation and Hazards (Joint: NCHRP RRD 333), 46 p.
91	J-07	Synthesis of Information Related to Transit Problems, 10 p. (2009)
92	J-03	International Transit Studies Program: Balancing Infrastructure Reinvestment with System Expansion, 27 p. (2009)
93	J-06/Task 71	Rural Transit Achievements: Assessing the Outcomes of Increased Funding for Rural Passenger Services under SAFETEA-LU, 12 p. (2009)
94	J-07	Synthesis of Information Related to Transit Problems, 9 p. (2010)
95	J-03	International Transit Studies Program: Performance Measurement and Outcomes, 36 p. (2010)
96	J-03	International Transit Studies Program: Managing Increasing Ridership Demand, 30 p. (2010)
97	J-05/ Topic 11-03	Transit Agency Compliance with Title VI, Limited English Proficiency Requirements, 20 p. (2011)
98	J-07	Synthesis of Information Related to Transit Problems, 10 p. (2011)
99	J-06/Task 74	Improving Mobility for Veterans, 98 p. (2011)
100	J-06/Task 72	Professional Certification and Credentialing Program for the Transit Industry, 16 p. (2011)
101	J-03	International Transit Studies Program: Funding for Infrastructure Maintenance: Achieving and Sustaining a State of Good Repair, 20 p. (2011)
102	J-03	International Transit Studies Program: Public Transportation Systems as the Foundation for Economic Growth, 20 p. (2011)
103	J-03	International Transit Studies Program: Sustainable Public Transportation: Environmentally Friendly Mobility, 26 p. (2011)
104	J-07	Synthesis of Information Related to Transit Problems, 12 p. (2012)
105	H-41	Summary of Research Findings: Assessing and Comparing Environmental Performance of Major Transit Investments (& WOD 55), 24 p. (2012)
106	J-07	Synthesis of Information Related to Transit Practices, 12 p. (2013)
107	H-44	Developing Partnerships Between Transportation Agencies and the Disability and Underrepresented Communities, 64 p. (2013)
108	J-07	Synthesis of Information Related to Transit Problems, 18 p. (2014)
109	J-06/Task 81	Impact of the Affordable Care Act on Non-Emergency Medical Transportation (NEMT): Assessment for Transit Agencies, 56 p. (2014)
110	J-07	Synthesis of Information Related to Transit Problems, 13 p. (2015)
111	J-07	Synthesis of Information Related to Transit Practices, 12 p. (2016)
112	G-14	Contracting Commuter Rail Services, 28 p. (2016)
113	J-07	Synthesis of Information Related to Transit Practices, 12 p. (2017)
114	J-07	Synthesis of Information Related to Transit Practices, 12 p. (2018)
115	J-07/SB-32	Use of Agency Service Agreements in ADA Paratransit Delivery, 16 p. (2021)

Legal Research Digests (Project J-05)

No.	Topic No.	Title, Pages, Publication Year
1	01-06	Strategies to Facilitate Acquisition and Use of Railroad Right of Way by Transit Providers, 16 p.
2	01-07	Successful Risk Management for Rideshare and Carpool-Matching Programs, 24 p. (1994)
3	01-04	State Limitations on Tort Liability of Public Transit Operations, 18 p. (1994)
4	01-01	Transit Labor Protection—A Guide to Section 13(c) Federal Transit Act, 32 p. (1996)

Legal Research Digests (Project J-05)

No.	Topic No.	Title, Pages, Publication Year
5	01-03	Legal Issues Associated with Intermodalism, 22 p. (1996)
6	01-05	Requirements That Impact the Acquisition of Capital-Intensive Long-Lead Items, Rights of Way, and Land for Transit, 24 p. (1996)
7	03-02	The Impact of Civil Rights Litigation Under Title VI and Related Laws on Transit Decision Making, 24 p. (1997)
8	01-02	Transportation Service Agreements: A Preparation and Reference Guide for Transit Attorneys, 40 p. (1997)
9	03-05	Strategies to Minimize Liability under Federal and State Environmental Laws, 20 p. (1998)
10	02-01	Restrictions on Speech and Expressive Activities in Transit Terminals and Facilities, 36 p. (1998)
11	02-02	Potential Tort Liability for Transit Agencies Arising Out of the Americans with Disabilities Act, 40 p. (1998)
12	03-03	The Zoning and Real Estate Implications of Transit-Oriented Development, 50 p. (1999)
13	03-01	Report on Innovative Financing Techniques for Transit Agencies, 41 p. (1999)
14	04-02	Treatment of Privacy Issues in the Public Transportation Industry, 29 p. (2000)
15	04-01	Impact of the Family and Medical Leave Act of 1993 on the Transit Industry, 39 p. (2000)
16	03-04	Drug and Alcohol Testing—A Survey of Labor-Management Relations, 60 p. (2001)
17	05-03	Guide to Federal Buy America Requirements, 29 p. (2001)
18	05-01	Federal and State Licensing and Other Safety Requirements for Commercial Motor Vehicle Operators and Equipment, 90 p. (2001)
19	06-02	Impact of the Americans with Disabilities Act on Transit Operations, 43 p. (2003)
20	07-01	Transit Passengers and Civil Rights, 68 p. (2005)
21	08-01	Trademarking and Licensing for Transit Providers, 30 p. (2005)
22		The Case for Searches on Public Transportation (Proj. J-06, Task 60), 82 p. (2005)
23	08-04	The Americans with Disabilities Act: The Federal Transit Administration's Letters of Findings and Compliance Assessments (& CD 65), 106 p. (2007)
24	09-05	Transit Bus Stops: Ownership, Liability, and Access, 61 p. (2008)
25	09-01	Privacy Issues with the Use of Smart Cards, 25 p. (2008)
26	09-06	Resources for Legal Issues Associated with Bus Maintenance, 75 p. (2008)
27	09-04	Civil Rights Implications of the Allocation of Funds Between Bus and Rail, 36 p. (2008)
28	09-02	Use of Fees or Alternatives to Fund Transit, 37 p. (2008)
29	10-01	First Amendment Implications for Transit Facilities: Speech, Advertising, and Loitering, 42 p. (2009)
30	11-01	Legal Handbook for the New Starts Process, 44 p. (2010)
31	12-01	Guide to Federal Buy America Requirements—2009 Supplement, 36 p. (2010)
32	10-03	Reconciling Security, Disclosure, and Record-Retention Requirements in Transit Procurements, 80 p. (2010)
33	10-02	Developing and Implementing a Transit Advertising Policy, 28 p. (2010)
34	09-03	Application of Physical Ability Testing to Current Workforce of Transit Employees, 95 p. (2010)
35	12-02	Reductions in Transit Service or Increases in Fares: Civil Rights, ADA, Regulatory, and Environmental Justice Implications, 56 p. (2011)
36	11-02	Transit-Oriented and Joint Development: Case Studies and Legal Issues (& CD 96), 38 p. (2011)
37	12-04	Legal Arrangements for Use and Control of Real-Time Data, 56 p. (2011)
38	12-03	Legal Aspects Relevant to Outsourcing Transit Functions Not Traditionally Outsourced, 28 p. (2011)
39	10-04	Competition Requirements of the Design/Build, Construction Manager at Risk, and Public-Private Partnership Contracts—Seven Case Studies, 56 p. (2012)
40	13-02	Legal Issues Involving Surety for Public Transportation Projects, 106 p. (2012)
41	13-03	Transit Labor 13c Employee Protection Digest (CD 120), 0 p. (2012)
42	14-02	Transit Agency Intergovernmental Agreements: Common Issues and Solutions (& CD 122), 56 p. (2012)
43	14-03	Contractual Means of Achieving High-Level Performance in Transit Contracts (& CD 134), 48 p. (2013)
44	15-02	Legal Issues in Public Transit Emergency Planning and Operation, 74 p. (2013)
45	15-03	Transit Public-Private Partnerships: Legal Issues, 322 p. (2014)
46	15-04	How the Health Insurance Portability and Accountability Act (HIPAA) and Other Privacy Laws Affect Public Transportation Operations, 224 p. (2014)
47	15-01	Legal Issues with Obtaining Insurance on Large Transit Projects, 66 p. (2014)
48	16-02	Legal Issues Concerning Transit Agency Use of Electronic Customer Data, 66 p. (2017)
49	16-01	Updated Guide to Buy America Requirements—2015 Supplement, 54 p. (2017)
50	16-03	Public Transit Emergency Preparedness Against Ebola and Other Infectious Diseases: Legal Issues, 56 p. (2017)
51	16-04	Technology Contracting for Transit Projects, 52 p. (2017)

Legal Research Digests (Project J-05)

No.	Topic No.	Title, Pages, Publication Year
52	17-02	Legal Implications of Video Surveillance on Transit Systems, 46 p. (2018)
53	17-03	Legal Considerations in Evaluating Relationships Between Transit Agencies and Ridesourcing Service Providers, 236 p. (2018)
54	17-01	Impact of the Americans with Disabilities Act on Transit Agency Liability, 70 p. (2018)
55	18-01	Tax Increment Financing for Transit Projects, 48 p. (2020)
56	18-04	Joint Development Agreements Using FTA Funds or FTA-Funded Assets, 29 p. (2021)
57	18-05	Fix it, Sign it or Close it: State of Good Repair in an Era of Budget Constraints (& NCHRP LRD 84), 32 p. (2021)
58	20-03	Policing and Public Transportation, 56 p. (2022)
59	19-02	Legal Issues and Emerging Technologies, 70 p. (2022)
60	20-01	Transit Mega Projects: Legal Issues, 52 p. (2023)

Syntheses (Project J-07)

No.	Topic No.	Title, Pages, Publication Year
1	SC-01	Safe Operating Procedures for Alternative Fuel Buses, 48 p. (1993)
2	SC-03	Low-Floor Transit Buses, 44 p. (1994)
3	SF-02	Incentive Programs to Improve Transit Employee Performance, 46 p. (1994)
4	SB-01	Integration of Bicycles and Transit, 54 p. (1994)
5	SG-03	Management Information Systems, 78 p. (1994)
6	SG-04	The Role of Performance-Based Measures in Allocating Funding for Transit Operations, 52 p. (1994)
7	SD-01	Regulatory Impacts of Design and Retrofit of Bus Maintenance Facilities, 50 p. (1994)
8	SC-04	Retrofit of Buses to Meet Clean Air Regulations, 48 p. (1994)
9	SC-02	Waste Control Practices at Bus Maintenance Facilities, 26 p. (1995)
10	SA-01	Bus Route Evaluation Standards, 54 p. (1995)
11	SA-02	System-Specific Spare Bus Ratios, 46 p. (1995)
12	SE-01	Transit Bus Service Line and Cleaning Functions, 48 p. (1995)
13	SG-01	Risk Management for Small and Medium Transit Agencies, 32 p. (1995)
14	SB-02	Innovative Suburb-to-Suburb Transit Practices, 50 p. (1995)
15	SA-03	System-Specific Spare Rail Vehicle Ratios, 44 p. (1995)
16	SA-07	Changing Roles and Practices of Bus Field Supervisors, 46 p. (1996)
17	SA-05	Customer Information at Bus Stops, 64 p. (1996)
18	SF-01	Bus Occupant Safety, 56 p. (1996)
19	SA-06	Passenger Transfer System Review, 37 p. (1996)
20	SH-01	Transit-Focused Development, 55 p. (1997)
21	SF-03	Improving Transit Security, 35 p. (1997)
22	SF-04	Monitoring Bus Maintenance Performance, 48 p. (1997)
23	SD-02	Inspection Policy and Procedures for Rail Transit Tunnels and Underground Structures, 95 p. (1997)
24	SA-04	AVL Systems for Bus Transit, 47 p. (1997)
25	SC-05	Light Rail Vehicle Compression Requirements, 34 p. (1997)
26	SA-08	Bus Transit Fare Collection Practices, 29 p. (1997)
27	SF-05	Emergency Preparedness for Transit Terrorism, 73 p. (1997)
28	SG-05	Managing Transit Construction Contract Claims, 50 p. (1997)
29	SA-09	Passenger Counting Technologies and Procedures, 50 p. (1998)
30	SB-03	ADA Paratransit Eligibility Certification Practices, 38 p. (1998)
31	SG-06	Paratransit Contracting and Service Delivery Methods, 35 p. (1998)
32	SB-04	Transit Advertising Revenue: Traditional and New Sources and Structures, 58 p. (1998)
33	SF-06	Practices in Assuring Employee Availability, 75 p. (1999)
34	SA-10	Data Analysis for Bus Planning and Monitoring, 68 p. (2000)
35	SG-08	Information Technology Update for Transit, 106 p. (2000)
36	SG-07	Identifying and Reducing Fraudulent Third Party Tort Claims Against Public Transit Agencies, 58 p. (2000)
37	SB-05	Communicating with Persons with Disabilities in a Multimodal Transit Environment, 48 p. (2001)

Syntheses (Project J-07)

No.	Topic No.	Title, Pages, Publication Year
38	SA-12	Electronic Surveillance Technology on Transit Vehicles, 57 p. (2001)
39	SA-11	Transportation on College and University Campuses, 62 p. (2001)
40	SF-07	A Challenged Employment System: Hiring, Training, Performance Evaluation, and Retention of Bus Operators, 72 p. (2001)
41	SB-06	The Use of Small Buses in Transit Service, 71 p. (2002)
42	SH-02	Use of Flexible Funds for Transit Under ISTEA and TEA-21, 40 p. (2002)
43	SB-08	Effective Use of Transit Websites, 79 p. (2002)
44	SF-09	Training for On-Board Bus Electronics, 63 p. (2002)
45	SB-07	Customer-Focused Transit, 100 p. (2002)
46	SF-08	Diversity Training Initiatives, 59 p. (2003)
47	SF-10	Corporate Culture as the Driver of Transit Leadership Practices, 91 p. (2003)
48	SA-14	Real-Time Bus Arrival Information Systems, 61 p. (2003)
49	SA-13	Yield to Bus—State of the Practice, 78 p. (2003)
50	SC-06	Use of Rear-Facing Position for Common Wheelchairs on Transit Buses, 42 p. (2003)
51	SB-10	Transit Advertising Sales Agreements, 99 p. (2004)
52	SF-11	Transit Operator Health and Wellness Programs, 80 p. (2004)
53	SB-09	Operation Experiences with Flexible Transit Services, 58 p. (2004)
54	SE-02	Maintenance Productivity Practices, 92 p. (2004)
55	SH-03	Geographic Information System Applications in Transit, 66 p. (2004)
56	SG-10	Performance-Based Measures in Transit Fund Allocation, 74 p. (2004)
57	SA-15	Use of Computer-Aided Scheduling and Dispatch for Demand-Responsive Transit Services, 80 p. (2004)
58	SC-07	Emergency Response Procedures for Natural Gas Transit Vehicles, 54 p. (2005)
59	SH-04	Strategic Planning and Management in Transit Agencies, 44 p. (2005)
60	SB-11	Practices in No-Show and Late Cancellation Policies for ADA Paratransit, 50 p. (2005)
61	SE-03	Maintenance Staffing Levels for Light Rail Transit, 42 p. (2005)
62	SB-12	Integration of Bicycles and Transit, 70 p. (2005)
63	SH-05	On-Board and Intercept Transit Survey Techniques, 92 p. (2005)
64	SD-03	Bus Use of Shoulders, 91 p. (2006)
65	SB-13	Transit Agency Participation in Medicaid Transportation Programs, 48 p. (2006)
66	SH-06	Fixed-Route Bus Transit Ridership Forecasting and Service Planning Methods, 51 p. (2006)
67	SH-08	Bus Transit Service in Land Development Planning, 62 p. (2006)
68	SB-14	Methods of Rider Communication, 95 p. (2006)
69	SH-07	Web-Based Survey Techniques, 104 p. (2006)
70	SC-08	Mobile Data Terminals, 150 p. (2007)
71	SB-15	Paratransit Managers' Skills, Qualifications, and Needs, 52 p. (2007)
72	SC-09	Use of Biodiesel in a Transit Fleet, 61 p. (2008)
73	SA-17	AVL Systems for Bus Transit: Update, 104 p. (2008)
74	SB-15	Policies and Practices for Effectively and Efficiently Meeting ADA Paratransit Demand, 54 p. (2008)
75	SA-16	Uses of Higher Capacity Buses in Transit Service, 72 p. (2008)
76	SB-16	Integration of Paratransit and Fixed-Route Transit Services, 48 p. (2008)
77	SA-18	Passenger Counting Systems, 74 p. (2008)
78	SA-19	Transit Systems in College and University Communities, 98 p. (2008)
79	SA-20	Light Rail Vehicle Collisions with Vehicles at Signalized Intersections, 48 p. (2009)
80	SF-13	Transit Security Update, 150 p. (2009)
81	SE-05	Preventive Maintenance for Transit Buses, 80 p. (2010)
82	SH-11	Transit Fare Arrangements for Public Employees, 90 p. (2010)
83	SA-22	Bus and Rail Transit Preferential Treatments in Mixed Traffic, 210 p. (2010)
84	SH-09	Current Practices in Greenhouse Gas Emissions Savings from Transit, 82 p. (2010)
85	SH-10	Effective Use of Citizen Advisory Committees for Transit Planning and Operations, 72 p. (2010)
86	SH-12	Relationships Between Streetcars and the Built Environment, 72 p. (2010)
87	SA-23	Practices in the Development and Deployment of Downtown Circulators, 122 p. (2011)
88	SB-18	Strollers, Carts, and Other Large Items on Buses and Trains, 170 p. (2011)
89	SH-13	Public Participation Strategies for Transit, 96 p. (2011)

Syntheses (Project J-07)

No.	Topic No.	Title, Pages, Publication Year
90	SA-24	Video Surveillance Uses by Rail Transit Agencies, 90 p. (2011)
91	SA-25	Use and Deployment of Mobile Device Technology for Real-Time Information, 96 p. (2011)
92	SG-11	Transit Asset Condition Reporting, 54 p. (2011)
93	SF-14	Practices to Protect Bus Operators from Passenger Assault, 126 p. (2011)
94	SB-17	Innovative Rural Transit Services, 52 p. (2011)
95	SF-15	Practices for Wayside Rail Transit Worker Protection, 90 p. (2012)
96	SA-27	Off-Board Fare Payment Using Proof-of-Payment Verification, 117 p. (2012)
97	SF-16	Improving Transit Safety Through Rewards and Discipline, 62 p. (2012)
98	SB-19	Ridesharing as a Complement to Transit, 72 p. (2012)
99	SB-19	Uses of Social Media in Public Transportation, 66 p. (2012)
100	SE-06	Elevator and Escalator Maintenance and Safety Practices, 58 p. (2012)
101	SA-26	Implementation and Outcomes of Fare-Free Transit Systems, 104 p. (2012)
102	SB-23	Integrating Passenger and Ferry Service with Mass Transit, 54 p. (2013)
103	SB-21	Transit Station and Stop Adoption Programs, 68 p. (2013)
104	SB-22	Use of Electronic Passenger Information Signage in Transit, 108 p. (2013)
105	SB-22	Use of Market Research Panels in Transit, 70 p. (2013)
106	SA-29	Energy Savings Strategies for Transit Agencies, 76 p. (2013)
107	SD-04	Rail Transit Track Inspection Practices, 58 p. (2014)
108	SF-17	Transit Bus Operator Distraction Policies, 100 p. (2013)
109	SA-32	System-Specific Spare Bus Ratios Update, 68 p. (2014)
110	SA-31	Commonsense Approaches for Improving Transit Bus Speeds, 147 p. (2014)
111	SG-12	Optimizing Bus Warranty, 72 p. (2014)
112	SA-30	Maintaining Transit Effectiveness Under Major Financial Constraints, 119 p. (2014)
113	SH-14	Sub-Allocating FTA Section 5307 Funding Among Multiple Recipients in Metropolitan Areas, 73 p. (2014)
114	SA-33	Critical Incident Management and Clearance Practices for Rail Transit, 108 p. (2015)
115	SA-34	Open Data: Challenges and Opportunities for Transit Agencies, 120 p. (2015)
116	SB-25	Practices for Establishing ADA Paratransit Eligibility Assessment Facilities, 76 p. (2015)
117	SA-35	Better On-Street Bus Stops, 132 p. (2015)
118	SG-13	Practices for Utility Coordination in Transit Projects, 56 p. (2015)
119	SB-26	Use of Taxis in Public Transportation for People with Disabilities and Older Adults, 113 p. (2016)
120	SF-18	Use of Automotive Service Excellence Tests Within Transit, 100 p. (2016)
121	SH-16	Transit Agency Practices in Interacting with People Who Are Homeless, 100 p. (2016)
122	SH-15	Transit Supportive Parking Policies and Programs, 70 p. (2016)
123	SA-36	Onboard Camera Applications for Buses, 90 p. (2016)
124	SA-40	Planning and Design for Fire and Smoke Incidents in Underground Passenger Rail Systems, 103 p. (2017)
125	SA-37	Multiagency Electronic Fare Pavement Systems, 132 p. (2017)
126	SA-38	Successful Practices and Training Initiatives to Reduce Bus Accidents and Incidents at Transit Agencies, 92 p. (2017)
127	SF-19	Addressing Difficult Customer Situations, 89 p. (2017)
128	SH-17	Practices for Evaluating the Economic Impacts and Benefits of Transit, 95 p. (2017)
129	SA-39	Managing Extreme Weather at Bus Stops, 77 p. (2017)
130	SA-41	Battery Electric Buses—State of the Practice, 194 p. (2018)
131	SA-42	College Student Transit Pass Programs, 138 p. (2018)
132	SB-27	Public Transit and Bikesharing, 104 p. (2018)
133	SB-28	Administration of ADA Paratransit Eligibility Appeal Programs, 102 p. (2018)
134	SB-29	Customer-Focused Service Guarantees and Transparency Practices, 128 p. (2018)
135	SG-14	ADA Paratransit Service Models, 256 p. (2018)
136	SG-15	Contracting Fixed-Route Bus Transit Service, 148 p. (2018)
137		Microgrids and Their Application for Airports and Public Transit (Joint: ACRP Syn. 91), 66 p. (2018)
138	SH-18	Public Transit Rider Origin-Destination Survey Methods and Technologies, 170 p. (2019)
139	SA-43	Transit Service Evaluation Standards, 140 p. (2019)
140	SA-44	Comprehensive Bus Network Redesigns, 200 p. (2019)
141	SB-30	Microtransit or General Public Demand-Response Transit Services: State of the Practice, 220 p.

Syntheses (Project J-07)

No.	Topic No.	Title, Pages, Publication Year
142	SB-31	Implementing the U.S. DOT Reasonable Modification Rule, 168 p. (2019)
143	SF-20	Managing the Transit Scheduling Workforce, 212 p. (2019)
144	SA-49	Multimodal Fare Payment Integration, 82 p. (2020)
145	SA-45	Current Practices in the Use of Onboard Technologies to Avoid Transit Bus Incidents and Accidents, 82 p. (2020)
146	SA-48	Transit Security Preparedness, 130 p. (2020)
147	SF-21	Attracting, Retaining, and Advancing Women in Transit, 66 p. (2020)
148	SA-46	Business Models for Mobile Fare Apps, 110 p. (2020)
149	SA-47	Transit Signal Priority: Current State of the Practice, 118 p. (2020)
150	SD-05	Third Rail Insulator Failures: Current State of the Practice, 78 p. (2020)
151	SE-07	Maintenance Planning for Rail Asset Management—Current Practices, 68 p. (2020)
152	SD-06	Transit Agency Relationships and Initiatives to Improve Bus Stops and Pedestrian Access, 204 p. (2021)
153	SG-18	The Transit Analyst Toolbox: Analysis and Approaches for Reporting, Communicating, and Examining Transit Data, 100 p. (2021)
154	SH-20	Innovative Practices for Transit Planning at Small to Mid-Sized Agencies, 158 p. (2021)
155	SG-17	Intelligent Transportation Systems in Headway-Based Bus Service, 96 p. (2021)
156	SB-33	Uses of Social Media in Public Transportation, 116 p. (2022)
157	SA-51	Transit Safety Risk Assessment Methodologies, 82 p. (2021)
158	SA-50	Cybersecurity in Transit Systems, 74 p. (2022)
159	SA-52	Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns, 90 p. (2022)
160	SH-21	Fare Capping: Balancing Revenue and Equity Impacts, 150 p. (2022)
161	SG-19	ADA Paratransit and Other Demand-Responsive Transportation Services in Small to Midsized Transit Agencies, 190 p. (2022)
162	SB-34	Coordination of Public Transit Services and Investments with Affordable Housing Policies, 94 p. (2022)
163	SH-19	Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand Response Services, 90 p. (2022)
164	SA-53	Bus Rapid Transit: Current State of Practice, 98 p. (2022)
165	SB-35	Customer Education and Awareness of On-Demand Mobility, 248 p. (2023)
166	SA-55	On-Street Bus Operations Management, 116 p. (2022)
167	SH-23	Partnerships for Equitable Pandemic Response and Recovery, 70 p. (2023)
168	SB-36	Continuous Dynamic Optimization: Impacts on ADA Paratransit Services, 100 p. (2023)
169	SA-54	Pedestrian and Bicycle Safety in Bus Rapid Transit and High-Priority Bus Corridors, 98 p. (2023)
170	SH-22	Inclusive Public Participation in Transit Decision-Making, 82 p. (2023)
171	SG-20	Third-Party Contracts for Fixed-Route Bus Operations and Maintenance: Performance Metrics, 128 p. (2023)
172	SA-57	Statewide Approaches to the Development of Comprehensive Transit Information Systems, 62 p. (2023)

Transportation Insights

No.	Proj. No.	Title, Pages, Publication Year
2	E-13	Air Quality in Transit Buses, 59 p. (2023)

IDEA

No.	Proj. No.	Title, Pages, Publication Year
1	J-04	Customer Satisfaction Index for the Mass Transit Industry, 61 p. (1995)
2	J-04	Adaptive Diagnostic System Project, 35 p. (1997)
3	J-04	Automatic Rail-Wheel Inspection Station, 11 p. (1997)
4	J-04	Management Information Benefits of Integrating Electronic Fareboxes with Other On-Board Equipment, 30 p. (1995)
5	J-04	Improved Passenger Counter and Classifier System for Transit Operations, 28 p. (1996)
7	J-04	Pneumatically Operated and Flexible Wheelchair Restraint System, 16 p. (1995)

IDEA

No.	Proj. No.	Title, Pages, Publication Year
8	J-04	Real-Time Transit Data Broadcast, 15 p. (1995)
9	J-04	Independent Transportation Network: Alternative Transportation for the Elderly, 27 p. (1997)
10	J-04	Automatic Data Collection on Transit Users via Radio Frequency Identification, 42 p. (1996)
11	J-04	Compact Disc—Interactive Multimedia Violence Prevention Training Program. Customers, Conflicts, and You: A Transit Operator's Guide to Problem Solving (CD-ROM was previously distributed by the National Training Institute), (2001)
13	J-04	Self-Paced PC-Based Track Safety Training System, 11 p. (1998)
14	J-04	Market Study and Operational Test Results for the Instant Rent-A-Car (IRAC) Station Field Tests, 42 p. (1998)
15	J-04	Internet Information Sharing for Transit Maintenance, 37 p. (1997)
16	J-04	A Public Transit-Compatible Restraint System for Wheelchair Users, 26 p. (1998)
17	J-04	Operational Evaluation of a Rail-Based Wheel Gauge Inspection System, 11 p. (1998)
18	J-04	Pilot Testing Innovative Payment Operations for Independent Transportation for the Elderly, 35 p. (2002)
19	J-04	Field Testing and Evaluation of the Transit Integrated Monitoring System, 25 p. (1998)
20	J-04	Non-Contact Sensor for Improved Passenger Counting and Classification System for Rail Transit, 25 p. (2001)
21	J-04	Smart Parking Lot with Just-in-Time Shuttle, 11 p. (2001)
22	J-04	Sleeved Column System for Crashworthiness of Light Rail Vehicles, 29 p. (2001)
24	J-04	Operational Testing of Intelligent Rail Lubrication System, 8 p. (1998)
28	J-04	Transit Scratchitti Removal, 54 p. (2002)
29	J-04	Fare Machine Tactile/Audio Instruction System, 40 p. (2003)
31	J-04	A Tool for Evaluating and Optimizing Bus Stop Location Decisions, 64 p. (2005)
32	J-04	Simulation and Animation Model for Planning and Designing Transit Facilities, 16 p. (2005)
33	J-04	Community Visualization in Design of Light Rail Transit-Oriented Development, 26 p. (2004)
35	J-04	Innovative Bioterrorism Detection Technology for Transit Security, 33 p. (2005)
36	J-04	Cleaning Device for Electrified Third Rail Insulators, 28 p. (2006)
37	J-04	Bandwidth Expansion and Real-Time Surveillance for Security on Transit Buses, 25 p. (2005)
38	J-04	Assessment of Rear-Facing Wheelchair Accommodation on BRT, 36 p. (2005)
39	J-04	Dynamic Timetable Generator from Schedule Data, 28 p. (2006)
40	J-04	Counter Terrorism Chemical Detector for Rail Transit Vehicles, 36 p. (2005)
41	J-04	Track Geometry/Design Testing for Transit Applications, 40 p. (2007)
42	J-04	Detection of Radioactivity in Transit Stations, 26 p. (2006)
44	J-04	Cleaning and Recoating Electrified Third Rail Cover Boards, 18 p. (2008)
45	J-04	Chemical and Biological Decontamination System for Rail Transit Facilities, 29 p. (2007)
47	J-04	Cleaning Device for Electrified Third Rail Insulators—Phase 2, 23 p. (2008)
49	J-04	Smart Sander Enhancement for Commuter Rail, 35 p. (2008)
50	J-04	Developing Regional Mobility Management Centers, 65 p. (2012)
52	J-04	Travel Assistance Device (TAD) to Help Transit Riders, 42 p. (2009)
53	J-04	Ultraviolet Germicidal Irradiation for Transit Buses, 24 p. (2009)
54	J-04	Detection of Radioactivity in Transit Stations—Phase 2, 22 p. (2009)
55	J-04	Warning Device for Rail Transit Personnel for Approaching Trains, 20 p. (2008)
56A	J-04	Detection of Explosives and Weapons in Transit Systems, 28 p. (2015)
57	J-04	Independent Wheelchair Securement, 22 p. (2010)
58	J-04	Google Transit Data Tool for Small Transit Agencies, 23 p. (2011)
59	J-04	Recoating Electrified Third Rail Cover Boards—Phase 2, 12 p. (2010)
60	J-04	Transit Communications Interface Profiles (TCIP) Traveler Information Pilot, 33 p. (2011)
61	J-04	Flexible Carpooling to Transit Stations, 70 p. (2012)
62	J-04	Development of Online Training Maintenance Module for Bus Transit Technicians, 18 p. (2012)
63	J-04	Improving Bus Transit On-Time Performance through the Use of AVL Data, 25 p. (2014)
65	J-04	A Context Aware Transit Navigator, 8 p. (2013)
66	J-04	Advanced Wayside Energy Storage Systems (WESS) for Rail Transit, 81 p. (2012)
67	J-04	Diesel-Electric Locomotive Energy Recovery and Conversion, 29 p. (2014)
68	J-04	Light Rail Transit/Street Grade Crossing Safety System, 52 p. (2014)
70	J-04	Effortless Passenger Identification System, 24 p. (2013)
71	J-04	Transit Information Access for Persons with Visual or Cognitive Impairments, 23 p. (2015)

IDEA

No.	Proj. No.	Title, Pages, Publication Year
72	J-04	Handheld Noncontact Electronic Rail Wheel Gauge, 42 p. (2014)
73	J-04	Innovative Operating Strategy for Paratransit Services, 59 p. (2014)
74	J-04	Apparatus for Gap Management, 20 p. (2015)
75	J-04	Transit Trip Planning Web Application, 29 p. (2014)
76	J-04	RideScout Mobile Application, 39 p. (2015)
77	J-04	Development of a Prototype Retrofit Bumper for Improved Light Rail Vehicle (LRV) Safety, 23 p. (2015)
79	J-04	Implementation of Smart Card Automatic Fare Collection (AFC) Technology in Small Transit Agencies for Standards Development, 36 p. (2016)
80	J-04	Enhancing Safety and Security of Transit Systems Using Computer Vision, 23 p. (2017)
81	J-04	Advanced Locomotive Exhaust Gas Simulator to Fine-Tune Energy Recovery and Conversion Systems, 35 p. (2016)
82	J-04	Active Safety-Collision Warning Pilot in Washington State, 33 p. (2017)
83	J-04	Track Circuit Monitoring Tool: Standardization and Deployment at CTA, 31 p. (2018)
85	J-04	Location Aware Networks Optimizing Use of Transit Systems by Blind Travelers, 31 p. (2019)
86	J-04	Advanced Neutral Temperature Estimation using Solitary Waves (ANTEUSW), 34 p. (2019)
87	J-04	Development of pathNav: A Pedestrian Navigation Tool that Utilizes Smart Data for Improved Accessibility and Walkability, 45 p. (2019)
88	J-04	Evaluation of an Automatic, Individual, Computer-Based Operator Education and Training Program, 36 p. (2021)
89	J-04	Dynamic Vehicle to Infrastructure TCIP Communications Laboratory Proof of Concept, 45 p. (2019)
90	J-04	sUAS-based GeoIntel for Commuter Rail Parking in Rural and Suburban Areas, 34 p. (2019)
91	J-04	Innovation in Action: Accomplishments of the Transit IDEA Program, 15 p. (2019)
92	J-04	Comprehensive Wayfinding for All (CWall), 31 p. (2022)
93	J-04	Augmented Reality Transit Dispatcher Interface, 29 p. (2021)
94	J-04	An Open Platform for Transit Agencies to Improve the Quality of Their Real-Time Data, 37 p. (2020)
95	J-04	Evaluation of Transit Vehicle Brake Inspection Through Ultrasonic Emissions Analysis, 33 p. (2020)
96	J-04	Connected and Automated Parking Feasibility—A Pilot Study, 37 p. (2021)
98	J-04	Multi-Stage Planning and Electrifying Transit Bus Systems with Multi-Format Charging Facilities, 44 p. (2022)
99	J-04	Safety Assessment for the Interaction Between the Autonomous Shuttle Bus and Vulnerable Road Users, 58 p. (2022)
100	J-04	Bike Love, 84 p. (2023)
101	J-04	TrainMate Robotic System Making Public Transportation, Public!, 36 p. (2023)
	J-04	Citopia MaaS/Multimodal Transit, 46 p. (2023)

Web-Only Documents

No.	Proj. No.	Title, Pages, Publication Year
1	F-04	Bus Operator Workstation Evaluation and Design Guidelines: Final Report, 694 p. (1997)
2	B-01	Evaluating Transit Operations for Individuals with Disabilities, 366 p. (1997)
3	B-02	Directions: A Simple Guidebook for Integrating Market and Customer Research into Transit Decision-Making to Become Customer Oriented, 30 p. (1998)
4	E-03	Inventory Management for Bus and Rail Public Transit Systems: Final Report, 114 p. (1998)
5	H-13B	Trends in Single Occupant Vehicle and Vehicle Miles of Travel Growth in the United States: Final Report, 100 p. (1998)
6	A-15	Transit Capacity and Quality of Service Manual, First Edition (CD 2), 426 p. (1999)
7	H-08	Using Public Transportation to Reduce the Economic, Social and Human Costs of Personal Immobility, 322 p. (1999)
8	B-08	Marketing Transit Services to Business, 242 p. (1999)
9	H-12	Integrated Urban Models for Simulation of Transit and Land-Use Policies: Final Report, 252 p. (1999)
10	G-02	Bar Coding in Mass Transit Operations and Maintenance—Application Guide Book, 84 p. (1999)

Web-Only Documents

No.	Proj. No.	Title, Pages, Publication Year
11	A-19	Integrating School Bus and Public Transportation Services in Non-Urban Communities—Implementation Guide (& Rep. 56), 160 p. (1999)
12	B-12	Traveler Response to Transportation System Changes, Interim Handbook, 446 p. (2000)
13	J-06/Task 33	Cost of Meeting Accessibility Requirements for Over-the-Road Buses, 130 p. (2000)
14	H-20	Using Geographic Information Systems for Welfare to Work Transportation Planning and Service Delivery—Case Studies, 76 p. (2000)
15	F-06	Guidelines for the Effective Use of Uniformed Transit Police and Security Personnel, 312 p. (2001)
16	H-15A	Welfare to Work: Integration and Coordination of Transportation and Social Services, 214 p. (2001)
17	E-03A	Applications for Improved Inventory Management for Public Transit Systems, 104 p. (2001)
18	F-06A	Developing Useful Transit-Related Crime and Incident Data, 76 p. (2001)
19	A-10A	An Evaluation of Bus Bulbs on Transit, Traffic, and Pedestrian Operations, 162 p. (2001)
20	B-17	Advanced Public Transportation Systems for Rural Areas, 200 p. (2002)
21	H-24	Public Transit System Policy Boards: Organization and Characteristics, 200 p. (2002)
22	B-04	Public Agency Guidance on Employer-Based TDM Programs and Employer Technical Memorandum Characteristics of Effective TDM Programs, 229 p. (2003)
23	H-28	Uses of Archived AVL-APC Data to Improve Transit Performance and Management: Review and Potential (& Rep. 113), 167 p. (2003)
24	H-24A	The Public Transportation Board Effectiveness Study (Contractor's Final Report), 44 p. (2004)
25	J-10B(01)	Public Transportation Emergency Mobilization Guide: Appendix B—Survey of U.S. Public Transportation Systems, 41 p. (2005)
26	H-21A	TravelMatters: Mitigating Climate Change with Sustainable Surface Transportation, 53 p. (2005)
27	H-25A	Appendixes to TCRP Report 107: Analyzing the Effectiveness of Commuter Benefit Programs (& Rep. 107), 97 p. (2005)
28	J-06/Task 62	Train Door Systems Analysis: Appendixes (& RRD 74), 64 p. (2006)
29	B-27	Cost-Benefit Analysis of Providing Non-Emergency Medical Transportation (& RRD 75), 208 p. (2006)
30	D-08	Improving Pedestrian Safety at Unsignalized Crossings: Appendixes B to O (& Rep. 112) (Joint: NCHRP WOD 91), 270 p. (2006)
31	G-07	Managing Capital Costs of Major Federally Funded Public Transportation Projects (& RRD 78), 297 p. (2006)
32	H-32	Elements Needed to Create High Ridership Transit Systems: Interim Guidebook (& Rep. 111), 237 p. (2006)
33	J-05	The Federal Transit Act, as Amended through August 10, 2005, and Related Laws, 317 p. (2007)
34	B-16	Developing Guidelines for Evaluating, Selecting, and Implementing Suburban Transit Services (Contractor's Final Report) (& Rep. 116), 250 p. (2006)
35	D-10	Appendixes to TCRP RRD 84: Audible Signals for Pedestrian Safety in LRT Environments (& RRD 84), 147 p. (2007)
36	D-11	Appendixes to TCRP Report 117: Design, Operation, and Safety of At-Grade Crossings of Exclusive Busways (& Rep. 117), 155 p. (2007)
37	D-07/Task 14	Rail Base Corrosion Detection and Prevention, 129 p. (2007)
38	J-10J	Appendixes to TCRP Report 86: Public Transportation Security, Volume 13: Public Transportation Passenger Security Inspections: A Guide for Decision Makers (& Rep. 86 Vol. 13), 77 p. (2007)
39	A-23A	Appendixes to TCRP Report 118: Bus Rapid Transit Practitioner's Guide (& Rep. 118), 50 p. (2007)
40	C-17	Development of Crash Energy Management Performance Requirements for Light-Rail Vehicles, 154 p. (2008)
41	G-08	Evaluation of Project Delivery Methods (& Rep. 131), 231 p. (2009)
42	A-30	Selected Appendixes for TCRP Report 137: Improving Pedestrian and Motorist Safety Along Light Rail Alignments (& Rep. 137), 341 p. (2009)
43	J-07	Track Maintenance Costs on Rail Transit Properties, 72 p. (2009)
44	B-38	Literature Review for Providing Access to Public Transportation Stations, 100 p. (2009)
45	A-29	Appendixes to TCRP Report 135: Controlling System Costs: Basic and Advanced Scheduling Manuals and Contemporary Issues in Transit Scheduling, 222 p. (2009)
46	J-06/Task 71	Rural Transit Achievements: Assessing the Outcomes of Increased Funding for Rural Passenger Services under SAFETEA-LU, 120 p. (2009)
47	D-07/Task 17	Guidelines for Rail Base Inspection and Rail Condemnation Limits for Corrosion Induced Material Loss, 26 p. (2009)
48	D-12	Ground-borne Noise and Vibration in Buildings Caused by Rail Transit, 208 p. (2010)
49	B-36	Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation, 83 p. (2010)

Web-Only Documents

No.	Proj. No.	Title, Pages, Publication Year
50	F-13	Survey Instrument, Productivity Charts, and Interview Protocol for Case Studies for TCRP Report 142 (& Rep. 142), 42 p. (2010)
51	J-06/Task 75	Guiding the Selection and Application of Wayside Energy Storage Technologies for Rail Transit and Electric Utilities, 64 p. (2010)
52	D-07/Task 18	Performance-Based Track Geometry, Phase I, 100 p. (2012)
53	A-32	Operation of Light Rail Transit Through Ungated Crossings at Speeds over 35 MPH, 124 p. (2012)
54	H-38	Developing, Enhancing, and Sustaining Tribal Transit Services: Final Research Report (& Rep. 154), 143 p. (2012)
55	H-41	Assessing and Comparing Environmental Performance of Major Transit Investments (& RRD 105), 344 p. (2012)
56	H-39	Methodology for Determining the Economic Development Impacts of Transit Projects, 365 p. (2012)
57	B-39	Audience Measurement for Transit Advertising, 142 p. (2012)
58	B-36	Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation (& Rep. 161), 104 p. (2013)
59	A-33A	Using Pictograms to Make Transit Easier to Navigate for Customers with Communications Barriers, 99 p. (2013)
60	A-36	Command-Level Decision Making for Transit Emergency Managers (Joint: NCHRP WOD 200), 70 p. (2013)
61	J-11/Task 17	Millennials & Mobility: Understanding the Millennial Mindset and New Opportunities for Transit Providers, 70 p. (2013)
62	J-06/Task 82	Standardizing Data for Mobility Management, 62 p. (2014)
63	A-38	Treatments Used at Pedestrian Crossings of Public Transit Rail Services (& Rep. 175), 166 p. (2015)
64	D-07/Task 19	Performance-Based Track Geometry Phase 2, 50 p. (2015)
65	D-07/Task 20	Wheel Profile Maintenance Guidelines, 137 p. (2015)
66	A-39	Improving Transportation Network Efficiency Through Implementation of Transit-Supportive Roadway Strategies (& Rep. 183), 194 p. (2016)
67	D-15	Protection of Transportation Infrastructure from Cyber Attacks: A Primer, 183 p. (2016)
68	G-13	Developing an ITS Technology Web Portal for Transit System Leaders, 159 p. (2016)
69	H-52	Decision-Making Toolbox to Plan and Manage Park-and-Ride Facilities for Public Transportation: Research Report and Transit Agency Case Studies (& Rep. 192), 513 p. (2017)
70	A-41	Improving the Resiliency of Transit Systems Threatened by Natural Disasters, Vol 1: A Guide, 163 p. (2017)
70	A-41	Improving the Resiliency of Transit Systems Threatened by Natural Disasters, Vol 2: Research Overview, 70 p. (2017)
70	A-41	Improving the Resiliency of Transit Systems Threatened by Natural Disasters, Vol 3: Appendixes A & B to the Research Report, 447 p. (2017)
71	D-18	A Transit Agency Guide to Evaluating Secondary Train Detection/Protection Systems in Communications-Based Train Control Systems, 93 p. (2018)
72	A-42	Developing a Guide to Bus Transit Service Reliability (& Rep. 215), 262 p. (2020)
73	H-57	Guide to Joint Development for Public Transportation Agencies: Appendixes (& Rep. 224), 185 p. (2021)
74	A-43	Recent Decline in Public Transportation Ridership: Hypotheses, Methodologies, and Detailed City-by-City Results (& Rep. 231), 293 p. (2022)
75	A-36	Command-Level Decision Making for Transportation Emergency Managers (joint with NCHRP WOD 321 and ACRP WOD 52), 259 p. (2022)
76	D-07/Task 21	Performance-Based Geometry, Phase 3, 28 p. (2023)

CDs

No.	Proj. No.	Title, Publication Year
2	A-15	Transit Capacity and Quality of Service Manual: First Edition (WOD 6) (1999)
3	D-05	Performance of Direct-Fixation Track Software: Design Guidelines and Software (1999)
4	C-11	Alternative-Fuel Transit Bus Hazard Assessment Model (2001)
13	G-03	Transit Risk Manager for Bus Services (Contractor's CD) (& RRD 12) (1996)
16	B-16	Multimedia Presentation: Role of Private-for-Hire Vehicle Industry in Public Transit (& Rep. 75) (2002)
17	B-15	Supporting Material for TCRP Report 73: Characteristics of Urban Travel Demand (& Rep. 73) (2002)
18	H-19	Estimating and Presenting the Benefits and Costs of Public Transit Projects: Guidebook for Practitioners (& Rep. 78) (2002)

CDs

No.	Proj. No.	Title, Publication Year
19	A-24	A Toolkit for Self-Service Barrier-Free Fare Collection (& Rep. 80) (2002)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 1: Construction Contract Law (2004)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 1 2014 Supplement: Construction Contract Law (2014)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 2: Eminent Domain (2009)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 3: Environmental Law and Transportation (2003)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 3 Supplement: Environmental Law and Transportation (2010)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 4: Tort Liability of Highway Agencies (2002)
20	J-05/Topic 05-04	Selected Studies in Transportation Law, Vol. 5: Transit Law (2004)
20	J-05/Topic 05-04	Selected Studies in Transportation Law, Vol. 5 2014 Supplement: Transit Law (2015)
20	J-05/Topic 06-03	Selected Studies in Transportation Law, Vol. 6: Transit Labor 13[c] Decisions (2003)
20	J-05/Topic 07-03	Selected Studies in Transportation Law, Vol. 7: Transit Charter Bus Service Decisions and Documents (2005)
20	20-06 NCHRP	Selected Studies in Transportation Law, Vol. 8: Transportation Law and Government Relations (2007)
21	F-10	Toolbox for Transit Operator Fatigue (& Rep. 81) (2002)
25	G-06	Guidebook for Developing a Transit Performance-Measurement System and Supplementary Material (& Rep. 88) (2003)
27	J-09/Task 06	Using the Internet for Transit Training and Certification (& Rep. 84 Vol. 3) (2003)
31	A-23	Supporting Material for TCRP Report 90, Volume 1, BRT Case Studies (& Rep. 90 Vol. 1) (2003)
34	J-09/Task 04	Supporting Material for TCRP Report 84, Volume 4: Advanced Features of Transit Websites (& Rep. 84 Vol. 4) (2003)
40	B-23	Supporting Material for TCRP Report 98 (NU DRT Software, User's Manual, and Supplementary Documents) (& Rep. 98) (2003)
42	A-15A	TCRP Report 100 (TCQSM) 2nd Edition and Supplemental Material (& Rep. 100) (2003)
43	J-10A(02)	Supporting Material for TCRP Report 86: Public Transportation Security; Vol. 5, Security-Related Customer Communications and Training for Public Transportation Providers (& Rep. 86 Vol. 5) (2004)
45	F-11	Public Transportation Operating Agencies as Employers of Choice: Toolkit (& Rep. 103) (2004)
51	H-30	Appendix Material for TCRP Report 105 (& Rep. 105) (2004)
52	H-29A	A Research Results Compendium to TCRP Report 106 (& Rep. 106) (2005)
60	B-26	Appendix Material for TCRP Report 108 (& Rep. 108) (2005)
61	D-07/Task 11	Direct-Fixation Track Design Specifications, Research, and Related Material (& Rep. 71 Vol. 6) (2005)
64	J-10D	TCRP Report 86: Public Transportation Security, Volume 10: Hazard and Security Plan Workshop: Instructor Guide—Appendixes (& Rep. 86 Vol. 10) (2006)
65	J-05/Topic 08-04	The Americans with Disabilities Act: The Federal Transit Administration's Letters of Findings and Compliance Assessments (& LRD 23) (2007)
66	H-32	Building and Retaining Transit Ridership: The Keys to Success—An Interactive CD (& Rep. 111) (2007)
71	C-15	Appendixes to and Toolkit for TCRP Report 132: Assessment of Hybrid-Electric Transit Bus Technology (& Rep. 132) (2009)
77	F-14	Model Job Descriptions and Employer Information (& Rep. 139) (2010)
86	G-09	Cost Sharing Model for TCRP Report 144 (& Rep. 144 Vol. 1) (2010)
96	J-05/Topic 11-02	TCRP LRD 36: Appendices to Case Studies (& LRD 36) (2011)
100	B-37	Estimation of Demand for Rural Intercity Bus Services Toolkit (& Rep. 147) (2011)
107	B-38	Planning Tool and Appendices for TCRP Report 153 (& Rep. 153) (2012)
120	J-05/Topic 13-03	Transit Labor 13c Employee Protection Digest (LRD 41) (2012)
121	B-28A	Supplemental Material to TCRP Report 158 (& Rep. 158) (2012)
122	J-05/Topic 14-02	TCRP LRD 42 Intergovernmental Agreements (& LRD 42) (2012)
134	J-05/Topic 14-03	Performance-Based Clauses and Standards for TCRP LRD 43 (& LRD 43) (2013)
138	A-15C	Supporting Material and Tools to Accompany TCRP Report 165 (& Rep. 165) (2013)

Notes:

Publications in parentheses with an ampersand (&) are companion publications.

Publications in parentheses without an ampersand are reports or digests published as stand-alone CDs.

Beginning with *TCRP Report 166*, *Research Results Digest 109*, *Legal Research Digest 45*, and *Synthesis 111*, publications are available online only.

APPENDIX B NEW PROJECTS AND CONTINUATIONS SELECTED FOR THE TCRP FISCAL YEAR 2024 PROGRAM

PROJECT NUMBER	TITLE	ALLOCATION
NEW PROJECTS		
A-52	Cyber Vulnerability of Automatic Vehicle Monitoring (AVM) and Health Monitoring Systems (HMS)	\$400,000
B-54	Paving the Way for Inclusion: Addressing Gaps in Measuring Disability within Transportation Data Systems	\$300,000
B-55	A Handbook for Surveying Hard-to-Reach Populations for Small, Medium, and Large Transportation Agencies	\$100,000
B-56	Using Market Segmentation to Increase Transit Ridership: An Updated Handbook	\$300,000
D-25	Preparation of a Manuscript for Publication of the Track Design Handbook for Light Rail Transit, 3rd Edition	\$500,000
D-26	Develop a Rational Approach to Performing Rail Structure Interaction Analysis (RSI) and for Using the Results of the Analysis in Transit Bridge Design	\$268,000
F-32	Culture Reform: Psychological Health and Safety at the Workplace—The Missing Elements of Successful Workforce Retention and Recruitment in Transit	\$350,000
F-33	Enriching Transit's Workforce: Recruiting and Retaining Individuals with Disabilities	\$150,000
F-34	CDL Requirements for Local and Regional Transit Drivers Needs Study	\$350,000
H-62	Innovations for Equitable Rural Transit Economic Benefit Analyses	\$300,000
*J-11/Task 48	Drug Testing Science and Best Practices	(\$125,000)
*J-11/Task 49	New Transit Service Delivery to Drive Ridership Growth	(\$150,000)
*J-11/Task 50	Transit Governance and Funding Methods	(\$125,000)
**J-11/Task 51	Enhancing Transit Operations with Artificial Intelligence	\$125,000
Total New Studies		\$3,143,000
CONTINUED PROJECTS		
J-04	Innovations Deserving Exploratory Analysis — The Transit IDEA Program	\$450,000
J-05	Legal Aspects of Transit and Intermodal Transportation Programs	\$150,000
J-07	Synthesis of Information Related to Transit Problems	\$385,000
J-11	Quick-Response Research on Long-Term Strategic Issues	\$300,000
Total Continuations		\$1,285,000

**These projects are funded separately under TCRP Project J-11, "Quick-Response Research on Long-Term Strategic Issues," and will be conducted as expedited research projects. Consequently, all panel meetings will be conducted as conference calls. **J-11/Task 51 was funded directly from the TOPS Commission.*

APPENDIX C SUMMARY OF PROJECT STATUS THROUGH DECEMBER 31, 2023

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
:: A: Operations (68)									
A-01	Fare Policies, Structures, and Technologies	\$450,000	\$449,941	Multisystems	4/1/93	6/30/97	Completed - Published as Report 10		
A-02	User's Manual for Assessing Service-Delivery Systems for Rural Passenger Transportation Aids for Rail Car Side-Door Observation	\$300,000	\$300,000	Ecosometrics	5/15/93	5/19/95	Completed - Published as Report 6		
A-03	Electronic On-Vehicle Passenger Information Displays (Visual and Audible)	\$200,000	\$199,789	Telephonics Corp	6/7/93	2/28/95	Completed - Published as Report 4		
A-04	Integration of Light Rail Transit into City Streets	\$100,000	\$100,000	Municipality of Metropolitan Seattle	3/4/94	3/31/96	Completed - Published as RRD 5		
A-05	Second Train Coming Warning Sign Demonstration Project	\$250,000	\$250,000	Korve Engineering	3/1/94	2/28/96	Completed - Published as Report 17		
A-05A(01)	Second Train Coming Warning Sign Demonstration Project	\$200,000	\$200,000	Los Angeles County Metropolitan Transit Authority	4/14/97	1/31/02	FTA Demonstration - Completed - Published as RRD 51		
A-05A(02)	Second Train Coming Warning Sign Demonstration Project	\$200,000	\$200,000	Mass Transit Agency, Baltimore, MD	2/26/97	1/31/01	FTA Demonstration - Completed - Published as RRD 51		
A-06	A Handbook for Acquiring Demand-Responsive Transit Software	\$200,000	\$200,000	Systan	2/22/94	7/20/96	Completed - Published as Report 18		
A-07	Operational Analysis of Bus Lanes on Arterials	\$100,000	\$100,000	Wilbur-Smith Assoc	5/1/94	6/30/96	Completed - Published as Report 26		
A-07A	Operational Analysis of Bus Lanes on Arterials: Application and Refinement	\$70,000	\$70,000	Wilbur-Smith Assoc	6/16/97	8/31/99	Completed - Published as RRD 38		
A-08	Rail Transit Capacity	\$200,000	\$199,640	Transport Consult Ltd	3/1/94	10/31/95	Completed - Published as Report 13		
A-09	Guidelines for Transit Facility Signing and Graphics	\$250,000	\$249,952	KRW	4/18/94	1/17/96	Completed - Published as Report 12		
A-10	Guidelines for the Location and Design of Bus Stops	\$300,000	\$250,000	Texas A&M Research Foundation	11/1/94	7/30/96	Completed - Published as Report 19		
A-10A	Evaluation of Bus Bulbs	\$175,000	\$175,000	Texas A&M Research Foundation	2/27/98	8/30/00	Completed - Published as Report 65 and Web-Only Document 19		
A-11	Transit Scheduling: Basic and Advanced Manuals	\$200,000	\$199,846	Transportation Management & Design	10/1/94	1/15/97	Completed - Published as Report 30		
A-12	Passenger Information Services: A Guidebook for Transit Systems	\$250,000	\$250,000	Texas A&M Research Foundation	3/1/96	2/28/98	Completed - Published as Report 45		
A-13	Light Rail Service: Pedestrian and Vehicular Safety	\$400,000	\$400,000	Korve Engineering	4/23/96	11/30/00	Completed - Interim Report Published as RRD 34; Final Report Published as Report 69		
A-14	Multipurpose Transit Payment Media	\$300,000	\$300,000	Multisystems	1/29/96	9/30/97	Completed - Published as RRD 16 and Report 32		
A-15	Transit Capacity and Quality of Service Manual: First Edition	\$250,000	\$250,000	Kittelison and Assoc	11/1/96	1/31/99	Completed - Published as RRD 35; Web-Only Document 6; and as CD-2		
A-15A	Transit Capacity and Quality of Service Manual: Second Edition	\$300,000	\$300,000	Kittelison and Assoc	10/29/99	9/1/03	Completed - Published as Report 100		
A-15B	Update of Transit Chapters of Highway Capacity Manual	\$22,000	\$22,000	Kittelison and Assoc	9/10/03	3/31/04	Completed - Forwarded to HCM Committee		
A-15C	Transit Capacity and Quality of Service Manual, Third Edition	\$400,000	\$400,000	Kittelison and Assoc	9/22/10	3/15/13	Completed - Published as Report 165		
A-16	Improved Traffic Signal Priority for Transit	\$105,270	\$105,270	U of Arizona	2/17/97	2/28/98	Terminated		
A-16A	Improved Traffic Signal Priority for Transit	\$194,730	\$194,730	Gardener Transportation Systems, Inc.	6/7/99	11/30/06	Completed - Not Published		
A-17	Joint Operation of Light Rail Transit or Diesel Multiple Unit Vehicles with Railroads	\$250,000	\$249,820	Edwards and Kelcey	10/7/96	9/30/98	Completed - Published as Report 52		
A-17A	Operation of Light Rail Transit or Diesel Multiple Unit Vehicles with Railroads	\$40,000	\$39,995	Edwards and Kelcey	8/18/00	4/18/01	Completed - Published as RRD 43		
A-18	Effective Practices to Reduce Bus Accidents	\$250,000	\$250,000	Technology & Management Systems	12/1/96	9/30/99	Completed - Published as Report 66		

APPENDIX C continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
A-19	Integrating School Bus and Public Transportation Services in Non-Urban Communities	\$200,000	\$199,751	Multisystems	12/1/96	4/21/99	Completed - Published as Report 56 and Web-Only Document 11		
A-19A	Scoping Study for Project A-19A(2)	\$9,000	\$8,059	Multisystems	4/1/01	12/31/01	Completed		
A-19A(02)	Vehicle Guide for Integrating Non-Urban School and Public Transportation Services	\$166,000	\$163,986	Team, Inc.	5/1/02	1/30/07	Cancelled		
A-20A	Strategies for Improved Traveler Information	\$90,417	\$90,417	Charles River Assoc	6/22/98	1/31/02	Completed - Results to A-20A(2)		
A-20A(02)	Strategies for Improved Traveler Information	\$359,583	\$50,000	Multisystems, Inc.	7/1/02	3/3/03	Completed - Published as Report 92		
A-20B	Training for New Technology	\$109,105	\$109,105	Battelle	1/4/99	7/6/00	Terminated		
A-20B(02)	Training for New Technology	\$90,895	\$90,895	Klein Associates, Inc.	1/3/01	2/15/03	Completed - Published as Report 96		
A-21	Guidebook for Change and Innovation at Rural and Small Urban Transit Systems	\$150,000	\$148,662	KFH Group	8/25/99	2/24/01	Completed - Published as Report 70		
A-22	Simulators and Bus Safety: Guidelines for Acquiring and Using Transit Bus Operator Driving Simulators	\$250,000	\$250,000	Milestone Group	8/19/99	7/30/01	Completed - Published as Report 72		
A-23	Implementation Guidelines for Bus Rapid Transit Systems	\$250,000	\$249,980	Daniel, Mann, Johnson & Mendenhall (DMJM)	5/24/00	5/1/03	Completed - Published as Report 90, Volumes 1 and 2		
A-23A	Bus Rapid Transit Practitioner's Guide	\$300,000	\$300,000	Kittelson & Associates, Inc.	11/15/03	9/30/06	Completed - Published as Report 118 and Web-Only Document 39		
A-24	A Toolkit for Self-Service, Barrier-Free Fare Collection	\$250,000	\$249,921	Multisystems	8/30/00	3/1/02	Completed - Published as Report 80		
A-25	Fare Policies, Structures and Technologies: Update	\$250,000	\$249,939	Multisystems	7/1/01	4/15/03	Completed - Published as Report 94		
A-26	Smart Card Interoperability issues for the Transit Industry	\$250,000	\$249,323	Acumen Building Enterprise	10/15/03	4/30/06	Completed - Published as Report 115		
A-27	Shared Use of Railroad Infrastructure With Non-Compliant Public Transit Rail Vehicles: A Practitioner's Guide	\$200,000	\$198,564	Booz-Allen & Hamilton	8/31/05	9/30/08	Completed - Published as Report 130		
A-28	Guidebook for Mitigating Fixed-Route Bus-and-Pedestrian Collisions	\$250,000	\$250,000	Science Applications International Corporation	11/2/05	9/15/07	Completed - Published as Report 125		
A-29	Controlling System Costs: Basic and Advanced Scheduling Manuals and Contemporary Issues in Transit Scheduling	\$375,000	\$375,000	Dan Boyle & Associates	7/31/06	3/15/09	Completed - Published as Report 135 and Web-Only Document 45		
A-30	Improving Pedestrian and Motorist Safety Along Light Rail Transit Alignments	\$300,000	\$300,000	iTrans Consulting, Ltd.	9/8/06	6/30/09	Completed - Published as Report 137 and Web-Only Document 42		
A-31	Transit, Call Centers, and 511: A Guide for Decision Makers	\$250,000	\$250,000	Battelle	12/15/06	6/30/09	Completed - Published as Report 134		
A-32	Operation of Light Rail Transit through Ungated Crossings at Speeds over 35 MPH	\$295,000	\$294,924	Science Applications International Corporation	11/26/08	12/31/11	Completed - Published as Web-Only Document 53		
A-33	Communication with Vulnerable Populations: A Transportation and Emergency Management Toolkit	\$350,000	\$349,888	The Louis Berger Group, Inc.	8/27/09	9/26/11	Completed - Published as Report 150		
A-33A	Using Pictograms to Make Transit Easier to Navigate for Customers with Communication Barriers	\$100,000	\$99,887	The Louis Berger Group, Inc.	12/6/11	9/30/12	Completed - Published as Web-Only Document 59		
A-34	Improving Safety-Related Rules Compliance in the Public Transportation Industry	\$350,000	\$350,000	Foster-Miller, Inc.	9/30/09	9/1/11	Completed - Published as Report 149		
A-35	Improving Safety Culture in Public Transportation	\$500,000	\$500,000	Sam Schwartz Engineering	12/15/10	10/1/14	Completed - Published as Report 174		

APPENDIX C continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
A-36	Command-Level Decision Making for Transit Emergency Managers	\$435,000 \$225,829 (NCHRP) \$155,000 \$220,000 (NCHRP) \$360,000 (NCHRP) \$50,000 (TCRP)	\$685,551	Engineering & Computer Simulations	11/1/10	6/30/21	Completed - Initial Research Published as Web-Only Document 60; Final Report published as TCRP Web-Only Document 75/NCHRP Web-Only Document 321/ACRP Web-Only Document 52	R. Lyons R. Chen	
A-36A	Transportation Emergency Response Application (TERA): Migration Options Beyond 2020	\$25,000 \$50,000 (ACRP)	\$75,000	Matherly Inclusive Resilient Transportation Associates, LLC (MIRTA LLC)	8/10/23	6/10/24	Research in Progress-ACRP co-funded with \$50,000 under ACRP A04-23.	L. Joiner	Mariela Garcia-Colberg
A-37	Paratransit Emergency Operations and Preparedness Handbook	\$350,000	\$350,000	BCG Transportation Group	11/14/10	6/30/12	Completed - Published as Report 160		
A-38	Guidebook on Pedestrian Crossings of Public Transit Rail Services	\$250,000	\$250,000	Texas A&M Transportation Institute	2/1/13	11/30/14	Completed - Published as Report 175 and Web-Only Document 63		
A-39	Improving Transportation Network Efficiency Through Implementation of Transit-Supportive Roadway Strategies	\$300,000	\$300,000	Kittelson & Associates	1/31/13	10/31/15	Completed - Published as Report 183 and Web-Only Document 66		
A-40	Manual to Improve Rail Transit Safety at Platform/Train and Platform/Guideway Interfaces	\$275,000	\$274,431	Oregon State University	12/20/13	5/31/16	Completed - Published as Report 189	P. Centolanzi	
A-41	Improving the Resiliency of Transit Systems Threatened by Natural Disasters	\$350,000	\$349,961	Louis Berger Group, Inc.	2/24/15	5/31/17	Completed - Published as Web-Only Document 70	N. Chung A. Schildge E. Papetti	
A-42	Minutes Matter: A Guide to Bus Transit Service Reliability	\$250,000	\$250,000	Parsons Brinckerhoff	1/4/16	12/31/18	Completed - Published as Report 215		
A-43	Recent Decline in Public Transportation Ridership: Analysis, Causes, Responses	\$400,000	\$400,000	Georgia Tech Research Corporation	1/17/19	5/28/21	Completed. Published as TCRP Report 231 and TCRP Web Only Document 74.	R. Bartlett	
A-44	Mitigation Strategies for Detering Trespassing on Transit Rail Rights-of-Way	\$250,000	\$250,000	Texas A&M Transportation Institute	3/25/19	11/5/21	Completed. Released as TCRP Report 233 Volume 1 & 2	G. Good S. Schuster	
A-45	Measuring and Managing Fare Evasion	\$150,000	\$150,000	Four Nine Technologies	10/15/19	6/30/21	Completed. Published as TCRP Report 234.	M. Kane	
A-46	Quantitative Procedures for Designing and Operating Ferry Transit Services	\$100,000	\$100,000	KPFF, Inc.	12/29/20	7/30/22	Completed. Published as TCRP Research Report 238.	S. Truong V. Williams	
A-47	Transit Capacity and Quality of Service Manual, 4th Edition	\$400,000	\$400,000	Kittelson & Associates	2/1/23	4/3/25	Research in Progress		Dianne Schwager
A-48	Mitigation Strategies for Detering Transit Assaults	\$250,000	\$250,000	Texas A&M Transportation Institute	1/18/23	3/17/25	Research in Progress		Mariela Garcia-Colberg
A-49	Fare Policies, Structures, and Technologies -- 2022 Updates	\$300,000					In Development	S. Weisfeld E. Novak	Mariela Garcia-Colberg
A-50	Practical Considerations for Developing Transition Plans to Zero-Emission Fleets	\$250,000					In Development	A. Brun P. Certolanzi	Mariela Garcia-Colberg
A-51	Innovative Practices for Technology Implementation at Rural, Small, and Mid-Sized Transit Agencies	\$350,000					In Development	D. Allan E. Sperling	Mariela Garcia-Colberg
:: B: Service Configuration (61)									
B-01	Transit Operations for Individuals with Disabilities	\$200,000 \$145,000	\$344,969	EG&G Dynatrend	6/1/93	3/31/97	Completed - Published as RRD 1, Report 9, and Web-Only Document 2		
B-01A	Demonstration of Paratransit/Fixed-Route Feeder Service for ADA Compliance	\$240,000	\$240,000	Regional Transit Authority, New Orleans	11/15/95	4/30/01	FTA Demonstration - Cancelled		
B-02	A Handbook: Integrating Market Research into Transit Management	\$600,000	\$339,368	Northwest Research Group	7/1/93	1/31/96	Completed - Published as Report 37 and Web-Only Document 3		
B-03	Workbook for Estimating Demand for Rural Passenger Transportation	\$200,000	\$199,685	SG Associates, Inc.	6/1/93	2/28/95	Completed - Published as Report 3		
B-04	Transportation Demand Management (TDM) Strategies	\$300,000	\$300,000	COMSIS Corp	6/15/93	3/31/96	Completed - Published as RRD 18 and Web-Only Document 22		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
B-05	Guidebook for Attracting Paratransit Patrons to Fixed-Route Services	\$250,000	\$250,000	Biometrics Corp, Ketrion Division	2/22/94	3/21/96	Completed - Published as Report 24		
B-06	Guidelines for Enhancing Suburban Mobility Using Public Transportation	\$300,000	\$274,993	Urbitrans Assoc	12/1/94	12/31/96	Completed - Published as Report 55		
B-07	Strategies to Assist Local Transportation Agencies in Becoming Mobility Managers	\$300,000	\$299,952	Crain & Assoc	10/3/94	8/31/97	Completed - Published as Report 21		
B-08	A Guidebook for Marketing Transit Services to Business	\$150,000	\$149,985	Multisystems	1/15/96	7/31/98	Completed - Published as Report 51 and Web-Only Document 8		
B-09	A Handbook: Using Market Segmentation to Increase Transit Ridership	\$250,000	\$249,999	Northwest Research Group	5/1/96	5/15/98	Completed - Published as Report 36		
B-10	The Role of Passenger Amenities and Vehicle Characteristics in Building Transit Ridership: Amenities for Transit Handbook and the Transit Design Game Workbook	\$200,000	\$200,000	Project for Public Spaces	2/1/96	11/30/98	Completed - Published as Report 46		
B-11	A Handbook for Measuring Customer Satisfaction and Service Quality	\$200,000	\$200,000	M.O.R. PACE	1/2/96	4/15/98	Completed - Published as Report 47		
B-12	Updating the Traveler Response to Transportation System Changes Handbook	\$300,000	\$300,000	Richard H. Pratt Consultant, Inc.	2/1/97	11/5/99	Completed - Published as Web-Only Document 12		
B-12A	Continuing Update of the Traveler Response to Transportation Systems Changes Handbook	\$300,000	\$300,000	Richard H. Pratt Assoc	11/5/99	12/31/12	Completed - Published as Report 95 series		
B-12B	Continuing Update of the Traveler Response to Transportation Systems Changes Handbook	\$300,000	\$75,000	Richard H. Pratt Assoc	11/5/99	12/31/12	Completed - Published as Report 95 series		
B-12C	Continuing Update of the Traveler Response to Transportation Systems Changes Handbook	\$300,000	\$81,600	Richard H. Pratt Assoc	11/5/99	12/31/12	Completed - Published as Report 95 series		
B-13	A Handbook of Proven Marketing Strategies for Public Transit	\$150,000	\$150,000	Texas A&M Research Foundation	1/6/97	10/6/98	Completed - Published as Report 50		
B-14	Analyzing the Costs of Operating Small Transit Vehicles	\$150,000	\$149,503	KFH Group	8/1/97	4/6/00	Completed - Published as Report 61		
B-15	Characteristics of Urban Travel Demand	\$250,000	\$249,998	Cambridge Systematics	8/18/97	9/30/01	Completed - Published as Report 73		
B-16	The Role of the Private-for-Hire Vehicle Industry in Public Transit	\$250,000	\$249,990	North Carolina State U.	3/9/98	7/30/01	Completed - Published as Report 75 and CD-16		
B-17	Guidebook for Selecting Appropriate Technology Systems for Small Urban and Rural Public Transportation Operators	\$200,000	\$199,905	North Carolina State U.	4/20/98	7/30/01	Completed - Published as Report 76 and Web-Only Document 20		
B-18	Improving Public Transportation Access to Large Airports	\$150,000	\$150,000	Leigh Fisher Associates	12/14/98	6/13/00	Completed - Published as Report 62		
B-18A	Strategies for Improving Public Transportation Access to Large Airports	\$200,000	\$200,000	Leigh Fisher Associates	6/20/00	5/17/02	Completed - Published as Report 83		
B-19	Improving Public Transit Options for Older Persons	\$300,000	\$300,000	Westat, Inc.	10/4/99	4/12/02	Completed - Published as Report 82		
B-20	Enhancing the Visibility and Image of Transit in the United States and Canada	\$250,000	\$310,000	Wirthlin Worldwide	7/15/99	9/1/00	Completed - Published as Report 63		
B-21	Effective Approaches to Meeting Rural Intercity Bus Transportation Needs	\$150,000	\$99,957	KFH Group	9/27/99	11/16/01	Completed - Published as Report 79		
B-22	New Paradigms for Rural and Small Urban Transit Service Delivery	\$82,000	\$82,000	University of Arizona	5/31/00	3/31/02	Completed - See Project B-22A		
B-22A	Case Studies in New Paradigms for Rural and Small Urban Transit Service Delivery	\$18,000	\$17,995	KFH Group	6/30/03	1/31/04	Completed - Published as Report 99		
B-23	Resource Requirements For Demand-Responsive Transportation Services	\$250,000	\$249,971	Northwestern University	11/1/00	10/1/03	Completed - Published as Report 98		
B-24	Toolkit for Rural Community Coordinated Transportation Services	\$250,000	\$250,000	Westat, Inc.	8/20/01	12/15/03	Completed - Published as Report 101		
B-25	Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services	\$300,000	\$299,977	Urbitrans Associates, Inc.	11/1/03	5/1/06	Completed - Published as Report 116 and Web-Only Document 34		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
B-26	Car-Sharing: Where and How it Succeeds	\$250,000	\$250,000	Nelson\Wygard	10/10/03	10/9/05	Completed - Published as Report 108		
B-27	Cost Benefit Analysis of Providing Non-Emergency Medical Transportation	\$250,000	\$250,000	Altarum	12/30/03	11/1/05	Completed - Published as RRD 75 and Web-Only Document 29		
B-28	Improving ADA Complementary Paratransit Demand Estimation	\$250,000	\$250,000	Nelson\Wygard	8/24/04	3/31/07	Completed - Published as Report 119		
B-28A	Improving ADA Paratransit Demand Estimation: Regional Modelling	\$330,000	\$330,000	Nelson\Wygard	5/15/08	4/30/12	Completed - Published as Report 158		
B-29	Leveraging ITS Data for Transit Market Research: A Practitioner's Guidebook	\$200,000	\$200,000	Portland State University	2/3/05	11/30/07	Completed - Published as Report 126		
B-30	Toolkit for Integrating Non-Dedicated Vehicles in Paratransit Service	\$249,921	\$249,921	Nelson\Wygard	9/1/04	10/1/07	Completed - Published as Report 121		
B-31	Guidebook for Measuring, Assessing, and Improving Performance of Demand-Response Transportation	\$250,000	\$250,000	KFH Group	9/8/05	9/15/07	Completed - Published as Report 124		
B-31A	Guidebook for Rural Demand-Response Transportation: Measuring, Assessing, and Improving Performance	\$150,000	\$150,000	KFH Group	9/30/07	8/31/09	Completed - Published as Report 136		
B-32	Understanding How to Motivate Communities to Support and Ride Public Transportation	\$300,000	\$324,542	SRBI	9/29/05	10/30/07	Completed - Published as Report 122		
B-33	Practical Measures to Increase Transit Industry Advertising Revenues	\$285,000	\$285,000	Demeene & Company	3/19/07	2/15/09	Completed - Published as Report 133		
B-34	Resource Guide for Commingling ADA and Non-ADA Paratransit Riders	\$300,000	\$300,000	TransSystems, Inc.	8/30/06	9/30/10	Completed - Published as Report 143		
B-35	A Guide for Planning and Operating Flexible Public Transportation Services	\$300,000	\$300,000	DMP Group	8/16/07	3/30/10	Completed - Published as Report 140		
B-36	Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook	\$300,000	\$599,180	Vanesse Hangen Brustlin, Inc.	12/4/07	9/30/12	Completed - Published as Report 161 and Web-Only Document 58		
B-37	Estimation of Demand for Rural Intercity Bus Services	\$200,000	\$199,411	KFH Group, Inc.	12/11/07	3/31/11	Completed - Published as Report 147		
B-38	Guidelines for Providing Access to Public Transportation Stations	\$500,000	\$489,288	Kittelson & Assoc	9/17/08	10/1/11	Completed - Published as Report 153; Literature Review Published as Web-Only Document 44		
B-39	Audience Measurement for Transit Advertising	\$350,000	\$350,000	People Count	12/1/09	5/1/12	Completed - Published as Web-Only Document 57		
B-40	Strategy Guide to Enable and Promote the Use of Fixed-Route Transit by People with Disabilities	\$300,000	\$300,000	TransSystems	9/30/11	1/30/14	Completed - Published as Report 163		
B-41	Travel Training for Older Adults: A Handbook	\$300,000	\$300,000	Westat, Inc.	11/4/11	1/31/14	Completed - Published as Report 168, Parts I and II		
B-42	Community Tools to Improve Transportation Options for Veterans, Military Service Members, and Their Families	\$200,000	\$200,000	KFH Group	4/13/12	2/1/14	Completed - Published as Report 164		
B-43	Use of Web-Based Rider Feedback to Improve Public Transit Services	\$250,000	\$250,000	Georgia Tech Research Corporation	1/11/13	4/1/15	Completed - Published as Report 179		
B-44	Impact of the Trend Toward Separate Statewide Medicaid Transportation Brokerages on Human Service Transportation Coordination	\$300,000	\$300,000	Texas A&M Transportation Institute	1/10/14	3/31/18	Completed - Published as Report 202	R. Opstelten	
B-45	Transportation to Dialysis Centers: Health/Transportation Policy Intersection	\$350,000	\$350,000	KFH Group, Inc.	12/3/16	10/30/18	Completed - Published as Report 203	D. Nelson	
B-46	Tactile Wayfinding in Transportation Settings for Travelers Who Are Blind or Visually Impaired	\$215,740 \$384,260 (NCHRP)	\$600,000	University of North Carolina - Chapel Hill	2/26/19	12/31/23	Completed - Publication Pending	P Butler D. Golba	Mariela Garcia-Colberg

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
B-47	Impact of Transformational Technologies on Underserved Populations	\$250,000 \$450,000 (NCHRP) \$250,000 (NCHRP)	\$250,000	Texas A&M Transportation Institute	11/5/19	9/30/23	Completed. Publication Pending.	B. Graves M. Veltri	Gwen Chisholm-Smith
B-48	The Provision of Alternative Services by Transit Agencies: The Intersection of Regulation and Program Objectives	\$350,000	\$350,000	KFH Group, Inc.	10/14/20	10/14/22	Research Completed. Published as TCRP Research Report 239.	B. Graves T. Scotton	
B-49	Improving Public Transportation in Rural Areas and Tribal Communities	\$100,000	\$600,000	KFH Group, Inc.	8/27/21	2/27/24	Research in Progress. This project is jointly funded by NCHRP and has a total budget of \$600,000. It is being managed as NCHRP 08-147.	J. Day M. Naqvi	Dianne Schwager
B-50	Public Transportation Information Systems for Riders with Vision Disabilities	\$350,000	\$350,000	Texas A&M Transportation Institute	11/9/22	12/8/24	Research in Progress		Mariela Garcia-Colberg
B-51	Floating Transit Stops and Passengers with Vision Disabilities	\$400,000	\$400,000				In Development	A. Ofsevit	Mariela Garcia-Colberg
B-52	Intercity Bus: The State Role Updated	\$450,000	\$450,000				In Development	M. Lange	Mariela Garcia-Colberg
B-53	TCRP Project B-53, Addressing the Travel Needs of Women	\$300,000	\$300,000	Fehr & Peers	11/10/23	1/10/26	Research in Progress	S. Glauthier-Phillips V. Pannani	Dianne Schwager
:: C: Engineering of Vehicles & Equipment (29)									
C-01	Personal Mobility Aid Securement and Passenger Restraint on Transit Vehicles	\$300,000	\$299,971	Cleveland Clinic Foundation	7/15/93	1/13/96	Completed - Not Published		
C-02	Applicability of Low-Floor Light Rail Vehicles in North America	\$200,000	\$198,497	Booz-Allen & Hamilton	6/8/93	1/31/95	Completed - Published as Report 2		
C-03	Wheel/Rail Noise Control Manual	\$300,000	\$300,000	Wilson, Ihrig & Assoc	3/1/94	10/15/96	Completed - Published as RRD 19 and Report 23		
C-03A	Wheel and Rail Vibration Absorber Testing and Demonstration	\$300,000	\$300,000	Wilson, Ihrig & Assoc	9/1/97	10/31/00	Completed - Published as Report 67		
C-04	Procurement Specification Guidelines for Mass Transit Vehicle Windows Glazing	\$200,000	\$199,875	U of Dayton	9/26/94	3/25/96	Completed - Published as RRD 9 and Report 15		
C-05	Impact of Radio Frequency Refarming on Transit Communications	\$125,000 \$17,151	\$142,151	Arthur D Little	9/26/94	12/31/95	Completed - Published as Report 11		
C-06	Improved Methods for Increasing Wheel/Rail Adhesion in the Presence of Natural Contaminants	\$150,000	\$150,000	Tranergy Corp	12/1/94	8/15/96	Completed - Published as RRD 17		
C-06A	Demonstration of Improved Methods for Increasing Wheel/Rail Adhesion in the Presence of Natural Contaminants	\$262,000	\$18,820	Vincent Terrill	11/1/97	6/30/98	Scoping Study Completed. Demonstration Project Cancelled.		
C-07	Technology Assessment of Refueling-Connection Devices for CNG, LNG, and Propane	\$150,000	\$149,989	SAIC	3/15/96	9/14/97	Completed - Published as RRD 25		
C-08	Evaluating Fuel Choices for Transit Bus Operations	\$150,000	\$150,000	ARCADIS Geraghty & Miller, Inc.	4/1/96	3/15/98	Completed - Published as Report 38		
C-09	Paratransit Vehicle Specifications and Related Special Maintenance Requirements	\$250,000	\$250,000	Bionetics Corp, Ketron Division	2/1/96	10/31/99	Completed - ParaSPEC Software Developed		
C-10A	Understanding and Applying Advanced On-Board Bus Electronics	\$170,000	\$170,000	John J. Schiavone, Technical & Corporate Communications	6/16/97	10/15/98	Completed - Published as Report 43		
C-10B	Hybrid Electric Transit Buses: Status, Benefits, and Issues	\$45,000	\$44,585	Northeast Alternative Vehicle Consortium	6/15/99	2/15/00	Completed - Published as Report 59		
C-10C	New Designs and Operating Experiences with Low-Floor Transit Buses	\$35,000	\$35,000	Rolland King	7/1/97	4/30/98	Completed - Published as Report 41		
C-11	Alternative-Fuel Transit Bus Hazard Assessment Model	\$300,000	\$299,921	SAIC	12/1/97	12/31/00	Completed - Published as RRD 39 and CD-4		
C-12	Standard Technical Specifications for 35/40-Foot Low-Floor and CNG Transit Buses	\$269,000	\$269,000	American Public Transportation Association	9/1/98	6/30/01	Completed - Specifications published by APTA		
C-13	30-Foot Transit Bus Technical Specification	\$92,000	\$92,000	American Public Transportation Association	9/14/00	6/30/02	Completed - Specifications published by APTA		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
C-14	Technical Assistance for Development of Transit Bus Standards	\$125,000 (01) \$250,000 (02) \$250,000 (03) \$250,000 (04) \$250,000 (05) \$150,000 (06)	\$1,275,000	American Public Transportation Association	10/1/01	9/30/08	Completed - Standards published by APTA		
C-15	Assessment of Hybrid-Electric Transit Bus Technology	\$300,000	\$300,000	West Virginia University	12/20/04	7/31/09	Completed - Published as Report 132		
C-16	Center Truck Performance of Low-Floor Light Rail Vehicles	\$250,000	\$249,170	Interfleet Technology, Inc.	10/19/04	4/18/06	Completed - Published as Report 114		
C-17	Development of Crash Energy Management Performance Requirements for Light-Rail Vehicles	\$300,000	\$299,990	Applied Research Associates, Inc.	9/22/05	3/31/08	Completed - Published as Web-Only Document 40		
C-18	Strategic Plan for Meeting Transit Industry Wireless Communication Needs	\$225,000 \$48,000 \$50,000	\$272,972	Science Applications International Corp.	10/22/08	10/31/12	Completed - Resources to APTA		
C-19	Guidebook for Evaluating Fuel Choices for Post-2010 Transit Bus Procurements	\$150,000 \$150,000	\$300,000	Science Applications International Corporation	11/15/07	12/31/10	Completed - Published as Report 146		
C-20	Use of Mobility Devices on Paratransit Vehicles and Buses	\$400,000	\$399,157	Oregon State University	11/4/11	12/31/13	Completed - Published as Report 171		
C-21	Positive Train Control (PTC) Radio Spectrum Planning for Passenger Commuter Rail Operators in the United States						Cancelled		
C-22	Bus Operator Workstation Design for Improving Occupational Health and Safety	\$275,000	\$275,000	Virginia Tech	1/15/14	3/1/16	Completed - Published as Report 185		
C-23	Assessing and Mitigating Electrical Fires on Transit Vehicles	\$150,000 \$150,000	\$300,000	TRC Engineering Services	1/5/17	12/31/20	Completed. Published as TCP Report 229.	M. Belanger M. Nawn	
C-24	Traction Power Cables: Replacement Guidelines	\$250,000	\$250,000	Eastern Michigan University	4/15/19	2/29/24	Completed. Publication Pending.	M. Smith	Gwen Chisholm-Smith
C-25	Bus Operator Barrier Design	\$350,000	\$350,000	Virginia Polytechnic Institute and State University	1/18/22	1/18/24	Research in Progress	J. Y. El-Hamri	Mariela Garcia-Colberg
:: D: Engineering of Fixed Facilities (46)									
D-01	Rail Corrugation Mitigation in Transit	\$500,000	\$270,000	Assoc of American Railroads	8/22/94	11/30/97	Completed - Published as RRD 26		
D-02	Derailment of Transit Vehicles in Special Trackwork	\$400,000	\$399,956	Zeta-Tech Assoc	4/1/94	6/30/96	Completed - Published as RRD 15		
D-03	Tunnel Track Reconstruction Methods Using Precast Concrete Systems	\$450,000	\$30,895	Louis Berger & Assoc	6/1/94	12/31/94	Terminated		
D-03A	Tunnel Track Reconstruction Methods Using Precast Concrete Systems	\$39,921	\$39,921	Thomas Dyer	9/1/95	12/31/96	Completed - Not Published		
D-04	Reducing the Visual Impact of Overhead Contact Systems	\$100,000	\$100,000	Urbitran Assoc	12/15/93	5/31/95	Completed - Published as Report 7		
D-05	Performance of Direct-Fixation Track Structure: Design Guidelines and Software	\$300,000	\$300,000	Battelle Memorial Inst	2/23/95	6/22/99	Completed - Published as CD-3		
D-06	Track Design Handbook for Light Rail Transit	\$350,000	\$350,000	Parsons Brinckerhoff, Quade & Douglas	1/2/96	8/30/99	Completed - Published as Report 57		
D-07	Joint Rail-Related Research with the Association of American Railroads/TTCI	\$250,000 (99) \$200,000 (00) \$150,000 (02) \$150,000 (03) \$50,000 (04) \$150,000 (05) \$150,000 (07) \$200,000 (09) \$476,896 (11) \$250,000 (15)	\$1,776,896	Transportation Technology Center, Inc.	10/28/99	6/30/22	Continuing Project; See Below - Research Completed. In Publication.	T. Williams	Gwen Chisholm-Smith

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
D-07/Task 01	Broken Rail Detection		\$31,685	TTCI	10/28/99	3/30/01	Completed - Published in Report 71, Volume 1		
D-07/Task 02	Transit Switch Design Evaluation (Phase I)		\$107,298	TTCI	10/28/99	3/31/02	Completed - Published in Report 71, Volume 2		
D-07/Task 03	Wide-Gap Welding Techniques		\$40,119	TTCI	10/28/99	7/31/01	Completed - Published in Report 71, Volume 1		
D-07/Task 04	Control of Wheel-Rail Friction		\$70,898	TTCI	10/28/99	6/30/01	Completed - Published in Report 71, Volume 1		
D-07/Task 05	Guidelines for an Alternative Transit Switch Design		\$79,109	TTCI	3/7/01	9/30/05	Completed - Published as RRD 72		
D-07/Task 06	Exothermic Welding of Heavy Electrical Cables to Rail		\$50,046	TTCI	3/7/01	11/15/03	Completed - Published in Report 71, Volume 3		
D-07/Task 07	Friction Control Methods Used by the Transit Industry		\$106,700	TTCI	3/7/01	1/31/05	Completed - Published in Report 71, Volume 4		
D-07/Task 08	Flange Climb Derailment Criteria & Wheel/Rail Profile Management and Maintenance Guidelines for Transit Operators		\$188,113	TTCI	7/17/03	3/15/05	Completed - Published in Report 71, Volume 5		
D-07/Task 09	Applicability of AREMA Track Recommended Practices for Transit Agencies		\$25,170	TTCI	8/11/03	5/15/04	Completed - Published in Report 71, Volume 3		
D-07/Task 10	Acoustic Rail-Break Detection Demonstration at MTA New York City Transit		\$49,000	TTCI	9/24/03	11/30/05	Completed - Published as RRD 76		
D-07/Task 11	Direct-Fixation Track Design Specifications, Research, and Related Material		\$50,000	Laurence E. Daniels	5/6/04	6/7/05	Completed - Published in Report 71, Volume 6		
D-07/Task 12	Use of Guard/Girder/Restraining Rail		\$40,619	TTCI	10/25/05	9/30/06	Completed - Published as RRD 82		
D-07/Task 13	Performance and Testing Requirements for Portable Track Geometry Inspection Systems		\$35,275	TTCI	10/25/05	12/15/06	Completed - Published as RRD 83		
D-07/Task 14	Rail Base Corrosion Detection and Prevention		\$74,110	TTCI	10/25/05	3/15/07	Completed - Published as Web-Only Document 37		
D-07/Task 15	Design of Track Transitions		\$34,383	TTCI	10/25/05	6/30/06	Completed - Published as RRD 79		
D-07/Task 16	Guidelines for Guard/Restraining Rail Installation		\$63,500	TTCI	4/11/08	6/30/09	Completed - Published as Report 71, Volume 7		
D-07/Task 17	Guidelines for Rail Base Inspection and Rail Condemnation Limits for Corrosion-Induced Material Loss		\$80,500	TTCI	4/11/08	2/25/09	Completed - Published as Web-Only Document 47		
D-07/Task 18	Performance-Based Track Geometry, Phase 1		\$199,800	TTCI	12/2/09	4/30/11	Completed - Published as Web-Only Document 52		
D-07/Task 19	Performance-Based Track Geometry, Phase 2		\$249,900	TTCI	1/12/12	10/31/14	Completed - Published as Web-Only Document 64		
D-07/Task 20	Wheel Profile Maintenance Guidelines		\$233,196	TTCI	1/11/12	10/31/14	Completed - Published as Web-Only Document 65		
D-07/Task 21	Performance-Based Track Geometry, Phase 3	\$250,000	\$150,000	TTCI	10/9/18	9/30/22	Completed - Published as Web-Only Document 76	T. Williams	Gwen Chisholm-Smith
D-08	Improving Pedestrian Safety at Unsignalized Roadway Crossings	\$275,000 (TCRP) \$275,000 (NCHRP)	\$550,000	Texas Transportation Institute	10/1/02	3/6/06	Completed - Published as Report 112 and Web-Only Document 30		
D-09	Transit Vehicles and Facilities on Streets and Highways	\$350,000	\$349,969	Parsons Brinckerhoff, Quade & Douglas	11/1/02	6/30/07	Completed - Published by AASHTO		
D-10	Audible Signals for Pedestrian Safety in Light Rail Transit Environments	\$400,000	\$400,000	Korve Engineering	10/3/03	1/31/07	Completed - Published as RRD 84 and Web-Only Document 35		
D-11	Design, Operation, and Safety of At-Grade Crossings of Exclusive Busways	\$150,000	\$150,000	BMI - SG	9/29/04	2/15/07	Completed - Published as Report 117 and Web-Only Document 36		
D-12	Ground-Borne Noise and Vibration in Buildings Caused by Rail Transit	\$425,000	\$424,867	Acentech, Inc.	9/16/05	12/31/09	Completed - Published as Web-Only Document 48		
D-13	A Guide for Implementing Bus-On-Shoulder (BOS) Systems	\$200,000	\$200,000	Wilbur Smith Associates, Inc.	9/15/06	4/30/11	Completed - Published as Report 151		
D-14	Track Design Handbook For Light Rail Transit, Second Edition	\$300,000	\$300,000	PB Americas, Inc.	9/24/09	11/30/11	Completed - Published as Report 155		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
D-15	Effective Practices for the Protection of Transportation Infrastructure from Cyber Incidents	\$150,000 (TCRP) \$150,000 (NCHRP)	\$300,000	Countermeasures Assessment and Security Experts, LLC	5/2/13	12/31/15	Completed - Published as Web-Only Document 67		
D-16	Improving the Safety and Sustainability of Stray Current Control of DC-Powered Rail Transit Systems	\$350,000	\$349,921	Compro Companies, Inc.	2/16/12	8/31/18	Completed - Published as Report 212	R. Chen	
D-17	Detecting and Mitigating Low-Level DC Leakage and Fault Currents in Transit Systems	\$250,000	\$250,000	University of Akron	10/24/14	9/30/17	Completed - Published Report 211	T. Williams	
D-18	A Transit Agency Guide to Evaluating Secondary Train Detection/Protection Systems in Communications-Based Train Control (CBTC) Systems	\$200,000	\$197,624	CH2M Hill	2/5/16	7/31/17	Completed - Published as Web-Only Document 71	P. Centolanzi	Mariela Garcia-Colberg
D-19	Detecting and Mitigating Low-Level DC Fault Currents in Transit Systems (Phase II of TCRP Project D-17)	\$250,000	\$250,000	The University of Akron	3/7/22	3/2/24	Research in Progress	P. Centolanzi T. Williams	Mariela Garcia-Colberg
D-20	Insulated Joint Failure Investigation Mitigation	\$250,000	\$249,989	Transportation Technology Center, Inc. d/b/a MXV Rail	8/14/23	2/14/25	Research in Progress	J. Thompson A. Medero	Mariela Garcia-Colberg
D-21	Planning for the Future of Intermodal Passenger Facilities: Guide and Decision-Making Framework	NCHRP \$200,000 ACRP \$150,000 TCRP \$100,000	\$100,000	Nelson/Nygaard Consulting Associates, Inc.	4/6/22	7/14/24	Research in Progress	N. Conroy M. McGill	Dianne Schwager
D-22	A Frog Design Primer and Research Roadmap	\$300,000	\$299,996	Cross-Spectrum Acoustics, Inc. 2022	8/15/23	2/15/25	Research in Progress	M. Lechuga M. Nawn	Mariela Garcia-Colberg
D-23	Guidebook for Planning and Constructing a Small and Rural Tribal Transit Facility	\$400,000					In Development	E. Flippin-Jones	Mariela Garcia-Colberg
D-24	Determination of Actual Derailment Loads on Transit Bridges	\$300,000					In Development		Mariela Garcia-Colberg
:: E: Maintenance (18)									
E-01	Leveraging Information for Better Transit Maintenance	\$350,000 \$150,000	\$349,890	RAND Corp	9/1/93	11/30/95	Completed - Published as RRD 13		
E-02	Artificial Intelligence Technology for Transit Railcar Diagnostics	\$150,000	\$149,597	ANSTEC	5/17/93	6/16/94	Completed - Published as Report 1		
E-02A	Demonstration of Artificial Intelligence Technology for Railcar Diagnostics	\$200,000	\$199,947	ANSTEC	2/27/97	10/31/98	Completed - Published as Report 44		
E-03	A Desk Guide for Inventory Managers in the Transit Industry	\$150,000	\$150,000	Klick, Kent, & Allen, Inc.	12/1/93	7/31/95	Completed - Published as RRD 28 and Web-Only Document 4		
E-03A	Revised Inventory Management Desk Guide	\$150,000	\$150,000	Draycott Consulting	10/1/97	3/31/00	Completed - Published as RRD 40 and Web-Only Document 17		
E-04	Guidelines for the Development of Public Transportation Facilities and Equipment Management Systems	\$200,000	\$200,000	Parsons Brinckerhoff, Quade, & Douglas	6/10/94	9/30/95	Completed - Published as Report 5		
E-05	Guidebook for Developing and Sharing Transit Bus Maintenance Practices	\$300,000	\$300,000	Transit Resource Center	9/26/03	7/15/05	Completed - Published as Report 109		
E-06	Transit Bus Mechanics: Building for Success - The ASE Transit Bus Maintenance Certification Test Series	\$450,000 (04) \$300,000 (05) \$300,000 (07) \$275,000 (08)	\$845,608	National Institute for Automotive Service Excellence (ASE)	8/1/04	6/30/12	Completed - 8 ASE Transit Bus Tests Now Offered		
E-07	Establishing a National Transit Industry Rail Vehicle Technician Qualification Program: Building for Success	\$400,000 (08) \$400,000 (09) \$400,000 (10) \$200,000 (11) \$500,000 (12)	\$1,900,000	Transportation Learning Center	7/18/08	3/1/14	Completed - Published as Report 170		
E-08	Extending and Deepening National Transit Training Standards	\$250,000	\$250,000	Transportation Learning Center (TLC)	7/14/08	10/13/09	Completed - Results Used by TLC		
E-09	State of Good Repair: Prioritizing the Rehabilitation and Replacement of Existing Capital Assets and Evaluating the Implications for Transit	\$150,000 (10)	\$150,000	Spy Pond Partners	10/6/10	3/31/12	Completed - Published as Report 157		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
E-09A	Guidance for Developing a Transit Asset Management Plan	\$350,000 (12)	\$350,000	Spy Pond Partners	9/25/12	6/30/14	Completed - Published as Report 172		
E-10	Maintenance Technician Staffing Levels for Modern Public Transit Fleets	\$300,000	\$300,000	EDSI Consulting	1/23/13	7/30/15	Completed - Published as Report 184		
E-11	The Relationship Between Transit Asset Condition and Service Quality	\$350,000	\$350,000	Spy Pond Partners	11/5/15	3/30/18	Completed - Published as Report 198	M. Schilling M. Smith	
E-12	Guidance for Calculating the Return on Investment in Transit State of Good Repair	\$300,000	\$300,000	Spy Pond Partners	10/21/16	10/20/18	Completed - Published as Report 206	E. Hu	
E-13	COVID-19 and Transit Air Quality Protections (Insight Event)	\$200,000	\$200,000	Versar	6/21/22	6/22/22	Completed. Published as Transportation Insights 2	M. Yusuf	
E-14	Electric Bus Fire Prevention and Risk Management	\$350,000	\$349,720	Fire Protection Research Foundation (FPFRF)	8/10/23	8/10/25	Research in Progress	M. Yusuf S. Winter	Mariela Garcia-Colberg
E-15	Air Quality Inside Buses	\$150,000					In Development		Mariela Garcia-Colberg
:: F: Human Resources (32)									
F-01	Fitness-for-Duty Testing in the Transit Workplace	\$300,000	\$474,350	Battelle Memorial Inst	6/1/93	10/31/96	Completed - Not Published		
F-02	Innovative Labor-Management Practices	\$250,000	\$199,935	Mercer Management Consult	7/15/93	10/31/94	Completed - Not Published		
F-03	A Quality Journey: A TOM Roadmap for Public Transportation	\$500,000	\$500,000	MacDorman & Assoc	5/10/93	11/10/95	Completed - Published as RRD 3 and Report 8		
F-04	Bus Operator Workstation Evaluation and Design Guidelines	\$250,000	\$250,000	Penn State U	5/1/94	2/28/97	Completed - Published as Report 25 and Web-Only Document 1		
F-05	Closing the Knowledge Gap for Transit Vehicle Maintenance Employees--A Systems Approach	\$300,000	\$300,000	RAND Corp	10/10/94	9/9/96	Completed - Published as Report 29		
F-06	Guidelines for the Effective Use of Uniformed Transit Police/Security Personnel	\$400,000	\$399,490	Interactive Elements	12/12/94	5/29/97	Completed - Published as Web-Only Document 15		
F-06A	Guidelines for Collecting, Analyzing, and Reporting Transit Crime Data	\$175,000	\$150,000	Technology & Management Systems, Inc.	4/1/98	3/31/00	Completed - Published as RRD 41		
F-07	Part-Time Transit Operators: The Trends and Impacts	\$250,000	\$250,000	Charles River Assoc	10/15/97	10/31/00	Completed - Published as Report 68		
F-09	Managing Transit's Workforce in the New Millennium	\$250,000	\$250,000	McGlothlin Davis, Inc.	2/1/00	1/30/02	Completed - Published as Report 77		
F-10	Toolbox for Transit Operator Fatigue	\$300,000	\$299,828	Foster-Miller, Inc.	10/15/00	6/30/02	Completed - Published as Report 81		
F-11	Positioning the Public Transportation Operating Agency as an Employer of Choice	\$300,000	\$299,705	Watson Wyatt Worldwide	9/12/02	10/15/03	Completed - Published as Report 103		
F-12	Employee Compensation Guidelines for Transit Providers in Rural and Small Urban Areas	\$300,000	\$300,000	KFH Group	9/27/05	3/3/08	Completed - Published as Report 127		
F-13	Vehicle Operator Recruitment, Retention, and Performance in ADA Complementary Paratransit Operations	\$300,000	\$300,000	TransSystems	9/4/07	1/30/10	Completed - Published as Report 142		
F-14	Guidebook for Recruiting, Developing, and Retaining Transit Managers for Fixed-Route and Paratransit Systems	\$250,000	\$249,998	ICF, Inc.	9/12/08	2/26/10	Completed - Published as Report 139		
F-15	A Practical Guide for Recruiting Minorities for Chief Executive Officers at Public Transportation Agencies	\$250,000	\$249,945	Generator Group, LLC	12/5/08	3/30/11	Completed - Published as Report 148		
F-16	Building a Sustainable Workforce in the Public Transportation Industry - A Systems Approach	\$150,000	\$149,278	Transportation Learning Center	9/29/10	3/28/11	Completed - Results to F-16A		
F-16A	Building a Sustainable Workforce in the Public Transportation Industry - A Systems Approach	\$350,000	\$350,000	ICF, Inc.	9/30/11	4/30/13	Completed - Published as Report 162		
F-17	Developing Best Practice Guidelines for Improving Bus Operator Health and Retention	\$350,000	\$350,000	Transportation Learning Center	10/13/11	11/30/13	Completed - Published as Report 169		
F-18	Policing and Security Practices for Small- and Medium-Sized Transit Systems	\$150,000	\$150,000	Countermeasures Assessment and Security Experts, LLC	9/30/11	11/13/14	Completed - Published as Report 180		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
F-19	A National Training and Certification Program for Transit Vehicle Maintenance Instructors	\$250,000	\$250,000	Transportation Learning Center	1/21/13	10/31/14	Completed - Published as Report 178		
F-20	Labor-Management Partnerships in Public Transportation	\$300,000	\$300,000	AECOM Technical Services, Inc.	11/12/12	8/15/15	Completed - Published as Report 181, Volumes 1 and 2		
F-21	Tools and Strategies for Eliminating Assaults Against Transit Operators	\$300,000	\$300,000	Countermeasures Assessment & Security Experts LLC	12/13/13	7/30/17	Completed - Published as Report 193	J. Powell	
F-22	Identifying Best Practices and Sharing Resources for Transit Technical Training	\$300,000	\$300,000	ICF, Inc.	10/28/15	3/30/18	Completed - Published as Report 199, Vol. 1	B. Jackson	
F-23	Knowledge Management Resource to Support Strategic Workforce Development for Transit Agencies	\$300,000	\$300,000	ICF, Inc.	11/3/15	8/30/17	Completed - Published as Report 194	T. Dexter	
F-24	Overcoming Barriers to Implementing Best and Innovative Training Practices for Public Transportation's Frontline Workforce	\$300,000	\$300,000	ICF, Inc.	10/28/15	3/30/18	Completed - Published as Report 199, Vol. 2	B. Jackson	
F-25	Improving the Safety, Health, and Productivity of Transit Operators Through Adequate Restroom Access	\$300,000	\$300,000	Research Foundation of City University of New York	2/2/17	1/30/20	Completed - Published as Report 216	H. Jensen	
F-26	Improving the Health and Safety of the Transit Workforce with Corresponding Impacts on the Bottom Line: Medical Qualification, Health Care and Use of RW/OTC	\$250,000	\$250,000	Econometrics, Inc.	11/15/17	1/17/20	Completed - Published as Report 217	K. Blacks	
F-27	Evaluation of Non-Punitive Employee Safety Reporting to Improve Transit Safety	\$100,000	\$100,000	USF CUTR	1/8/19	4/30/20	Completed - Published as Report 218	N. Sobhi	
F-28	Practitioner's Guide to Bus Operator Workforce Management	\$100,000	\$100,000 (from J-11)	Ero Transportation	12/3/20	12/2/22	Research completed. Published as TCPR Report 240.	C. LaMacchia B. Jackson	
F-29	Mental Health, Wellness, and Resilience for Transit System Workers	\$300,000	\$300,000	Rutgers University	12/21/21	1/15/24	Research in Progress	B. Jackson K. Osborne	Mariela Garcia-Colberg
F-30	Guide for Protecting Transportation Employees and the Traveling Public from Airborne Diseases	\$350,000	\$350,000	University of California, Riverside	5/3/22	5/31/24	Research in Progress (Jointly funded with NCHRP)		Dianne Schwager
F-31	Modernizing Transit Station Staffing Management	\$250,000					In Development	B. Tugbobo	Mariela Garcia-Colberg
:: G: Administration (21)									
G-01	Information Technologies--State-of-the-Art Applications for Transit Properties	\$100,000	\$100,000	Castle Rock Consultants	12/1/93	5/31/95	Completed - Not Published		
G-02	Bar Coding in Transit Operations and Maintenance	\$150,000	\$149,999	Telephonics Corp	11/15/93	9/14/95	Completed - Published as Web-Only Document 10		
G-03	Transit Risk Manager for Bus Systems	\$195,000	\$192,964	Risk Management Center	10/1/94	5/31/96	Completed - Published as RRDs 11 and 12; Risk Manager Software Developed		
G-04	Developing Standards for System and Subsystem Interfaces in Electric Rail Passenger Vehicles	\$200,000	\$200,000	Thomas J McGean	1/15/96	10/1/97	Completed - Project Continued as G-04A		
G-04A	Developing Standards for System and Subsystem Interfaces in Electric Rail Passenger Vehicles - Extension	\$275,000	\$755,148	Thomas J McGean	9/1/97	2/28/02	Completed - Published as RRD 44		
G-04B	Developing Standards for System and Subsystem Interfaces in Electric Rail Passenger Vehicles - Extension	\$275,000	\$755,148	Thomas J McGean	9/1/97	2/28/02	Completed - Published as RRD 44		
G-04C	Developing Standards for System and Subsystem Interfaces in Electric Rail Passenger Vehicles - Transition to APTA	\$75,000	\$75,000	American Public Transportation Association	4/1/02	7/31/03	Completed - APTA Standards Published		
G-05	Public Transportation Systems Management Toolkit for Small Urban and Rural	\$250,000	\$249,896	KFH Group	2/1/97	3/31/99	Completed - Published as Report 54		
G-06	A Guidebook for Developing a Transit Performance Measurement System	\$300,000	\$300,000	Kittelson & Associates	6/28/01	11/28/02	Completed - Published as Report 88 and RRD 56		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
G-07	Managing Capital Costs of Major Federally Funded Public Transportation Projects	\$300,000	\$300,000	Booz, Allen & Hamilton	9/10/03	12/1/05	Completed - Published as RRD 78 and Web-Only Document 31		
G-08	A Guidebook for the Evaluation of Project Delivery Methods	\$300,000	\$300,000	Northeastern University	10/1/06	10/31/08	Completed - Published as Report 131 and Web-Only Document 41		
G-09	Sharing the Costs of Human Services Transportation	\$250,000	\$250,000	Westat, Inc.	10/15/06	9/30/10	Completed - Published as Report 144		
G-10	Estimating Soft Costs for Major Public Transportation Fixed Guideway Projects	\$300,000	\$300,000	AECOM Consult	8/24/07	12/1/09	Completed - Published as Report 138		
G-11	A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry	\$300,000	\$300,000	Kittelson & Assoc	11/1/07	3/1/10	Completed - Published as Report 141		
G-12	Fuel Purchasing Strategies for Public Transit Agencies	\$300,000	\$299,997	Science Applications International Corporation	12/11/09	3/2/12	Completed - Published as Report 156		
G-13	Developing an ITS Technology Web Portal for Transit System Leaders	\$100,000	\$99,993	Consensus Systems Technologies Corp.	11/15/11	12/31/15	Completed - Results to APTA		
G-14	Contracting Commuter Rail Services	\$300,000	\$300,000	Texas A&M Transportation Institute	2/18/15	5/31/18	Completed - Published as Report 200	S. Maia	
G-15	Public Transportation Resource for Small- and Medium-Sized P3 Initiatives	\$150,000	\$150,000	Parsons Brinckerhoff	9/25/15	1/24/17	Completed - Published as TCPR Report 191	T. Yedinak	
G-16	Development of Transactional Data Specifications for Demand-Responsive Transportation	\$250,000	\$250,000	Demand Trans Solution	11/16/16	8/31/19	Completed - Published as Report 210	M. Onay	
G-17	Assessing Lifecycle and Human Costs of Bus Operator Workstation Design and Components	\$250,000	\$250,000	Pennsylvania State University	7/17/18	4/30/23	Research Completed. Publication Pending	S. Pereira D. Sprattling	Gwen Chisholm-Smith
G-18	Improving Access and Management of Transit ITS Data	\$350,000	\$349,873	EBP-US	2/27/20	2/26/22	Completed. Published as TCPR Report 235	G. Torng A. Valle	
:: H: Policy and Planning (78)									
H-01	Transit and Urban Form	\$600,000	\$600,000	Parsons Brinckerhoff, Quade, & Douglas	6/10/93	3/31/96	Completed - Published as RRD 7 and Report 16		
H-02	Measuring and Valuing Transit Benefits and Disbenefits	\$300,000	\$300,000	Cambridge Systematics	5/26/93	5/31/96	Completed - Published as Report 20		
H-03	Strategies to Attract Auto Users to Public Transportation	\$300,000	\$300,000	Portland State U	5/2/94	10/31/96	Completed - Published as Report 40		
H-04A	Building Transit Ridership: An Exploration of Transit's Market Share and the Public Policies that Influence It	\$250,000	\$250,000	Charles River Assoc	10/17/94	10/16/97	Completed - Published as Report 27		
H-04B	Transit Markets of the Future - The Challenge of Change	\$250,000	\$249,995	U of Arizona	2/1/95	4/30/97	Completed - Published as Report 28		
H-04C	Institutional Barriers to Intermodal Transportation Policies and Planning in Metropolitan Areas	\$250,000	\$249,998	Crain & Assoc	10/3/94	6/30/96	Completed - Published as Report 14		
H-04D	The Role of Transit in Creating Livable Metropolitan Communities	\$250,000	\$250,000	Project for Public Spaces	10/3/94	7/31/97	Completed - Published as Report 22		
H-04D(02)	Transit-Friendly Streets: Design and Traffic Management Strategies to Support Livable Communities	\$75,000	\$75,000	Project for Public Spaces	7/1/96	7/31/97	Completed - Published as Report 33		
H-04E	Sustainable Transportation	\$150,000	\$150,000	TRB Studies and Information Services Division	5/1/94	12/31/96	Completed - Published as TRB Special Report 251		
H-05	Research Agenda for Increasing Transit Ridership	\$200,000	\$54,828	N/A	11/18/94	11/19/94	Completed - All Tasks Published as RRD 6		
H-05/Task 1	Identification of Research Needs to Increase U.S. Transit Ridership		\$53,798	Broughton, Piras, Preminger	6/1/94	9/30/95	Completed - Published as RRD 6		
H-05/Task 2	Identification of Research Needs to Increase U.S. Transit Ridership		\$1,030	Speaker Fees/Jack O'Toole	12/29/94	6/30/95	Completed - Published as RRD 6		
H-06	Coordinated Intermodal Transportation Pricing and Funding Strategies	\$200,000	\$150,000	Multisystems	12/1/94	6/30/97	Completed - Published as RRD 14		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
H-07	Funding Strategies for Public Transportation	\$200,000	\$199,836	Price Waterhouse	2/15/96	12/31/97	Completed - Published as Report 31		
H-08	Using Public Transportation to Reduce the Economic, Social, and Human Costs of Personal Immobility	\$300,000	\$299,996	Crain & Assoc	2/12/96	6/30/99	Completed - Published as Report 49; Case Studies Published as Web-Only Document 7		
H-09	Economic Impact Analysis of Transit Investments: Guidebook for Practitioners	\$200,000	\$200,000	Cambridge Systematics	1/2/96	12/1/97	Completed - Published as Report 35		
H-10	Costs of Sprawl-2000	\$300,000	\$300,000	Rutgers U Center for Urban Policy Research	4/1/96	4/30/01	Completed - Interim Report Published as Report 39; Final Report Published as Report 74		
H-11	Assessment of the Economic Impacts of Rural Public Transportation	\$250,000	\$250,000	Ecosometrics	1/15/96	10/14/97	Completed - Published as Report 34		
H-12	Integrated Urban Models for Simulation of Transit and Land-Use Policies: Guidelines for Implementation and Use	\$100,000	\$100,000	U of Toronto	6/1/97	9/30/98	Completed - Published as Report 48 and Web-Only Document 9		
H-13A	Consequences of the Interstate Highway System for Transit	\$125,000	\$125,000	Parsons Brinckerhoff, Quade, & Douglas	5/31/96	12/31/97	Completed - Interim Report Published as RRD 21; Final Report Published as Report 42		
H-13B	Trends in Single-Occupant Vehicle and Vehicle Miles of Travel Growth in the U.S.	\$125,000	\$125,000	Charles River Assoc	4/16/96	10/16/97	Completed - Published as RRD 30 and Web-Only Document 5		
H-14	Making Transit Work: Insight from Western Europe, Canada, and the United States	\$400,000	\$400,000	TRB Studies and Information Services	3/10/97	12/30/00	Completed - Published as TRB Special Report 257		
H-15	Projects to Support "Mobility for the 21st Century"	\$150,000	\$5,000	N/A	2/1/97	12/31/97	Completed - Workshop Conducted April 1997		
H-15A	Guidebook for Developing Welfare-to-Work Transportation Services	\$300,000	\$300,000	Multisystems	5/11/98	6/30/00	Completed - Published as Report 64 and Web-Only Document 16		
H-16	A National Transit Industry Labor-Management Cooperation Program: New Paradigms for Labor-Management Relations in the Transit Industry of the 21st Century	\$150,000	\$75,000	Cornell University	8/6/98	1/31/02	Completed - Three Workshops Conducted		
H-17	New Forms of Labor/Management Cooperation: A Series of Meetings Leading to a Demonstration of Innovative Working Assignments	\$150,000		Cancelled			Cancelled		
H-19	Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners	\$200,000	\$200,000	Parsons, Brinckerhoff, Quade, & Douglas	3/23/99	10/31/01	Completed - Published as Report 78		
H-19A	Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners	\$200,000	\$50,000	Parsons, Brinckerhoff, Quade, & Douglas	3/23/99	10/31/01	Completed - Published as Report 78		
H-20	Using Geographic Information Systems (GIS) for Welfare to Work Transportation Planning and Service Delivery	\$125,000	\$124,970	Multisystems	10/19/98	2/15/00	Completed - Published as Report 60 and Web-Only Document 14		
H-21	Travel Matters: Mitigating Climate Change with Sustainable Surface Transportation	\$175,000	\$174,953	Center for Neighborhood Technology	6/7/01	3/7/03	Completed - Published as Report 93		
H-21A	Travel Matters: Mitigating Climate Change with Sustainable Surface Transportation	\$100,000	\$100,000	Center for Neighborhood Technology	6/7/03	10/1/04	Completed - Published as Web-Only Document 26		
H-22A	Evaluation of the National Transit Database	\$900,000	\$900,000	FTA Project with KPMG Peat Marwick	2/1/00	5/31/01	Completed - FTA Report Prepared		
H-22B	Evaluation of the National Transit Database-TRB Committee	\$100,000	\$100,000	TRB Division B	8/1/00	4/30/01	Completed - Letter Reports Prepared		
H-22C	Implementation of the Redesignated National Transit Database	\$1,500,000	\$1,500,000	FTA Project			FTA Project - Completed		
H-23	Assessment of the Benefits of New Transit Investments vs. Investments in Existing Infrastructure	\$200,000	\$200,000	FTA Project			FTA Project - Completed		
H-24	Public Transit Board Governance Guidebook	\$150,000	\$150,000	Simon & Simon Research and Assoc.	10/11/00	7/15/02	Completed - Published as Report 85 and Web-Only Document 21		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
H-24A	Public Transportation Board Effectiveness: A Self-Assessment Handbook	\$175,000	\$175,000	AECOM Consulting Transportation Group	1/13/03	6/13/04	Completed - Published as Report 104 and Web-Only Document 24		
H-25	Strategies for Increasing the Effectiveness of Commuter Benefits Programs	\$150,000	\$150,000	ICF Consulting, Inc.	10/13/00	11/15/02	Completed - Published as Report 87		
H-25A	Analyzing the Effectiveness of Commuter Benefit Programs	\$160,000	\$160,000	ICF Consulting, Inc.	4/8/03	6/30/05	Completed - Published as Report 107 and Web-Only Document 27		
H-26	Economic Benefits of Coordinating Human Service Transportation and Transit Services	\$150,000	\$150,000	Westat, Inc.	10/15/00	4/15/03	Completed - Published as Report 91		
H-27	Transit-Oriented Development in America: Experiences, Challenges, and Prospects	\$250,000	\$250,000	UC - Berkeley	9/1/01	1/30/04	Completed - Published as Report 102		
H-27A	Effects of TOD on Housing, Parking, and Travel	\$250,000	\$250,000	Parsons, Brinckerhoff, Quade, & Douglas	10/1/04	4/30/08	Completed - Published as Report 128		
H-28	Use of Archived AVL-APC Data to Improve Transit Performance and Management	\$300,000	\$300,000	Northeastern University	8/1/01	4/30/06	Completed - Interim Report Published as Web-Only Document 23; Final Report Published as Report 113		
H-29	A New Vision of Mobility: Guidance to Foster Collaborative Multimodal Decision Making	\$200,000 (TCRP) \$150,000 (NCHRP)	\$350,000	TransManagement, Inc.	8/1/01	10/28/04	Completed - Published as Report 106		
H-30	Strategies to Increase Coordination of Transportation Services for the Transportation Disadvantaged	\$200,000	\$200,000	TransSystems	7/16/02	10/9/04	Completed - Published as Report 105		
H-30A	Strategies to Increase Coordination of Transportation Services for the Transportation Disadvantaged	\$200,000	\$200,000	TransSystems	7/16/02	10/9/04	Completed - Published as Report 105		
H-31	Understanding How Individuals Make Travel and Location Decisions: Implications for Public Transportation	\$350,000	\$350,000	TransSystems	10/22/03	8/31/07	Completed - Published as Report 123		
H-32	Elements Needed to Create High Ridership Transit Systems	\$300,000	\$300,000	TransSystems	11/4/04	10/30/06	Completed - Published as Report 111		
H-33A	State and National Transit Investment Analysis: Quick-Response Analyses for SAFETEA-LU Commission	\$100,000	\$100,000	Cambridge Systematics, Inc.	2/21/06	12/30/06	Completed - Results to APTA		
H-33B	State and National Transit Investment Analysis: Additional Analyses for AASHTO Bottom Line Report and Related APTA Reports	\$100,000	\$100,000	Cambridge Systematics, Inc.	10/16/07	10/15/08	Completed - Results to AASHTO and APTA		
H-34	Local and Regional Funding Mechanisms for Public Transportation	\$250,000	\$250,000	Cambridge Systematics, Inc.	8/8/06	9/15/08	Completed - Published as Report 129		
H-35	The Role of Transit in Emergency Evacuation	\$65,000	\$65,000	NAS/TRB	11/1/06	7/31/08	Completed - Published as TRB Special Report 294		
H-36	Reinventing the Urban Interstate: A New Paradigm for Multimodal Corridors	\$400,000	\$349,984	Dowling Associates	10/26/07	11/1/10	Completed - Published as Report 145		
H-37	Characteristics of Premium Transit Services that Affect Choice of Mode	\$375,000 \$400,000	\$774,945	RSG, Inc.	12/28/07	12/30/13	Completed - Published as Report 166		
H-38	Developing, Enhancing and Sustaining Tribal Transit Services: A Guidebook	\$400,000	\$399,366	LSC Transportation Consultants, Inc.	9/30/08	12/31/11	Completed - Published as Report 154 and Web-Only Document 54		
H-39	Methodology for Determining the Economic Development Impacts of Transit Projects	\$400,000	\$400,000	Rutgers University	11/11/08	6/23/12	Completed - Published as Web-Only Document 56		
H-40	Guidelines for Ferry Transportation Services	\$200,000	\$199,286	Arup	10/30/08	11/30/11	Completed - Published as Report 152		
H-41	Assessing and Comparing Environmental Performance of Major Transit Projects	\$400,000	\$400,000	Cambridge Systematics, Inc.	12/24/09	3/1/12	Completed - Published as RRD 105 and Web-Only Document 55		
H-42	Making Effective Fixed - Guideway Transit Investments: Indicators of Success	\$400,000 \$100,000	\$500,000	University of California - Berkeley	11/19/10	1/15/14	Completed - Published as Report 167		
H-43	Transforming Public Transportation Institutional and Business Models	\$300,000	\$300,000	High Street Consulting Group	10/1/10	10/31/12	Completed - Published as Report 159		
H-44	Developing Partnerships Between Transportation Agencies and the Disability and Underrepresented Communities	\$75,000	\$74,955	Simon & Simon Research Associates	9/21/10	9/30/12	Completed - Published as RRD 107		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
H-45	Liveable Transit Corridors: Methods, Metrics, and Strategies	\$400,000	\$400,000	CFA Consultants	1/20/12	6/1/16	Completed - Published as Report 187	A. Loui	
H-46	Quantifying Transit's Impact on GHG Emissions and Energy Use: The Land Use Component	\$400,000	\$400,000	ICF, Inc.	10/11/11	12/1/14	Completed - Published as Report 176		
H-47	Linking Transit Agencies and Land Use Decision-Making: Guidebook for Transit Agencies	\$300,000	\$300,000	Parsons Brinckerhoff	1/25/12	10/24/15	Completed - Published as Report 182		
H-48	Value Capture for Financing Transit	\$300,000		Cancelled			Cancelled		
H-49	Improving Transit Integration Among Multiple Transit Providers	\$300,000	\$299,783	Nelson\Nygaard	1/2/13	10/1/14	Completed - Published as Report 173, Volumes I and II		
H-50	Local Economic Development Measurement Tool for Transit	\$150,000	\$150,000	Economic Research Development Group	2/11/15	4/1/16	Completed - Published as Report 186		
H-51	Understanding Changes in Demographics, Preferences and Markets for the Transit Industry	\$350,000	\$350,000	Resource Systems Group, Inc.	10/23/15	4/30/18	Completed - Published as Report 201	P. Mazurek J. Ryan	
H-52	Decision-Making Toolbox to Plan and Manage Park-and-Ride Facilities for Public Transportation	\$300,000	\$300,000	Texas A&M Engineering Experiment Station	2/1/15	1/11/17	Completed - Published as Report 192	K. Cervenka	
H-53	Tools for a Sustainable Transit Agency	\$300,000	\$300,000	ICF International, Inc	10/23/15	3/30/18	Completed - Published as Report 197	A. Quagliata	
H-54	Guide to Equity Analysis in Regional Transportation Planning Processes	\$300,000	\$200,000	ICF International, Inc	12/14/16	8/31/19	Completed - Published as Report 214, Vol. 1, Vol. 2	K. Cervenka	
H-55	Guidebook for Integrating Transportation and Health Care Services	\$200,000	\$200,000	KFH Group	10/16/17	9/30/20	Completed - Published as Report 223	D. Nelson J. Lynch	
H-56	Reinventing Transit Networks for a New Mobility Future	\$300,000	\$300,000	Foursquare Integrated Transportation Planning Inc	1/8/19	7/7/20	Completed - Published as Report 221	M. Onay K. Wood	
H-57	Guide to Joint Development for Public Transportation Agencies	\$400,000	\$400,000	AECOM	12/3/18	6/2/20	Completed - Published as Report 224	D. Schmed J. Crocker	
H-58	Transit Prioritization Scoring Methodology in Metropolitan Planning Organization Programming	\$100,000	\$100,000	ERDG	3/29/19	2/11/21	Completed - Published as Report 227	R. Long	
H-59	Racial Equity, Black America, and Public Transportation	\$250,000	\$249,883	Thrivance Group LLC	11/15/21	11/30/23	Research in Progress - Partially Published as TCRP Report 236, Volume 1 (of 4)	S. Nelson M. Hopson	Gwen Chisholm-Smith
H-60	Lessons Learned from Covid-19: Strategies to Enhance Racial and Social Equity through Public Transportation as a Community Lifeline	\$350,000	\$350,000	WSP USA Inc.	11/1/21	3/1/24	Research in Progress	J. Bochicchio J. Howard	Dianne Schwager
H-61	Resilience and Emergency Response Planning for Zero-Emission Fleets	\$215,000	\$215,000	Center for Transportation and the Environment	9/11/23	11/11/24	Research in Progress	A. Bruun L. Brennan	Mariela Garcia-Colberg

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
:: J: Special Projects (270)									
J-01	Dissemination and Implementation of TCRP Research Findings	\$400,000 (92) \$600,000 (94) \$250,000 (95) \$450,000 (96) \$696,000 (97) \$596,000 (98) \$666,600 (99) \$696,605 (00) \$691,600 (01) \$700,000 (02) \$696,000 (03) \$700,000 (04) \$736,000 (05) \$750,000 (06) \$775,000 (07) \$750,400 (08) \$756,000 (09) \$695,000 (10) \$720,700 (11) \$404,600 (12) \$313,650 (13) \$308,219 (14) \$420,000 (15) \$500,000 (16) \$450,000 (17) \$439,260 (18) \$414,841 (19) \$393,600 (20) \$0 (21) \$0 (22) \$0 (23)	\$499,600 American Public Transportation Association	2/15/93	Continuing Project	Tara Clark	Gwen Chisholm-Smith		
J-02	TCRP Strategic Planning Process and Strategic Plan	\$50,000	\$50,000	Various	10/28/92	12/31/96	Completed		
J-03	International Transit Studies Program	\$250,000 (92) \$250,000 (94) \$250,000 (95) \$325,000 (96) \$325,000 (97) \$200,000 (98) \$450,000 (99) \$325,000 (00) \$325,000 (01) \$325,000 (02) \$325,000 (03) \$325,000 (04) \$325,000 (05) \$325,000 (06) \$450,000 (07) \$425,000 (08) \$500,000 (09) \$500,000 (10) \$500,000 (11)	\$1,744,931 Various	2/1/94	10/31/00	Project on Hold; Publications - RRDs F. Hall 20, 22, 27, 31, 33, 36, 42, 47, 49, 53, 54, 58, 62, 64, 66, 68, 70, 71, 77, 81, 85, 87, 88, 89, 92, 95, 96, 101, 102, and 103			

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04	Innovations Deserving Exploratory Analysis--The Transit IDEA Program	\$500,000 (92) \$500,000 (94) \$400,000 (95) \$400,000 (96) \$500,000 (97) \$500,000 (99) \$500,000 (00) \$500,000 (01) \$200,000 (02) \$500,000 (03) \$500,000 (04) \$500,000 (05) \$500,000 (06) \$500,000 (07) \$560,000 (08) \$560,000 (09) \$560,000 (10) \$560,000 (11) \$460,000 (12) \$300,000 (13) \$300,000 (14) \$560,000 (15) \$360,000 (16) \$585,000 (17) \$425,000 (18) \$200,000 (19) \$205,000 (20) \$210,000 (21) \$210,000 (22) \$315,000 (23)	\$9,200,000	Transportation Research Board	12/1/92		Continuing Project; See Below	R. Opstelten	Inam Jawed
J-04A	Plans for Tracking IDEA and Developing Transit IDEA Marketing and Communications	\$40,000	\$40,000	Eastern Research Group	7/1/19	11/30/19	Completed - Posted to the Web	R. Opstelten	

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-05	Legal Aspects of Transit and Intermodal Transportation Programs	\$150,000 (92) \$175,000 (94) \$300,000 (95) \$150,000 (96) \$175,000 (97) \$300,000 (99) \$120,000 (00) \$150,000 (01) \$150,000 (02) \$100,000 (03) \$25,000 (04) \$150,000 (05) \$250,000 (06) \$250,000 (07) \$250,000 (08) \$250,000 (09) \$300,000 (10) \$200,000 (11) \$200,000 (12) \$150,000 (13) \$250,000 (14) \$250,000 (15) \$125,000 (16) \$250,000 (17) \$200,000 (18) \$150,000 (19) \$150,000 (20) \$150,000 (21) \$150,000 (22) \$225,000 (23)	Transportation Research Board	3/1/93	Continuing Project; See Below - Published as RRD 50	B. Graves	Gwen Chisholm-Smith		
J-05/Topic 01-01	Transit Labor Protection--A Guide to Section 13(c) Federal Transit Act			G. Kent Woodman, Esq., and Jane Sutter Starke, Esq., Eckert, Seamans, Cherin & Mellot	9/1/93		Completed - Published as LRD 4		
J-05/Topic 01-02	Purchase of Service Agreements for Public Transportation Agencies (Transit)			Robert Weaver, Esq., Weaver & Prell	9/1/94		Completed - Published as LRD 8		
J-05/Topic 01-03	Legal Issues Associated with Intermodalism			Russell Leibson, Esq., Carroll, Burdick & McDonough	6/1/94		Completed - Published as LRD 5		
J-05/Topic 01-04	State Limitations on Tort Liability for Public Transit Operations			Larry W. Thomas, Esq., Cameron & Hombostel	9/1/93		Completed - Published as LRD 3		
J-05/Topic 01-05	Procurement and Funding Procedures Which Impact the Procurement of Expensive Long Lead Items			Kevin M. Sheys, Esq., Oppenheimer, Wolff & Donnelly	10/1/94		Completed - Published as LRD 6		
J-05/Topic 01-06	Strategies to Facilitate Acquisition and Use of Right of Way			Kevin M. Sheys, Esq., Oppenheimer, Wolff & Donnelly	9/1/93		Completed - Published as LRD 1		
J-05/Topic 01-07	Risk Management for Rideshare Carpool Matching Programs			Russell Leibson, Esq., Carroll, Burdick & McDonough	9/1/93		Completed - Published as LRD 2		
J-05/Topic 02-01	Restriction of Speech and Related Activity at Transit and Terminal Facilities			Norman Y. Herring, et al.	9/1/95		Completed - Published as LRD 10		
J-05/Topic 02-02	Reconciling ADA with Tort Liability Law			Robert Hirsch, Esq., Krukowski, & Costello	1/1/96		Completed - Published as LRD 11		
J-05/Topic 03-01	Innovative Financing Techniques for Transit Providers			Mary A. Collins & Victor Hsu	3/1/96		Completed - Published as RRD 13		
J-05/Topic 03-02	The Impact of Civil Rights Litigation on Transit Decisionmaking			Sandra Van de Walle	4/1/96		Completed - Published as LRD 7		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-05/Topic 03-03	Zoning and Real Property Implications of Transit-Oriented Development			Robert Freilich & S. Mark White	5/1/96		Completed - Published as LRD 12		
J-05/Topic 03-04	Drug and Alcohol Testing - A Survey of Labor-Management Relations			Robert Hirsch, Esq., Krukowski & Costello	6/1/96		Completed - Published as LRD 16		
J-05/Topic 03-05	Strategies to Minimize Liability under Federal and State Environmental Laws			G. Martin Cole, Rothberg & Logan	8/1/96		Completed - Published as LRD 9		
J-05/Topic 04-01	The Impact of the Federal Wage, Hour, and Family Medical Leave Act on the Transit Industry			Lauri D'Auri	5/1/98		Completed - Published as LRD 15		
J-05/Topic 04-02	Privacy Issues in Public Transportation			Mark McNulty, Special Counsel, State of Delaware	9/1/97		Completed - Published as LRD 14		
J-05/Topic 05-01	Federal and State Licensing and Other Safety Requirements for Commercial Motor Vehicles, Operators and Equipment			Rex Nicholson Trans Tech Attorney	3/1/00		Completed - Published as LRD 18		
J-05/Topic 05-02	A Survey of Joint Development Techniques			Mattie Condray	11/1/99		Cancelled		
J-05/Topic 05-03	Guide to Federal Buy America Provisions			Jays Pershing Johnson	1/1/00		Completed - Published as LRD 17		
J-05/Topic 05-04	A Compilation of Transit Laws			Paul Dempsey	1/1/00		Completed - Published as CD-20/5		
J-05/Topic 06-01	Integrated Transit Operation and Maintenance and the Use of Private Contractors			John Brennan, Attorney-at-Law	10/1/01		Cancelled		
J-05/Topic 06-02	Impact of the Americans with Disabilities Act on Transit Operations			Cross, Gunther, Witherspoon & Galchus, PC	7/1/01		Completed - Published as LRD 19		
J-05/Topic 06-03	Transit Labor 13(c) Decisions			Shelly Brown Associates	6/1/01		Completed - Published as CD-20/6		
J-05/Topic 07-01	Transit Passengers and Civil Rights			Larry Thomas	9/1/03		Completed - Published as LRD 20		
J-05/Topic 07-02	State and Transit Authority Immunity from State Laws						Cancelled		
J-05/Topic 07-03	Transit Charter Bus Service: Decisions and Documents			Shelly R. Brown	3/15/03		Completed - Published as CD-20/7		
J-05/Topic 08-01	Trademarking and Licensing for Transit Providers			Raju & Sarracino, LLC	9/1/04		Completed - Published as LRD 21		
J-05/Topic 08-02	Innovative Financing Techniques for Transit Providers (Update)						Cancelled		
J-05/Topic 08-03	The Federal Transit Act as Amended Through August 10, 2005 and Related Laws			Jocelyn K. Waite Waite & Associates	1/1/05		Completed - Published as Web-Only Document 33		
J-05/Topic 08-04	FTA Interpretations - The Americans with Disabilities Act			Shelly R. Brown	1/1/05	9/1/05	Completed - Published as LRD 23		
J-05/Topic 09-01	Privacy Issues with the Use of Smart Cards			Paul Dempsey	5/1/06		Completed - Published as LRD 25		
J-05/Topic 09-02	Use of Fees or Alternatives to Fund Transit			Jays Pershing Johnson	9/1/06		Completed - Published as LRD 28		
J-05/Topic 09-03	Application of Physical Ability Testing to Current Workforce of Transit Employees			Jocelyn K. Waite Waite & Associates	11/1/08	11/1/10	Completed - Published as LRD 34		
J-05/Topic 09-04	Civil Rights Implications of the Allocation of Funds Between Bus and Rail			Larry Thomas	10/1/06		Completed - Published as LRD 27		
J-05/Topic 09-05	Transit Bus Stops: Ownership, Liability and Access			Jocelyn K. Waite Waite & Associates	6/1/06		Completed - Published as LRD 24		
J-05/Topic 09-06	Resources for Legal Issues Associated with Bus Maintenance			Jocelyn K. Waite Waite & Associates	6/1/06		Completed - Published as LRD 26		
J-05/Topic 09-07	How to Handle Security-Related Documents						Cancelled		
J-05/Topic 10-01	First Amendment Implications for Transit Facilities: Speech, Advertising, and Loitering			Ames, Miller & Van Eaton	7/1/07		Completed - Published as LRD 29		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-05/Topic 10-02	Developing and implementing a Transit Advertising Policy			Lew Bricker & Smith Amundsen	8/1/08	10/1/10	Completed - Published as LRD 33		
J-05/Topic 10-03	Reconciling Security, Disclosure & Record-Retention Requirements in Transit Procurements			Jocelyn K. Waite Waite & Associates	6/1/09	9/1/10	Completed - Published as LRD 32		
J-05/Topic 10-04	Competition Requirements of Design-Build, Construction Manager at Risk, and Public-Private Contracts - Seven Case Studies			Anthony Songer	11/1/07	12/1/10	Completed - Published as LRD 39		
J-05/Topic 11-01	Legal Handbook for the New Starts Process		\$38,000	Daniel Duff, Thompson, Coburn	7/1/08	7/2/09	Completed - Published as LRD 30		
J-05/Topic 11-02	Transit-Oriented Development and Joint Development: Case Studies and Legal Issues			The TOD Group	7/1/08	8/1/10	Completed - Published as LRD 36		
J-05/Topic 11-03	Transit Agencies Compliance with Title VI: Limited English Proficiency Requirements			Steven Diaz	12/1/08	11/1/10	Completed - Published as RRD 97		
J-05/Topic 12-01	Guide to Buy America Requirements - 2009 Supplement			Jaye Pershing Johnson	1/1/09		Completed - Published as LRD 31		
J-05/Topic 12-02	Reductions in Transit Service or Increases in Fares: Civil Rights, ADA, Regulatory, and Environmental Justice Issues			Larry Thomas	4/1/09	11/1/10	Completed - Published as LRD 35		
J-05/Topic 12-03	Legal Aspects Relevant to Outsourcing Transit Functions: Not Traditionally Outsourced		\$40,000	Daniel Duff, Thompson, Coburn	4/1/09	3/31/10	Completed - Published as LRD 38		
J-05/Topic 12-04	Legal Arrangements for Use and Control of Real-Time Data			Larry Thomas	5/1/09		Completed - Published as LRD 37		
J-05/Topic 13-01	Strategies to Facilitate Acquisition of New and Use of Existing Railroad Right-of-Way by Transit and Other Intercity Providers (Update)		\$25,000	Kevin Sheys	8/2/12	9/30/13	Cancelled		
J-05/Topic 13-02	Legal Issues Involving Surety for Public Transportation Projects		\$45,000	Capital Project Strategies	3/1/10	3/31/11	Completed - Published as LRD 40		
J-05/Topic 13-03	Transit Labor 13(c) Employee Protection Digest			Shelly Brown	2/1/10		Completed - Published as LRD 41		
J-05/Topic 14-01	TCRP Selected Studies in Transportation Law, Volume 5: Transit Law 2014 Supplement		\$109,000	Paul Dempsey	3/1/11	12/31/13	Completed - Published as SSSL 5 Supplement		
J-05/Topic 14-02	Transit Agency Intergovernmental Agreements: Common Issues and Solutions			Larry Thomas	3/1/11		Completed - Published as LRD 42		
J-05/Topic 14-03	Contractual Means of Achieving High-Level Performance in Transit Contracts		\$63,500	Larry Thomas	4/1/11	8/1/12	Completed - Published as LRD 43		
J-05/Topic 14-04	Legal Handbook for Rural Transit Providers						Cancelled		
J-05/Topic 15-01	Legal Issues with Obtaining Insurance for Large Transit Projects		\$52,500	Kerness Consulting	6/1/12	3/31/14	Completed - Published as LRD 47		
J-05/Topic 15-02	Legal Issues in Public Transit Emergency Planning and Operation		\$32,060	URS	6/1/12	9/30/13	Completed - Published as LRD 44		
J-05/Topic 15-03	Transit Public-Private Partnerships: Legal Issues		\$43,500	Larry Thomas	9/1/12	10/31/13	Completed - Published as LRD 45		
J-05/Topic 15-04	How HIPAA and Other Privacy Laws Affect Public Transportation Operations		\$43,500	Larry Thomas	9/1/12	1/31/14	Completed - Published as LRD 46		
J-05/Topic 16-01	Guide to Buy America Requirements - 2015 Supplement		\$50,000	Timothy Wyatt Conner Gwyn Schenck	7/1/15	11/30/16	Completed - Published as LRD 49	B. Graves	
J-05/Topic 16-02	Legal Issues Concerning Transit Agency Use of Electronic Customer Data		\$49,750	Larry Thomas The Thomas Law Firm	7/1/15	12/2/16	Completed - Published as LRD 48	B. Graves	
J-05/Topic 16-03	Public Transit Emergency Preparedness against Ebola and Other Infectious Diseases: Legal Issues		\$55,625	Center for Health and Homeland Security	7/1/15	3/1/17	Completed - Published as LRD 50	B. Graves	
J-05/Topic 16-04	Technology Contracting for Transit Projects		\$47,750	Larry Thomas The Thomas Law Firm	7/1/15	2/15/17	Completed - Published as LRD 51	B. Graves	
J-05/Topic 17-01	Impact of the Americans with Disabilities Act on Transit Agency Liability	\$43,750	\$43,750	Larry Thomas The Thomas Law Firm	11/17/16	6/30/18	Completed - Published as LRD 54	B. Graves	

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-05/Topic 17-02	Legal Implications of Video Surveillance on Transit Systems	\$50,000	\$43,750	Larry Thomas The Thomas Law Firm	11/18/16	11/18/17	Completed - Published as LRD 52	B. Graves	
J-05/Topic 17-03	Legal Considerations in Relationships Between Transit Agencies and Ride-Sourcing Service Providers	\$50,000	\$50,000	Jocelyn K. Waite	12/1/16	2/28/18	Completed - Published as LRD 53	B. Graves	
J-05/Topic 18-01	Tax Increment Financing for Transit Projects	\$50,000	\$50,000	University of Texas - Austin	9/26/18	3/26/20	Completed - Published as LRD 55	B. Graves	
J-05/Topic 18-02	Codes of Conduct on Transit Vehicles and Property: Legal Issues	\$50,000	\$50,000	Countermeasures Assessment & Security Experts, LLC	1/9/19	3/30/23	Research Completed.	B. Graves	Gwen Chisholm-Smith
J-05/Topic 18-03	Workplace Implications of Autonomous Vehicles on the Transit Workforce						Terminated	B. Graves	
J-05/Topic 18-04	Joint Development Agreements Using FTA Funds or FTA-Funded Assets	\$70,000	\$70,000	AECOM Technical Services, Inc.	4/1/19	3/5/21	Completed. Published as TCRP Legal Research Digest 56	B. Graves	
J-05/Topic 18-05	Fix It, Sign It, or Close It: State of Good Repair in an Era of Budget Constraints	\$50,000	\$50,000	Parker Corporate Enterprises, Ltd	1/28/19	3/1/21	Completed. Published as TCRP Legal Research Digest 57/NCHRP Legal Research Digest 84	B. Graves	
J-05/Topic 19-01	Legal Issues Regarding Multijurisdictional Transit Agencies	\$50,000	\$50,000				Terminated	B. Graves	
J-05/Topic 19-02	Legal Issues and Emerging Technologies	\$50,000	\$50,000	Windels Marx Lane & Mitterdorf LLP	2/21/20	1/31/22	Completed. Published as TCRP Legal Research Digest 59.	B. Graves	
J-05/Topic 19-03	Navigating the Complexities of SSI and PCII	\$50,000	\$50,000	Countermeasures Assessment & Security Experts, LLC	2/21/20	3/30/23	Research Completed.	B. Graves	Gwen Chisholm-Smith
J-05/Topic 19-04	Transit Sponsor and Contractor Delay Damages and Remedies Due to Third Parties - Transit Facility Improvements - Common Legal Issues and Solutions	\$50,000					Cancelled.	B. Graves	
J-05/Topic 19-05	Legal Issues Surrounding Disasters and Evacuations	\$45,000	\$45,000				In Development	B. Graves	Gwen Chisholm-Smith
J-05/Topic 20-01	Legal Issues in Transit Mega Projects--Case Studies	\$75,000	\$75,000	Kaplan, Kirsch, Rockwell, LLP	12/2/20	9/30/22	Completed - Published as LRD 60.	B. Graves	
J-05/Topic 20-02	Liability Insurance Issues for Transit Lawyers: A Primer						In Development	B. Graves	Gwen Chisholm-Smith
J-05/Topic 20-03	Policing and Public Transportation	\$70,000	\$70,000	Larry Thomas w/The Thomas Law Firm (ePro)	3/15/21	3/15/22	Completed. Published as LRD 58.	B. Graves	
J-05/Topic 21-01	Update of Legal Research Digests Regarding Civil Rights, Privacy, and Other Related Digests	\$25,000					In Development		Gwen Chisholm-Smith
J-05/Topic 21-02	Legal Issues in Transit Agencies Providing/Subsidizing Innovative Micromobility Projects	\$75,000	\$75,000	Windels Marx Lane & Mitterdorf, LLP	8/10/22	11/1/23	Completed. Publication Pending.		Gwen Chisholm-Smith
J-05/Topic 21-03	Update of Selected Studies in Transportation Law, Volume 5, 2014 Supplement (Transit Law)	\$75,000					In Development		Gwen Chisholm-Smith
J-05/Topic 22-01	Legal Impact of Bus Stop Design and Location Placement on Tort and Civil Rights Lawsuits for Public Transit Agencies		\$100,000	-----			In Development		Gwen Chisholm-Smith
J-05/Topic 22-02	Status of State and Local Suspension and Debarment Programs and Barriers to Creation and Implementation for State and Local Programs		\$0	Combined			In Development		Gwen Chisholm-Smith
J-05/Topic 22-03	Legal Aspects of Transit to Airports		\$75,000	-----			In Development		Gwen Chisholm-Smith
J-05/Topic 22-04	Update of Buy America		\$50,000	-----			In Development		Gwen Chisholm-Smith

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-06	TCRP Quick Response for Special Needs	\$100,000 (93) \$50,000 (94) \$329,139 (95) \$100,000 (96) \$175,000 (97) \$125,000 (98) \$535,887 (99) \$335,000 (00) \$75,000 (01) \$200,000 (02) \$150,000 (03) \$500,000 (04) \$150,000 (05) \$300,000 (06) \$150,000 (07) \$75,000 (08) \$250,000 (09) \$205,000 (10) \$150,000 (11) \$100,000 (13) \$100,000 (15) \$50,000 (16)	Various		1/1/94		Continuing Project; See Below		
J-06/Task 01	New Transit Bus		\$16,801	Ronald J. Hartman and Rosalyn Simon	3/1/94	12/31/95	Completed		
J-06/Task 02	Transit Ridership Initiative		\$25,000	Robert Stanley, Cambridge Systematics	3/1/94		Completed - Published as RRD 4		
J-06/Task 03	Organizational Research Structure for APTA		\$5,900	Barbara T. Harder	2/1/94	9/30/95	Completed		
J-06/Task 04	Station Car Demonstration		\$11,647	Kevin Sheys, Esq., Oppenheimer, Wolff & Donnelly	3/1/94	5/31/95	Completed		
J-06/Task 05	Characteristics of State and Local Transit Funding		\$41,200	Sarah Campbell, TransManagement, Inc., and Robert Stanley, Cambridge Systematics, Inc.	7/1/95	11/1/95	Completed		
J-06/Task 06	Integrating Americans with Disabilities Act (ADA) Paratransit Services with Health and Human Services Transportation Projects		\$107,585	Rosalyn Simon	6/1/95	12/31/96	Completed		
J-06/Task 07	Impact of a Change in the Matching Ratio for Transit Projects		\$25,700	Booz-Allen & Hamilton, Inc.	8/1/95	10/31/95	Completed		
J-06/Task 08	Impact of Elimination of Federal Operating Assistance for Transit		\$25,614	TransManagement, Inc. and Cambridge Systematics, Inc.	8/1/95	10/31/95	Completed		
J-06/Task 09	The Value of Federal Support for Transit Research		\$25,750	National Transportation Consortium of Minority Colleges and Universities	8/1/95	10/31/95	Completed		
J-06/Task 10	Direct Cost of Drug and Alcohol Testing		\$30,800	Battelle	8/1/95	12/31/95	Completed		
J-06/Task 11	FCC Proposal to Institute User Fees or to Auction Radio Frequencies		\$20,554	Arthur D. Little, Inc.	9/1/95	1/31/96	Completed		
J-06/Task 12	Innovative Technologies Initiative		\$17,806	Brian McColom	3/1/96	8/31/96	Completed		
J-06/Task 13	Commuter Rail System Management Contracts to Minimize Cost and Maximize Productivity		\$65,285	John Cline, Kent Woodman, and Jane Sutter Starke	3/1/96	12/31/97	Completed		
J-06/Task 14	Development of a Transit Bus Research Agenda		\$27,895	John J. Schiavone	2/1/96	6/15/96	Completed		
J-06/Task 15	The Useful Life of a Heavy Duty Transit Bus		\$50,000	Edward Abrams, Abrams-Cherwonny & Associates, Henry Hide, TMG International	12/1/96	6/1/97	Completed		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-06/Task 16	Development of a Human Resources Research Agenda		\$41,545	Gayland Moffat	6/1/96	12/30/96	Completed		
J-06/Task 17	Available Geographic Information System (GIS) Technology and Potential Transit Applications		\$29,218	Lawrence Harman, Bridgewater State College	2/15/96	1/1/97	Task Cancelled		
J-06/Task 18	Characteristics and Functions of State Transit Associations		\$23,503	Katherine Hooper	8/1/96	3/1/97	Completed		
J-06/Task 19	Continuing Examination of Successful Transit Ridership Initiatives		\$31,900	Cambridge Systematics, Inc.	4/1/97	12/31/97	Completed - Published as RRD 29		
J-06/Task 20	Feasibility of an Orientation Course for New Members of Transit Agency Boards of Directors		\$30,000	Deborah Price	9/1/97	4/30/98	Task Cancelled		
J-06/Task 21	New Paradigms Research and Strategic Plan Update		\$25,000	Various	9/1/97	10/31/02	Completed		
J-06/Task 22	Market Research on Current National Public Attitudes Toward Public Transportation		\$75,000	Fleishman-Hillard	10/1/97	3/31/98	Completed		
J-06/Task 23	Survey of Current Practice and Potential Improvements in Screening of Transit Personnel Placement in Customer Sensitive Positions		\$50,000	Watson Morris Consulting, Simon & Simon Research & Associates, Inc.	2/1/00	5/30/01	Completed		
J-06/Task 24	Combating Global Warming Through Sustainable Surface Transportation Policy: A Research Scoping Study		\$20,000	Elizabeth Deakin	4/1/98	12/31/98	Completed		
J-06/Task 25	APTA/FTA Bus Technology: Research Agenda for TCRP		\$16,000	N/A	11/1/97	12/31/98	Completed		
J-06/Task 26	Identification of Research Needs for Rural and Small Transit Agencies		\$20,000	N/A			Completed		
J-06/Task 27	Organizational Support for APTA/FTA Intelligent Transportation Systems (ITS) International Exchange Program Workshops		\$16,000	George Wynne	9/1/98	12/31/99	Completed		
J-06/Task 28	Characteristics of State Funding for Public Transportation		\$40,000	Robert Stanley, Cambridge Systematics, Inc.	3/1/99	4/15/00	Completed		
J-06/Task 29	Financing Capital Investment: A Primer for the Transit Practitioner		\$100,000	Hagler-Bailly, Inc.	10/1/99	10/15/02	Completed - Published as Report 89		
J-06/Task 30	Data Collection on Pupil Safety on Transit Buses		\$74,987	University of Michigan Transportation Research Institute	10/1/99	12/31/00	Completed		
J-06/Task 31	Transportation & Livable Communities Summary Booklet		\$30,000	Stephen Davies, Project for Public Spaces, Inc.	4/1/99	12/31/99	Completed		
J-06/Task 32	Evaluation of the National Transit Database - TRB Committee		\$100,000	Renamed Project H-22B	1/1/00	12/31/02	Completed		
J-06/Task 33	Cost of Meeting Accessibility Requirements for Over-the-Road Buses		\$50,000	KFH Group, Inc.	1/1/00	7/9/00	Completed		
J-06/Task 34	Documentation of Independent Technical Study Tour Featuring German Shared Track		\$12,000	David Phramer, Edwards & Kelcey	6/1/00	8/25/00	Completed		
J-06/Task 35	GIS Forum		\$30,000	Planners Collaborative, Inc.	9/1/00	11/11/00	Completed		
J-06/Task 36	Analyses for TEA-21 Reauthorization Activities		\$200,000	Cambridge Systematics	12/1/00	9/30/01	Completed		
J-06/Task 36(01)	Projects Related to Reauthorization		\$25,000	Cambridge Systematics	12/1/00	9/30/01	Completed		
J-06/Task 36(02)	Projects Related to Reauthorization		\$100,000	Cambridge Systematics	12/1/00	8/31/01	Completed		
J-06/Task 36(03)	Projects Related to Reauthorization		\$75,000	Cambridge Systematics	12/1/00	8/31/01	Completed		
J-06/Task 37	Procurement Issues in the Public Transportation Industry: An Assessment of Perceptions and Concerns		\$25,000	Scott Baker, AECOM Consulting	1/1/01	3/22/01	Completed		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-06/Task 38	Identification of the Critical Workforce Development Issues in the Transit Industry		\$25,000	Brian Vogel, Quatt Associates	3/1/01	9/15/01	Completed - Published as RRD 45		
J-06/Task 39	Supplemental Analysis of National Survey on Contracting Transit Services		\$25,000	Daniel K Boyle	5/1/01	9/30/01	Completed		
J-06/Task 40	Identification of Practices, Techniques, and Strategies for Attracting and Retaining Employees in the Transit Industry		\$25,000	Brian Vogel, Quatt Associates	3/1/01		Completed - Published as RRD 45		
J-06/Task 41	Transit Research and Reauthorization		\$25,000	Cambridge Systematics	10/1/01	5/31/02	Completed		
J-06/Task 42	Developing a Recommended Standard for Automated Fare Collection for Transit: Scoping Study- Regional Fare Management Programs		\$25,000	Rich Lobron	5/1/02	2/28/03	Completed - Published as RRD 57		
J-06/Task 43	Expanded State and National Transit Investment Analysis		\$74,982	Cambridge Systematics	12/1/01	7/7/02	Completed		
J-06/Task 44	Identification of Competitive Contract Success Stories and Management Guidelines		\$75,000	Cancelled			Cancelled by Requestor		
J-06/Task 45	Advanced Transportation Technology Workshop		\$30,600	BCAE Consultants	8/1/02		Completed		
J-06/Task 46	Characteristics of State Funding for Public Transportation - 2002		\$40,000	Cambridge Systematics	9/1/02	6/1/03	Completed - Published as RRD 60		
J-06/Task 47	Case Studies in Environmental Justice		\$25,000	University of South Florida	6/1/03	1/31/06	Completed		
J-06/Task 48	Transit Industry Interface with International Standards		\$29,995	Thomas McGean, PE	10/1/03	12/3/03	Completed		
J-06/Task 49	Feasibility and Issues Associated with the Concept of Environmental Transfer Credits with a Public Transportation Focus		\$25,000	Environmental Financial Products	11/1/03	6/30/04	Completed		
J-06/Task 50	Light Rail Vehicle (LRV) Crashworthiness Standards		\$23,420	Aaron James	8/1/03	12/31/04	Completed		
J-06/Task 51	Update of Examination of Successful Transit Ridership Initiatives		\$50,000	Cambridge Systematics	11/1/03	1/15/05	Completed - Published as RRD 69		
J-06/Task 52	Economic Perspective on the Value of Public Transportation		\$32,500	HLB Decision Economics, Inc.	11/1/03	11/30/04	Completed		
J-06/Task 53	Hudson Institute Transportation Vision 2010 and Beyond Project		\$49,763	Hudson Institute	12/1/03	6/16/04	Completed		
J-06/Task 54	Develop a Curriculum for Leadership Development Workshop for Upper Level Managers Serving in Public- and Private-Sector Organizations in the Transit Industry		\$100,000	Eno Transportation Foundation	2/1/04	3/1/05	Completed		
J-06/Task 55	Support for the Preparation of "Commuting in America"		\$49,991	MacroSys	1/1/04	9/30/05	Completed - Published as Report 110		
J-06/Task 56	Excess Liability Insurance - Developing Alternatives for Public Transit Agencies						Cancelled		
J-06/Task 57	The Business Case for Transit Standards		\$25,000	AECOM Consult	3/1/04	10/25/04	Completed - Published by APTA		
J-06/Task 58	Warehouse, Fulfillment, Dissemination - Developing and Implementing Multi-Organizational Solutions for Transit Research Materials		\$25,000	Bain & Associates	1/1/05	6/3/05	Completed		
J-06/Task 59	Racial and Gender Diversity in State DOTs and Transit Agencies: A Benchmark Scoping		\$78,354	University of Minnesota	7/1/05	3/30/07	Completed - Published as Report 120		
J-06/Task 60	The Case for Searches on Public Transportation		\$30,000	Jocelyn Waite, Waite & Associates	8/1/04	8/1/05	Completed - Published as LRD 22		
J-06/Task 61	Support for Transit Industry Participation in the 2004 ITS World Congress						Cancelled by Requestor		
J-06/Task 62	Train Door Systems Analysis		\$50,000	Transportation System Design, Inc.	12/1/04	10/15/05	Completed - Published as RRD 74 and Web-Only Document 28		
J-06/Task 63	Support for TRB "Potential Impacts of Climate Change on U.S. Transportation" Study		\$75,000	TRB Division B	10/1/05		Completed - Published as TRB Special Report 290		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-06/Task 64	Identification of Existing Practices, Guidelines, Strategies and Related Activities Applicable to Level Boarding and Commuter Rail Facilities and Equipment		\$24,991	SEB Associates	9/1/05	6/30/07	Completed		
J-06/Task 65	Operation of Street-Running Light Rail Transit at Higher Speeds		\$65,000	Korve Engineering	6/1/06	6/15/07	Completed		
J-06/Task 66	Small Starts and New Starts Program Research		\$50,000	PB Consult	9/1/05	2/1/06	Completed		
J-06/Task 67	Strategic Assessment of Wireless Capabilities and Needs for the Public Transportation Industry		\$99,740	Science Applications International Corporation	8/1/06	3/31/08	Completed		
J-06/Task 68	Background Information and Issues Associated with Ridership Estimates for Major Capital Projects		\$29,584	AECOM Consult	8/1/06	3/1/07	Completed		
J-06/Task 69	Quality Service in Public Transportation Organizations		\$50,000	PSTG Consulting	8/1/07	2/22/08	Completed		
J-06/Task 70	Security Standards and Guidelines Pertinent to Public Transportation		\$49,996	KFH Group	10/1/07	11/30/08	Completed		
J-06/Task 71	Rural Transit Achievements: Assessing the Outcomes of Increased SAFETEA-LU Funding for Rural Passenger Services		\$74,954	KFH Group	3/1/08	5/1/09	Completed - Published as RRD 93 and Web-Only Document 46		
J-06/Task 72	Professional Certification and Credentialing Program for the Transit Industry		\$75,000	McClothlin Davis, Inc.	9/1/09	10/30/10	Completed - Published as RRD 100		
J-06/Task 73	Bus Fleet Management in an Era of Increasing Technical Complexity		\$75,000	Eagle Harbor Group, LLC	12/1/08	6/8/09	Completed		
J-06/Task 74	Improving Mobility for Veterans		\$100,000	Westat, Inc.	9/1/09	12/1/10	Completed - Published as RRD 99		
J-06/Task 75	Guiding the Selection and Application of Wayside Energy Storage Technologies for Rail Transit and Electric Utilities		\$75,000	American Public Transportation Association	5/1/09	12/31/10	Completed - Published as Web-Only Document 51		
J-06/Task 76	Support for a Transit Wireless Communications Joint Council			Science Applications International Corporation	7/1/09		Completed		
J-06/Task 77	Support for APTA/FTA Transit Train Control Assessment		\$99,783	Jacobs Engineering Group	8/1/09	4/19/12	Completed		
J-06/Task 78	FCC Narrowbanding of Passenger Transport Provider Radio Systems in the United States		\$30,000	Shulman, Rogers, Gandal, Porchy & Ecker, P.A.	11/1/10	2/10/11	Completed		
J-06/Task 79	Positive Train Control (PTC) Radio Spectrum Planning for Passenger Commuter Rail Operations in the United States		\$99,555	Stantec Consulting	6/1/11	12/2/12	Completed		
J-06/Task 80	Research Symposium on Sleep Hygiene and Fatigue of Transit Operators		\$100,000	TRB Technical Activities Division	4/1/11		Completed		
J-06/Task 81	Impact of the Affordable Care Act on Non-Emergency Medical Transportation (NEMT): Assessment for Transit Agencies		\$49,165	RLS & Associates	9/1/12	7/1/13	Completed - Published as RRD 109		
J-06/Task 82	Standardizing Data for Mobility Management		\$43,890	TransitPlus, Inc.	1/1/13	11/15/13	Completed - Published as Web-Only Document 62		
J-06/Task 83	Preliminary Strategic Analysis of Open Standards for Fare Payment Systems for Public Transportation		\$100,000	Volpe Center	10/1/13	1/15/15	Completed - Published as Report 177		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-07	Synthesis of Information Related to Transit Practices	\$1,800,000 (92-94) \$375,000 (95) \$375,000 (96) \$400,000 (97) \$200,000 (98) \$400,000 (99) \$400,000 (00) \$400,000 (01) \$375,000 (02) \$400,000 (03) \$500,000 (04) \$600,000 (05) \$600,000 (06) \$600,000 (07) \$600,000 (08) \$700,000 (09) \$755,000 (10) \$750,000 (11) \$650,000 (12) \$350,000 (13) \$550,000 (14) \$650,000 (15) \$750,000 (16) \$857,000 (17) \$870,000 (18) \$315,000 (19) \$315,000 (20) \$315,000 (21) \$315,000 (22) \$440,000 (23)	Transportation Research Board	12/1/92	Continuing Project; See Table 6; Publications - RRDs 2, 8, 37, 48, 63, 67, 73, 80, 86, 91, 98, 104, 108, 110, 111, and 113	T. Clark			
J-08	New Paradigms for Public Transit	\$171,000 (96)	\$14,955	Burkan, Wayne	5/20/96	8/1/96	Completed		
J-08A	New Paradigms for Public Transportation: A Scoping Study	\$154,000 (96)	\$154,000	Eno Transportation Foundation	2/25/97	2/24/98	Completed - Future Search Held May 1997; Published as RRD 24		
J-08B	New Paradigms for Local Public Transportation Organizations	\$325,000 (97) \$400,000 (99)	\$323,283	Cambridge Systematics, Inc.	5/11/98	9/30/03	Completed - Task 1 Published as Report 53; Task 5 Published as Report 58; Phase III Issue Paper Published as RRD 55; Final Report Published as Report 97		
J-08C	New Paradigms for Local Public Transportation Organizations	\$325,000 (97) \$400,000 (99)	\$323,283	Cambridge Systematics, Inc.	5/11/98	9/30/03	Completed - Task 1 Published as Report 53; Task 5 Published as Report 58; Phase III Issue Paper Published as RRD 55; Final Report Published as Report 97		
J-09	e-Transit: Electronic Business Strategies for Public Transportation	\$400,000 (00) \$175,000 (02) \$210,000 (03) \$100,000 (04) \$100,000 (05) \$100,000 (06)	\$400,000	Various	7/1/01		Completed Project; See Below		
J-09/Task 01	Supply Chain: Parts and Inventory Management		\$45,000	Mitretek	7/1/01	8/30/02	Completed - Published as Report 84, Volume 1		
J-09/Task 02	Regulatory Issues		\$20,056	Mitretek	7/13/01	8/30/02	Cancelled		
J-09/Task 03	Application Service Provider Implementation Guidelines		\$45,000	Mitretek	7/1/01	8/30/02	Completed - Published as Report 84, Volume 2		
J-09/Task 04	Advanced Features of Transit Websites		\$55,000	Multisystems	7/1/01	11/30/02	Completed - Published as Report 84, Volume 4		
J-09/Task 05	Electronic Payments						Cancelled		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-09/Task 06	Using the Internet for Transit Training and Certification		\$35,000	Multisystems	7/1/01	11/30/02	Completed - Published as Report 84, Volume 3		
J-09/Task 07	Create and Manage a Series of e-Zine Articles		\$23,000	Mitretek	6/1/03	2/28/04	Cancelled - See Task 11		
J-09/Task 08	Concept for an e-Transit Reference Enterprise Architecture		\$50,000	Center for Applied Research	12/1/03	3/30/05	Completed - Published as Report 84, Volume 5		
J-09/Task 09	The Successful Adoption of Web-Based Collaborative Software		\$50,000	Acumen Building Enterprises	1/1/04	9/1/04	Completed - Published as Report 84, Volume 6		
J-09/Task 10	Strategies to Expand and Improve Deployment of ITS in Rural Transit Systems		\$205,000	EG&G Technical Services	9/1/05	12/31/09	Completed		
J-09/Task 11	The "e-Zine Technology Knowledge Center" for Transit		\$250,000	Battelle	10/1/04	3/31/07	Completed - Published as Report 84, Volume 8		
J-09/Task 12	Improving Public Transportation Technology Implementations and Anticipating Emerging Technologies		\$213,000	Consensus Systems Technologies	9/1/08	12/30/10	Completed - Published as Report 84, Volume 9		
J-09/Task 13	Transit Enterprise Architecture and Planning Framework		\$2,000,000 (02) \$400,000 (03) \$350,000 (04)	Dames & Moore			Completed Project; See Below		
J-10	Public Transportation Security Research		\$75,000	Booz-Allen Hamilton, Inc. American Public Transportation Association	11/1/01	3/1/02	Completed - APTA Publication issued		
J-10/Task 01	Development of Research Agenda/Conduct Four Security Workshops		\$300,000 \$32,000						
J-10/Task 01A	Transit Security Roundtables		\$225,000	Booz-Allen & Hamilton	6/10/02	12/10/02	Completed		
J-10/Task 01B	Logistics Support for Security Roundtables		\$31,000	American Public Transportation Association	10/6/04	12/31/04	Completed		
J-10/Task 02	White Papers on Decontamination Procedures and Technology Clearinghouse/Product Testing		\$20,000	Science Applications International Corp.	4/1/02	5/22/02	Completed		
J-10/Task 03	A Guide to Public Transportation Security Resources		\$5,000	McCormick Taylor	9/1/02	4/30/03	Completed - Published as RRD 59		
J-10/Task 04	Logistics Support for International Transportation Associations Transit Security Summit		\$20,000	American Public Transportation Association	9/1/02	6/6/03	Completed		
J-10/Task A(01)	Update of FTA "Transit System Security Program Planning Guide" and FTA "Transit Security Handbook"		\$150,000	McCormick Taylor	3/1/02	8/31/02	Completed - FTA Publication issued		
J-10/Task A(02)	Security-Related Customer Communications and Training for Public Transportation Providers		\$400,000	McCormick Taylor	3/1/02	5/1/03	Completed - Published as Report 86, Volume 5		
J-10/Task A(03)	Intrusion Detection for Public Transportation Facilities Handbook		\$246,795	Science Applications International Corp.	6/1/02	2/1/03	Completed - Published as Report 86, Volume 4		
J-10/Task A(04)	A Scan of Tools for Evaluating and Prioritizing Anti-Terrorist Security Measures for Transit Applications		\$25,000	McCormick Taylor	2/1/03	4/1/03	Completed		
J-10/Task B(01)	Emergency Public Transportation Mobilization and Emergency Operations Guide		\$400,000	McCormick Taylor	3/1/02	5/1/03	Completed - Published as Report 86, Volume 7		
J-10/Task B(02)	Applicability of Portable Explosive Detection Devices in Transit Environments		\$199,701	Science Applications International Corp.	6/1/02	6/1/03	Completed - Published as Report 86, Volume 6		
J-10/Task B(03)	Robotic Devices: A Guide for the Transit Environment		\$20,000	Science Applications International Corp.	6/1/02	4/30/03	Completed - Published as Report 86, Volume 3		
J-10/Task B(04)	Communication of Threats: A Guide		\$20,000	McCormick Taylor	3/1/02	8/31/02	Completed - Published as Report 86, Volume 1		
J-10/Task B(05)	K9 Units in Public Transportation: A Guide for Decision Makers		\$15,000	McCormick Taylor	3/1/02	7/31/02	Completed - Published as Report 86, Volume 2		
J-10/Task C	Guidelines for Transportation Emergency Training Exercises		\$100,000 (TCRP) \$100,000 (NCHRP)	McCormick Taylor	7/1/04	11/30/05	Completed - Published as Report 86, Volume 9		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-10/Task D	Hazard and Security Plan Workshop: Instructor Guide	\$200,000	\$200,000	AECOM Consulting	5/1/04	10/8/05	Completed - Published as Report 86, Volume 10		
J-10/Task E	A Guide to Transportation and Hazards Resources	\$37,500	\$45,000	University of Colorado at Boulder	1/1/07		Completed - Published as RRD 90		
J-10/Task F	Continuity of Operations (COOP) Planning Guidelines for Transportation Agencies	\$100,000 (TCRP) \$100,000 (NCHRP)	\$100,000	McCormick Taylor	7/1/04	5/31/05	Completed - Published as Report 86, Volume 8		
J-10/Task G	Making Transportation Tunnels Safe and Secure	\$200,000 (TCRP) \$200,000 (NCHRP)	\$400,000	Science Applications International Corporation	9/1/04	6/30/06	Completed - Published as Report 86, Volume 12		
J-10/Task H	Security Measures for Ferry Systems	\$150,000	\$150,000	Science Applications International Corporation	8/1/04	2/28/06	Completed - Published as Report 86, Volume 11		
J-10/Task J	Public Transportation Passenger Security Inspections: A Guide for Decision Makers	\$100,000	\$100,000	Countermeasures Assessment and Security Experts, LLC	2/1/06	3/31/07	Completed - Published as Report 86, Volume 13 and Web-Only Document 38		
J-11	Quick Response Research on Long-Term Strategic Issues	\$300,000 (07) \$300,000 (08) \$300,000 (09) \$75,000 (10) \$250,000 (11) \$200,000 (13) \$225,000 (15) \$100,000 (16) \$400,000 (17) \$400,000 (18) \$300,000 (19) \$300,000 (20) \$400,000 (21) \$300,000 (22) \$400,000 (23)					Continuing Project; See Below		Dianne Schwager
J-11/Task 01	Research for ENO Transportation Foundation Forum on the Future of Metropolitan Transportation		\$25,000	ENO Transportation Foundation	12/1/06	1/27/07	Completed - White papers produced for Forum		
J-11/Task 02	Public Transportation Contribution to Greenhouse Gas Reduction and Improved Air Quality		\$30,000	Science Applications International Corporation	4/1/07	9/30/07	Completed - Published by APTA		
J-11/Task 03	Broadening and Localizing the Connection between Public Transportation and Petroleum Conservation		\$49,882	ICF International	7/1/07	3/1/08	Completed - Published by APTA		
J-11/Task 04A	Support for the Transit Portion of the AASHTO Transportation Visioning Effort		\$5,000	A. Cambridge Systematics, Inc.	4/1/07	5/31/07	Completed		
J-11/Task 04B	Support for the Transit Portion of the AASHTO Transportation Visioning Effort		\$10,000	A. Cambridge Systematics, Inc.	4/1/07	6/30/07	Completed		
J-11/Task 05	Strategy for Demonstrating the Economic Return on Transit and the Benefits of Growth		\$68,000	HDR	7/1/07	12/28/07	Completed - Published by APTA		
J-11/Task 06	Role of Transit Agencies in the Regional Planning Process		\$30,000	Paul N. Bay	7/1/08	11/30/08	Completed - Results to APTA		
J-11/Task 07	Economic Impact of Transit (Update of 1999 APTA Report)		\$100,000	Cambridge Systematics, Inc.	12/1/08	8/31/09	Completed - Results to APTA		
J-11/Task 08	Implications of an Aging Population on Public Transit Agency Funding Needs		\$75,000	Nelson/Nygaard Consulting Associates, Inc.	4/1/09	3/31/10	Completed - Results to APTA		
J-11/Task 09	Improving Transit Systemwide Energy Efficiency to Enhance Transit's Role in Climate Change Strategies		\$60,000	Center for Neighborhood Technology	4/1/10	9/1/10	Completed - Published by APTA		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-11/Task 10	Regional Institutional Models for Transit Agencies		\$99,986	Booz Allen & Hamilton	5/1/10	11/1/10	Completed - Results to APTA		
J-11/Task 11	Approaches to Updating Urbanized Area Population and Density Data		\$39,878	The Nielson Group	4/1/11	7/29/12	Completed - Results to APTA		
J-11/Task 12	Survey of Existing Resources, Practices and Metrics of Workforce Development Programs in the U.S. Transit Industry		\$70,000	Transportation Learning Center	9/1/09	6/30/10	Completed - Results to APTA		
J-11/Task 13	National Forum on Performance-Based Planning			Cambridge Systematics, Inc.	8/1/10		Completed		
J-11/Task 14	Assessment of Alternative Local and Regional Funding Mechanisms		\$125,000	Cambridge Systematics, Inc.	7/1/11	12/28/12	Completed - Results to APTA		
J-11/Task 15	Impacts of Cuts and Reductions in Public Transportation Funding		\$99,800	KFH Group	6/1/11	10/31/12	Completed - Results to APTA		
J-11/Task 16	Improving Safety Performance Comparisons among Transportation Modes		\$99,832	Watchung Transportation, LLC	2/1/12	6/30/13	Completed - Results to APTA		
J-11/Task 17	Millennials and Mobility: Understanding the Millennial Mindset and New Opportunities for Transit Providers		\$49,951	Lattitude Research	11/1/12	7/30/13	Completed - Published as Web-Only Document 61		
J-11/Task 18	Broadening Transportation Planning Evaluation Criteria		\$49,981	ICF Consulting	1/1/13	3/31/14	Completed - Results to APTA		
J-11/Task 19	Critical Assessment for Future Transportation Needs Analysis			Arlee Reno	8/1/13		Completed - Results to AASHITO/APTA		
J-11/Task 20	An Analysis of Transit Bus Axle Weight Issues		\$80,000	MORR Transportation Consulting, Ltd	3/1/14	11/15/14	Completed - Results to APTA		
J-11/Task 21	The Impact of New Technology-Enabled Mobility Services on Public Transportation		\$74,996	Shared Use Mobility Center	6/1/15	5/31/16	Completed - Published as Report 188	F. Hall	
J-11/Task 22	Value Capture Financing for Public Transportation Projects	\$75,000	\$75,000	IMG Rebel	10/1/15	8/9/16	Completed - Published as Report 190	F. Hall	
J-11/Task 23	Real Estate Market Analysis: Approaches for Measuring Developing Potential	\$100,000		Cancelled			Cancelled		
J-11/Task 24	Private Transit Services and Public Transportation	\$75,000	\$75,000	Shared Use Mobility Center	10/8/16	9/1/17	Completed - Published as Report 196	M. Leary	
J-11/Task 25	Broadening Understanding of the Interplay of Public Transit, Shared Mobility, and Personal Automobiles	\$90,000	\$89,991	Shared Use Mobility Center	5/1/16	8/31/17	Completed - Published as Report 195	G. Torig	
J-11/Task 26	Collaborations and Partnerships between Public Transportation and Transportation Network Companies (TNCs)	\$100,000	\$100,000	Nelson/Nygaard	9/28/17	12/21/18	Completed - Published as Report 204	B. Graves	
J-11/Task 27	Low-Speed Automated Vehicles (LSAV) in Public Transportation	\$60,000	\$60,000	Mobility e3 LLC	10/30/18	1/30/21	Completed - Published as Report 220	D. Diggs	
J-11/Task 28	Analysis of Recent Public Transit Ridership Trends	\$60,000	\$60,000	Georgia Tech	6/6/18	4/30/19	Completed - Published as Report 209	R. Sinquefeld P. Armstrong	
J-11/Task 29	Strategic Communications to Improve Support for Transit-Priority Projects	\$50,000	\$50,000	Nelson/Nygaard	5/15/18	5/30/19	Completed - Published as Report 208	V. Berton	
J-11/Task 30	Quick-Build Projects to Improve Bus Transportation Services	\$50,000	\$50,000	Street Plans Collaborative	5/30/18	6/1/19	Completed - Published as Report 207	J. Sacks	
J-11/Task 31	Guidance for Trading, Sharing, and Selling Public Transit Data - Now and in the Future	\$90,000	\$90,000	Economic Development Research Group, Inc.	11/8/18	10/31/19	Completed - Published as Report 213	M. Daigle	
J-11/Task 32	Social and Economic Sustainability Metrics for Public Transportation	\$50,000	\$50,000	Louis Berger	8/13/18	2/12/19	Completed - Published as Report 205	A. Quagliata	
J-11/Task 33	Guidebook for Deploying Zero Emissions Transit Buses	\$100,000	\$100,000	Center for Transportation and the Environment	1/24/19	7/23/19	Completed - Published as Report 219	S. Rickleton S. Coronado	
J-11/Task 34	The Effects of Vehicle Automation on the Public Transportation Workforce	\$100,000	\$100,000	Texas A&M Transportation Institute	3/25/19	10/15/21	Completed - Published as Report 232	D. Diggs	
J-11/Task 35	Resource Guide for Improving Diversity and Inclusion Programs for the Public Transportation Industry	\$50,000	\$50,000	Keen Independent Research	10/16/19	4/30/21	Completed - Published as Report 228	B. Wheeler S. Portee	

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-11/Task 36	An Update on Public Transportation's Impacts on Greenhouse Gas Emissions	\$90,000	\$90,000	Center for Neighborhood Technology	10/25/19	1/24/21	Completed - Published as Report 226	M. Naqvi T. Grep	
J-11/Task 37	Transit and Micro-Mobility (Bikeshare, Scooter-share, etc.)	\$91,000	\$90,959	Shared-Used Mobility Center	9/10/19	6/4/21	Completed - Published as Report 230	M. Lange E. Sperling	
J-11/Task 38	An Analysis of Green Bond Financing in the Public Transportation Industry	\$91,000	\$91,000	Cadmus	9/4/19	7/3/20	Completed - Published as Report 222	P. Mazurek E. Smallwood	
J-11/Task 39	Evaluation Framework for Fare-Free Transit	\$100,000	\$100,000	Nelson/Nygaard Consulting Associates, Inc.	12/3/20	7/29/22	Completed. Published as TCRP Research Report 237.	T. Plaskon J. Furrer	
J-11/Task 40	Homelessness: A Guide for Public Transportation	\$100,000	\$100,000	Portland State University	11/13/20	7/28/23	Research Completed. Released as a Pre-publication draft for TCRP Report 242.	M. Veltri	Dianne Schwager
J-11/Task 41	Pathways to Effective, Inclusive, and Equitable Virtual Public Engagement for Public Transportation	\$100,000	\$100,000	Rutgers University (POET)	2/1/22	4/30/23	Research completed. Released as TCRP Report 241.	R. Fonseca D. Phan	
J-11/Task 42	Transportation Services for People with Disabilities and Older Adults during a Pandemic and Other Emergencies: Lessons Learned during the COVID-19 Pandemic	\$100,000	\$100,000	Texas A&M Transportation Institute	12/1/21	9/1/23	Research completed. Released as a Pre-publication draft for TCRP Report 243.	S. Clark L. Rodriguez E. Sperling	Dianne Schwager
J-11/Task 43	Analysis of Public Transportation Health Impacts and Benefits	\$125,000	\$125,000	Steer Davies & Gleave (Steer)	11/2/22	5/1/24	Research in Progress		Dianne Schwager
J-11/Task 44	Improving Access to Public Transportation Services and Facilities with Transit-Oriented Complete Streets	\$125,000	\$125,000	Texas A&M Transportation Institute	1/18/23	1/17/25	Research in Progress	D. Kraft C. MacNeith	Dianne Schwager
J-11/Task 45	Future of Commuter Rail in North America	\$100,000	\$100,000				In Development		Dianne Schwager
J-11/Task 46	Zero-Emission Vehicles: New Tech, New Skills, New Jobs	\$100,000	\$100,000				In Development		Dianne Schwager
J-11/Task 47	Affordable Housing and Transit	\$100,000	\$100,000				In Development	A. McLaen McCoy M. Swingholm	Mariela Garcia-Colberg
IDEA 103									
J-04/IDEA 001	Customer Satisfaction Index for the Mass Transit Industry			Tri-County Metropolitan Transportation District of Oregon	8/1/94	4/30/95	Completed		
J-04/IDEA 002	Adaptive Diagnostic System Demonstration Project			San Francisco Bay Area Rapid Transit District	2/1/95	9/2/98	Completed		
J-04/IDEA 003	Automated Wheel Inspection Station			International Electronic Machines Corp.	8/1/94	9/30/95	Completed		
J-04/IDEA 004	Management Information Benefits of Integrating Electronic Fareboxes with Other On-Board Equipment			Northeastern University	8/15/94	9/22/95	Completed		
J-04/IDEA 005	Improved Passenger Counter and Classification System for Transit Applications			E. F. Grenaker & Associates	10/15/95	4/14/96	Completed		
J-04/IDEA 006	Interactive Training with Video and Audio			Transit Engineering	10/1/94	11/18/95	Terminated		
J-04/IDEA 007	Wheelchair Restraint System			Baylor College of Medicine	10/1/94	10/31/95	Completed		
J-04/IDEA 008	Real-Time Transit Data Broadcast			Transcom International Ltd.	10/1/94	9/30/95	Completed		
J-04/IDEA 009	Independent Transportation Network (ITN): Alternative Transportation for the Elderly			Southern Maine Areas Agency on Aging	4/15/95	8/31/96	Completed		
J-04/IDEA 010	Automatic Data Collection on Transit Users Via Radio Frequency Identification (RF/ID)			Advanced Systems Group International	8/1/95	6/30/96	Completed		
J-04/IDEA 011	Compact Disc-Interactive Violence Prevention Training Program			San Francisco Municipal Railway	7/15/96	2/29/00	Completed		
J-04/IDEA 012	Transit and Intermodal Scheduling Using Expert Systems			Vertical Systems, Inc.	3/1/97		Terminated		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04/ IDEA.013	Interactive PC-Based Track Safety Training			TransTech Management	5/1/96	7/27/98	Completed		
J-04/ IDEA.014	Instant Rent-A-Car Technology Applied to Transit Station Car Practice			C.F. International	9/1/96	7/31/98	Completed		
J-04/ IDEA.015	Internet Information Sharing for Transit Maintenance			Kieman Transit Associates	9/1/96	12/15/97	Completed		
J-04/ IDEA.016	Transit Restraint System for Wheelchairs			Cleveland Clinic Foundation	9/1/96	12/31/01	Completed		
J-04/ IDEA.017	Pilot Testing of a Prototype Rail-Based Wheel Gauge Inspection System			International Electronic Machines Corp.	4/1/97	8/30/98	Completed		
J-04/ IDEA.018	Pilot Testing Innovative Payment Operations for Independent Transportation for the Elderly			Independent Transportation Network	4/1/97	10/31/02	Completed		
J-04/ IDEA.019	Transit Integrated Monitoring System: Operational Evaluation			University of Virginia	1/15/98	1/15/99	Completed		
J-04/ IDEA.020	Non-Contact Sensor for Improved Passenger Counting and Classification System for Transit and Rail Applications			E.F. Grenaker & Associates	12/1/97	2/22/01	Completed		
J-04/ IDEA.021	Smart Parking Lot with Just-in-Time Shuttle Rail Applications			Oregon State University	10/1/97	12/31/01	Completed		
J-04/ IDEA.022	Sleeved Column System for Crashworthiness of Light Rail Vehicles			Arthur D. Little, Inc.	12/31/98	2/22/01	Completed		
J-04/ IDEA.023	Optimizing Travel Paths for People with Disabilities			Washington University	3/1/98	10/1/98	Terminated		
J-04/ IDEA.024	Operational Testing of Innovative and Intelligent Rail Lubrication System			Tranenergy Corporation	1/1/98	6/30/98	Completed		
J-04/ IDEA.025	Operating Policies for Improved Transit Productivities			System, Inc.	5/17/00	7/16/01	Terminated		
J-04/ IDEA.026	Designing Transit Services for the Mode-Choice Market: Stage III Planning Tools and Processes			The Mission Group	6/30/00	3/31/05	Terminated		
J-04/ IDEA.027	"Gap Guard" for Reducing the Gap Between Rail Platforms and Cars			Ultimate Technologies	12/17/99	4/29/02	Terminated		
J-04/ IDEA.028	Transit Scratchitti Removal by Controlled Fire Polishing			Columbia University	2/2/00	3/20/02	Completed		
J-04/ IDEA.029	Fare Machine Tactile/Audio Instruction System			KRW Inc.	9/25/01	4/11/03	Completed		
J-04/ IDEA.030	Predictive Diagnostics for Bus Maintenance			Georgia Tech Research Institute	12/19/01	7/1/03	Terminated		
J-04/ IDEA.031	A Tool for Evaluating and Optimizing Bus Stop Location Decisions			Northeastern University	12/12/01	8/31/06	Completed		
J-04/ IDEA.032	Simulation and Animation Model for Planning and Designing Transit Facilities			TransAn	12/19/01	11/23/05	Completed		
J-04/ IDEA.033	Community Visualization in Design of Light Rail Transit-Oriented Development			University of Kentucky	12/6/01	9/30/03	Completed		
J-04/ IDEA.034	Mechanical Precision Docking System for Bus Rapid Transit			Greater Cleveland Regional Transit Authority	5/30/02	6/30/06	Terminated		
J-04/ IDEA.035	Innovative Bioterrorism Detection Technology for Transit Security			Science Applications International Corporation	5/30/03	8/8/05	Completed		
J-04/ IDEA.036	Cleaning Device for Electrified Third Rail Insulators			Arun Vohra	5/7/03	10/25/04	Completed		
J-04/ IDEA.037	Bandwidth Expansion and Real-Time Surveillance for Security on Transit Buses			Carnegie-Mellon University	8/23/03	5/20/05	Completed		
J-04/ IDEA.038	Assessment of Rear Facing Wheelchair Accommodation on BRT			Oregon State University	8/27/03	1/6/05	Completed		
J-04/ IDEA.039	Dynamic Timetable Generator from Schedule Data			Systems & Solutions, Inc.	9/24/03	1/31/06	Completed		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04/ IDEA.040	Counter Terrorism Chemical Detector for Rail Transit Vehicles			Connecticut Analytical Corporation	11/25/03	12/28/05	Completed		
J-04/ IDEA.041	Track Geometry/Design Testing for Transit Applications			Trak-Tech Corporation	12/22/03	6/18/07	Completed		
J-04/ IDEA.042	Detection of Radioactivity in Transit Stations			Advanced Fuel Research, Inc.	6/25/04	10/20/06	Completed		
J-04/ IDEA.043	Portable Electronic Wheel Gauge			International Electronic Machines	12/30/04	9/30/08	Terminated		
J-04/ IDEA.044	Cleaning and Recoating Electrified Third Rail Cover Boards			Arun Vohra	6/30/05	12/31/07	Completed		
J-04/ IDEA.045	Chemical and Biological Decontamination System for Rail Transit Facilities			Foster Miller, Inc.	3/31/05	12/29/06	Completed		
J-04/ IDEA.046	Toxic Industrial Chemical Detection for Rail Transit Systems			MESI, Inc.	9/30/05	6/30/07	Terminated		
J-04/ IDEA.047	Cleaning Device for Electrified Third Rail Insulators - Phase 2			Arun Vohra	9/30/05	12/20/07	Completed		
J-04/ IDEA.048	Biometric Notification Network for Transit Employees			Eyemetric Identity Systems	12/20/05	4/30/09	Terminated		
J-04/ IDEA.049	Smart Sander Enhancement for Commuter Rail			AEA Technology Rail	12/30/05	11/30/07	Completed		
J-04/ IDEA.050	Developing Regional Mobility Management Centers			Westat, Inc.	7/28/07	3/30/12	Completed		
J-04/ IDEA.051	Bi-terrorism Detection Technology for Transit Security - Phase 2			Science Applications International Corporation	10/20/06	9/30/08	Terminated		
J-04/ IDEA.052	Travel Assist Device (TAD) to Help Transit Riders			University of South Florida	3/20/07	1/31/10	Completed		
J-04/ IDEA.053	Ultraviolet Germicidal Irradiation for Transit Buses			JKA Company	5/29/07	2/20/09	Completed		
J-04/ IDEA.054	Detection of Radioactivity in Transit Stations - Phase II			Advanced Fuel Research, Inc.	6/25/07	10/30/09	Completed		
J-04/ IDEA.055	Warning Device for Rail Rapid Transit Personnel for Approaching Trains			Victoria Consultants, LLC	6/29/07	12/10/08	Completed		
J-04/ IDEA.056A	Detection of Explosives and Weapons in Transit Systems		\$65,000	Systems Micro Technologies (Kirsen) Inc.	1/2/14	2/1/15	Completed		
J-04/ IDEA.057	Independent Wheelchair Securement			Oregon State University	3/12/08	12/30/10	Completed		
J-04/ IDEA.058	Google Transit Data Tool for Small Transit Agencies			PEMCO, Inc.	12/30/08	3/28/11	Completed		
J-04/ IDEA.059	Recoating Electrified Third Rail Cover Boards - Phase 2			Arun Vohra	9/22/09	6/30/10	Completed		
J-04/ IDEA.060	TCIP Traveler Information Pilot			Ayers Electronic Systems, LLC	12/15/08	5/31/11	Completed		
J-04/ IDEA.061	Flexible Carpooling to Transit Stations		\$55,000	Trip Convergence Ltd.	12/22/08	12/31/12	Completed		
J-04/ IDEA.062	Development of Electrical Maintenance Training Module for Bus Transit Technicians			CDX Global	10/23/09	8/10/12	Completed		
J-04/ IDEA.063A	Improving Bus Transit On-Time Performance through the Use of AVL Data		\$16,000	Pascal Systems, Inc.	9/30/13	5/29/14	Completed		
J-04/ IDEA.064	Improved Crashworthiness of Rail Transit Vehicles Using Advanced Composite Structures			University of California, Davis	3/30/10	12/31/10	Terminated		
J-04/ IDEA.065	A Context Aware Transit Navigator		\$80,000	University of Illinois at Chicago	6/30/10	3/21/13	Completed		
J-04/ IDEA.066	Advanced Wayside Energy Storage Systems (WESS) for Rail Transit			Navigant Consulting, Inc.	11/8/10	12/30/11	Completed		
J-04/ IDEA.067	Diesel - Electric Locomotive Energy Recovery and Conversion		\$80,000	Thermodynamics Rail, LLC	9/20/11	6/30/14	Completed		

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04/ IDEA.068	Light Rail Transit/Street Grade Crossing Safety System		\$78,000	SIL4 Systems, Inc.	6/20/11	1/10/14	Completed		
J-04/ IDEA.069	Predictive Failure Mode Characterization System for Rail Transit Car Equipment		\$82,000	Dayton T. Brown, Inc.	3/30/12	11/30/13	Terminated		
J-04/ IDEA.070	Effortless Passenger Identification System		\$90,000	North Dakota State University	3/30/12	7/31/13	Completed		
J-04/ IDEA.071	Transit Information Access for Persons with Visual or Cognitive Impairments		\$80,000	University of California, Santa Cruz	9/29/12	5/15/15	Completed		
J-04/ IDEA.072	Noncontact Electronic Wheel Gauge		\$100,000	International Electronic Machines Corp.	3/26/12	3/31/14	Completed		
J-04/ IDEA.073	Innovative Operating Strategies for Paratransit Services		\$90,000	Texas A&M University	8/30/12	1/31/14	Completed		
J-04/ IDEA.074	Apparatus for Gap Management		\$100,000	Rutgers University	8/8/13	11/15/15	Completed		
J-04/ IDEA.075	Transit Trip Planning Web Application		\$100,000	Resource Systems Group, Inc.	6/1/13	11/1/14	Completed		
J-04/ IDEA.076	RideScout Mobile Application		\$100,000	RideScout, LLC	6/20/13	9/30/15	Completed		
J-04/ IDEA.077	Development of a Prototype Retrofit Bumper for Improved Light Rail Vehicle (LRV) Safety		\$98,881	Applied Research Associates	1/27/14	6/3/15	Completed		
J-04/ IDEA.078	Rail Neutral Temperature Monitoring		\$100,000	Protran Technology	1/27/14	9/30/15	Completed		
J-04/ IDEA.079	Smartcard AFC in Small Transit Agencies	\$100,000	\$100,000	Acumen Building Enterprise	11/24/14	10/14/17	Completed	R. Opstelten	
J-04/ IDEA.080	Enhancing Safety and Security of Transit Systems Using Computer Vision	\$100,000	\$100,000	Rutgers University	11/2/15	10/14/17	Completed	R. Opstelten	
J-04/ IDEA.081	Advanced Locomotive Exhaust Gas Simulator to Fine-Tune Energy Recovery and Conversion Systems	\$100,000	\$100,000	ThermaDynamics Rail, LLC	1/12/15	5/12/16	Completed	R. Opstelten	
J-04/ IDEA.082	Active Safety-Collision Warning Pilot in Washington State	\$100,000	\$100,000	Washington State Transit Insurance Pool (WSTIP)	1/19/16	7/19/17	Completed	R. Opstelten	
J-04/ IDEA.083	Track Circuit Monitoring Tool: Standardization and Deployment at Chicago Transit	\$100,000	\$100,000	Rail IT, LLC	6/6/16	11/30/17	Completed	R. Opstelten	
J-04/ IDEA.084	Deployment of a Mass-Based Automated Passenger Counter	\$98,971	\$98,971	University of Minnesota	11/2/16	10/1/19	Completed - Posted to the Web as Transit IDEA Final Report 84	R. Opstelten	
J-04/ IDEA.085	Location AWARE Networks Optimization Use of Transit Systems by Blind Travelers	\$100,000	\$100,000	SVN, Inc	1/13/17	2/5/19	Completed - Posted to the Web as Transit IDEA Final Report 85	R. Opstelten	
J-04/ IDEA.086	Advanced Neutral Temperature Estimation Using Solitary Waiver	\$99,994	\$99,994	University of Pittsburgh	4/27/17	12/31/18	Completed - Posted to the Web as Transit IDEA Final Report 86	R. Opstelten	
J-04/ IDEA.087	Development of pathNav: A Pedestrian Navigation Tool that Utilizes Smart Data for Improved Accessibility and Walkability	\$100,000	\$100,000	Pathway Accessibility Solutions, Inc.	1/25/18	6/30/19	Completed - Posted to the Web as Transit IDEA Final Report 87	R. Opstelten	
J-04/ IDEA.088	Evaluation of an Automatic, Individual Computer-Based Operator Education and Training Program	\$100,000	\$100,000	Vignia Tech Transportation Institute	1/31/18	3/20/21	Completed - Posted to the Web as Transit IDEA Final Report 88	R. Opstelten	
J-04/ IDEA.089	Dynamic Vehicle to Infrastructure TCIP Communications Laboratory Proof of Concept	\$88,662	\$88,662	Ayers Electronic Systems, LLC	3/30/18	10/31/19	Completed - Posted to the Web as Transit IDEA Final Report 89	R. Opstelten	
J-04/ IDEA.090	suAS-Based Geospatial Intelligence for Commuter Rail Parking in Rural and Suburban Areas	\$80,000	\$80,000	Hammon Consulting, LLC	6/11/18	9/11/19	Completed - Posted to the Web as Transit IDEA Final Report 90	R. Opstelten	
J-04/ IDEA.091	Comprehensive Wayfinding for All (CWAll)	\$68,000	\$99,815	Texas A&M Transportation Institute	6/13/18	2/15/22	The project was terminated at Stage 1, as the contractor was unable to continue work beyond Stage 1 due to software development problems. The contractor was paid \$68,000, the Stage 1 amount.	R. Opstelten	

APPENDIX C continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04/ IDEA 092	Augmented Reality Transit Dispatcher Interface	\$99,928.00	\$99,928	MACRO, a Division of Ross & Baruzzini	1/24/19	4/15/21	Completed - Posted to the Web as Transit IDEA Final Report 92	R. Opstelten	
J-04/ IDEA 093	An Open Platform for Transit Agencies to Improve the Quality of Their Real-time Data	\$98,705	\$98,705	Interline Technologies, LLC	1/10/19	9/30/20	Completed - Posted to the Web as Transit IDEA Final Report 93	R. Opstelten	
J-04/ IDEA 094	Evaluation of Transit Vehicle Brake Inspection Through Ultrasonic Emissions Analysis	\$99,478	\$99,478	BrakeAudit	5/30/19	11/15/20	Completed - Posted to the Web as Transit IDEA Final Report 94	R. Opstelten	
J-04/ IDEA 095	Feasibility/MDOT MTA Dorsey Run Pilot Project Connected and Automated Parking	\$97,900	\$97,900	Maryland Department of Transportation	7/30/19	12/31/21	Completed - Posted to the Web as Transit IDEA Final Report 95	R. Opstelten	
J-04/ IDEA 096	Multi-stage Planning for Electrifying Transit Bus Systems with Multiformat Charging Facilities	\$100,000	\$99,478	University of South Florida	12/9/19	10/31/21	Completed - Posted to the Web as Transit IDEA Final Report 96	R. Opstelten	
J-04/ IDEA 097	Open Platform to Attract, Organize, and Coordinate Volunteers for Rural and Small Urban Transit	\$99,888	\$97,900	West Virginia University	2/12/20	12/15/23	Completed - Posted to the Web as Transit IDEA Final Report 97	R. Opstelten	
J-04/ IDEA 098	Safety Assessment of the Interaction Between the Autonomous Shuttle Bus and Vulnerable Road Users	\$100,000	\$100,000	Florida State University	10/26/20	7/31/22	Completed - Posted to the Web as Transit IDEA Final Report 98	R. Opstelten	
J-04/ IDEA 099	Bike Love	\$100,000	\$100,000	Palo Alto Transportation Management Association (TMA)	2/8/21	1/31/23	Research Completed. Final Report posted on the Transit IDEA website	R. Opstelten	
J-04/ IDEA 100	TrainMate Robotic Systems: Making Public Transportation Public	\$99,520	\$99,520	Infratek Solutions, Inc.	1/14/22	3/31/23	Research Completed. Final report posted on the Transit IDEA website.	R. Opstelten	
J-04/ IDEA 101	Multimodal Transit with Citopia	\$100,000	\$100,000	Citopia	1/22/22	3/31/23	Research Completed. Final report posted on the Transit IDEA website.	R. Opstelten	
J-04/ IDEA 102	The Magnetic Rail Movement Measuring Device (MRMMD)		\$100,000	JPPCLC, LLC dba PBI Innovation	5/9/23	9/30/24	Research in Progress	Inam Jawed	
J-04/ IDEA 103	Real-Time Trip Support for Multimodal Travelers		\$99,807	I BI Group	7/1/23	12/31/24	Terminated.	Inam Jawed	

APPENDIX D SUMMARY OF TCRP PROJECT J-7 STATUS THROUGH DECEMBER 31, 2023
Synthesis of Information Related to Transit Practices

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
001	Operations (63)					
J-07/Topic SA-01	Bus-Route Evaluation Standards	Howard P. Benn	12/1/92	Completed - Published as Synthesis 10		
J-07/Topic SA-02	System-Specific Spare Bus Ratios	Judith T. Pierce	8/1/93	Completed - Published as Synthesis 11		
J-07/Topic SA-03	System-Specific Spare Rail Vehicle Ratios	Judith T. Pierce	8/1/93	Completed - Published as Synthesis 15		
J-07/Topic SA-04	AVL Systems for Bus Transit	Paula Okunieff	8/1/95	Completed - Published as Synthesis 24		
J-07/Topic SA-05	Customer Information at Bus Stops	John Dobies	3/1/95	Completed - Published as Synthesis 17		
J-07/Topic SA-06	Passenger Transfer Systems	Richard Stern	3/1/95	Completed - Published as Synthesis 19		
J-07/Topic SA-07	Changing Roles and Practices of Bus Field Supervisors	Gayland Moffat	12/1/94	Completed - Published as Synthesis 16		
J-07/Topic SA-08	Bus Transit Fare Collection Practices	Richard Stern	11/1/95	Completed - Published as Synthesis 26		
J-07/Topic SA-09	Passenger Counting Technologies and Procedures	Daniel K. Boyle	10/1/96	Completed - Published as Synthesis 29		
J-07/Topic SA-09A	Accessibility of Automated Fare Vending and Collection for Customers with Disabilities	Daniel K. Boyle	4/1/97	Completed - Published as RRD 32		
J-07/Topic SA-10	Data Analysis for Bus Planning and Monitoring	Peter G. Furth	1/1/98	Completed - Published as Synthesis 34		
J-07/Topic SA-11	Transportation on College and University Campuses	James H. Miller	2/1/00	Completed - Published as Synthesis 39		
J-07/Topic SA-12	Electronic Surveillance Technology on Transit Vehicles	Patricia Maier, Jim Caton	2/1/00	Completed - Published as Synthesis 38		
J-07/Topic SA-13	Yield to Bus Programs - State of the Practice	Rolland King	1/1/02	Completed - Published as Synthesis 49		
J-07/Topic SA-14	Real Time Bus Arrival Information Systems	Carol Schweiger	1/1/02	Completed - Published as Synthesis 48		
J-07/Topic SA-15	Computer-Aided Scheduling and Dispatch in Demand-Responsive Transit Services	David Kessler	11/1/03	Completed - Published as Synthesis 57		
J-07/Topic SA-16	Uses of Higher Capacity Buses in Transit Service	Bendon Hemily Rolland King	10/1/06	Completed - Published as Synthesis 75		
J-07/Topic SA-17	AVL Systems for Bus Transit: Update	Doug Parker, TransSystems	11/1/06	Completed - Published as Synthesis 73		
J-07/Topic SA-18	Passenger Counting Systems	Daniel Boyle	10/1/07	Completed - Published as Synthesis 77		
J-07/Topic SA-19	Transit Systems in College and University Communities	Gail Murray	10/1/07	Completed - Published as Synthesis 78		
J-07/Topic SA-20	Light Rail Vehicle Collisions with Vehicles at Signalized Intersections	Kelley Pecheux, SAIC	11/1/07	Completed - Published as Synthesis 79		
J-07/Topic SA-21	Inventory of Operating Agreements Between Passenger Rail and Freight Railroads			Cancelled		
J-07/Topic SA-22	Bus and Rail Transit Preferential Treatments in Mixed Traffic	Alan Danaher	11/1/08	Completed - Published as Synthesis 83		
J-07/Topic SA-23	Practices in the Development and Deployment of Downtown Circulators	Daniel Boyle	11/1/09	Completed - Published as Synthesis 87		
J-07/Topic SA-24	Video Surveillance Uses By Rail Transit Agencies	Dorothy Schulz	12/1/09	Completed - Published as Synthesis 90		
J-07/Topic SA-25	Use and Deployment of Mobile Device Technology for Real-Time Transit Information	Carol Schweiger	12/1/09	Completed - Published as Synthesis 91		
J-07/Topic SA-26	Implementation and Outcomes of Fare-Free Transit Systems	University of South Florida, Joel Volinski	11/1/10	Completed - Published as Synthesis 101		
J-07/Topic SA-27	Off-Board Transit Fare Payment Using Proof-of-Payment Verification	Lee Engineering, Thomas Larwin	11/1/10	Completed - Published as Synthesis 96		
J-07/Topic SA-28	Use of Electronic Passenger Information Signage in Transit	Carol Schweiger	12/1/11	Completed - Published as Synthesis 104		
J-07/Topic SA-29	Energy Savings Strategies for Transit Agencies	Frank Gallivan	11/1/11	Completed - Published as Synthesis 106		
J-07/Topic SA-30	Maintaining Transit Effectiveness under Major Financial Constraints	Joel Volinski	11/1/12	Completed - Published as Synthesis 112		
J-07/Topic SA-31	Commonsense Approaches for Improving Transit Bus Speeds	Dan Boyle	12/1/12	Completed - Published as Synthesis 110		
J-07/Topic SA-32	System-Specific Spare Bus Ratios Update	Martin Minkoff	11/1/12	Completed - Published as Synthesis 109		
J-07/Topic SA-33	Critical Incident Management and Clearance Practices for Rail Transit	Dan Boyle	11/1/13	Completed - Published as Synthesis 114		
J-07/Topic SA-34	Open Data: Challenges and Opportunities for Transit Agencies	Carol Schweiger	11/1/13	Completed - Published as Synthesis 115		
J-07/Topic SA-35	Better On-Street Bus Stops	Dan Boyle	11/1/13	Completed - Published as Synthesis 117		
J-07/Topic SA-36	On-Board Camera Application for Buses	Barbara Thomson	11/1/14	Completed - Published as Synthesis 123		
J-07/Topic SA-37	Multi Agency Electronic FARE Payment Systems	Paula Okunieff	12/1/15	Completed - Published as Synthesis 125	F. Hall	
J-07/Topic SA-38	Successful Practices and Training Initiatives to Reduce Bus Incidents at Transit Agencies	Lisa Staes	12/1/15	Completed - Published as Synthesis 126	F. Hall	
J-07/Topic SA-39	Managing Extreme Weather at Bus Stops	Barbara Thomson	12/1/15	Completed - Published as Synthesis 129	J. Weinstock	
J-07/Topic SA-40	Planning and Design for Fire/Smoke Incidents in Underground Passenger Rail Systems	Dan Boyle	12/1/15	Completed - Published as Synthesis 124	T. Lloyd	
J-07/Topic SA-41	Battery Electric Buses - State of the Practice	Jason Hamlin	12/1/16	Completed - Published as Synthesis 130	S. Ricketson	
J-07/Topic SA-42	College Student Transit Pass Programs	Jie Yu	12/1/16	Completed - Published as Synthesis 131	A. Corniel	

APPENDIX D continued

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
J-07/Topic SA-43	Transit Service Evaluation Standards	Dan Boyle & Associates, Inc.	12/15/17	Completed - Published as Synthesis 139	M. Bathrick	
J-07/Topic SA-44	Comprehensive Bus Network Redesign	Foursquare Integrated Transportation Planning Inc	11/9/17	Completed - Published as Synthesis 140	J. Roux B. Jackson	
J-07/Topic SA-45	Current Practices in the Use of Onboard Technologies to Prevent Bus Incidents and Accidents	University of South Florida	10/30/18	Completed - Published as Synthesis 145	R. Chen P. Centolanzi B. Jackson	Mariela Garcia-Colberg
J-07/Topic SA-46	Mobile Fare Apps Business Models	University of Tennessee	1/11/19	Completed - Published as Synthesis 148	J. Roux	Mariela Garcia-Colberg
J-07/Topic SA-47	Transit Signal Priority Parameters – Current State of the Practice	Texas A&M Transportation Institute	11/9/18	Completed - Published as Synthesis 149		Mariela Garcia-Colberg
J-07/Topic SA-48	Current Practices in Transit Security Preparedness	Countermeasures Assessment & Security Experts, LLC	11/9/18	Completed - Published as Synthesis 146	K. Montgomery	Mariela Garcia-Colberg
J-07/Topic SA-49	Multi-Modal Fare Payment Integration	IMG Rebel Advisory, Inc.	11/26/18	Completed - Published as Synthesis 144	B. Jackson	Mariela Garcia-Colberg
J-07/Topic SA-50	Cyber Security in Transit Systems	Geographic Paradigm Computing, Inc.	11/8/19	Completed - Published as Synthesis 158.	B. Jackson	Mariela Garcia-Colberg
J-07/Topic SA-51	Transit Safety Risk Assessment Methodologies	Texas A&M Transportation Institute	11/13/20	Completed - Published as Synthesis 157.	D. Guruswamy D. Powell	Mariela Garcia-Colberg
J-07/Topic SA-52	Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns	Foursquare Integrated Transportation Planning	12/7/20	Completed - Published as Synthesis 159.	M. Hecht K. Cervenka	Mariela Garcia-Colberg
J-07/Topic SA-53	BRT State of Practice, Experience, and Lessons Learned	Texas A&M Transportation Institute	12/7/20	Completed - Published as TCRP Synthesis 164.	J. J. Borrego	Mariela Garcia-Colberg
J-07/Topic SA-54	Pedestrian and Bicycle Safety in Bus/BRT Corridors	Texas A&M Transportation Institute	12/6/21	Completed - Published as Synthesis 169.	J. Howard D. Kellman	Mariela Garcia-Colberg
J-07/Topic SA-55	On Street Bus Operations Management	Daniel Boyle and Associates	12/6/21	Completed - Published as TCRP Synthesis 166.	N. Ismail M. K. Nagyvi	Mariela Garcia-Colberg
J-07/Topic SA-56	Use of Automatic Vehicle Monitoring (AVM) and Vehicle Health Monitoring/Diagnostic Systems by Transit Agencies	AECOM Technical Services, Inc.	3/6/23	Research in Progress		Jamaal Schoby
J-07/Topic SA-57	Statewide Approaches to the Development of Comprehensive Transit Information Systems	EBP US, Inc.	11/30/22	Completed - Published as Synthesis 172.		Jamaal Schoby
J-07/Topic SA-58	Analysis of Transit Exclusion Policies in Passenger Transportation Systems	Matherly Inclusive Resilient Transportation Associates, LLC	11/1/22	Research complete. To be published as Synthesis 173.		Jamaal Schoby
J-07/Topic SA-59	Electronic Surveillance of Railroad-Highway Crossings for Collision Avoidance, State of the Practice	AAAJ LLC	11/28/22	Research in Progress		Jamaal Schoby
J-07/Topic SA-60	Examination of Transit Agency Coordination with Electric Utilities	American Public Transportation Association	12/12/22	Research in Progress		Jamaal Schoby
J-07/Topic SA-61	State of Practice for Transit Recovery in the Aftermath of Severe Weather Events	Drexel University		In Contracting		Jamaal Schoby
J-07/Topic SA-62	Planning and Operations Initiatives to Support Nighttime Off-Peak Transit Ridership	Foursquare Integrated Transportation Planning	11/6/23	In Contracting	Patrick Centolanzi Ivey Glendon	Jamaal Schoby
:: B: Service Configuration (42)						
J-07/Topic SB-01	Integration of Bicycles and Transit	John T. Doolittle	2/1/93	Completed - Published as Synthesis 4		
J-07/Topic SB-02	Innovative Suburb-to-Suburb Transit Practices	Katherine S. Hooper	7/1/94	Completed - Published as Synthesis 14		
J-07/Topic SB-03	ADA Paratransit Eligibility Certification Practices	Richard Weiner	11/1/96	Completed - Published as Synthesis 30		
J-07/Topic SB-04	Transit Advertising Revenue: New Sources and Structures	Beverly R. Silverberg	10/1/96	Completed - Published as Synthesis 32		
J-07/Topic SB-05	Communicating with Persons with Disabilities in a Multimodal Transit Environment	Angela Iannuzziello	7/1/99	Completed - Published as Synthesis 37		
J-07/Topic SB-06	Use of Small Buses in Transit Services	Brendon Hemily, Roland D. King	3/1/00	Completed - Published as Synthesis 41		
J-07/Topic SB-07	Customer-Focused Transit	John Potts	1/1/01	Completed - Published as Synthesis 45		
J-07/Topic SB-08	Effective Use of Transit Websites	Bruce Schaller	2/1/01	Completed - Published as Synthesis 43		
J-07/Topic SB-09	Operational Experiences with Flexible Transit Services	David Koffman	11/1/02	Completed - Published as Synthesis 53		
J-07/Topic SB-10	Transit Advertising Sales Agreements	Bruce Schaller	11/1/02	Completed - Published as Synthesis 51		
J-07/Topic SB-11	Practices in No-Show and Late Cancellation Policies for ADA Paratransit	Rosemary Mathias	10/1/04	Completed - Published as Synthesis 60		
J-07/Topic SB-12	Integration of Bicycles and Transit	Robert Schneider	10/1/04	Completed - Published as Synthesis 62		

APPENDIX D continued

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
J-07/Topic SB-13	Transit Agency Participation in Medicaid Transportation Programs	Kenneth Hosen, KFH Group	1/1/05	Completed - Published as Synthesis 65		
J-07/Topic SB-14	Methods of Rider Communication	Carol Schweiger, TransSystems Corp.	10/1/05	Completed - Published as Synthesis 68		
J-07/Topic SB-15	Policies and Practices for Effectively and Efficiently Meeting ADA Paratransit Demand	David Chia, Planners Collaborative	10/1/06	Completed - Published as Synthesis 74		
J-07/Topic SB-16	Integration of Paratransit and Fixed-Route Transit Services	R. Weiner Nelson/Nygaard	10/1/07	Completed - Published as Synthesis 76		
J-07/Topic SB-17	Innovative Rural Transit Services	Ken Hosen	5/1/10	Completed - Published as Synthesis 94		
J-07/Topic SB-18	Strollers, Carts, and Other Large Items on Buses and Trains	J. Goldman	11/1/09	Completed - Published as Synthesis 88		
J-07/Topic SB-19	Ridesharing as a Complement to Transit	Gail Murray	11/1/10	Completed - Published as Synthesis 98		
J-07/Topic SB-20	Uses of Social Media in Public Transportation	Susan Bregman	11/1/10	Completed - Published as Synthesis 99		
J-07/Topic SB-21	Transit Station and Stop Adoption Programs	Kathryn Harrington-Hughes	12/1/11	Completed - Published as Synthesis 103		
J-07/Topic SB-22	Use of Market Research Panels in Transit	Kathryn Coffel	12/1/11	Completed - Published as Synthesis 105		
J-07/Topic SB-23	Integrating Passenger Ferry Service with Mass Transit	Tim Payne	12/1/11	Completed - Published as Synthesis 102		
J-07/Topic SB-24	Advanced Methods for Title VI Fare and Service Analysis	Sue Knapp	11/1/12	Cancelled		
J-07/Topic SB-25	Practices for Establishing ADA Paratransit Eligibility Determination Facilities	Russell Thatcher	11/1/13	Completed - Published as Synthesis 116		
J-07/Topic SB-26	Use of Taxis in Public Transportation for People with Disabilities and Older Adults	Elizabeth Ellis	11/1/14	Completed - Published as Synthesis 119		
J-07/Topic SB-27	Public Transit and Bikeshearing	R.J. Eldridge	12/1/16	Completed - Published as Synthesis 132	M. Baltes	
J-07/Topic SB-28	Administration of ADA Paratransit Eligibility Appeal Programs	David Chia	12/1/16	Completed - Published as Synthesis 133	D. Sweet	
J-07/Topic SB-29	Customer-Focused Service Guarantee and Transparency Practices	Michael Walk	12/1/16	Completed - Published as Synthesis 134	M. Foreman	
J-07/Topic SB-30	Microtransit: Evolving Approaches to Providing General Demand-Response Transit	Joel Volinski	12/15/17	Completed - Published as Synthesis 141	R. Opstellen	
J-07/Topic SB-31	Implementing the US DOT Reasonable Modification Rule	KFH Group, Inc.	10/20/17	Completed - Published as Synthesis 142	R. Nguyen	
J-07/Topic SB-32	Use of Agency Trip Agreements in ADA Paratransit Service Delivery	Thomson Consulting	12/18/18	Completed - Published as RRD 115	S. Clark	Marielea Garcia-Colberg
J-07/Topic SB-33	Uses of Social Media in Public Transportation	Texas A&M Transportation Institute	12/23/20	Complete - Published as Synthesis 156.	N. Pembleton T. T. Scott	Marielea Garcia-Colberg
J-07/Topic SB-34	Coordination of Public Transit Services and Investments with Affordable Housing Policies	M2 Strategies, LLC	12/23/20	Complete - Published as Synthesis 162.	S. Eddy T. T. Pelt	Marielea Garcia-Colberg
J-07/Topic SB-35	Customer Education and Awareness of On-Demand Mobility	Texas A&M Transportation Institute	12/1/21	Completed. Published as Synthesis 165.	K. Tyler E. Younger-Riehl	Marielea Garcia-Colberg
J-07/Topic SB-36	Dynamic Optimization on ADA Paratransit Service	Texas A&M Transportation Institute	12/2/21	Completed. Published as Synthesis 168.	P. M. Centolanzi	Marielea Garcia-Colberg
J-07/Topic SB-37	Transit Agency Goals and Non-Traditional Performance Indicators Focused on Equity	Texas A&M Transportation Institute	12/19/22	Research in Progress		Jamaal Schoby
J-07/Topic SB-38	Paratransit Fleet Configurations	Texas A&M Transportation Institute	12/20/22	Research complete. To be published as Synthesis 174.		Emily Griswold
J-07/Topic SB-39	Improving Transit Customer Perception of Personal Security	Texas A&M Transportation Institute		In Contracting		Jamaal Schoby
J-07/Topic SB-40	Low-Income Transit Discount Provision at Public Transit Agencies in the United States	University of Tennessee		In Contracting		Jamaal Schoby
J-07/Topic SB-41	Microtransit Solutions in Rural Communities: On-Demand Alternatives to Dial-A-Ride Services and Unproductive Coverage Routes	Foursquare Integrated Transportation Planning	11/13/23	Research in Progress		Emily Griswold
J-07/Topic SB-42	Operational and Service Factors When Integrating/Consolidating ADA Paratransit and Microtransit	Texas A&M Transportation Institute		In Contracting		Jamaal Schoby
J-07/Topic SC-01	Safe Operating Procedures for Alternative Fuel Buses	Acurex Environmental Corp.	1/1/93	Completed - Published as Synthesis 1		David Bartels
J-07/Topic SC-02	Waste Control Practices at Bus Maintenance Facilities	Acurex Environmental Corp.	1/1/93	Completed - Published as Synthesis 9		
J-07/Topic SC-03	Low-Floor Transit Buses	Rolland D. King	5/1/93	Completed - Published as Synthesis 2		
J-07/Topic SC-04	Retrofit of Buses to Meet Clean Air Regulations	John J. Schiavone	2/1/94	Completed - Published as Synthesis 8		
J-07/Topic SC-05	Light Rail Vehicle Compression Requirements	Z. M. Lewalski	9/1/95	Completed - Published as Synthesis 25		
J-07/Topic SC-06	Use of Rear-Facing Position for Common Wheelchairs on Transit Buses	Brendon Hemilly, Uwe Rutenberg	1/1/02	Completed - Published as Synthesis 50		

:: C: Engineering of Vehicles & Equipment (9)

APPENDIX D continued

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
J-07/Topic SC-07	Emergency Response Procedures for Natural Gas Transit Vehicles	Michael Murphy	12/1/03	Completed - Published as Synthesis 58		
J-07/Topic SC-08	Mobile Data Terminals	Larry Harman	10/1/05	Completed - Published as Synthesis 70		
J-07/Topic SC-09	Use of Biodiesel in a Transit Fleet	John Schiavone	11/1/06	Completed - Published as Synthesis 72		
:: D: Engineering of Fixed Facilities (8)						
J-07/Topic SD-01	Regulatory Impacts of Design and Retrofit on Bus Maintenance Facilities	Edward M. Abrams, Frank Spielberg	2/1/93	Completed - Published as Synthesis 7		
J-07/Topic SD-02	Rail Transit Tunnel and Underground Structures Inspection Policy and Procedures	Henry A. Russell	6/1/94	Completed - Published as Synthesis 23		
J-07/Topic SD-03	Bus Use of Shoulders	Peter Martin	11/1/04	Completed - Published as Synthesis 64		
J-07/Topic SD-04	Rail Transit Track Inspection Practices	John Zuspán	12/1/11	Completed - Published as Synthesis 107		
J-07/Topic SD-05	Mitigating Third Rail Insulator Failures - State of Practice	University of Texas - Arlington	5/19/19	Completed - Published as Synthesis 150	R. Chen	
J-07/Topic SD-05A	Third Rail Insulator Failures- Current State of the Practice	University of Texas - Arlington	5/17/19	Published as TCRP Synthesis 150.		Marriela Garcia-Colberg
J-07/Topic SD-06	Transit Agency Programs to Improve Bus Stops and Associated Infrastructure	Texas A&M Transportation Institute	10/30/19	Completed - Published as Synthesis 152	S. Clark	Marriela Garcia-Colberg
J-07/Topic SD-07	Red Tinted Bus Lanes Experience	Texas A&M Transportation Institute		In Contracting	Lisa Gavin Frank Hackett	Jamaal Schoby
:: E: Maintenance (7)						
J-07/Topic SE-01	Transit Bus Service Line and Cleaning Functions	John J. Schiavone	2/1/94	Completed - Published as Synthesis 12		
J-07/Topic SE-02	Maintenance Productivity Practices	Frank Venezia	11/1/02	Completed - Published as Synthesis 54		
J-07/Topic SE-03	Maintenance Staffing Levels for Light Rail Transit Systems	Richard Stanger, Manuel Padron & Associates, Inc.	11/1/04	Completed - Published as Synthesis 61		
J-07/Topic SE-04	Track Maintenance Costs on Rail Transit Properties	Lawrence Daniels	11/1/06	Completed - Published as Web-Only Document 43		
J-07/Topic SE-05	Preventive Maintenance Intervals for Transit Buses	John J. Schiavone	11/1/08	Completed - Published as Synthesis 81		
J-07/Topic SE-06	Elevator and Escalator Maintenance and Safety Practices	John J. Schiavone	11/1/10	Completed - Published as Synthesis 100		
J-07/Topic SE-07	Maintenance Planning for Rail Asset Management - Current Practices	University of Delaware	11/8/19	Completed - Published as Synthesis 151	M. Smith	Marriela Garcia-Colberg
:: F: Human Resources (21)						
J-07/Topic SF-01	Bus Occupant Safety	Roland D. King	3/1/95	Completed - Published as Synthesis 18		
J-07/Topic SF-02	Employee Incentive Programs to Improve Transit Performance	Ronald Hartman and Elaine Kurtz	4/1/93	Completed - Published as Synthesis 3		
J-07/Topic SF-03	Methods for Reducing Violence and Improving Transit Security	Jerome Needle	3/1/95	Completed - Published as Synthesis 21		
J-07/Topic SF-04	Monitoring Maintenance Performance	John J. Schiavone	10/1/95	Completed - Published as Synthesis 22		
J-07/Topic SF-05	Emergency Procedures for Transit Counter Terrorism	Annabelle Boyd, John Sullivan	6/1/96	Completed - Published as Synthesis 27		
J-07/Topic SF-06	Practices in Ensuring Employee Availability	Joel Volinski	12/1/97	Completed - Published as Synthesis 33		
J-07/Topic SF-07	Practices for Bus Operator Hiring, Training, Performance Evaluation, and Retention	Gayland K. Moffat	12/1/99	Completed - Published as Synthesis 40		
J-07/Topic SF-08	Diversity Training Initiatives	Gwynn Simpson	1/1/01	Completed - Published as Synthesis 46		
J-07/Topic SF-09	Training for On-Board Bus Electronics	John Schiavone	2/1/01	Completed - Published as Synthesis 44		
J-07/Topic SF-10	Corporate Culture as the Driver of Transit Leadership Practices	Mary Davis	1/1/02	Completed - Published as Synthesis 47		
J-07/Topic SF-11	Transit Operator Health and Wellness Programs	Mary J. Davis	11/1/02	Completed - Published as Synthesis 52		
J-07/Topic SF-12	Paratransit Managers' Skills, Qualifications, and Needs	John Potts	11/1/06	Completed - Published as Synthesis 71		
J-07/Topic SF-13	Transit Security Update	The DWP Group				
J-07/Topic SF-14	Practices to Protect Bus Operators from Passenger Assault	Yuko Nakanishi	10/1/07	Completed - Published as Synthesis 80		
J-07/Topic SF-15	Practices for Wayside Rail Transit Worker Protection	Chris Kozub	11/1/09	Completed - Published as Synthesis 93		
J-07/Topic SF-16	Improving Bus Transit Safety through Rewards and Discipline	Jay Goodwill	12/1/10	Completed - Published as Synthesis 95		
J-07/Topic SF-17	Transit Bus Operator Distraction Policies	Chris Kozub	12/1/10	Completed - Published as Synthesis 97		
J-07/Topic SF-18	Use of Automotive Service Excellence Tests Within Transit	John J. Schiavone	12/1/11	Completed - Published as Synthesis 108		
J-07/Topic SF-19	Addressing Difficult Customer Situations	Joel Volinski	11/1/14	Completed - Published as Synthesis 120		
J-07/Topic SF-20	Managing the Transit Scheduling Workforce	Texas A&M Transportation Institute	12/1/15	Completed - Published as Synthesis 127	F. Hall B. Lavender	
J-07/Topic SF-21	Attracting, Retaining, and Advancing Women in Transit	ICF Incorporated	12/15/17	Completed - Published as Synthesis 143		
:: G: Administration (19)						
J-07/Topic SG-01	Risk Management for Small and Medium Transit Agencies	Michael M. Kaddatz	12/20/18	Completed - Published as Synthesis 147	K. Davis	Marriela Garcia-Colberg

APPENDIX D continued

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
J-07/Topic SG-02	Reducing Fraudulent Third-Party Claims Against Transit Agencies	Ronald Hartman, Elaine Kurtz	4/1/93	Cancelled - See SG-7		
J-07/Topic SG-03	Management Information Systems	Roger Boldt	10/1/93	Completed - Published as Synthesis 5		
J-07/Topic SG-04	The Role of Performance-Based Measures in Allocating Funding for Transit Operations	Ronald Hartman, Elaine Kurtz	4/1/93	Completed - Published as Synthesis 6		
J-07/Topic SG-05	Managing Transit Construction Contract Claims	Joel Callahan	11/1/95	Completed - Published as Synthesis 28		
J-07/Topic SG-06	Paratransit Contracting and Service Delivery Methods	Rosalyn M. Simon	10/1/96	Completed - Published as TCRP Synthesis 31		
J-07/Topic SG-07	Identifying and Reducing Fraudulent Third-Party Tort Claims Against Public Transit Agencies	Boyd, Maier & Associates	8/1/98	Completed - Published as TCRP Synthesis 36		
J-07/Topic SG-08	Information Technology Update for Transit	Roger Boldt	8/1/98	Completed - Published as Synthesis 35		
J-07/Topic SG-10	Performance-Based Measures in Transit Fund Allocation	Robert Stanley	10/1/03	Completed - Published as Synthesis 56		
J-07/Topic SG-11	Transit Asset Condition Reporting	Stephen Berrang, Brian McCollom	11/1/09	Completed - Published as Synthesis 92		
J-07/Topic SG-12	Optimizing Bus Warranty	John Schiavone	11/1/12	Completed - Published as Synthesis 111		
J-07/Topic SG-13	Practices for Utility Coordination in Transit Projects	Cesar Quiroga	12/1/13	Completed - Published as Synthesis 118		
J-07/Topic SG-14	ADA Paratransit Service Delivery Models	David Chia	12/1/16	Completed - Published as Synthesis 135	S. Clark	
J-07/Topic SG-15	Contracting Fixed-Route Bus Transit Service	Daniel Boyle	12/1/16	Completed - Published as Synthesis 136	D. Ridley-Curtis	
J-07/Topic SG-16	Microgrids and Their Application	Arup		Completed - Published as Synthesis 137		
J-07/Topic SG-17	The Use and Practice of Intelligent Transportation Systems in Real-Time	Texas A&M Transportation Institute	11/12/19	Completed - Published as Synthesis 155	M. Foreman	Mariela Garcia-Colberg
J-07/Topic SG-18	Headway-Based Service Bus Operations					
J-07/Topic SG-18	The Transit Analyst Toolbox: Analysis and Approaches for Reporting, Communicating, and Examining Transit Data	Go Systems & Solutions	11/18/19	Completed - Published as Synthesis 153	D. Schneider	Mariela Garcia-Colberg
J-07/Topic SG-19	Paratransit Service Delivery Models for Small Systems	Texas A&M Transportation Institute	12/15/20	Completed - Published as Synthesis 161	S. Clark	Mariela Garcia-Colberg
J-07/Topic SG-20	Third-Party Contracts for Fixed-Route Bus Operations and Maintenance: Performance Metrics	Texas A&M Transportation Institute	11/16/21	Completed - Published as Synthesis 171.	T. Coleman M. Gleason	Mariela Garcia-Colberg
:: H: Policy and Planning (24)						
J-07/Topic SH-01	Transit-Focused Development	Douglas Porter	2/1/95	Completed - Published as Synthesis 20		
J-07/Topic SH-02	Use of Flexible Funding Under ISTEA and TEA-21	Robert Stanley	1/1/00	Completed - Published as Synthesis 42		
J-07/Topic SH-03	Geographic Information Systems Applications in Transit	John Sutton	10/1/03	Completed - Published as Synthesis 55		
J-07/Topic SH-04	Strategic Planning and Management in Transit Agencies	Judson Lawrie	1/1/04	Completed - Published as Synthesis 59		
J-07/Topic SH-05	On-Board and Intercept Transit Survey Techniques	Bruce Schaller	11/1/04	Completed - Published as Synthesis 63		
J-07/Topic SH-06	Fixed-Route Transit Ridership Forecasting and Service Planning Methods	Daniel Boyle	10/1/05	Completed - Published as Synthesis 66		
J-07/Topic SH-07	Web-Based Survey Techniques	Gregory Spitz, RSG, Inc.	10/1/05	Completed - Published as Synthesis 69		
J-07/Topic SH-08	Bus Transit Service in Land Development Planning	Mary Kay Christopher	11/1/05	Completed - Published as Synthesis 67		
J-07/Topic SH-09	Current Practices in Greenhouse Gas Emissions Savings from Transit	Frank Gallivan, Michael Grant, ICF International	11/1/08	Completed - Published as Synthesis 84		
J-07/Topic SH-10	Effective Use of Citizen Advisory Committees for Transportation Planning and Operations	Kristin Hull, CH2MHILL	11/1/08	Completed - Published as Synthesis 85		
J-07/Topic SH-11	Transit Fare Arrangements for Public Employees	Daniel Boyle	11/1/08	Completed - Published as Synthesis 82		
J-07/Topic SH-12	Relationships Between Streetcars and the Built Environment	Ron Golem, BAE Urban Economics	1/1/09	Completed - Published as Synthesis 86		
J-07/Topic SH-13	Public Participation Strategies for Transit	Scott Giering	12/1/09	Completed - Published as Synthesis 89		
J-07/Topic SH-14	Sub-Allocating FTA Section 5307 Funding Among Multiple Recipients in Metropolitan Areas	John Potts Maxine Marshall	11/1/12	Completed - Published as Synthesis 113		
J-07/Topic SH-15	Transit Supportive Parking Policies and Programs	Lisa Jacobsen	11/1/14	Completed - Published as Synthesis 122		
J-07/Topic SH-16	Transit Agency Practices in Interacting with People Who Are Homeless	Daniel Boyle	11/1/14	Research in Progress		
J-07/Topic SH-17	Practices for Evaluating the Economic Impact and Benefits of Transit	Glen Weisbrod	12/1/15	Completed - Published as Synthesis 120	R. Bains	
J-07/Topic SH-18	Public Transit Rider Origin-Destination Survey Methods and Technologies	Foursquare Integrated Transportation Planning, Inc.	12/15/17	Completed - Published as Synthesis 138	K. Cervenka F. Chowdhury	
J-07/Topic SH-19	Supporting the Unbanked in the Transition to Cashless Fare Payment at Point of Service for Bus/Demand Response Services	University of Tennessee	11/7/19	Completed - Published as Synthesis 163	M. Omay	Mariela Garcia-Colberg
J-07/Topic SH-20	Innovative Practices for Transit Planning at Small- to Mid-Sized Agencies	Texas A&M Transportation Institute	11/1/19	Completed - Published as Synthesis 154	R. Tomczak	Mariela Garcia-Colberg

APPENDIX D continued

Project No.	Title	Topic Consultant	Start Date	Status	FTA Liaison(s)	Staff Officer
J-07/Topic SH-21	Transit Fare Capping: Balancing Revenue and Equity Impacts	Nelson/Nygaard Consulting Associates, Inc.	12/10/20	Completed. Published as Synthesis 160.	J. Yucis	Mariela Garcia-Colberg
J-07/Topic SH-22	Inclusive Public Participation in Transit Decision Making	Michael Baker International, Inc.	12/2/21	Completed. Published as Synthesis 170.	M. E. Hughes V. Shoenfelt	
J-07/Topic SH-23	Partnerships for Equitable Pandemic Response and Recovery	EBP US, Inc.	12/6/21	Completed. Published as Synthesis 167.	R. Buckley D. Nelson	Mariela Garcia-Colberg
J-07/Topic SH-24	Impacts of Substance Abuse and Fentanyl on Transit	University of Alberta		In Contracting		Jamaal Schoby

APPENDIX E SUMMARY OF ACTIVE PROJECTS THROUGH DECEMBER 31, 2023

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
A-36A	Transportation Emergency Response Application (TERA): Migration Options Beyond 2020	\$25,000 \$50,000 (ACRP)	\$75,000	Matherly Inclusive Resilient Transportation Associates, LLC (MIRTA LLC)	8/10/23	6/10/24	Research in Progress-ACRP co-funded with \$50,000 under ACRP A04-29.	L. Joiner	Mariela Garcia-Colberg
A-47	Transit Capacity and Quality of Service Manual, 4th Edition	\$400,000	\$400,000	Kittelson & Associates	2/1/23	4/3/25	Research in Progress		Dianne Schwager
A-48	Mitigation Strategies for Detering Transit Assaults	\$250,000	\$250,000	Texas A&M Transportation Institute	1/18/23	3/17/25	Research in Progress		Mariela Garcia-Colberg
A-49	Fare Policies, Structures, and Technologies -- 2022 Updates	\$300,000					In Development	S. Weisfeld E. Novak	Mariela Garcia-Colberg
A-50	Practical Considerations for Developing Transition Plans to Zero-Emission Fleets	\$250,000					In Development	A. Brun Centolanzi	Mariela Garcia-Colberg
A-51	Innovative Practices for Technology Implementation at Rural, Small, and Mid-Sized Transit Agencies	\$350,000					In Development	D. Allan E. Sperling	Mariela Garcia-Colberg
B-46	Tactile Wayfinding in Transportation Settings for Travelers Who Are Blind or Visually Impaired	\$215,740 \$384,260 (NCHRP)	\$600,000	University of North Carolina - Chapel Hill	2/26/19	12/31/23	Research in Progress. Supplemental funding request to NCHRP was denied administratively by the NCHRP Program Manager. An appeal is in progress.	P. Butler D. Goiba	Mariela Garcia-Colberg
B-47	Impact of Transformational Technologies on Underserved Populations	\$250,000 \$450,000 (NCHRP) \$250,000 (NCHRP)	\$250,000	Texas A&M Transportation Institute	11/5/19	9/30/23	Completed. Publication Pending.	B. Graves M. Veltri	Gwen Chisholm-Smith
B-49	Improving Public Transportation in Rural Areas and Tribal Communities	\$100,000	\$600,000	KFH Group, Inc.	8/27/21	2/27/24	Research in Progress. This project is jointly funded by NCHRP and has a total budget of \$600,000. It is being managed as NCHRP 08-147.	J. Day M. Naqvi	Dianne Schwager
B-50	Public Transportation Information Systems for Riders with Vision Disabilities	\$350,000	\$350,000	Texas A&M Transportation Institute	11/9/22	12/8/24	Research in Progress		Mariela Garcia-Colberg
B-51	Floating Transit Stops and Passengers with Vision Disabilities	\$400,000					In Development	A. Ofsevit	Mariela Garcia-Colberg
B-52	Intercity Bus: The State Role Updated	\$450,000					In Development	M. Lange	Mariela Garcia-Colberg
B-53	Addressing the Travel Needs of Women	\$300,000	\$300,000	Fehr & Peers	11/10/23	1/10/26	Research in Progress	S. Glauthier-Phillips V. Pannani	Dianne Schwager
C-24	Traction Power Cables: Replacement Guidelines	\$250,000	\$250,000	Eastern Michigan University	4/15/19	2/29/24	Completed. Publication Pending.	M. Smith	Gwen Chisholm-Smith
C-25	Bus Operator Barrier Design	\$350,000	\$350,000	Virginia Polytechnic Institute and State University	1/18/22	1/18/24	Research in Progress	J.Y. El-Hamri	Mariela Garcia-Colberg
D-07	Joint Rail-Related Research with the Association of American Railroads/TTCI	\$250,000 (99) \$200,000 (00) \$150,000 (02) \$150,000 (03) \$50,000 (04) \$150,000 (05) \$150,000 (07) \$200,000 (09) \$476,896 (11) \$250,000 (15)	\$1,776,896	Transportation Technology Center, Inc.	10/28/99	6/30/22	Continuing Project; See Below - Research Completed. In Publication.	T. Williams	Gwen Chisholm-Smith
D-07/Task 21	Performance-Based Track Geometry, Phase 3	\$250,000	\$150,000	TTCI	10/9/18	9/30/22	Completed - Published as Web-Only Document 76.	T. Williams	Gwen Chisholm-Smith
D-19	Detecting and Mitigating Low-Level DC Fault Currents in Transit Systems (Phase II of TCRP Project D-17)	\$250,000	\$250,000	The University of Akron	3/2/22	3/2/24	Research in Progress	P. Centolanzi T. Williams	Mariela Garcia-Colberg
D-20	Insulated Joint Failure Investigation Mitigation	\$250,000	\$249,989	Transportation Technology Center, Inc.d/b/a MXV Rail	8/14/23	2/14/25	Research in Progress	J. Thompson A. Medero	Mariela Garcia-Colberg

APPENDIX E continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
D-21	Planning for the Future of Intermodal Passenger Facilities: Guide and Decision-Making Framework	NCHRP \$200,000 ACRP \$150,000 TCRP \$100,000	\$100,000	Nelson/Nygaard Consulting Associates, Inc.	4/6/22	7/14/24	Research in Progress	N. Conroy M. McGill	Dianne Schwager
D-22	A Frog Design Primer and Research Roadmap	\$300,000	\$299,996	Cross-Spectrum Acoustics, Inc. 2022	8/15/23	2/15/25	Research in Progress	M. Lechuga M. Nawh	Mariela Garcia-Colberg
D-23	Guidebook for Planning and Constructing a Small and Rural Tribal Transit Facility	\$400,000					In Development	E. Flippin-Jones	Mariela Garcia-Colberg
D-24	Determination of Actual Derailment Loads on Transit Bridges	\$300,000					In Development		Mariela Garcia-Colberg
E-14	Electric Bus Fire Prevention and Risk Management	\$350,000	\$349,720	Fire Protection Research Foundation (FPRF)	8/10/23	8/10/25	Research in Progress	M. Yousuf S. Minter	Mariela Garcia-Colberg
E-15	Air Quality Inside Buses	\$150,000					In Development		Mariela Garcia-Colberg
F-29	Mental Health, Wellness, and Resilience for Transit System Workers	\$300,000	\$300,000	Rutgers University	12/21/21	1/15/24	Research in Progress	B. Jackson K. Osborne	Mariela Garcia-Colberg
F-30	Guide for Protecting Transportation Employees and the Traveling Public from Airborne Diseases	\$350,000	\$350,000	University of California, Riverside	5/3/22	5/31/24	Research in Progress (Jointly funded with NCHRP)		Dianne Schwager
F-31	Modernizing Transit Station Staffing Management	\$250,000					In Development	B. Tugbobo	Mariela Garcia-Colberg
G-17	Assessing Lifecycle and Human Costs of Bus Operator Workstation Design and Components	\$250,000	\$250,000	Pennsylvania State University	7/17/18	4/30/23	Research Completed. Publication Pending	S. Pereira D. Spratling	Gwen Chisholm-Smith
H-59	Racial Equity, Black America, and Public Transportation	\$250,000	\$249,883	Thrivance Group LLC	11/15/21	11/30/23	Research in Progress. Partially Published as Report 236, Volume 1 (of 4)	S. Nelson M. Hopson	Gwen Chisholm-Smith
H-60	Lessons Learned from Covid-19: Strategies to Enhance Racial and Social Equity through Public Transportation as a Community Lifeline	\$350,000	\$350,000	WSP USA Inc.	11/1/21	3/1/24	Research in Progress	J. Bochicchio J. Howard	Dianne Schwager
H-61	Resilience and Emergency Response Planning for Zero-Emission Fleets	\$215,000	\$215,000	Center for Transportation and the Environment	9/11/23	11/11/24	Research in Progress	A. Brun L. Brennan	Mariela Garcia-Colberg

APPENDIX E continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-01	Dissemination and Implementation of TCRP Research Findings	\$400,000 (92) \$600,000 (94) \$250,000 (95) \$450,000 (96) \$696,000 (97) \$596,000 (98) \$666,600 (99) \$696,605 (00) \$691,600 (01) \$700,000 (02) \$696,000 (03) \$700,000 (04) \$736,000 (05) \$750,000 (06) \$775,000 (07) \$750,400 (08) \$695,000 (09) \$720,700 (11) \$404,600 (12) \$313,650 (13) \$308,219 (14) \$420,000 (15) \$500,000 (16) \$450,000 (17) \$439,260 (18) \$414,841 (19) \$393,600 (20) \$0 (21) \$0 (22) \$0 (23)	\$499,600	American Public Transportation Association	2/15/93		Continuing Project	Tara Clark	Gwen Chisholm-Smith

APPENDIX E continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-04	Innovations Deserving Exploratory Analysis--The Transit IDEA Program	\$500,000 (92) \$500,000 (94) \$400,000 (95) \$400,000 (96) \$500,000 (97) \$500,000 (99) \$500,000 (00) \$500,000 (01) \$200,000 (02) \$500,000 (03) \$500,000 (04) \$500,000 (05) \$500,000 (06) \$500,000 (07) \$560,000 (08) \$560,000 (09) \$560,000 (10) \$560,000 (11) \$460,000 (12) \$300,000 (13) \$300,000 (14) \$560,000 (15) \$360,000 (16) \$585,000 (17) \$425,000 (18) \$200,000 (19) \$205,000 (20) \$210,000 (21) \$210,000 (22) \$315,000 (23)	\$9,200,000	Transportation Research Board	12/1/92		Continuing Project; See Below	R. Opstelten	Inam Jawed
J-04/IDEA 102	The Magnetic Rail Movement Measuring Device (MRMMD)		\$100,000	JPLLC, LLC dba PBI Innovation	5/9/23	9/30/24	Research in Progress		Inam Jawed
J-04/IDEA 103	Real-Time Trip Support for Multimodal Travelers		\$99,807	IBI Group	7/1/23	12/31/24	Terminated.		Inam Jawed

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-05	Legal Aspects of Transit and Intermodal Transportation Programs	\$150,000 (92) \$175,000 (94) \$300,000 (95) \$150,000 (96) \$175,000 (97) \$300,000 (99) \$120,000 (00) \$150,000 (01) \$150,000 (02) \$100,000 (03) \$25,000 (04) \$150,000 (05) \$250,000 (06) \$250,000 (07) \$250,000 (08) \$250,000 (09) \$300,000 (11) \$200,000 (12) \$150,000 (13) \$250,000 (14) \$250,000 (15) \$125,000 (16) \$250,000 (17) \$200,000 (18) \$150,000 (19) \$150,000 (20) \$150,000 (21) \$150,000 (22) \$225,000 (23)	Transportation Research Board	3/4/93	Continuing Project; See Below - Published as RRD 50	B. Graves	Gwen Chisholm-Smith		
J-05/ Topic 18-02	Codes of Conduct on Transit Vehicles and Property: Legal Issues	\$50,000	\$50,000	Countermeasures Assessment & Security Experts, LLC	1/9/19	3/30/23	Research Completed.	B. Graves	Gwen Chisholm-Smith
J-05/ Topic 19-03	Navigating the Complexities of SSI and PCII	\$50,000	\$50,000	Countermeasures Assessment & Security Experts, LLC	2/21/20	3/30/23	Research Completed.	B. Graves	Gwen Chisholm-Smith
J-05/ Topic 19-05	Legal Issues Surrounding Disasters and Evacuations	\$45,000	\$45,000				In Development	B. Graves	Gwen Chisholm-Smith
J-05/ Topic 20-02	Liability Insurance Issues for Transit Lawyers: A Primer						In Development	B. Graves	Gwen Chisholm-Smith
J-05/ Topic 21-01	Update of Legal Research Digests Regarding Civil Rights, Privacy, and Other Related Digests	\$25,000					In Development		Gwen Chisholm-Smith
J-05/ Topic 21-02	Legal Issues in Transit Agencies Providing/Subsidizing Innovative Micromobility Projects	\$75,000	\$75,000	Windels Marx Lane & Mittendorf, LLP	8/10/22	11/1/23	Completed. Publication Pending.		Gwen Chisholm-Smith
J-05/ Topic 21-03	Update of Selected Studies in Transportation Law, Volume 5, 2014 Supplement (Transit Law)	\$75,000					In Development		Gwen Chisholm-Smith
J-05/ Topic 22-01	Legal Impact of Bus Stop Design and Location Placement on Tort and Civil Rights Lawsuits for Public Transit Agencies		\$100,000	-----			In Development		Gwen Chisholm-Smith
J-05/ Topic 22-02	Status of State and Local Suspension and Debarment Programs and Barriers to Creation and Implementation for State and Local Programs		\$0	Combined			In Development		Gwen Chisholm-Smith
J-05/ Topic 22-03	Legal Aspects of Transit to Airports		\$75,000	-----			In Development		Gwen Chisholm-Smith
J-05/ Topic 22-04	Update of Buy America		\$50,000	-----			In Development		Gwen Chisholm-Smith

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-06	TCRP Quick Response for Special Needs	\$100,000 (93) \$50,000 (94) \$329,139 (95) \$100,000 (96) \$175,000 (97) \$125,000 (98) \$535,887 (99) \$335,000 (00) \$75,000 (01) \$200,000 (02) \$150,000 (03) \$500,000 (04) \$150,000 (05) \$300,000 (06) \$150,000 (07) \$75,000 (08) \$250,000 (09) \$205,000 (10) \$150,000 (11) \$100,000 (13) \$100,000 (15) \$50,000 (16)	Various		1/1/94		Continuing Project; See Below		
J-07	Synthesis of Information Related to Transit Practices	\$1,800,000 (92-94) \$375,000 (95) \$375,000 (96) \$400,000 (97) \$200,000 (98) \$400,000 (99) \$400,000 (00) \$400,000 (01) \$375,000 (02) \$400,000 (03) \$500,000 (04) \$600,000 (05) \$600,000 (06) \$600,000 (07) \$700,000 (08) \$755,000 (09) \$750,000 (10) \$650,000 (11) \$350,000 (12) \$550,000 (13) \$650,000 (14) \$750,000 (15) \$857,000 (16) \$870,000 (17) \$315,000 (18) \$315,000 (19) \$315,000 (20) \$315,000 (21) \$315,000 (22) \$440,000 (23)	Transportation Research Board		12/1/92		Continuing Project; Publications - RRDs 2, 8, 37, 48, 63, 67, 73, 80, 86, 91, 98, 104, 108, 110, 111, and 113	T. Clark	
J-07/ Topic SA-56	Use of Automatic Vehicle Monitoring (AVM) and Vehicle Health Monitoring/Diagnostic Systems by Transit Agencies	\$55,000	\$55,000 AECOM Technical Services, Inc.		3/6/23	9/9/24	Research in Progress		Jamaal Schoby

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Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-07/ Topic SA-57	Statewide Approaches to the Development of Comprehensive Transit Information Systems	\$55,000	\$55,000	EBP US, Inc.	11/30/22	5/30/24	Completed - Published as Synthesis 172.		Jamaal Schoby
J-07/ Topic SA-58	Analysis of Transit Exclusion Policies in Passenger Transportation Systems	\$55,000	\$55,000	Matherly Inclusive Resilient Transportation Associates, LLC	11/1/22	5/1/24	Research complete. To be published as Synthesis 173.		Jamaal Schoby
J-07/ Topic SA-59	Electronic Surveillance of Railroad-Highway Crossings for Collision Avoidance, State of the Practice	\$55,000	\$55,000	AAAI LLC	11/28/22	5/28/24	Research in Progress		Jamaal Schoby
J-07/ Topic SA-60	Examination of Transit Agency Coordination with Electric Utilities	\$55,000	\$55,000	American Public Transportation Association	12/12/22	7/12/24	Research in Progress		Jamaal Schoby
J-07/ Topic SA-61	State of Practice for Transit Recovery in the Aftermath of Severe Weather Events	\$55,000	\$55,000	Drexel University			In Contracting		Jamaal Schoby
J-07/ Topic SA-62	Planning and Operations Initiatives to Support Nighttime Off-Peak Transit Ridership	\$55,000	\$55,000	Foursquare Integrated Transportation Planning	11/6/23	5/2/25	In Contracting	Patrick Centolanz Ivey Glendon	Jamaal Schoby
J-07/ Topic SB-37	Transit Agency Goals and Non-Traditional Performance Indicators Focused on Equity	\$55,000	\$55,000	Texas A&M Transportation Institute	12/19/22	6/19/24	Research in Progress		Jamaal Schoby
J-07/ Topic SB-38	Paratransit Fleet Configurations	\$55,000	\$55,000	Texas A&M Transportation Institute	12/20/22	6/20/24	Research complete. In publication.		Emily Griswold
J-07/ Topic SB-39	Improving Transit Customer Perception of Personal Security	\$55,000	\$55,000	Texas A&M Transportation Institute			In Contracting	Anna Curtis Stacy Weisfeld	Jamaal Schoby
J-07/ Topic SB-40	Low-income Transit Discount Provision at Public Transit Agencies in the United States	\$55,000	\$55,000	University of Tennessee			In Contracting	Jeremy Mott Elliot Sperling	Jamaal Schoby
J-07/ Topic SB-41	Microtransit Solutions in Rural Communities: On-Demand Alternatives to Dial-A-Ride Services and Unproductive Coverage Routes	\$55,000	\$55,000	Foursquare Integrated Transportation Planning	11/13/23	5/6/25	Research in Progress	Meg Young	Emily Griswold
J-07/ Topic SB-42	Operational and Service Factors When Integrating/Consolidating ADA Paratransit and Microtransit	\$55,000	\$55,000	Texas A&M Transportation Institute			In Contracting	Michelle Bloomer David Bartels	Jamaal Schoby
J-07/ Topic SD-07	Red Timed Bus Lanes Experience	\$55,000	\$55,000	Texas A&M Transportation Institute			In Contracting	Lisa Gavin Frank Hackett	Jamaal Schoby
J-07/ Topic SH-24	Impacts of Substance Abuse and Fentanyl on Transit	\$55,000	\$55,000	University of Alberta			In Contracting		Jamaal Schoby
J-11	Quick Response Research on Long-Term Strategic Issues	\$300,000 (07) \$300,000 (08) \$300,000 (09) \$75,000 (10) \$250,000 (11) \$200,000 (13) \$225,000 (15) \$100,000 (16) \$400,000 (17) \$400,000 (18) \$300,000 (19) \$300,000 (20) \$400,000 (21) \$300,000 (22) \$400,000 (23)	\$100,000	Portland State University	11/13/20	7/28/23	Research Completed. Released as a Pre-publication draft for TCRP Report 242.	M. Veltri	Dianne Schwager
J-11/Task 40	Homelessness: A Guide for Public Transportation	*\$100,000							
J-11/Task 42	Transportation Services for People with Disabilities and Older Adults during a Pandemic and Other Emergencies: Lessons Learned during the COVID-19 Pandemic	\$100,000	\$100,000	Texas A&M Transportation Institute	12/1/21	9/1/23	Research completed. Released as a Pre-publication draft for TCRP Report 243.	S. Clark L. Rodriguez E. Sperling	Dianne Schwager
J-11/Task 43	Analysis of Public Transportation Health Impacts and Benefits	\$125,000	\$125,000	Steer Davies & Gleave (Steer)	11/2/22	5/1/24	Research in Progress		Dianne Schwager

APPENDIX E continued

Project No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status Comments	FTA Liaison(s)	Staff Officer
J-11/Task 44	Improving Access to Public Transportation Services and Facilities with Transit-Oriented Complete Streets	\$125,000	\$125,000	Texas A&M Transportation Institute	1/18/23	1/17/25	Research in Progress	D. Kraft MacNeith	C. Dianne Schwager
J-11/Task 45	Future of Commuter Rail in North America	\$100,000					In Development		Dianne Schwager
J-11/Task 46	Zero-Emission Vehicles: New Tech, New Skills, New Jobs	\$100,000					In Development		Dianne Schwager
J-11/Task 47	Affordable Housing and Transit	\$100,000					In Development	A. McLaen McCoy M. Swingholm	Mariela Garcia-Colberg

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