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This TCAR guidance identifies key decision points and steps for planning, programming, and preparing premium transit projects for implementation. Whether seeking local, state, or federal funding, the goal of a TCAR Study is to advance transit projects towards implementation with the greatest potential for success.

Introduction

The purpose of the Transit Concept and Alternatives Review (TCAR) guidance is to outline the Florida Department of Transportation (FDOT) Transit Office (TO) process for early planning and early evaluation of transit projects in Florida. The guidance is intended for use by transit Project Sponsors (see page 10 for definition) and their consultants, and by FDOT staff who prepare or review planning and design for transit projects. Although the TCAR Study is not required, it is encouraged if seeking Federal Transit Administration (FTA) funding and FDOT matching New Starts funds.

The TCAR process is a uniform approach for advancing transit projects by linking early planning work to the FDOT Project Development and Environment (PD&E) and FTA Project Development (PD) processes. The result of the TCAR is a study that details the project information and requirements necessary to prepare an application for entry into the FTA PD process or development through the state project development process.

The TCAR process is a streamlined planning and environmental screening process that compares transit project alternatives, potential costs, funding options, community benefits, economic development, and mobility for users of a proposed project. It also considers high level environmental effects of the alternatives. Advancing transit projects that maximize existing funding sources and have the greatest potential return on investment is paramount to the preservation and growth of an effective transportation system.

WHAT IS PREMIUM TRANSIT?

Premium transit is a term for transit service that moves a higher number of riders, longer distances, more quickly as compared to local transit.





Background

Transit projects can be costly; therefore transit sponsors often seek state or federal funding to cover a portion of the project's capital costs. To qualify for federal funding, such as New or Small Starts funding through the FTA Capital Investment Grant (CIG) Program, projects must undergo a thorough review. The FTA CIG Program review includes Project Development (New and Small Starts), Engineering (New Starts), and Full Funding Grant Agreement (FFGA)/Construction (New and Small Starts).

FTA encourages local and state agencies to evaluate multiple project alternatives before entering the federal grant program and the environmental review process. This streamlines project implementation by identifying the most appropriate projects for federal funding. In response, FDOT created the TCAR process to link early planning and the federal process.

The TCAR process incorporates and complies with all federal and state regulations to provide consistent guidance for Florida transit projects preparing to enter the FTA or state process. A TCAR Study is designed to gather information and evaluate transit project alternatives, including modes, alignments, and end points. The TCAR Study streamlines the

A transit alternative is defined as operation of one or more transit modes, such as enhanced bus, bus rapid transit (BRT), automated guideway transit, streetcar, light rail, heavy rail, commuter rail, and high speed rail within a specific corridor.

National Environmental Policy Act (NEPA) process by eliminating impractical or infeasible alternatives and conducting early environmental screening so that Project Sponsors can complete the FTA PD phase within the required timeframe by the current federal transportation funding legislation. Current legislation requires that PD for all New Starts and Core Capacity projects are completed within two years. While there is no time limitation to complete PD for Small Starts projects, the TCAR process should enable Small Starts projects to be completed efficiently as well.

Due to the growing complexity and cost of project implementation, as well as the need for state funding and strong local agency and community support, FDOT has frequently and increasingly been asked to take a lead role in implementing large transit projects. Additionally, FTA relies on FDOT's input as a partner to ensure these major transit projects are viable. This leadership demand is in part a result of FDOT's proven success in managing, designing, and building major



multimodal projects and garnering partner support. The TCAR process builds upon this experience, providing guidance and direction to ensure that projects with greatest potential for success are advanced to the FDOT PD&E phase and FTA PD phase.

Pages 26-27 highlight the FTA process for projects seeking federal funding though the CIG Program.

Project Development in Florida

FDOT has a prescribed five-step process for moving all transportation projects, including road and transit, from concept to construction, as shown in **Figure**1. The TCAR Study supports Step 2 of the process, programming and screening of transit alternatives, prior to entering the PD&E Study phase where the New Starts process is initiated in Step 3.

Comparing FTA and FHWA/FDOT Project Development

The Federal Highway Administration (FHWA) and FTA transit project delivery processes are similar in content but different in administration. As with a FDOT PD&E Study, FTA-funded projects must complete environmental compliance with NEPA and related environmental laws, as well as sufficient preliminary engineering to clearly define the project, its possible impacts, and financial resource requirements.

The FTA PD process serves the same function as the FDOT PD&E Study. After the PD&E Study, FDOT typically advances the project into design before

Figure 1: Project Development Process in Florida





moving to construction. FTA defines the design phase as Engineering (New Starts and Core Capacity Projects). The key distinction between the two processes is the need to seek and receive project approval for FTA-led projects before entering the federal program and at the completion of FTA PD and Engineering phases. FTA-led projects also require a Project Management Plan and Financial Plan be completed and executed with direct FTA supervision during the Engineering phase.

Most importantly, projects completing PD must have a medium or higher rating and committed local and state matching funds to cover the capital and operations and maintenance (O&M) costs of the project before the project can be considered for entry into the Engineering phase. **Figure 2** shows the relationship between the FTA and FHWA process.

FTA-Funded Transit Projects

A major difference between the FHWA/FDOT and FTA transit project processes is that FTA-funded transit projects need to receive congressional approval for federal funding. As a result, the transit projects seeking federal funding must be approved by FTA before entering the PD, Engineering, or Construction phase. Upon entrance into the federal CIG program, FTA takes responsibility of project review/rating as well as oversight during engineering/design and construction. Additionally, FTA requests consultation regarding the level of environmental review, or potential Class of Action, before the environmental analysis begins.

Federal transit funding is limited and there is significant competition for these funds. As a result, federal funding for transit projects is highly competitive, with all projects competing nationally. This has prompted FTA to use a prescribed approval

and rating process. To qualify for federal funding, the Project Sponsor must build the case for and justify the project before the project may be submitted to Congress for funding. This includes developing a sound financial plan and securing the local and state funding commitment for the capital and Operating and Maintenance (O&M) costs.

FTA-funded projects also require a Project Management Plan (PMP) be developed to outline the roles and responsibilities of the agencies involved, define the project, describe the mitigation plan for project impacts, document project controls, and outline the construction schedule, as well as other elements of project delivery. A complete PMP is not required prior to entering PD; however, it is advised that the PMP be started during the TCAR process.

While FTA's involvement in the TCAR Study will be minimal, Project Sponsors should meet with FTA Region IV staff and the District Modal Development Office as soon as transit project needs emerge and the potential need for FTA funding is identified.

Non FTA-Funded Transit Projects

For projects not requesting federal FTA funding, a TCAR Study may still be required or encouraged to narrow the range of alternatives considered for the project, garner public support, define agency roles and responsibilities, and identify costs and local funding sources and commitments for O&M costs. The TCAR Study details the overall project concept, costs, and alternatives analyses necessary for state and local agencies to consider advancing the project towards completion of a State Environmental Impact Report (SEIR) or Project Evaluation Impact Report (PEIR). Refer to *Part 1, Chapter 14 of the FDOT PD&E Manual* for further definition of the PD&E Study steps required after completion of a TCAR Study.¹



Transit Project Delivery Process

Figure 2 illustrates the transit project delivery process for both federal FTA funded projects and local or state funded projects.

Step 1 includes early project identification as a result of systems planning, such as local or regional Long Range Transportation Plans (LRTPs), Transit Development Plans (TDPs), or other regional transportation plans where project needs are identified with little more information than the general corridor and potential transit technologies and/or modes. During this step, the Efficient Transportation Decision Making (ETDM) process is initiated to reveal early

environmental fatal flaws along the corridor. This step also includes early public involvement to gauge local community support in pursuing a premium transit solution. Once the systems plan is developed, a single project should be brought forward to advance through the TCAR Study process. This project may be defined as an identified mobility need. The project should have public and political support and preliminary funding sources should be identified.

Step 2 is the data collection, ridership assessment, ETDM programming screen and alternatives evaluation process which is carried out during the TCAR Study process. This step typically involves defining the purpose and need of the project, the recommended





Figure 2: Transit Project Delivery (State and Federal)

Transit PD&E

Environmental review

Engineering



STEP 3 &

STEP 1

Planning & Community Support

Adopted into LRTP

Systems planning

Transit market analysis

Comprehensive Operational Analysis

STEP 2

Programming & Alternatives

Transit Concept and Alternatives Review

Efficient Transportation
Decision Making

Request entry into FTA CIG Program (if applicable)

STEP 3

FDOT Transit PD&E (Federally Funded)

Requires FTA approval to enter (two years to complete, except Small Starts)

Environmental review

Preliminary Engineering (at least 30% Design)

Adopt LPA into LRTP

FTA Project Development (CIG Program)

Funding for PD programmed

FTA Funding Milestones

Project costs determined; federal portion locked in; **30%** local funding committed for construction and O&M



Figure 2: Transit Project Delivery (State and Federal) (cont.)

(State or Locally Funded Only)



Design

Design Build package

STEP 4a

STEP 4b STEP 5

STEP 4a

FDOT Transit Design (Federally Funded)

Requires FTA project rating approval and local funding commitment to enter

Design (60% to 100% Design)

> FTA Engineering (CIG Program)

Funding

State funding programmed

FTA Full Funding Grant Agreement or Small Starts Grant Agreement

Construction & Operation

Complete construction

Begin operation

Congressional Request for Funding Congressional Approval of Funding

Final project costs determined; 50% local funding committed for construction and O&M



transit mode and technology, corridor alternatives, and any potential environmental project effects. Most importantly, when considering FTA funding, this step identifies partner agency roles and responsibilities as well as general order of magnitude costs for construction, operations, and maintenance. This step is important to generating and documenting community support for the project, both generally and financially. A tentative schedule and cost for the PD phase should also be well defined. At this time, the Project Sponsor should also identify the potential funding source for O&M costs.

For FTA-led projects the following steps are required at the completion of Step 2 and **BEFORE** entering PD:

- Clearly document all planning evaluations and how its supports future project actions
- Request and receive approval to enter the FTA CIG program (New/Small Starts)
- The request, by letter, to enter the CIG program should include the following information:
 - Sponsor, any partners, project manager and other key staff
 - Description of the corridor (Recommended Alternative), transportation problem, and purpose and need
 - Cost and funding strategies
 - Draft timeline for completing the project
- · Commit funds to complete PD work
- Coordinate with FTA on environmental effort needed or potential NEPA Class of Action

Step 3 reflects the point in project development where a traditional PD&E Study is completed. This is roughly equivalent to the FTA PD phase which combines the preliminary engineering, refined alternative evaluation and ranking, and detailed environmental analysis to comply with state and federal environmental laws. This step also includes preparing necessary studies

and reports consistent with FTA or FDOT requirements to advance the project into design and construction.

For FTA-led **New Starts** projects the following steps are required **AFTER** completing PD and seeking approval to enter FTA Engineering:

- Select a LPA and adopted it into the fiscally constrained metropolitan plan
- Complete NEPA with final FTA environmental decision
- Sufficient information for FTA to develop a project rating
- Preliminary Project Management Plan
- Commitment of at least 30% of local/state funding
- Complete at least 30% design
- Project cost and federal funding commitment determined

For FTA-led **Small Starts** projects the following steps are required **AFTER** completing PD and seeking approval to enter FTA Engineering:

- Select a LPA and adopted it into the fiscally constrained metropolitan plan
- Complete NEPA with final FTA environmental decision
- Sufficient information for FTA to develop a project rating
- Preliminary Project Management Plan
- An advanced level of engineering and design has been completed so that the project scope, cost, and schedule are considered
- Generally, at least 50 percent of the non-CIG funds for the project are committed
- Project cost and federal funding commitment determined

Step 4 takes the LPA into design or the FTA Engineering Phase (New Starts Only). For FTA-led



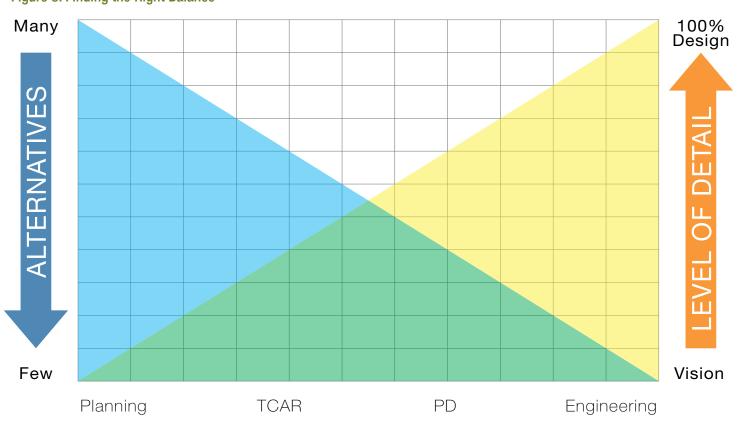
projects, the project must be approved by FTA and submitted to Congress at the completion of the FTA Engineering Phase and before advancing to construction. A project rating, specified by law, is required before submitting to the U.S. Congress for federal funding. For FTA approval, project readiness or an advanced level of engineering and design is required so that the project scope, cost, and schedule are considered reliable. At this point, any changes in the cost of the project, as compared to those produced at the end of PD or Step 3 are the responsibility of the local agency. Generally, at least 50 percent of the local/state funds for the project are committed at the end of Step 4.

Step 5 for FTA-led projects includes submitting the project to Congress for approval of a Full Funding

Grant Agreement (FFGA). Once approved, the Project Sponsor can move the project into construction and begin operations.

Each step of the transit project delivery process becomes increasingly more detailed and costly. Project changes, such as the addition of project corridors can easily have major schedule and cost implications. As stated previously, FTA encourages local and state agencies to evaluate multiple project alternatives before entering the federal grant program and the environmental review process. TCAR streamlines these later steps by using the appropriate level of detailed evaluation in order to eliminate impractical or infeasible alternatives. This balancing of the depth of detail evaluated versus number of alternatives evaluated is illustrated in **Figure 3**.

Figure 3: Finding the Right Balance







TCAR Study Process

A successful TCAR Study will provide the information necessary to request entrance into FTA PD and move the transit project into the PD&E Study phase. A TCAR Study will answer the following key questions:

- Who are the Project Sponsor, Lead Agency, and participating agencies, and what are their roles and responsibilities?
- Where is the project located and what alternatives are being considered?
- How will community and agency engagement be conducted? Which alternatives are supported by the local community?
- What are the transportation problem, unmet needs, and existing conditions?
- Was a Purpose and Need prepared for the project during pre-planning? How will the proposed alternatives address the project's Purpose and Need?
- What are the nature and extent of the effects related to any alternatives being considered?
- Based on the ETDM planning and programming screens, what are the potential environmental impacts associated with any alternatives?
- What Class of Action is likely appropriate for the project?
- Will the proposed alternatives use existing or new right-of-way?
- How well do the proposed alternatives perform?
- What is the recommended alternative (mode and alignment)?

- What are the preliminary project costs? What are the ongoing project costs?
- Are we prepared to work with the local decision-makers to determine the local funding source?
- What is the anticipated project timeline for PD, engineering, construction, and operations and maintenance?
- What are the potential funding sources for completing PD?
- What are the short and long-term funding sources to implement and successfully operate the project? What revenue sources have been committed for the project at this time to ensure that the local community is serious about implementing this project?
- What local actions or decision are needed to determine the local project funding source?
- Will this project be able to compete nationally for federally funding?

A successful TCAR Study **IS NOT**:

- A PD&E Study or full NEPA documentation
- The New/Small Starts evaluation and ranking process
- · A Multi-year, multi-phased study
- Multi-million dollar study
- Program of projects

Identifying Transit Projects Appropriate for a TCAR Study

Transit projects considered for a TCAR Study typically emerge from the Planning and Community Support phase as a result of regional systems planning analyses or transit market studies (Step 1 in **Figures**

Up-to-date and reliable transit data (e.g., travel patterns and transit usage) is not typically readily-available for analysis. Transit data, unless collected via passive electronic means (e.g., automatic vehicle location [AVL], automatic passenger counter [APC]), can take months to collect and prepare for analysis. It is strongly suggested that transit data collection be advanced as early as possible in the process, potentially even before the TCAR process begins.

1 and 2). Systems planning analysis identifies travel demands and defines where there is an existing deficiency or future transportation need. Systems planning studies or activities that may propose a transit project include:

- Long Range Transportation Plan: developed by Metropolitan Planning Organizations (MPOs) to identify financially feasible transportation projects over a 25-year planning horizon; considers all transportation needs and investments regardless of mode; updated every five years for metropolitan areas with a population over 50,000
- Transit Regional Plans or Vision Plans: developed by transit agencies to identify long range system plans, regional connectivity, or vision plans that may include elements like transit emphasis corridors
- Transit Development Plan: developed by transit agencies to identify ten years of transit needs for the agency's service area; updated annually with a major update every five years
- Comprehensive Operational Analysis Plans:
 developed by transit agencies to review existing
 transit service, including detailed description of
 existing fixed route services, ADA direct access
 service, and capital assets; the plan is often the
 basis for defining future transit service needs



Prior to initiating a TCAR Study, other corridor-based studies may be conducted to refine the potential transit solutions. These may include Action Plans, Corridor Plans, travel market assessments, and community consensus building or other public outreach activities.

Ten Steps of Conducting a TCAR Study

This section describes the steps to conduct a TCAR Study and actions or products required to seek funding from federal, state, local, and private sources. Also discussed are agency roles and responsibilities, when the TCAR Study should be completed, and how it supports subsequent steps in the transit project delivery process. These steps do not have to be completed in the order presented, but completing each will provide the level of project detail and information needed to compete effectively for federal transit funding. The first six TCAR steps represent the initial foundation for a successful Project Management Plan and a basis for a future FTA project rating which will carry a project from planning to construction.

As new transit projects emerge, the agency proposing the project should meet and coordinate with the FDOT TO and the District Modal Development Office early and often to discuss the process and possible approaches to project delivery.

1 Identify Roles and Responsibilities

As part of the TCAR Study or any transit project seeking to enter the FTA CIG program, agency roles and responsibilities should be well-defined and agreed upon before work commences as follows:

 Lead Federal and/or State Agency: The funding agency acts as the lead agency and decision-maker for the TCAR Study and documentation. For projects Prior to initiating a TCAR Study, the roles and responsibilities of the participating parties should be defined and a memorandum of understanding (MOU) established between funding partners and the future operator of the service. Prior to entering each phase of project development, the MOU should be reassessed and revised as necessary.

seeking state or local funding, the lead agency will be the agency funding the majority of the project; for projects seeking federal funding, the lead agency will be FTA or FHWA. If state funding is requested as a match for a local project, a TCAR may be recommended.

- Lead Local Agency: This agency, whether the FDOT District office, regional agency, transit agency, or municipality provides additional leadership during the TCAR Study and the PD phase and has the primary responsibility for overseeing the study to ensure work is performed in a technically sound manner and is successfully completed in accordance with the project schedule and budget. This agency may also perform the technical work, share responsibility for the work with other local agencies, or contract out all or part of the work to a consultant. When not the Lead Local Agency, the FDOT District's role is to review, similar to FTA.
- Project Sponsor: This is the agency or entity that is proposing or initiating the study and seeking approval for funding, and will be the recipient of any federal funding for the project. If FDOT is the Lead Local Agency, the transit agency or other agency may be the Project Sponsor or the Lead Local Agency; however, it could be that FDOT is the Project Sponsor. This role will typically continue through PD and Construction. If this agency will not be the service operator, a MOU should be created with the project's operator.



- Participating Agency(ies): Participating agencies
 are any state, tribal, regional, and local government
 agencies that have an interest in the project (e.g.,
 MPO, City, County, Transit Agency); must identify
 issues of concern which may substantially delay
 approval or result in denial of permit. Private and
 nongovernmental organizations are not eligible to
 serve as participating agencies.
- Service Operator: This is the agency responsible for operations and maintenance for continued service once the project is built and running. The Service Operator should be involved from the beginning of the process and part of the defined MOU.

Sound and effective project management is important to the success of a TCAR Study. The Lead Local Agency must effectively control schedule and costs, as well as contributing factors that can affect the schedule and cost of the study. The Project Sponsor should identify a project manager and other key staff that will work with FTA and carry the project forward into PD, Engineering, Construction, and Operations.

Depending on the complexity of the project, an advisory Committee and/or a Study Management Team may also be identified. Participants may include a combination of the following:

- Elected officials (for highly complex or politically sensitive projects)
- Agency directors
- Agency staff (including staff from any/all agencies participating in the study)
- Key stakeholders

Documentation of the identified roles and responsibilities is recommended. If a MOU was signed by all participants it should be included in the TCAR appendices.

Coordinate with Study Partners and Stakeholders

Once roles have been established, begin coordination with all study partners, including the Environmental Technical Advisory Team (ETAT) identified in the ETDM Environmental Screening Tool (EST) and stakeholders, elected officials, special interest groups, and the FDOT TO to bring diverse viewpoints and values to the surface early in the decision-making process.

Coordination with the MPO/Transportation Planning Organization (TPO), transit service providers, and other relevant agencies in whatever role they serve, is critical to collect and incorporate available data, reflect existing conditions, understand planned transit services, generate technical inputs, and help generate local support for the project.

2 Initiate Public Involvement

The next step is to define how the public will be engaged in the transportation decision-making process to ensure consensus for project recommendations. Engaging the public effectively can pose a significant challenge; therefore, a Public Involvement Plan (PIP) should be created and consider methods that result in meaningful public participation. The PIP should consider outreach methods that result in meaningful participation with all members of the community including those who are transit dependent and have limited English proficiency — complying with Title VI of the Civil Rights Act of 1964.

The PIP should provide a basis for future involvement activities during the PD&E Study. Public involvement is an iterative process. The PIP should be updated as needed throughout the TCAR Study process. For example, stakeholders or engagement strategies may be selected or changed to reflect decisions made



The following are key elements of a successful PIP:

- Project goals and communication objectives
- Affected communities and stakeholders
- · Outreach activities, strategies, and schedule
- · Method for noticing outreach activities
- Method for collecting and analyzing public comments

during future steps. Refer to *Part 1, Chapter 11 of the PD&E Manual* for additional guidance.¹

The public involvement process for a TCAR Study should not be as formal as the Coordination Plan and PIP developed during the PD&E Study. The level of effort may be less than typically expended for a PD&E Study; however, there is an expectation that the resulting project will be implemented and therefore represents the project that the FTA may potentially fund. For this reason, local stakeholder participation and support of the recommended alternative is critical,

particularly because local match funding will be required for the FTA grant.

If previous public involvement activities were conducted for the transit project, documentation of the activities should be included, with results and public comments addressed in the TCAR Study. Detailed documentation may be included in the TCAR Study appendices.

3 Develop Project Description

A project description is developed during the planning process. The description should be defined enough to guide the study, but flexible enough to allow for a reasonably broad set of alternatives. The following elements are typically included in the project description:

- Location of the project, including city and county
- Project limits, such as length and end points or destinations
- Study area





Define Study Area

The study area and project's end points are selected using early planning work and coordination with stakeholders and partner agencies. The study area should include the entire project corridor under consideration, as well as the area surrounding the corridor to accurately identify potential impacts from the project. The study area generally encompasses a one half-mile buffer (reasonable walking distance for transit riders) surrounding the project corridor, but the distance can change based on corridor needs and discussion with stakeholders and partner agencies. For example, if the project being evaluated proposes a new commuter rail service; the project study area should also consider the potential ridership catchment area for riders who may drive and park at a station to use the proposed service.

A TCAR Study may look at a longer corridor than makes sense to move forward into FTA PD, particularly given that cost effectiveness is a critical factor of receiving federal funding for a project. The end points for a project that advances into NEPA may be different than the project limits studied in a TCAR, but the service must be usable even if no additional transportation improvements in the area are made.

4 Define Purpose and Need

As part of the Purpose and Need, the project problem statement explains the specific transportation issues the project will address. Each proposed transit project is unique and should fit the context of the community discussion. There are, however, several planning best practices that inform key TCAR Study decisions. For example, a travel market assessment should be completed prior to developing the alternatives to clearly evaluate existing conditions, define the

Local Project Sponsors should review the FTA requirements early in the process and monitor FTA's website for changes as the project advances (www.fta.dot.gov).

The following are common transportation needs which establish the purpose of a transit project.

- Added capacity
- System connections and modal interrelationships
- Transportation demand
- Social or economic development demands
- Safety
- · Roadway deficiencies

transportation problem, and set the framework for identifying potential alternative solutions.

Conduct Travel Market Assessment

Once transportation needs are identified an areawide or corridor-specific travel market analysis is recommended to understand where people travel to and from most frequently. The analysis determines the components of the problem and avoids identifying corridors or transit solutions before travel patterns are fully understood. The travel market analysis will potentially identify trip purpose and length, magnitude of unmet demand, origins and destinations, peaking characteristics, and current travel times.

A travel market assessment will assist in the evaluation of the transportation gaps, key destinations, connections that people regularly make, and whether or how many people would benefit from a proposed solution. The travel market analysis should be paired with or informed by an operational analysis of existing and planned transit service defined by the TDP(s).



5 Conduct Existing and Future Conditions Assessment

Document existing and future conditions in the study area to provide a detailed understanding of the area around the corridor. Field observations and travel time surveys along key corridors within the study area are highly recommended. Field observations will identify conditions that are conducive to or an impediment to implementation of transit service and existing corridor travel times (average speed, signal delays, and congested travel times) are critical for calibrating and validating travel demand forecasts.

Estimate Ridership

FTA developed the Simplified Trips-on-Projects Software (STOPS) to estimate project ridership. Use of STOPS is optional. For FTA-funded projects, the local travel forecasting model may be used with the understanding that FTA must review the model and forecasts to ensure compliance with FTA policies and procedures and validity of the results. The model (STOPS or local model) used to calculate trips for the mobility, congestion relief, and cost effectiveness measures is expected to also be used for calculating the change in vehicle miles traveled (VMT) for the environmental benefits measure. If the project will be seeking federal funding, the Project Sponsor should seek input from FTA to ensure sufficient data is collected to support the proposed ridership methodologies for evaluation of the alternatives.²

It is highly recommended to select the preferred model for ridership estimation during TCAR Study Step 5. Once selected, existing travel data should be used to validate and calibrate the model. TCAR Study Steps 4 and 5 should be conducted concurrently as the ridership estimation model supports a travel market assessment. Running the model is described in TCAR Study Step 8.

Recommended existing and future conditions assessment activities include:

- Adjacent land uses
- Employment centers
- · Existing and planned development
- Auto speeds
- Transit speeds
- Local transit network and service
- Safety
- Drainage and utilities
- · Pedestrian and bicycle facilities
- Approximate available right-of-way
- Roadway characteristics
- Additional points of concern based on the ETDM EST
- Features that could influence engineering decisions (bridges and box culverts)

Review Previous Studies and Best Practices

As described above, early planning work includes identifying potential projects through Transportation Systems Planning, Corridor and Subarea Planning, TDPs, Local Comprehensive Planning, LRTPs, and other local and regional planning efforts. Many transportation projects may already have corridor options from a completed action or master plan. These analyses should be evaluated and considered prior to advancing into the TCAR Study and should be included in the TCAR Study report as appendices for reference purposes.

Often questions about the best type of transit service or technology surround a project, such as whether the project should propose BRT, light rail (including streetcars), or commuter rail. It is recommended that



a TCAR Study collects and evaluates the wealth of national information, best practices, and case studies related to what types of transit technology are often most effective in a variety of community settings.

Transit technology characteristics to consider are:

- Average travel speed
- Rider capacity
- Turning radius and/or guideway/runningway geometry
- Station spacing and location
- Maintenance and storage yard needs and siting
- Acceleration and deceleration
- · Vibration and noise
- Necessity for steel rail or tracks as applicable, or ability to travel without steel rail or tracks (for example, tram vehicles that mimic streetcars)
- Ability for light rail or streetcar vehicle to travel "off-wire" on battery power in some circumstances where catenary may not be feasible or desirable

FDOT's *Making Tracks* brochure provides information regarding the transit technology types and typical cost ranges for each technology.³

7 Develop Project Evaluation Plan

Before developing and evaluating alternatives it is critical to establish an Evaluation Plan. This plan will direct how the performance of alternatives is determined. The Evaluation Plan will also inform project decisions even beyond the TCAR Study, so it is imperative that the evaluation plan addresses two key elements. First, the Evaluation Plan should be consistent with current FTA guidance and project evaluation criteria. Second, the Evaluation Plan must address the established Purpose and Need for the project in direct, simple terms that can be easily understood by all interested parties.

FTA Project Evaluation and Rating Criteria:

- Land Use (1/2 mile from station area)
 - Employment served by system
 - Avg. Population density (persons/sq. mile)
 - Amount and cost of parking
 - Available affordable housing
- Cost Effectiveness
- Mobility
 - Annual trips
 - Annual trips by transit dependent persons
- Congestion Relief
 - New weekday linked trips
- Environmental benefits
 - Change in air quality
 - Change in energy use
 - Change in greenhouse gases
 - Change in safety
- Economic Development
 - Growth management
 - Transit-supportive corridor policies
 - Supportive zoning near transit
 - Change in safety
 - Tools to implement transit-supportive plans and policies
 - Performance of transit-supportive plans and policies
 - Potential impact of transit project on regional development
 - Plans and policies to maintain or increase affordable housing in corridor

When establishing evaluation measures for a transit project, it is important to consider both local and federal criteria requirements. Local criteria can be established during the study initiation phase of the project and refined as the alternatives are developed. It is beneficial to generally apply the FTA evaluation criteria and measures as part of a TCAR Study;



When developing the evaluation plan, specific evaluation criteria should reflect objectives for the project to identify the alternative(s) with the highest opportunity for success. A multi-step screening process evaluates a decreasing number of alternatives at each step, initially removing alternatives with fatal flaws or little ability to meet project objectives, eventually selecting the most viable alternative. Evaluation methods typically use quantifiable scores for each alternative to calculate quartiles, ranges, or weighted averages to compare alternatives. Scoring should be simple, transparent, and easily defensible.

however, the level of detail for the TCAR should be much less than expected during FTA PD. Using FTA criteria can assist the public and decision-makers in understanding how the project will compete at a national level for federal funding.

Evaluation measures used during a TCAR Study may include the following:

- Corridor travel time, number of traffic signals, or crossings that may cause delay
- · Corridor capacity and level of service
- Estimated trips or market served
- Demographics served
- Connections to Community Redevelopment Areas, Enterprise Zones, Community Development Block Grant areas, and brownfields
- Connections to other transit systems and travel modes
- Constructability and infrastructure needs that may impact cost
- Connections to libraries, parks, schools, and other community resources
- Capital costs
- O&M costs

For complex transit projects a series of unique evaluation milestones or screens may be required, each addressing critical characteristics of the project based on the stated Purpose and Need for the project. This process of screening alternatives will have one or more screens or phases for analysis, with each phase structured to eliminate alternatives that show the least amount of promise or those that have fatal flaws early in the TCAR Study. Example evaluation milestones can be considered all in one phase or in multiple phases screens and include:

- 1. **Where** are the corridors that best serve the project's Purpose and Need?
- 2. What transit technology performs best?
- 3. **How** does the project interact with other modes and community assets?
- 4. **How** could the project be constructed?
- 5. How much could the project cost?

Evaluation Methodologies and Tools

The method for analyzing alternatives varies and should be customized for each individual project. The most frequently used tools to analyze alternatives include geospatial information tools and travel demand and trip estimation modeling. As described, the preferred method for estimating trips and travel demand should be defined and include a detailed description of data requirements to calibrate, validate, and run the chosen model. All evaluation methodologies and tools should be documented in the Evaluation Plan.

Other analyses that may be applicable for any given TCAR Study are as follows:

- Traffic impact analysis
- Preliminary noise and vibration screenings
- Preliminary air quality modeling
- Inventory of environmental resources
- Preliminary financial analysis



Building Consensus around the Evaluation Plan

Once completed, it is critical to build consensus behind the recommended Evaluation Plan with all stakeholders, which includes:

- Developing draft evaluation measures and evaluation methodologies
- Circulating and discussing draft with study partners and stakeholders
- Reaching agreement among study partners and stakeholders
- Developing the final evaluation measures and evaluation methodologies

With consensus reached, all study partners and stakeholders know when to expect key study decisions, the type of information available to support that decision, and how each proposed alternative will be measured and compared against other alternatives.

O Develop and Evaluate Alternatives

Conceptual transit alternatives should emerge from earlier study efforts and plans, public involvement, and an evaluation of existing and future conditions. Definition of corridors should include general end points or major destinations, potential station locations, and connections to other local transit services. Each alternative should be distinct and test probable solution(s) to the study's Purpose and Need.

This distinction between alternatives is required to provide sufficient technical analyses necessary for understanding the trade-offs between alternatives to support an informed decision. Readily available information should be reviewed to eliminate any duplication. Following identification of initial alternatives, the Evaluation Plan should be used to begin the process of eliminating or narrowing

A TCAR Study should examine not only alignments or corridors but also various transit types or technologies. Each transit technology serves a specific type of transit market. When evaluating transit technology options, consideration must be given to elements such as cost per mile, cost per revenue hour, etc. Transit alternatives should also examine the amount and/or frequency of service provided. This combination of corridors, transit types, and service may increase the number of alternatives for evaluation exponentially.

the number of study alternatives. Each evaluation milestone or screen requires consensus among study partners and stakeholders to ensure that all involved have the opportunity to reasonably discuss the performance of the alternatives considered.

Time Horizons

FTA states that evaluations based on existing conditions are the most easily understood, most reliable, and have access to the most readily available information for decision-making. Thus, FTA requires all projects to calculate the evaluation criteria based on current year data and for opening year of the proposed project. FTA defines "current year" as close to today as the data (including the American Community Survey) will permit.

FTA recognizes that some projects are designed to accommodate future growth and allows projects to calculate the evaluation criteria using horizon year forecasts as well as current year forecasts. FTA allows Project Sponsors to choose either 10 years in the future or 20 years in the future for the horizon year.



No Build Alternative (Optional)

TCAR Studies that evaluate corridors using a future horizon year may also develop a No Build alternative as a basis of comparison for horizon year evaluations. If used, the No Build alternative should accurately and reasonably reflect the horizon year without construction of the recommended transit project, and therefore should include currently funded and committed transportation and development projects.

The preferred travel demand and trip estimation model should evaluate and forecast demand for services within the study area without the construction of the proposed project. This should include planned service improvements and infrastructure investments.

Local and State Funded Projects

There are no requirements to evaluate multiple alternatives in a SEIR; however, multiple alternatives may be required for projects involving an alignment in a new location (not within existing right-of-way), historic bridges, or federal permits. Project Sponsors should consult with the FDOT TO and the District Modal Development Office to assist with development of multiple alternatives for the SEIR. At a minimum, the alternatives should include a Baseline Alternative, multimodal alternatives (particularly when rail transit is considered), and a No Build Alternative.

Conduct Performance Evaluation of Alternatives

A comparative analysis applies the methodologies identified in the Evaluation Plan. During this step, the following should be documented for inclusion in the TCAR Study report:

- · Definition of Alternatives
- Travel Demand Forecasting
- Traffic Impacts
- · Evaluation Analysis and Results

Each of these reports should be consistent with the defined Evaluation Plan's methodologies. To be included as TCAR Study appendices, the reports should describe analysis efforts and results in detail.

When evaluating the performance of each alternative's ability to serve trips, consideration should be given to other transit services in the corridor that directly compete with the proposed alternative. If competing services are identified, they should be communicated to stakeholders and considered for removal from the supporting network when modeling that alternative.

9 Select Recommended Alternative and Prepare TCAR Study Report

The final step in a TCAR Study is selection of the Recommended Alternative which should reflect the best performing alternative with the most agency and stakeholder support and public consensus. Depending on the nature of the project more than one Recommended Alternative may be identified to advance into the PD&E Study phase and FTA PD. However, carrying forward many alternatives will result in a more costly PD&E Study that requires more time to complete.

Although there is no requirement for the Recommended Alternative to be adopted by the MPO, it is recommended that at least a resolution of support be acquired from the MPO and affected municipalities and the need for the project be identified in the LRTP for consistency. For non-urbanized areas, a similar action by the regional planning council and affected municipalities, or both for projects that cross multiple jurisdictions, is recommended. This documentation can be provided to the FTA as part of the request to enter PD to demonstrate local support for the proposed action. The end result of the TCAR Study is to provide sufficient information to prepare





an application letter to FTA requesting entry into the PD (including NEPA) phase of the New Starts, Small Starts, or Core Capacity programs.

Table 1 summarizes the actions needed to conduct the alternatives evaluation during a TCAR Study.

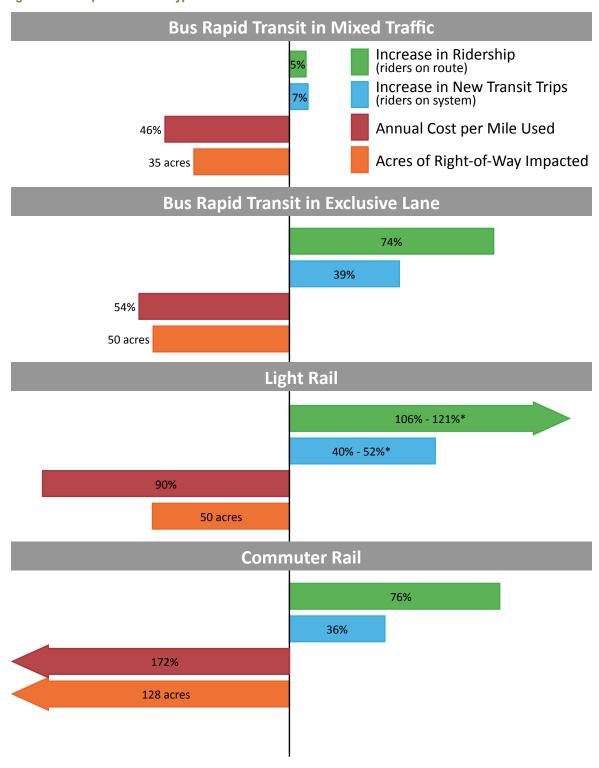
Table 1: Summary of TCAR Evaluation Process

	Action	Result/Documentation	Key Consideration
Develop Analysis Methodologies	Develop a methodology for evaluating the alternatives based on the project's purpose and need	Draft and Final Evaluation Plan	Ensure consistency with FTA evaluation criteria, but the level of detailed analysis prescribed by FTA Project Development is not required
ldentify Alternatives	Alternatives emerge from earlier study efforts and plans, public involvement, and an evaluation of existing and future conditions	Corridors should have end points or destinations, potential station locations, and connections to other local transit services	Each alternative should be distinctive and test probable solution(s) to the study's Purpose and Need
Conduct Comparative Analysis and Evaluation of Alternatives	Apply methodologies set forth in Evaluation Plan Conduct detailed quantitative analysis on each alternative's ability to satisfy the project's Purpose and Need using the established evaluation criteria	Prepare the following technical reports: Definition of Alternatives Report Travel Demand Forecasting Report Traffic Impacts Report Evaluation Analysis and Results Report	It is critical to build consensus among stakeholders and agency partners on technical results
Select the Recommended Alternative	Present results of alternatives evaluation that identifies a recommended alternative	Draft and Final TCAR Study report	Document the process leading to the selection of a Recommended Alternative



Figure 4 shows an example of an evaluation of the transit types in a study.

Figure 4: Example of Transit Type Evaluation



ETDM Screening and Potential Environmental Impacts

After selecting the Recommend Alternative(s), it is suggested that environmental screening be continued through the EST. This Programming Screen aids FDOT to identify project issues and actions needed during the PD&E Study to avoid, minimize, or mitigate potential project impacts and provide the foundation for developing a project's scope of services. The results of the Draft Programming Screen Summary Report should be included in the TCAR Study report as it will assist the lead agency in determining the project's potential Class of Action and assists with development of a focused scope of services for the PD&E/PD. For FTA-led projects, FTA determines the Class of Action once the project enters PD. FTA coordination is recommended at the conclusion of TCAR to identify the potential level of environmental review and the project's preliminary Class of Action before requesting FTA approval to enter PD.

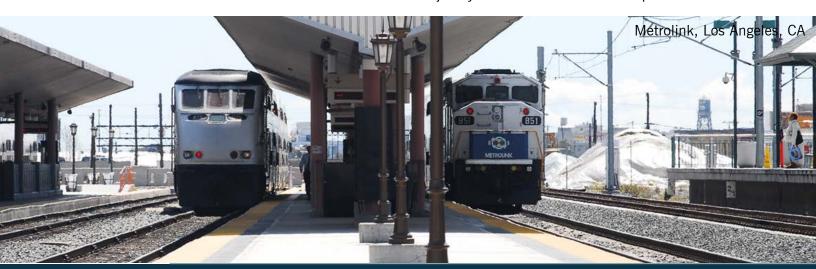
The notice to the ETAT for the Programming Screen begins the Federal Consistency Review (if applicable) and initiates the NEPA scoping process. For FTA led projects, notice to the ETAT and associated formal resource agency comments are not required until FTA has approved the project's entrance in the federal funding program. However, the information regarding potential environmental concerns resulting from the

use of the EST and the Draft Programming Screen Summary Report are vital. If an area of environmental concern is identified for the project, additional effort and evaluations should be considered after consultation with FTA. Early environmental studies should be conducted only if FTA feels the work is necessary to ensure compliance with the two-year requirement to complete PD for New Starts projects. Examples may include more detailed cultural resource evaluations, Section 4(f) resources impacts, permitting needs, or other lengthy environmental evaluations. As stated, careful consideration should be given to how these evaluations are conducted as they are not reimbursable by FTA because the project has not officially entered the federal grant program.⁴

The anticipated Class of Action may be a Type 2 Categorical Exclusion (Type 2 CE) documentation, SEIR, Environmental Assessment (EA), or Environmental Impact Statement (EIS). **Appendix A** contains the Environmental Checklist required by FTA to determine Class of Action.

Right-of-Way Considerations

If the amount of right-of-way acquisition needed to construct the recommended alternative is significant or significantly more than another alternative, the Project Sponsor may be required or encouraged to justify the decision. Advance acquisition of the





right-of-way should be considered to reduce potential cost escalation. Because project cost is 50 percent of the project rating criteria, significant right-of-way costs can create a low rating which may keep the project from advancing to the next phases of the FTA process.

For projects seeking FTA funding, right-of-way considerations may inform the Class of Action determination. It is also recommended that conceptual engineering of the recommended alternative be conducted, including stations and maintenance facilities, and illustrating the existing and additional right-of-way. The engineering drawings should be provided to FTA with the application letter to assist in determining the official Class of Action.

TCAR Report

The TCAR Study documents the evaluation process, including the methodology used to screen alternatives, the relationship between the alternatives, the Purpose and Need, and the reasons alternatives advanced or did not advance to subsequent screens. It should also address the ETDM program screen, cost, and schedule analyses for the PD or PD&E process. Typically, a TCAR Study report includes the following elements:

- Executive Summary
- Introduction
- Purpose and Need Statement
- · Alternatives Considered
- Transportation Issues and Analysis
- Environmental Issues and Analysis
- Financial Analysis
- Public Involvement
- Agency and Stakeholder Coordination
- Comparative Analysis and Evaluation of Alternatives
- Conceptual Design
- Environmental Screening
- Estimated Project Costs
- · Draft Project Schedule

- Summary of Recommendations
- Appendices
 - ° ETDM Programming Screen Report
 - Supporting technical reports
 - Conceptual design drawings
 - Correspondence
 - o Other

1 Determine Potential Funding Sources, Prepare for Application into FTA Project Development

After all of the information is analyzed and documented in the TCAR Study, the Project Sponsor should decide whether the project should advance to subsequent phases. This includes the decision to pursue federal, state, or local funding for the project (or a combination thereof). A summary of all available funding options or scenarios for the project related to both capital and O&M costs may include local, state, or federal monies, or some combination of all three. For projects seeking funding under the FTA CIG Program, consideration should be given to ongoing New/Small Starts projects in the region and how these projects may compete or be interrelated. Documentation of currently committed funding sources will be required for the FTA application process.

Regarding the state match for non-federally funded projects, **Florida Statue 341.051** states "The department may fund up to 50 percent of the nonfederal share of the costs, not to exceed the local share, of any eligible public transit capital project or commuter assistance project that is local in scope; except, however, that departmental participation in the final design, right-of-way acquisition, and construction phases of an individual fixed-guideway project which is not approved for federal funding shall not exceed an amount equal to 12.5 percent of the total cost of each phase."





The funding decision informs several other key decisions, such as project evaluation requirements and responsible agencies. For example, some transit grants may only address the construction of major transit facilities or transit operations. This information is essential in having an informed discussion with the MPO or other governmental agency on the recommended alternative.

The anticipated costs as well as available local, state, and federal funding sources are noted in the FDOT Work Program, State Transportation Improvement Program (STIP), the LRTP, and TDPs. The availability of local funding sources varies from municipalities and counties. State funding for New Starts transit projects is available in the form of matching funds from Florida's State New Starts Grant Program. State funding typically covers 50 percent of the non-federal match (§ 341.051).

To consider projects for state assistance, FDOT requests the TCAR Study or similar analysis be performed to determine a project's viability and ensure that all projects are evaluated in an equitable manner. Federal funding for transit projects is available from FTA's Formula or Discretionary programs such as the CIG program, which includes New Starts, Small Starts, or Core Capacity grants, as described on pages 26-27.

Request Entry into the FTA Project Development Phase

A TCAR Study is designed to assist Project Sponsors in preparing for a PD&E Study and an application to request entry into FTA's PD phase. The PD phase for FTA includes preparing the NEPA document, conducting the alternatives evaluation and ranking, and formally designating a Locally Preferred Alternative (LPA) which must then be included in the current LRTP. If already included in the LRTP, project information should be verified and made consistent with elements of the LPA, such as project length, transit mode, estimated cost, general corridor, and destinations; however, the LRTP should not provide too much detail, thereby locking in a specific alternative.

Costs associated with the PD phase (not including the cost of work done prior to officially entering PD) are eligible for FTA funding. In addition to preparing the NEPA document, sufficient information must be gathered during this phase to develop the formal goals, objectives, and performance measures. It is recommended that performance measures be consistent with and reflective of FTA's evaluation criteria for Project Justification and Local Financial Commitment.

If federal funding is desired, the Project Sponsor would submit a letter describing the project and requesting entry into the PD phase to the FTA. The



FTA has 45 days to respond in writing to the request. The response may indicate that the proposed action is accepted into PD or that additional information is required. The application letter should be succinct (two to five pages) and summarize the pertinent information from the TCAR Study. A sample letter is provided in **Appendix B** of this guidance.

Per the FTA's website, the following information should be included with the request letter:⁵

- Name of the Project Sponsor, any partners involved in the study, and their roles and responsibilities
- Identification of the project manager and other key staff performing the PD work
- · Brief description of the corridor being studied
- Description of the transportation problem in the corridor or a statement of purpose and need
- Identification of a proposed project if one is known and the alternatives being considered, if any
- An initial cost estimate for the project
- Indication of whether the project would be a New Starts, Small Starts, or Core Capacity project
- · Current levels of transit service in the corridor
- · Copies of prior studies done in the corridor, if any
- Explanation of the funding available and committed to conduct the PD work
- Documentation demonstrating commitment of funds for the PD work

The following outlines the steps anticipated for a project to receive FTA CIG funding:

- Compliance with NEPA and environmental laws, regulations, requirements, and Executive Orders
- Selection of LPA and adoption of LPA into LRTP
- Completion of the activities required to obtain a project rating
- Completion of the readiness requirements for entry into Engineering

- Anticipated receipt date of a FFGA from FTA
- Anticipated start date of revenue service

Coordination with the FTA Region IV staff is recommended prior to preparing this information to ensure the guidance has not changed. Once FTA has approved the application and sent formal notification of acceptance into the New Starts, Small Starts, or Core Capacity programs then the PD phase can begin.

For New Starts or Core Capacity projects, the PD phase must be completed within two years of the date on which the project officially enters PD. Within this period, the Project Sponsor must complete the activities required to obtain sufficient FTA project rating. An overall project rating of Medium or better is required for entry into the New Starts Program and approval to move into the Engineering phase. The more certainty that exists about a project, in terms of its potential impacts and benefits, community support, and implementation challenges, the more likely it is to move through the environmental documentation phase within the two-year period.

A Funding and Financing Plan will be required to show adequate funding over several years to complete the project in year of expenditure dollars. The highest funded projects with the best benefits have a better chance of competing nationally. Projects that result in less substantial ratings may be bolstered by a greater percentage of local matching funds. The process for completing PD is detailed in *Part 1, Chapter 14 of the FDOT PD&E Manual* and on the FTA website.

Project Schedule (Draft Timeline)

If FTA funds are pursued, the PD Application must include a schedule for completion of the PD and NEPA process. A two-year timeframe is required for New Starts or Core Capacity projects. The Project Sponsor should consult with FTA to confirm and refine the preliminary schedule upon determination of the



Class of Action. The schedule should also present the engineering and construction phases as well.

Project Costs

In addition to the PD and NEPA schedule, costs associated with conducting PD should be provided to FTA or agencies participating in the PD&E process, along with documentation that funds to complete PD are programmed. FTA may reimburse the project sponsor for PD costs once accepted into the process. While sometimes necessary and advised to complete preliminary environmental analysis prior to entering PD, including the TCAR Study, Project Sponsors should be aware that this effort is not reimbursed by FTA. Additionally, State New Starts funding, as identified in Section 341.051 Florida Statutes, may be available to assist in project funding. The Central Office Transit Manager should be contacted upon completion of the TCAR process to determine availability.

Preliminary capital costs to construct the recommended project alternative should be developed and reported in both present day costs and the projected horizon year costs based on annual inflation rates. It is recommended that cost estimates be calculated in accordance with the FTA Standard Cost Category (SCC) estimate format for all transit projects.

O&M cost estimates should also be developed for the recommended project alternative in both present day costs and the projected horizon year costs based on annual inflation rates. Costs should consider recent service and financial data for the operator, if applicable. As appropriate, start-up costs should also be prepared to include all costs needed to get the transit system operational, such as hiring and training of staff, system testing, marketing, and safety reviews. These capital and O&M costs will be refined upon completion of PD and will need to be committed prior to entry into engineering.

A TCAR Study...

- ...is highly recommended for use by all agencies considering federal and state matching funds for a premium transit project.
- ...is recommended for all state and locally funded transit projects where multiple alternatives are considered to narrow the number of alternatives for a SEIR or NEPA Study.
- ...streamlines the process of taking a project from early planning to environmental review.
- ...further evaluates alternative options for a priority corridor identified during planning to solve the transportation problems.
- ...documents public and agency support for the project.
- ...identifies agencies roles and responsibilities and lays a framework for a project management plan
- ...determines if FTA funding should be sought for the project.
- ...collects and documents enough information to prepare an application to enter the FTA PD phase for New Starts, Small Starts, or Core Capacity.
- ...identifies the Recommended Alternative for further evaluation in the PD&E Study phase and FTA PD process.
- ...considers available and potential funding for project delivery.
- ...ensures a highly competitive project is advanced.
-documents a well-organized, thoughtful process and a community based approach in delivering beneficial and sustainable transit projects.
- ...ensures the PD process can be completed within the timeframe required.



2

Federal Transit Administration

All transit projects receiving federal funds or transit projects that involve major federal actions, such as new or extended transit systems, maintenance facilities, or multimodal centers, must work with FTA to complete the Project Development and Engineering phases, and to enter into a FFGA to receive funding to build the project. **Figure 5** shows the steps of the FTA New Starts and Small Starts processes.

FTA developed and issued "Final Interim Policy Guidance Federal Transit Administration Capital Investment Grant Program"; however, planning and documentation requirements are subject to frequent updates; therefore, it is advised to review FTA's webpage prior to initiating a project.²

Three major components are imperative to submitting a successful project for FTA funding (**Figure 6**). The first is the NEPA analysis or environmental review to determine if building the project is anticipated to significantly impact the environment or community. The second is the project's competitiveness compared to other project applications submitted. The final is identifying the funding strategy or financial plan as well as the financial commitment of the local and state agencies. Competitiveness and funding highlight the primary differences between the FTA and FHWA/FDOT process. Therefore, it is imperative that the project chosen to enter project development be the best project.

While FTA is heavily involved in the later steps of Project Development, the agency is not typically involved in early project development or environmental screenings until a project considers applying for federal funding. Therefore, FTA will not comment on the adequacy of a TCAR study or the alternatives covered in it. During a TCAR study, the Project Sponsor should coordinate with the TO and District Modal

Figure 5: FTA New and Small Starts Process

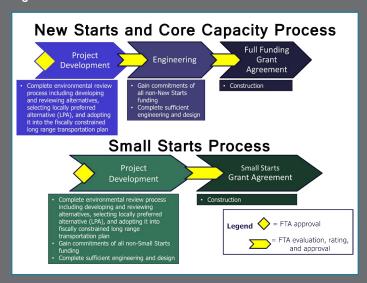
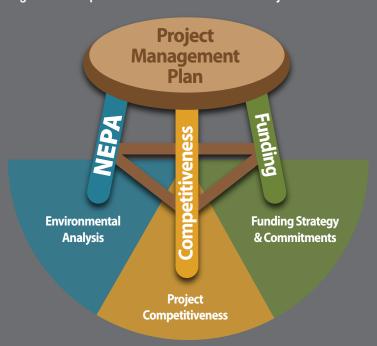


Figure 6: Components of a Successful FTA Project Evaluation



Development Office. Once a TCAR study is complete, the project sponsors should meet with FTA Region IV staff to discuss the methodologies for evaluating transit alternatives and appropriate federal grant programs.



FTA Capital Investment Grant Funding Programs

The CIG Program is FTA's primary grant program for funding major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and BRT. It is a discretionary grant program unlike most others in

government. Instead of an annual call for applications and selection of awardees by the FTA, the law requires that projects seeking CIG funding complete a series of steps over several years to be eligible for a FFGA.

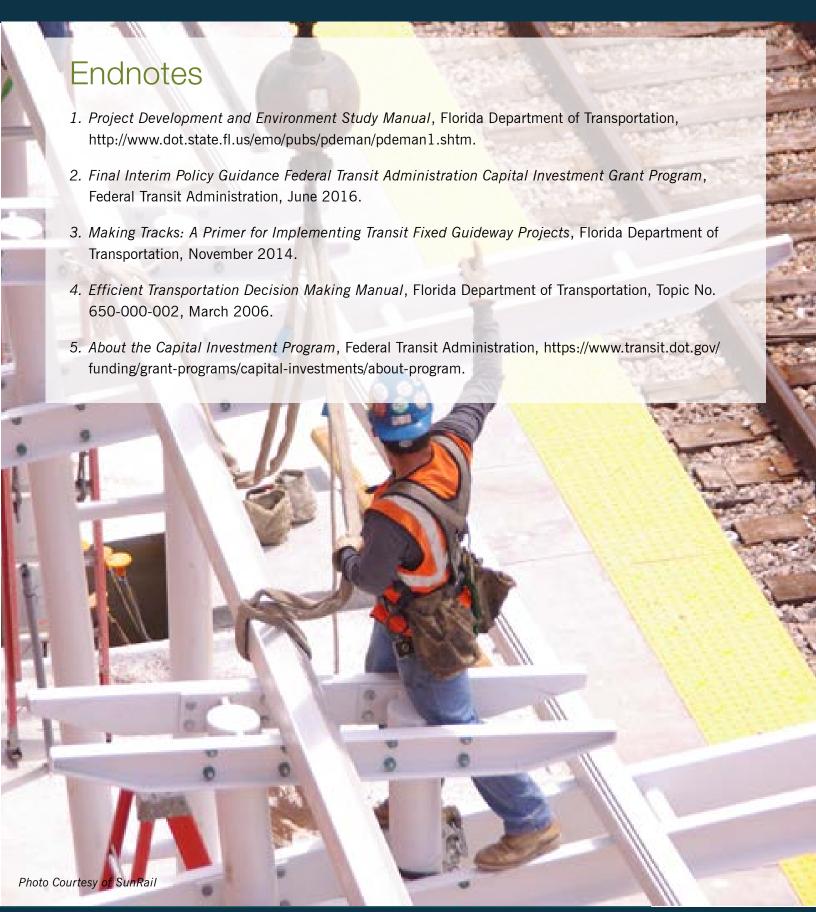
Table 2: Comparison of Capital Investment Grant Programs

	Small Starts	New Starts	Core Capacity
Total Project Cost	< \$300 million	≥ \$300 million	Not specified
Total CIG Funding	< \$100 million	> \$100 million	Not specified
Project Type	New fixed guideway systemExtension of existing systemFixed guideway BRTCorridor-based BRT system	New fixed guideway systemExtension of existing systemFixed guideway BRTCorridor-based BRT system	Substantial corridor-based investment in existing fixed guideway system
Required Phases to Apply for FFGA/SSGA	Project Development Project Development & Engineering		Project Development & Engineering
Time to Complete Project Development	Not specified	2 years	2 years
Other Requirements			 Located in corridor at or over capacity, or will be within 5 years Increases capacity by 10% Must not "maintain a state of good repair"

Programs of Interrelated Projects are comprised of any combination of two or more New Starts, Small Starts, or Core Capacity projects. The projects in the program must have logical connectivity to one another and all must begin construction within a reasonable timeframe. All projects must be evaluated and rated on a set of statutorily defined project justification and local financial commitment criteria and receive and maintain at least a "Medium" overall rating to advance through the various phases and be eligible for funding.

The law also requires projects to be rated by FTA at various points in the process according to statutory criteria evaluating project justification and local financial commitment. For a complete discussion of the CIG process and the evaluation criteria, refer to FTA's Policy Guidance.





Acronyms

APC	Automatic passenger counter	O&M	Operating and Maintenance
AVL	Automatic vehicle location	PD	Project Development
BRT	Bus Rapid Transit	PD&E	Project Development and Environment Study
CE	Categorical Exclusion	PEIR	Project Evaluation Impact Report
CIG	Capital Investment Grant	PIP	Public Involvement Plan
EA	Environmental Assessment	PMP	Project Management Plan
EIS	Environmental Impact Statement	SCC	Standard Cost Category
EST	Environmental Screening Tool	SEIR	State Environmental Impact Report
ETAT	Environmental Technical Advisory Team	SSGA	Small Starts Grant Agreement
ETDM	Efficient Transportation Decision Making	STIP	State Transportation Improvement Program
FDOT	Florida Department of Transportation	STOPS	Simplified Trips-on-Projects Software
FFGA	Full Funding Grant Agreement	TCAR	Transit Concept and Alternatives Review
FHWA	Federal Highway Administration	TDP	Transit Development Plan
FTA	Federal Transit Administration	ТО	Transit Office
LPA	Locally Preferred Alternative	TPO	Transportation Planning Organization
LRTP	Long Range Transportation Plan	TSM	Transportation Systems Management
MPO	Metropolitan Planning Organization	VMT	Vehicle miles traveled
MOU	Memorandum of Understanding	YOE	Year of expenditure
NEPA	National Environmental Policy Act		





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Appendix A: FTA Class of Action Environmental Checklist (Always check for latest version on FTA website)



Transit Concept and Alternatives Review

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What is NEPA?

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

The intent of NEPA, the National Environmental Policy Act, is to provide federal agencies with sufficient documentation and analysis to make the best environmental decisions through a reasoned study of the existing environment and the likely impacts of the proposed project.

NEPA **is not** intended to stop or delay projects. NEPA **is** intended to provide decisional information to Federal agencies.

NEPA is essentially 3 questions:

- 1. What is the **current** environment in the project area?
- 2. Will the project significantly impact the existing environment?
- 3. If there is a significant impact, can the impact be **mitigated**?

Who is responsible for what?

Grantee:

- The Grantee will provide a clear and accurate project description to FTA
- The Grantee will complete the required NEPA documentation either in-house or through a contractor
- The **Grantee** will provide FTA with complete documents for review
- The **Grantee** will notify FTA of any changes to the proposed project

FTA:

- FTA will ask the grantee for a project description
- FTA will determine the class of action (COA) based on the project description
- FTA will review environmental documents for technical and legal sufficiency
- FTA will initiate consultation to satisfy Section 106 of the National Historic Preservation Act
- FTA will be the Federal decision maker for NEPA

INFORMATION REQUIRED TO INITIATE NEPA

A CHECKLIST

For FTA to determine the extent of environmental analysis required for a proposed project, we must have a clear idea of what it may do to the environment. This includes the **natural environment** (soil, water, air, flora/fauna) *and* the **human environment** (socioeconomics, land use, traffic, etc.). Additionally, FTA must determine whether any Federal funding is sought (now or in the future) for the proposal and if FTA is required to make a decision or approval (e.g., approval for incidental use of property).

INFORMATION REQUIRED **QUESTIONS ADDRESSED** ☐ Sources of federal, state, and local funds and transit Is the project a Federal Action eligible for FTA funding? nexus Description of existing property with map showing What are the Existing conditions? Area of Potential Effect (APE) Are there possible environmental areas of concern ☐ Street address or coordinates at the site or in its surroundings? What are the characteristics of the natural ☐ Photos of property environment of the property? ☐ Photos of buildings on property Might any of the buildings be historic? ☐ Photos of surrounding buildings visible from Are there any nearby buildings that may be historic? property ☐ Description of complete project with site plan. Be What physical changes will be made to the existing site? specific for each action of the project. ☐ List of actions required upon existing property to Are there physical changes that are not obvious in achieve complete project (e.g., clear 5 acres of the site plan? (e.g., excavation for a basement, fuel wooded land, demolish building, culvert and cover creek, storage) etc.) Has thorough planning for the proposed project ☐ Logical termini, alignment, mode, and technology (if occurred? (3 out of 4 are typically enough to begin a linear project). NEPA.) ☐ List of any public involvement done for the project, Has the community affected by the project been to date, if any informed? Is there any potential controversy?

The more information FTA knows about a project, the more accurate we can be in assigning the most appropriate level of environmental analysis.

TCAR

Appendix B: Sample Letter for Entrance into FTA Project Development



Transit Concept and Alternatives Review

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March 9, 2016

Ms. Lucy Garliauskas FTA, Associate Administrator for Planning and Environment United States Department of Transportation - East Building 1200 New Jersey Avenue, SE Washington, DC 20590

RE: Pinellas Suncoast Transit Authority's Request to Enter the Small Starts Program Project Development Phase for the Proposed Central Avenue Bus Rapid Transit Project

Dear Ms. Garliauskas:

The Pinellas Suncoast Transit Authority (PSTA), with support from its many local and regional partners, is pleased to submit to the United States Department of Transportation Federal Transit Administration (FTA) our request to enter the Small Starts Program Project Development (PD) phase for the proposed Central Avenue Bus Rapid Transit (BRT) project, pursuant to the Fixing America's Surface Transportation Act (FAST) legislation. This letter describes the significant amount of planning already completed for this project and demonstrates PSTA's readiness to enter into PD and meet the associated requirements. We also want to thank FTA staff for participating in conference calls and meetings to discuss the project and provide valuable insight.

In accordance with the FTA's Final Interim Policy Guidance for the Capital Investment Program, the following sections of the letter, including links to completed reports and other key project materials, provide the information needed to approve PSTA's request to enter PD.

Study Sponsor and Partner Roles and Responsibilities

PSTA is the study sponsor for the Central Avenue BRT and has led the planning work accomplished to date. FTA will serve as the lead review agency. Local and state partners in this effort include the Florida Department of Transportation (FDOT), the Pinellas Metropolitan Planning Organization (MPO), and the City of St. Petersburg. Additionally, the Pinellas County and the Cities of Madeira Beach, Treasure Island, St. Pete Beach, and South Pasadena will be consulted as stakeholders for local land use planning and transportation coordination.

The roles and responsibilities of PSTA's partners in the development of this project are listed below:

- FTA Lead Review Agency
- FDOT (funding partner, technical review)
- City of St. Petersburg (funding partner, land use planning, local transportation coordination)
- Pinellas County MPO (socio-economic forecasts, technical review)
- Tampa Bay Area Regional Transportation Authority (regional coordination)

Other strong supporters of the project include the St. Petersburg Chamber of Commerce, the Central Avenue Business District, the Tampa Bay Beaches Chamber, and the Tampa Bay Rays.

Project Manager and Other Key Staff

PSTA will lead this project with assistance from one of PSTA's General Services Contractors, Parsons Brinkerhoff with Jacobs Engineering as a sub-consultant, procured under federal guidelines for qualifications based procurements.

Key PSTA staff include:

- Project Manager Heather Sobush, AICP, Planning Manager
- Project Oversight Casandra Borchers, AICP, Chief Development Officer
- Public Outreach Bob Lasher, External Affairs Officer

Description of the Study Corridor

The Central Avenue corridor stretches approximately 12 miles between Downtown St. Petersburg to the east and the Gulf Beaches to the west. Possible west end termini include St. Pete Beach, Treasure Island, and Madeira Beach, as shown in Figure 1. The corridor also provides a critical regional linkage by connecting visitors arriving at Tampa International Airport and entering Pinellas County via I-275 to the southern Pinellas County beaches, which have more than 3,900 hotel rooms.

Both downtown St. Petersburg and the beaches are major activity centers, connecting residents to jobs and community activities and tourists to various attractions in downtown and along the beaches. Within only a ½-mile of the corridor, there are more than 48,000 residents and 50,000 jobs. Major employers in downtown include Bayfront Health, All Children's Hospital/John

Figure 1: Central Avenue BRT Route Alternatives



Hopkins Medical, the University of South Florida-St. Petersburg, the Tampa Bay Times, and Duke Energy. Downtown St. Petersburg is also home to museums, research facilities, higher education institutions, a performing arts center, Tropicana Field (Tampa Bay Rays Baseball), and numerous restaurants and shops making it a popular place to live-work-play. The Central Avenue corridor contains several distinct districts that are in various stages of revitalization and growth, including strong growth in residential units in downtown. These include the Innovation District, the Central Arts District, the Edge District, the Warehouse Arts District, and the West Central District. Sections of the corridor are also part of three Community Redevelopment Areas (CRAs).

On the western end, the corridor serves the gulf beaches, which attract a large share of Pinellas County's 14 million annual visitors, including 5.8 million overnight visitors. Many lower income workers also commute to the beaches to service jobs at the numerous hotels and restaurants.

Purpose and Need

In 2012, PSTA conducted a comprehensive operational analysis, documented in the 2013 Community Bus Plan. The plan identified six key corridors for premium transit service, including Central Avenue. This corridor has also continually emerged as a key connection in local and regional studies.

The Central Avenue BRT is PSTA's top priority expansion project and provides a transit solution that will:

 Expand transit options to attract new riders and benefit existing riders, including those with a higher propensity for transit use such as the growing number of university students, millennials, tourists, moderate and low-income residents and workers, patients of medical centers, active seniors, and transit dependent residents.

The Central Avenue corridor serves two major activity centers including thousands of jobs, hotels, beaches, cultural attractions, healthcare centers, sports venues, and a vibrant downtown. In addition to the 17,000 people who live within a ½-mile of the corridor, more than 20 bus routes directly connect to neighborhoods north and south of the corridor providing convenient access to more than 120,000 people. Within the corridor and surrounding areas, 19% of the population is at or below the poverty level, 38% is minority, and 17% is age 65+. 13% of households in the same area do not have access to a car. The corridor also

provides direct access to three institutes of higher education serving thousands of students, including the University of South Florida, St. Petersburg College, and JobCorps. In addition, the medical centers along the corridor serve thousands of patients each year.

With such as diverse population base and variety of destinations, the Central Avenue corridor serves multiple travel markets, including work, healthcare, education, community access, entertainment, and tourism. By providing high frequency transit service that operates in a bus-only lane during peak hours and late into the evening, the Central Avenue BRT is expected to reduce transit travel time in the corridor by 20% or more, thereby increasing the attractiveness of transit for new riders and benefitting existing riders.

• Support Pinellas County's tourism industry, which is its top economic driver.

Pinellas County's tourism industry brings more than 14 million visitors to Pinellas County each year, contributing over four billion dollars to the local economy. Of the more than five million overnight visitors, many stay in hotels along the southern gulf beaches and travel inland during their stay to the museums, restaurants, shops, sporting events, and community events in downtown St. Petersburg. These tourists already show a propensity to utilize the Suncoast Beach Trolley and Central Avenue Trolley – contributing to a rider profile on these routes that is different than the rest of the system. The Central Avenue BRT would attract more of these visitors with expedited service between the beaches and downtown.

Foster development that supports local land use plans as well as long-term economic growth.

In the last decade, the City of St. Petersburg has invested heavily in multimodal transportation infrastructure in downtown St. Petersburg and the Central Avenue Corridor, including sidewalks, crosswalks, and bike lanes. This investment has contributed to the revitalization seen throughout the downtown area. A downtown housing boom has brought more mixed-use projects and denser residential properties. As the scarcity of land in downtown increases, this development has been expanding westward along the corridor. In keeping with long-term sustainable growth goals, local plans have designated the corridor as primarily Activity Center or Multimodal land uses, allowing for denser redevelopment that would further supporttransit. By providing a new premium transit option and expanding accessibility, BRT service will complement these plans, particularly in and around station areas.

Previous Studies

Numerous prior studies have proposed premium transit for the Central Avenue corridor. More recent studies include:

- Central Avenue Bus Rapid Transit Alternatives Analysis
- Central Avenue BRT Extended Corridor Analysis
- <u>Central Avenue Revitalization Plan (City of St. Petersburg)</u>
- 2013 Community Bus Plan

The project is included in the Pinellas County MPO's 2009 Countywide BRT Plan, the fiscally constrained 2040 Long Range Transportation Plan, the Tampa Bay Regional Transportation Authority Master Plan, and in PSTA's Transit Development Plan.

Proposed Project and Alternatives

Through the 2007 Alternatives Analysis process, a Locally Preferred Alternative was selected for the segment of the corridor from downtown St. Petersburg to 58th Street North. In this segment, the

Core Network
Frequent Local
Frequent

Figure 2: 2013 Community Bus Plan

BRT would travel along 1st Avenues North and South, which are one-way in each direction on either side of Central Avenue. At the same time, three beach alternatives, including St. Pete Beach, Treasure Island, and Madeira Beach, were evaluated as termini for the route through an Extended Corridor Analysis Study.

Although Madeira Beach was recommended by this study, subsequent public outreach and stakeholder coordination indicated a preference for Treasure Island or St. Pete Beach to capture more of the tourism market. The 2013 Community Bus Plan recommended St. Pete Beach as the western termini. Beach terminus options, shown in Figure 1, will be evaluated further as part in PD.

Given the beach alternatives, the proposed Central Avenue BRT service would travel 10 to 14 miles with 12 to 16 stops in each direction between downtown St. Petersburg and the beaches. The service is proposed to run every 15 minutes and span from 5am to midnight seven days per week and to operate in an exclusive lane during peak hours along 1st Avenues North and South between downtown and 58th Street North. Other route optimization strategies will be evaluated during PD. Daily ridership is expected to be greater than 5,500, based on the 2007 Alternatives Analysis. Ridership estimates will be updated during PD using the STOPS model.

The Central Avenue BRT would use 5-7 (depending on the beach alternative selected) specially branded articulated hybrid buses, however, vehicle alternatives will be evaluated further. Vehicles chosen for this project would be accommodated within the existing maintenance facility, which has the capacity for an increased bus fleet. PSTA will engage a marketing consultant on the branding of the entire BRT network, which includes the Central Avenue BRT project as the first route.

Current Levels of Transit Service

The Central Avenue Trolley (CAT) currently provides 30 minute service between downtown St. Petersburg and Pass-a-Grille, via St. Pete Beach. The CAT travels 14.5 miles and serves 87 stops in each direction along Central Avenue, Pasadena Avenue, the Corey Causeway, and Gulf Boulevard. A one-way trip between downtown and the beach takes 33 to 40 minutes. Over 900,000 rides were taken on the CAT in FY2015. Four other routes travel along large portions of the Central Avenue Corridor. These include Routes 18, 52, and 97 which utilize the middle and eastern parts of the corridor and Route 90, which uses the western portion from Grand Central Station to St. Pete Beach. Routes 18 and 52 operate seven days a week and have weekday headways of approximately 20 minutes. Routes 90 and 97 provide peak hour commuter service for residents traveling to jobs on the beach and in the Gateway Area, respectively. Combined, these routes provide more than 2.8 million rides a year, helping make the Central Avenue corridor one of the highest ridership corridors in the Tampa Bay Region.

At Grand Central Station, about midway along the Central Avenue Corridor, riders can connect to 12 routes and in downtown St. Petersburg connections can be made to 17 routes. On the beach end, riders can connect to the Suncoast Beach Trolley to travel to destinations along the entire beach.

Cost Estimates

The Central Avenue BRT project's capital costs are estimated at \$16.5 million (\$1.4 million per mile), assuming 5 articulated buses and 25 stations. Capital costs also include right-of-way improvements and ticket vending machines. Capital funding is expected to be 25% PSTA funds, 25% State funds, and 50% FTA New Starts funds. Operating costs are estimated at \$3 million per year assuming service from 5am-midnight with 15 minute headways, seven days per week. Operating costs will be funded through PSTA's existing revenues. Costs will be refined through the Project Development process.

Anticipated Cost to Complete Project Development and Commitment of Funds

PSTA is committed to completing all PD activities, including NEPA, as described in the attached scope, within 18 months. Project Development is anticipated to cost \$700,000, \$500,000 of which will be provided by the FDOT. PSTA will fund the remaining \$200,000. The project is currently in the Pinellas County MPO's fiscally constrained Long Range Transportation Plan and the FDOT's Tentative Work Program. It will be included in the TIP/STIP in July 2016.

Project Schedule

Spring 2016 - Enter Project Development

- Work with FTA staff to submit formal request
- Select alternatives for environmental review
- Begin agency coordination and public engagement

Summer 2016 – Refine Project

- Begin environmental impact analysis
- Develop design concepts
- Define project elements
- Continue agency coordination and public engagement

Early 2017 – Finalize Impact Analysis (NEPA)

- Select Locally Preferred Alternative (LPA)
- Update 2040 LRTP Cost Feasible Plan to include LPA

Summer 2017 - Finalize Project Development

- Refine Financial Plan
- Complete Small Starts Evaluation and Justification Package
- Request inclusion in FY19 Budget Submission

Fall 2018 – Request Construction Grant Agreement

Summer 2019 – Anticipated Receipt of Construction Grant Agreement

Fall 2019 - Begin Construction

Fall 2020 - Begin Revenue Service

Conclusion

Premium transit, with greater frequency, longer hours of service, and reduced transit travel time, is important in the Central Avenue corridor to increase the mobility of a diverse group of people who utilize the corridor for a variety of trip types and to attract new riders, thereby reducing automobile travel and demand for parking at each of the destination ends. The Central Avenue BRT project supports economic development, local land use plans, the tourism industry, and the high quality of life enjoyed by residents. In addition, the City of St. Petersburg is very focused on the corridor as evidenced by redevelopment plans and large investments in multimodal transportation, including bike lanes, sidewalks, and crosswalks. The PD phase is the critical next step to advance PSTA's top priority expansion project. Please accept this letter as PSTA's request to enter the Capital Investment Program's PD phase.

If you have any questions, please contact me at 727-540-1807 or bmiller@psta.net. PSTA looks forward to your positive review of our request to enter into PD, and to working with you and your staff as the project advances.

Sincerely,

Brad Miller

Chief Executive Officer

Pinellas Suncoast Transit Authority

Cc: Dr. Yvette G. Taylor, FTA Regional Administrator, Region IV

Elizabeth Day, Director, FTA Office of Project Planning

Jennifer Hibbert, Director, FTA Office of Planning and Program Development Brian Jackson, Community Planner, FTA Office of Planning and Environment

Jim Boxold, Secretary, FDOT

Ed Coven, State Transit Manager, FDOT Paul Steinman, Secretary, FDOT District 7

Ming Gao, Modal Development Administrator, FDOT District 7

Elba Lopez, Transit Administrator, FDOT District 7

Darden Rice, PSTA Chair

Attachments: Central Avenue BRT Fact Sheet

Project Development Scope of Services and Budget

FDOT Work Program Documentation

Letters of Support





Central Avenue Bus Rapid Transit Small Starts Project

Bus Rapid Transit (BRT) in St. Petersburg's Central Avenue corridor from downtown St. Petersburg to the Gulf beaches is an ideal BRT "pilot project" for Pinellas County reflecting local priorities and local commitment to fixed guideway. This demographically diverse corridor represents the highest ridership corridor in the Tampa Bay Region.

The **goals of the Central Avenue BRT** project are to develop and implement successful BRT service that:

- Supports local revitalization and economic development plans;
- Supports tourism with a fast, convenient transportation alternative between two of Pinellas' major tourist centers;
- Attracts new ridership;
- Supports the unique character of the area; and
- Provides service in a cost-effective manner.

The Central Ave BRT will complement local service provided by the existing, and highly successful Central Avenue Trolley by providing **expedited**, **limited stop travel** from downtown St. Petersburg to the beaches, seven days a week on 1st Ave N (westbound) and 1st Ave S (eastbound).

The proposed BRT will serve only major stops in the corridor, cutting the current transit travel time from St. Pete to the beaches by more than a third.

Proposed Schedule

Spring 2016 –Enter Project Development

- Work with FTA staff to submit formal request
- Select alternatives for environmental review
- Begin agency coordination and public engagement

Summer 2016 – Refine Project

- Begin environmental impact analysis
- Develop design concepts
- Define Project Elements
- Continue agency coordination and public engagement

Early 2017 – Finalize Impact Analysis (NEPA)

Select Preferred Alternative

Summer 2017 – Finalize Project Development

- Complete Small Starts Evaluation and Justification Package

- Refine Financial Plan
- Request FTA Grant for inclusion in FY19 Budget

Summer 2019 – Anticipated Receipt of Construction Grant Agreement

Fall 2020 – Begin Revenue Service

dor, cutting the current transit travel time Proposed Capital Funding

25% State New Starts \$4M

25%

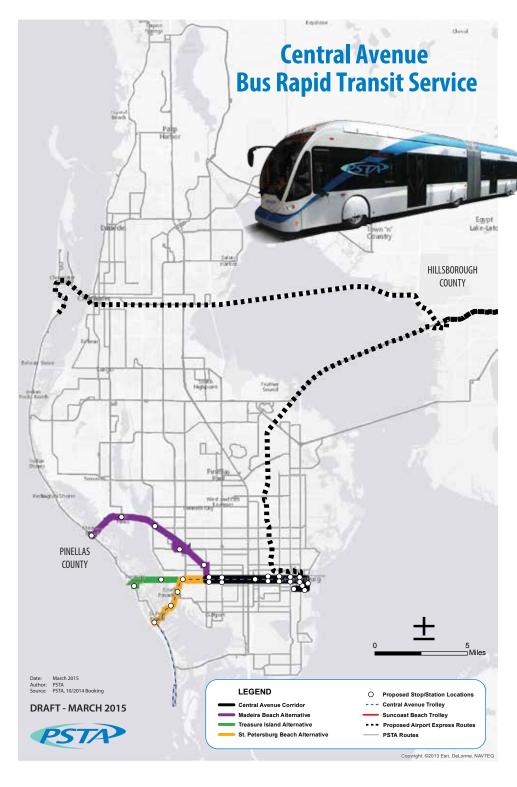
ocal (PSTA Capital Reserves)

\$4M

50% Federal New Starts \$8M







<u>Serves Major Employers, Destinations, and Residential Areas:</u>

- Downtown St. Petersburg's medical center and other major medical facilities.
- University of South Florida St. Petersburg
- Restaurants and shops
- Museums, Performing Arts Center and arts districts
- Tropicana Field
- Tourist destinations/employment on the Beaches
- Special events downtown and on the Beaches

Supports Community Plans and Investments:

- City of St. Petersburg Central Avenue Revitalization Plan
- Central Avenue Art in Transit Project (\$2.8-\$4M+ City Investments)
- St. Petersburg City-Chamber Economic Development Initiatives

Service Facts:

- Length of Route: 10-14 miles
- City of St. Petersburg Dedicated Right-of-Way along 1st Ave. N. and 1st Ave. S.
- Proposed Stops: 12-16 in each direction
- Proposed Frequency: Bus every 15 minutes
- Proposed Service Span: 5am-midnight
- Total Number of Vehicles: 5-7
- Total Capital Cost: \$16.5M
- # of Jobs within ½ mile of Corridor: 25K
- # of People within ½ mile of Corridor: 48K

Supported By:

- Pinellas Suncoast Transit Authority
- City of St. Petersburg
- Pinellas County
- St. Petersburg Chamber of Commerce
- St. Petersburg Downtown Partnership
- Central Avenue Business District
- Tampa Bay Beaches Chamber
- Tampa Bay Rays Baseball
- Pinellas MPO

Brad Miller, PSTA Chief Executive Officer

Office: (727) 540-1807 Cell: (727) 459-9697 Email: bmiller@psta.net



MASTER SCOPE OF SERVICES CENTRAL AVENUE BUS RAPID TRANSIT PROJECT PROJECT DEVELOPMENT

In 2012, PSTA conducted a comprehensive operational analysis, resulting in the 2013 Community Bus Plan. The plan identified key corridors for premium transit service, including Central Avenue Corridor in St. Petersburg. This corridor has also continually emerged as a key connection in numerous local and regional studies. The Central Avenue corridor stretches approximately 12 miles between Downtown St. Petersburg to the east and the Gulf Beaches to the west. Possible west end termini include St. Pete Beach, Treasure Island, and Madeira Beach. The corridor also provides a critical regional link by connecting visitors arriving at Tampa International Airport and entering Pinellas County via I-275 to the southern Pinellas County beaches, which have more than 3,900 hotel rooms.

The Central Avenue BRT is PSTA's top priority expansion project and provides a transit solution that will:

- Expand transit options to attract new riders and benefit existing riders, including those with a higher
 propensity for transit use such as the growing number of university students, millennials, tourists,
 moderate and low-income residents and workers, patients of medical centers, active seniors, and
 transit dependent residents.
- Support Pinellas County's tourism industry, which is its top economic driver.
- Foster development that supports local land use plans as well as long-term economic growth.

This Scope of Services (Scope) is an agreement between the Pinellas Suncoast Transit Authority (PSTA) and Parsons Brinkerhoff (Prime)/Jacobs Engineering (Sub) (hereinafter referred to as the CONSULTANT) to conduct the Central Avenue Bus Rapid Transit (BRT) Project Development & Environment (PD&E) Study (hereinafter referred to as the Central Ave. BRT PD&E).

To construct the Central Ave. BRT project, it is anticipated that federal funding would be needed through a Capital Investment Grant (CIG) from the Federal Transit Administration (FTA). It is expected that a PD&E Study will be completed that satisfies all of the requirements for FTA Small Starts Evaluation and Justification Package. The provisions and requirements for work detailed in this Scope are guided by the following agencies and their respective project responsibilities:

- Federal Transit Agency (FTA) Lead review agency
- Pinellas Suncoast Transit Authority (PSTA) Project sponsor
- Florida Department of Transportation (FDOT) Funding partner, technical review
- City of St. Petersburg Funding partner, land use planning, local transportation coordination
- Pinellas County MPO Socio-economic forecasts, technical review
- Tampa Bay Area Regional Transportation Authority Regional coordination

Routine project guidance will be provided by the following:

- Study Management Team PSTA, FDOT, and MPO staff, with City participation as needed
- Downtown, Beaches, and Central Avenue Stakeholder Working Groups Neighborhood associations, business and community leaders, chambers of commerce, Central Avenue Council, Downtown Partnership, agency staff, and others as needed
- **Public Involvement** All interested parties and participants

This Scope is designed to be completed in phases as described below:

Task	Description	Schedule	
Task One	Complete corridor analyses, guided by	Spring	
Project Initiation and Corridor Analysis	community input, culminating with the identification of alternatives for NEPA.	/Summer 2016	
Task Two	Complete preliminary design and service plan guided by community consensus and complete	Fall 2016	
Conceptual Design and Environmental Effects	the required efforts to satisfy NEPA through the completion of the PD&E.	to Spring 2017	
Task Three	Submit Evaluation and Justification Package	Summer	
Documentation and FTA Small Starts Submittal	for FTA Small Starts Program (before 7/1/17).	2017	
*Public engagement activities will be held during all three tasks.			

The following summarizes general work activities to complete this effort; the CONSULTANT will develop a detailed Scope with deliverables for each task.

1.0 PROJECT INITIATION AND CORRIDOR ANALYSIS

The CONSULTANT will initiate the Central Ave. BRT PD&E with intensive public consensus building, evaluation, and comparison of pertinent corridors, resulting in the selection of preferred corridor based on performance.

1.1 PROJECT INITIATION

The CONSULTANT will use previous planning work to develop a clear picture of unmet transportation needs. In consultation with PSTA, the CONSULTANT will review previous studies, such as the PSTA Community Bus Study, Central Avenue Alternatives Analysis, Pinellas Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP), Pinellas Alternatives Analysis, and others. The CONSULTANT will document the multi-step evaluation process; anticipating no more than three (3) corridors will be initially evaluated, followed by another round of evaluations focused on up to three (3) alternatives for design and environmental review. This effort will include identification of the No Build Alternative, corridor travel market analysis, and transit ridership forecasting.

Deliverables:

- Evaluation Plan
- Corridor Travel Market Assessment
- No Build Transit Ridership Forecast

1.2 MANAGEMENT AND COORDINATION

PSTA will coordinate with FTA to review the program requirements and confirm that requirements are met. PSTA will document agency roles and responsibilities with the creation of a Study Management Team (SMT) which is expected to include PSTA, FDOT, and MPO staff, with City participation on an as needed basis. The CONSULTANT will prepare the necessary coordination materials that support the SMT. The CONSULTANT will meet with PSTA as needed throughout the project.

Deliverables:

- Up to 14 progress meetings with PSTA Project Manager (Approximately 1 per Month)
- Up to 14 SMT meetings (Approximately 1 per Month)

The CONSULTANT will coordinate their work with any ongoing and/or planned projects that may affect this Study. The CONSULTANT will coordinate with local governmental entities to ensure Study concepts are compatible with local improvements and right of way activities. The CONSULTANT will coordinate with any agencies and/or entities that require further coordination through the Efficient Transportation Decision Making Process (ETDM).

1.3 CORRIDOR ANALYSIS AND SELECTION

The CONSULTANT will conduct all corridor analyses which will include Measures of Effectiveness (MOEs) that at minimum reference FTA guidance and are used to evaluate each corridor. The corridor analysis will focus on connecting to the Gulf Beaches, logical termini, potential stations, and vehicle technology. The result of this task will be the definition of three alternatives for design and environmental review. This effort will include evaluation of the corridor, definition of the recommended alternative(s) for environmental evaluation, ETDM screening, and scoping of environmental work with FTA.

Deliverables:

- Corridor Evaluation Summary
- Definition of Recommended Alternative(s) for NEPA review and evaluation
- ETDM Screening Summary

1.4 PUBLIC INVOLVEMENT

Public involvement includes communicating to and receiving input from all interested persons, groups, business owners, and government organizations regarding the development of the project. The CONSULTANT will support PSTA with all public involvement materials (e.g., newsletters, advertisements, handouts, exhibits, etc.) associated with the following tasks. All meetings and meeting participants are subject to change.

Deliverables:

- Public Involvement Plan and Report
- Advance Notification
- One (1) City and County Agency Kick-off Meeting
- Up to Six (6) Stakeholder Meetings for the Downtown, Beach, and Central Avenue Stakeholder Working Groups
- Up to Two (2) Public Corridor Workshops

1.4.1 PSTA Responsibilities

PSTA staff will support the Study by leading several engagement efforts with the community. These responsibilities include, but are not limited to the following:

- Individual One-on-One Meetings with Stakeholders and Other Interested Parties
- Website Communications
- On-line Surveys
- Social Media Communications
- Small Group Presentations
- Presentations to Agency Committees and Boards
- Public Outreach Materials

2.0 CONCEPTUAL DESIGN AND ENVIRONMENTAL EFFECTS

Based on the input collected and analyses conducted in the previous task, the CONSULTANT will move forward with development of the Central Ave. BRT conceptual design and its resulting environmental effects and costs.

2.1 CONCEPTUAL DESIGN

This Study is anticipated to require a Type II Categorical Exclusion. The CONSULTANT will perform the appropriate level of engineering analysis for this class of action. It is anticipated that the CONSULTANT will develop 30 percent design concepts appropriate for a FTA CIG Small Starts submittal.

The CONSULTANT will develop and analyze conceptual design alternatives to address project needs and objectives. The development of the conceptual design will consider a context sensitive system of complete streets. Consideration for complete streets will enable safe, convenient, and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. Efforts will include:

- Field Review and Preliminary Survey
- Geotechnical Review
- Traffic Data and Analysis
- Safety
- Non-Motorized Transportation
 - Pedestrian crossings
 - Concepts that accommodate bicyclists
 - Relationship between bike lanes and dedicated bus lanes
 - Options for buffered bicycle facilities
 - Options for separated/protected twoway bicycle facilities

- Routing of bike lanes past transit loading platforms
- Interaction with other Utilities and Railroads
- Interaction with Roadway
- Station Locations
- Preliminary Stations Design
- Passenger Boarding and Alighting
- BRT Vehicles Technologies and Manufacture Specifications
- ITS and Parking

Deliverables:

- Preliminary Engineering Report
- Transit Infrastructure, Service, and Operating Plans
- Ridership and Revenue Forecasts
- Operating and Maintenance Cost Estimates
- Systems Elements and Cost Estimates
- Preliminary Engineering Report
- Phasing Plan (if needed)

2.2 ENVIRONMENTAL ANALYSIS

The CONSULTANT will coordinate and perform the appropriate level of environmental analysis for this Study. Pertinent data will be collected, analyzed, and summarized in the appropriate sections of the PD&E Document. The level of assessment depends on complexity of the project, level of controversy, potential for significant impacts and degree and quality of information/data available from previous activities. PSTA, in coordination with FTA, will identify conditions which do not require environmental

evaluations in this PD&E Study. Efforts may include the evaluation of sociocultural, cultural, historic, natural resources, and physical environmental effects. Efforts may include the following:

- Sociocultural Effects
 - Social and Land Use Effects
 - Safety/Emergency Response
 - Title VI/VIII
 - Mobility/Transit Dependant
 - o Economic
 - Aesthetics
- Cultural Resources
 - o Archaeological and Historic Resources
 - Recreational, Section 4(f)

- Natural Resources
 - Special Designations
 - Permit Conditions
- Physical Effects
 - Traffic Effects
 - Noise and Vibration
 - Air Quality
 - Construction
 - Contamination

Deliverables:

Draft and Final Environmental Memoranda and Summary Documents

2.3 PUBLIC INVOLVEMENT

The CONSULTANT will continue to support PSTA with all public involvement materials (e.g., newsletters, advertisements, handouts, exhibits, etc.) associated with the following tasks. All meetings and meeting participants are subject to change, as follows.

Deliverables:

- Up to Three (3) City/County Coordination Meetings
- Up to Six (6) Stakeholder Work Sessions for the Downtown, Beaches, and Central Avenue Stakeholder Working Groups
- Up to Four (4) Public Workshops
- Up to Two (2) Environmental Forums

2.3.1 PSTA Responsibilities

PSTA staff will support the Study by leading several engagement efforts with the community. These responsibilities include, but are not limited to the following:

- Individual One-on-One Meetings with Stakeholders and Other Interested Parties
- Website Communications
- On-line Surveys
- Social Media Communications
- Small Group Presentations
- Presentations to Agency Committees and Boards
- Public Outreach Materials

3.0 REPORTS AND DOCUMENTATION

The CONSULTANT will use project evaluations and information to produce the appropriate Federal Grant Documentation Package for the CIG Small Starts Program. Specifically, documentation for the Small Starts program is required.

Deliverables:

- Small Starts Templates
- Cost Estimate (Standard Cost Category Worksheets)

- Documentation of Project Definition and Key Elements
- Refined Financial Plan
- Project Schedule
- Draft and Final Environmental Document
- Draft and Final Project Evaluation and Justification Package
- Public Hearing
- Notice of Approved Environmental Document

3.1.1 PSTA Responsibilities

- Supporting Documentation Demonstrating all of the Non-CIG Funding is Committed
- Draft Single Year Grant Agreement or Small Starts Grant Agreement (SSGA)
- Project Management Plans and Subplans Including the Following:
 - o Risk and Contingency Management Plan
 - Documented Processes and Procedures to Manage the Project During SSGA/Construction
 - Staffing plans Addressing Schedule and Cost Controls, Risk Management, Construction Management, and Safety and Security
- Completion of all Major Third Party Agreements and Permits

4.0 PROPOSED BUDGET BREAKDOWN

The following is the anticipated cost for each task/subtask. The final task work orders may include additional scope details resulting in a modification of the subtask fees, however, the project will not exceed the budget \$700,000.

Task	Subtask	Approximate Cost
Task One	Project Initiation and Management	\$40,000
	Corridor Analysis	\$80,000
	Public Involvement	\$60,000
Task Two	Conceptual Design	\$250,000
	Environmental Analysis	\$140,000
	Public Involvement	\$65,000
Task Three	Reports and Documentation	\$50,000
	Public Involvement	\$15,000
TOTAL		\$700,000

From: "Gao, Ming" < Ming.Gao@dot.state.fl.us > Date: January 28, 2016 at 11:36:06 AM EST

To: "cborchers@psta.net" < cborchers@psta.net > Cc: "Lopez, Elba" < Elba.Lopez@dot.state.fl.us >

Subject: Program for Central Avenue BRT Project Development

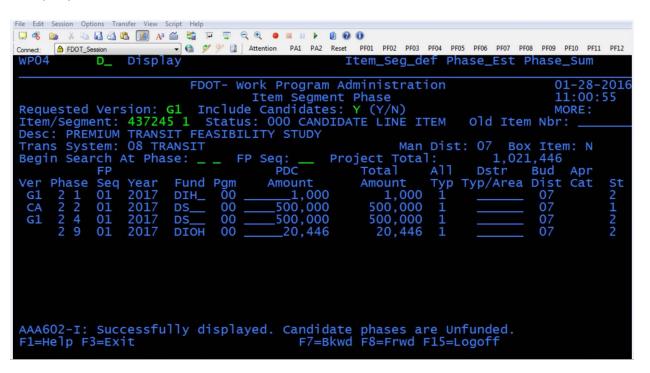
Good morning Cassandra,

Please see below a screen shot of our work program depicting the \$500K we programmed for the Central Avenue BRT Project Development phase. This line item is currently shown as tentative but will become adopted in our new fiscal year starting on July 1, 2016. Please let us know if you have any questions.

Regards,

Ming Gao, P.E.
FDOT District VII Modal Development
11201 N. McKinley Drive
Tampa, FL 33612-6456

Office: (813) 975-6454 Cell: (813) 455-1136 Fax: (813) 975-6451



February 12, 2016

Ms Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms McMillan

On behalf of the Pinellas County Metropolitan Planning Organization (MPO). I am writing to encourage you to approve the Pinellas Suncoast Transit Authority (PSTA) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project. The proposed project is along one of the county's busiest transit corridors and would be a tremendous boost to our economy, industry and quality of life.

The Pinellas MPO first identified the Central Avenue corridor for premium transit in its Major Investment Study, completed in 2000. Numerous plans developed over years, including the Pinellas Mobility Initiative, the Countywide BRT Plan, the Central Avenue Corridor Alternatives Analysis, the Pinellas Alternatives Analysis, and the 2013 Community Bus Plan have reconfirmed the need for premium transit in the corridor and identified BRT as the preferred type of premium transit service. BRT service along the Central Avenue corridor is identified as cost feasible in the adopted Long Range Transportation Plan (LRTP) and is on the priority transportation project list for the Tampa Bay urbanized area.

For many years now, our county has struggled to meet the demands for improved transit service. Being able to bring this BRT project to fruition would be an integral step toward improving our region's transit service, as well as providing attractive and viable transportation options for residents, employees, and visitors. The Pinellas MPO strongly supports this project and has amended it into both the Transportation Improvement Program (TIP) and the LRTP Cost Feasible Plan to facilitate its implementation.

We are proud to be partners with PSTA on this project and look forward to the implementation of this long planned project.

Sincerely.

Jim Kennedy, Chairma

Pinellas County

Metropolitan Planning Organization

Dr Yvette Taylor, Federal Transit Administration, Region IV Cc:

PSTA Board of Directors





CITY OF ST. PETERSBURG, FLORIDA

RICK KRISEMAN, Mayor

Office of the Mayor

December 11, 2015

Ms. Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms. McMillan,

On behalf of the City of St. Petersburg, I am writing to encourage you to approve the Pinellas Suncoast Transit Authority's (PSTA's) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project. The proposed project, located primarily within St. Petersburg, is along Pinellas County's busiest transit corridor. It would be a tremendous boost to our economy, industry, and quality of life while also serving as a vision of what preferred transit service could be throughout our community.

The Central Avenue corridor links many of our strong, traditional neighborhoods with several key commercial districts, our world-famous beach communities, and our Downtown core. Accordingly, the City of St. Petersburg remains steadfast in our dedication to the continued investment along the corridor as it is a primary urban redevelopment focus area that spans the entire width of St. Petersburg. Its success is vital to our sustained growth which allows St. Petersburg to be a city of opportunity where the sun shines on all who come to live, work and play.

Our commitment to this project is evidenced by our willingness to dedicate the exclusive use of a motor vehicle lane to the BRT on our city-owned streets of First Avenue North and First Avenue South during the peak hours as required to provide the premium service that is expected of bus rapid transit. The City will also work to provide enhanced pedestrian connections from the First Avenues to Central Avenue such that the facility is seamlessly integrated into our urban fabric for the city's 256,681 residents and the nearly six million visitors to Pinellas County each year.

For many years now our county has struggled to meet the demands for improved transit service. This project would have a major impact on helping to meet that growing demand. It provides a hefty return on investment that leverages the considerable investment the City has made in the Central Avenue corridor. Therefore, we are proud to partner with PSTA on this

project, and look forward to the successful implementation of BRT for the residents and visitors of St. Petersburg and Pinellas County.

Sincerely

Rick Kriseman, Mayor City of St. Petersburg

Cc: Yvette Taylor, Regional Administrator, Federal Transit Administration, Region IV Bill Jonson, Chairman, PSTA Board of Directors

Brad Miller, Chief Executive Officer, PSTA



December 17, 2015

OFFICE OF THE CITY COUNCIL

Charlie Gerdes, Chair

District 1

Ms. Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms. McMillan,

On behalf of the St. Petersburg City Council, I am writing to encourage you to approve the Pinellas Suncoast Transit Authority's (PSTA's) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project. The proposed project, located primarily within St. Petersburg, is along Pinellas County's busiest transit corridor. It would be a tremendous boost to our economy, industry, and quality of life while also serving as a vision of what preferred transit service could be throughout our community.

The Central Avenue corridor links many of our strong, traditional neighborhoods with several key commercial districts, our world-famous beach communities, and our Downtown core. Accordingly, the City of St. Petersburg remains steadfast in our dedication to the continued investment along the corridor as it is a primary urban redevelopment focus area that spans the entire width of St. Petersburg. Its success is vital to our sustained growth that provides our residents and visitors with improved quality of life.

Our commitment to this project is evidenced by our willingness to dedicate the exclusive use of a motor vehicle lane to the BRT on our city-owned streets of First Avenue North and First Avenue South during the peak hours as required to provide the premium service that is expected of bus rapid transit. The City will also work to provide enhanced pedestrian connections from the First Avenues to Central Avenue such that the facility is seamlessly integrated into our urban fabric for the city's 256,681 residents and the nearly six million visitors to Pinellas County each year.

For many years now our county has struggled to meet the demands for improved transit service. This project would have a major impact on helping to meet that growing demand. It provides a hefty return on investment that leverages the considerable investment the City has made in the Central Avenue corridor. Therefore, we are support the City's partnership with PSTA on this project, and look forward to the successful implementation of BRT for the residents and visitors of St. Petersburg and Pinelias County.

Sincere

Charle Gerdes, Chair

St. Petersburg City Council

Cc: Yvette Taylor, Regional Administrator, Federal Transit Administration, Region IV
Bill Jonson, Chairman, PSTA Board of Directors

Brad Miller, Chief Executive Officer, PSTA



THE CHAMBER BUILDING 100 SECOND AVE. N., SUITE 150 ST. PETERSBURG, FL 33701

> T 727.821.4069 F 727.895.6326 www.stpete.com

November 12, 2015

Ms. Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms. McMillan,

On behalf of the St. Petersburg Area Chamber of Commerce, I am writing to encourage you to approve the Pinellas Suncoast Transit Authority's (PSTA's) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project. The proposed project, located primarily within St. Petersburg, is along one of the Pinellas County's busiest transit corridors. It would be a tremendous boost to our economy, industry, and quality of life while also serving as a vision of what preferred transit service could be throughout our community.

The Central Avenue corridor links many of our strong, traditional neighborhoods with several key commercial districts, our world-famous beach communities, and our Downtown core. Accordingly, the City of St. Petersburg remains steadfast in its dedication to the continued investment along the corridor as it is a primary urban redevelopment focus area that spans the entire width of St. Petersburg. Its success is vital to our chamber members and sustained economic growth.

Our city leaders are offering the exclusive use of a motor vehicle lane to the BRT on city-owned streets of First Avenue North and First Avenue South during the peak hours as required to provide the premium service that is expected of Bus Rapid Transit. The City will also work to provide enhanced pedestrian connections along the corridor to ensure user friendly access for the city's 252,372 residents and the nearly six million visitors to Pinellas County each year.

For many years now our city and county have struggled to meet the demands for improved transit service. This project would have a major impact on helping to meet that growing demand. It provides a hefty return on investment that leverages the considerable outlay the City has made in the Central Avenue corridor. Therefore, we are proud to partner with the City of St. Petersburg and PSTA on this project, and look forward to the successful implementation of BRT for the residents and visitors of St. Petersburg and Pinellas County.

Sincerely,

Chris Steinocher President/ CEO

St. Petersburg Area Chamber of Commerce

Cc: PSTA CEO, Brad Miller, FTA Region IV Administrator, Yvette Taylor



244 Second Avenue North, Suite 201 St. Petersburg, Florida 33701 tel 727.821.5166 • fax 727.896.6302 www.stpetepartnership.org

January 28, 2016

Ms. Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms. McMillan,

On behalf of the St. Petersburg Downtown Partnership, I am writing to encourage you to approve the Pinellas Suncoast Transit Authority's (PSTA's) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project. The proposed project, located primarily within St. Petersburg, is along one of the Pinellas County's busiest transit corridors. It would be a tremendous boost to our economy, industry, and quality of life while also serving as a vision of what preferred transit service could be throughout our community.

The Central Avenue corridor links many of our strong, traditional neighborhoods with several key commercial districts, our world-famous beach communities, and our Downtown core. Accordingly, the City of St. Petersburg remains steadfast in our dedication to the continued investment along the corridor as it is a primary urban redevelopment focus area that spans the entire width of St. Petersburg. Its success is vital to our sustained growth which allows St. Petersburg to be a city of opportunity where the sun shines on all who come to live, work and play.

Our city leaders are offering the exclusive use of a motor vehicle lane to the BRT on city-owned streets of First Avenue North and First Avenue South during the peak hours as required to provide the premium service that is expected of bus rapid transit. The City will also work to provide enhanced pedestrian connections from the First Avenues to Central Avenue such that the facility is seamlessly for the city's 252,372 residents and the nearly 6 million visitors to Pinellas County each year.

For many years, our city and county have struggled to meet the demands for improved transit service. This project would have a major impact on helping to meet that growing demand. It provides a hefty return on investment that leverages the considerable investment the City has made in the Central Avenue corridor. Therefore, we are proud to partner with PSTA on this project, and look forward to the successful implementation of BRT for the residents and visitors of St. Petersburg and Pinellas County.

Sincerely,

Joni James

CEO

St. Petersburg Downtown Partnership



January 11, 2016

Ms. Therese W. McMillan, Acting Administrator Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590

Dear Ms. McMillan,

On behalf of the Tampa Bay Beaches Chamber of Commerce membership, we urge you to approve the Pinellas Suncoast Transit Authority's (PSTA's) request to enter Small Starts Project Development for the Central Avenue Bus Rapid Transit (BRT) Project.

The proposed BRT line is expected to complement local service by supplying limited, expedited stops along Central Avenue from downtown St. Petersburg to the beaches. The aim of the Central Avenue BRT project is to serve several major employers and destinations, such as downtown St. Petersburg's medical center, the University of South Florida St. Petersburg, museums and special events downtown and at the beaches.

There approximately 25,000 jobs within a half-mile of the bus stop corridor and 48,000 people residing within that area, according to the PSTA. In addition, 15 million visitors come to Pinellas County each year and 94,000 are employed in the tourism industry in Pinellas County; 25 percent of those visitors are international and a significant amount are millennials, both of whom expect alternative transportation to cars. Central Avenue is the busiest transit corridor in the entire Tampa Bay region and we urge you to support PSTA's request and look forward to the implementation of the BRT.

Regards,

Robin Sollie, IOM CEO / President



TCAR



For more information please contact:

Diane Quigley 850.414.4520



