



**Collier County MPO  
Transit Development Plan**

# **Executive Summary**

November 2020

*Prepared by*



## Introduction

CAT initiated this study in coordination with Collier County Metropolitan Planning Organization (MPO) to update CAT's Transit Development Plan (TDP), the strategic guide for public transportation in the community over the next 10 years. It represents the transit agency's vision for public transportation in its service area during this period. The main purpose of this study is to update the TDP for Collier County, as currently required by State law. This plan addresses transit and mobility needs in Collier County from 2021 to 2030.

## State of Florida Public Transit Block Grant Program

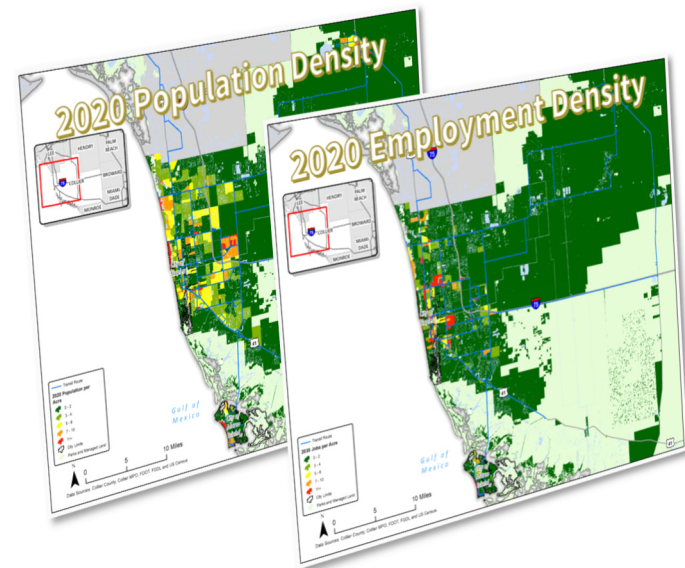
This TDP is consistent with the State of Florida Public Transit Block Grant Program, a program enacted by the Florida Legislature to provide a stable source of funding for public transit. The Block Grant Program requires public transit service providers to develop, adopt, and annually update a 10-Year TDP. Under legislation that became effective February 20, 2007, the TDP must undergo a major update every five years. Major updates involve more substantial reporting requirements. Each update must be submitted to the appropriate Florida Department of Transportation (FDOT) District Office by September 1st. CAT requested and was granted an extension due to COVID-19, the TDP was submitted to FDOT before the extension deadline of November 1, 2020.

## Plan Development

Development of the TDP included a combination of technical analysis and public outreach, including documentation of study area conditions and demographic characteristics, an evaluation of existing transit services, the development of a situation appraisal and needs assessment, and the preparation of a constrained and unconstrained 10-year financial plan.

## Baseline Conditions

To provide an assessment of current and future transportation needs, the review of baseline conditions for Collier County includes socioeconomic data, journey-to-work characteristics, new developments, tourism, land use trends, major transit trip generators and attractors, economic factors, existing roadway conditions, major employers, and commuter workflow patterns. The information is compiled and presented in this section.



The review shows growth in Collier County has and will continue to outpace Florida's growth. The review found that land use in Collier County tends to be largely comprised of low-density land uses, however future nodes featuring mixed-use activity centers along Tamiami Trail, Airport Pulling Road and Collier Boulevard have the potential to create a more transit-supportive environment.

## Public Outreach

In the effort to prepare a true community plan, an extensive public outreach process was conducted to provide valuable input into the development of transit improvements. Public outreach efforts include an onboard survey, discussion group workshops, stakeholder interviews, Review Committee meetings, virtual outreach, and online survey results.

Based on the public survey, the general public generally agrees that transit services in Collier County must be provided (71%) and that higher frequency bus service was the most preferred improvement they would like to see (56.4%), followed by more bus service to new areas (55.5%). The impact of adding improved service frequencies will provide better service and improve ridership but is expensive, adding frequency will more than double annual revenue hours.

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*I encourage more coverage and more frequent routes. As a restaurant manager, many of my staff rely on CAT service and it takes them hours to get to and from work.*

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**268 General Public Surveys**



**1,090 CAT Rider Surveys**



**12 Stakeholder Interviews**



**23 Public Workshop Participants**

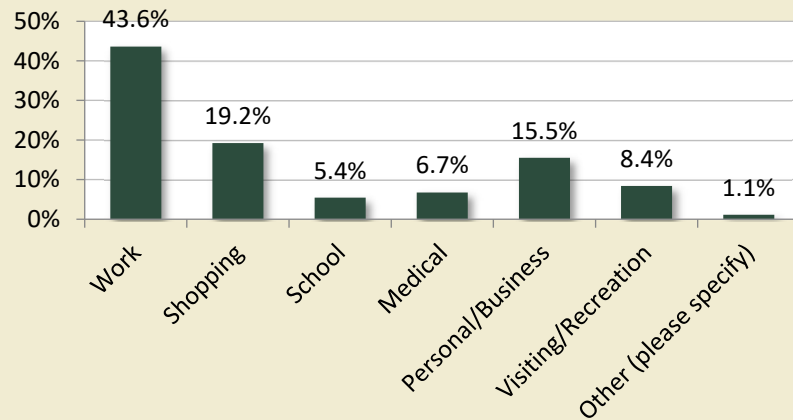


**6 Discussion Group Meetings**

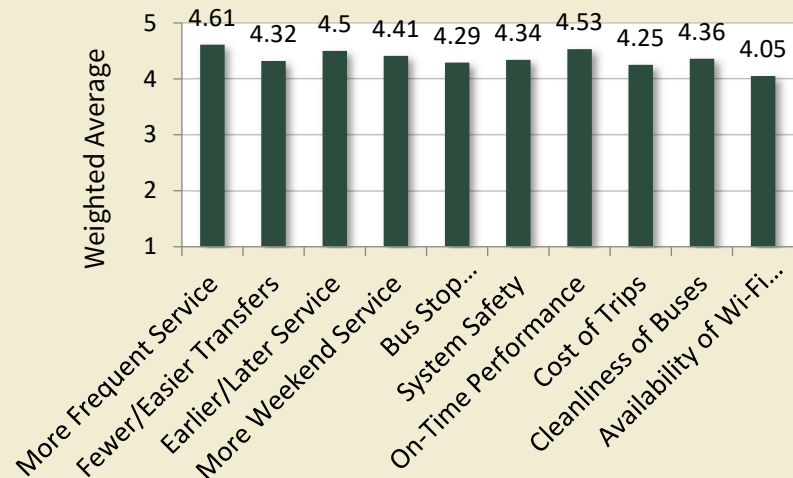
## Survey Highlights

### Current Riders

#### What is the main purpose of your trip today?

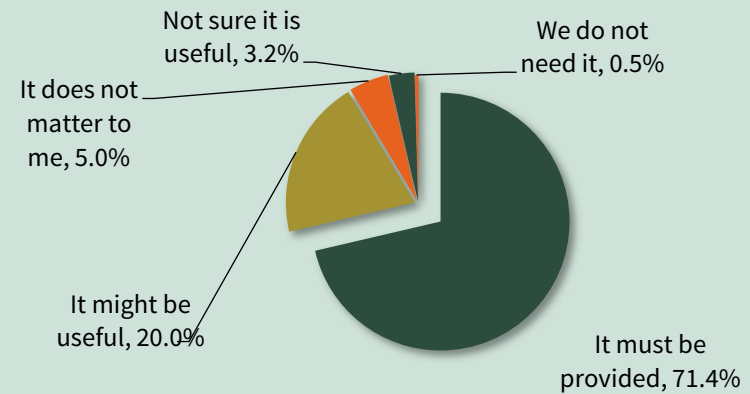


#### Rate Importance of CAT Services (CAT Riders)

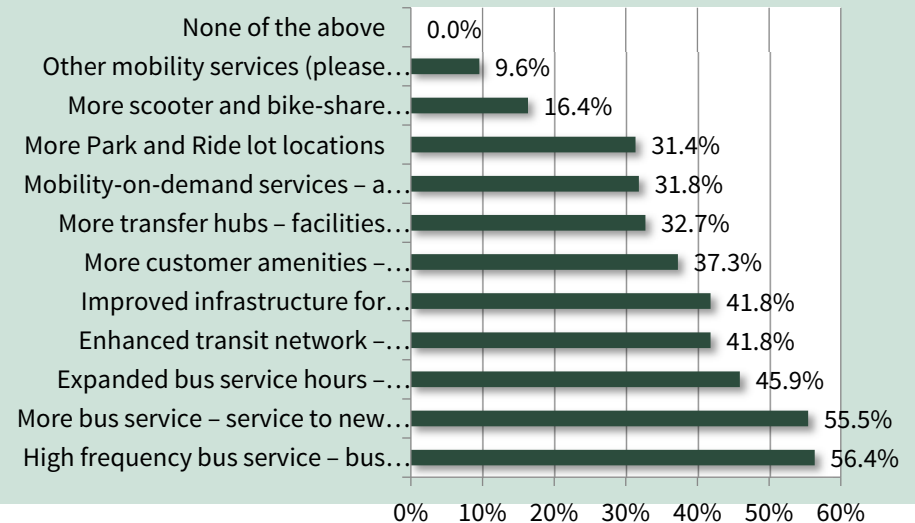


### General Public

#### Opinion of transit services in Collier County



#### Rate Importance of CAT Services (CAT Riders)

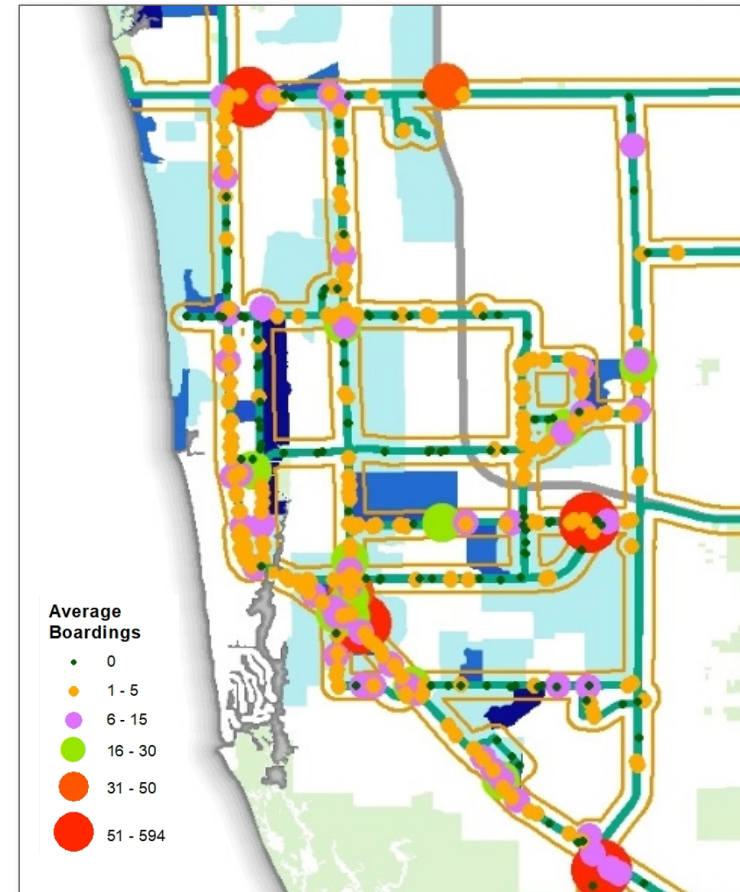


## Existing Transit Assessment

Existing ridership by month for the system was documented, followed by a breakdown of ridership by month by route. Also examined was route productivity (ridership per revenue hour and mile) and an evaluation of average daily passenger boardings by stop using **Automatic Passenger Counting (APC)** data from 2019 to evaluate productivity at the stop level. Based on the APC data provided by CAT, the areas with the highest average boardings include Collier County Government Center, CAT Operations, and Creekside Transfer Center. Other parts of the CAT service area that have high average boardings are the Immokalee Health Department, Northbrooke Plaza Drive, and Walmart near Collier Boulevard/Tamiami Trail. Route segments with low productivity vary throughout the county but are primarily along Santa Barbara Boulevard between Radio Road and Davis Boulevard, Davis Boulevard between Airport Pulling Road and Santa Barbara, Golden Gate Parkway between I-75 west and Goodlette-Frank Road, Pine Ridge Road, and Airport-Pulling Road between Golden Gate Boulevard and Pine Ridge Road. In addition, several stops on Marco Island show zero average daily boardings.

## Identifying Needs

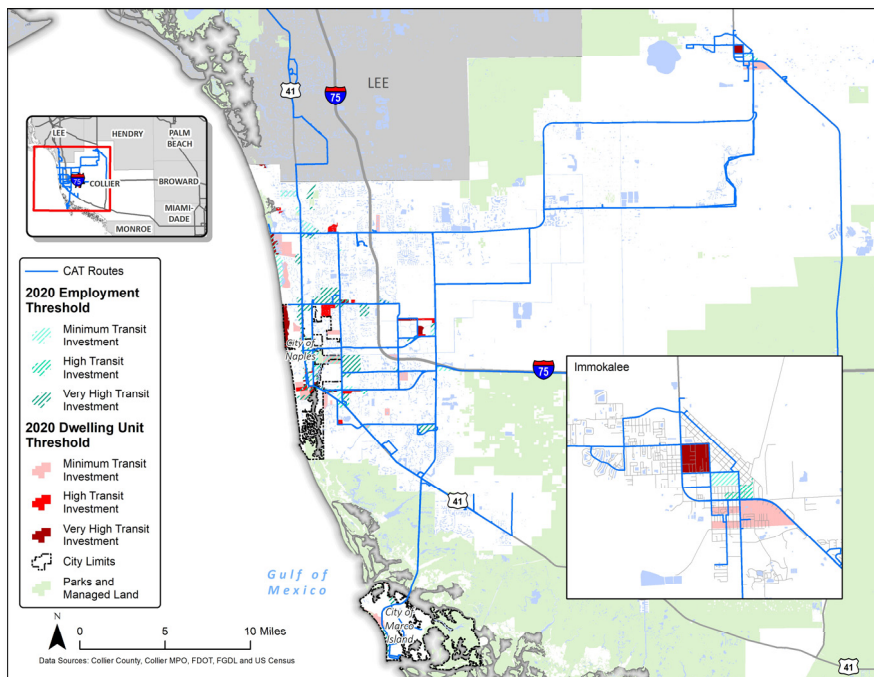
In addition to public outreach, a **Gap Analysis** for CAT was conducted to identify gaps in service compared to the expected transit needs based on an analysis of socioeconomic data gathered. This analysis included a **Transit Demand Assessment** of current transit service, which uses GIS-based tools to identify discretionary and traditional transit demand markets in Collier County and 10-year ridership projections for CAT.



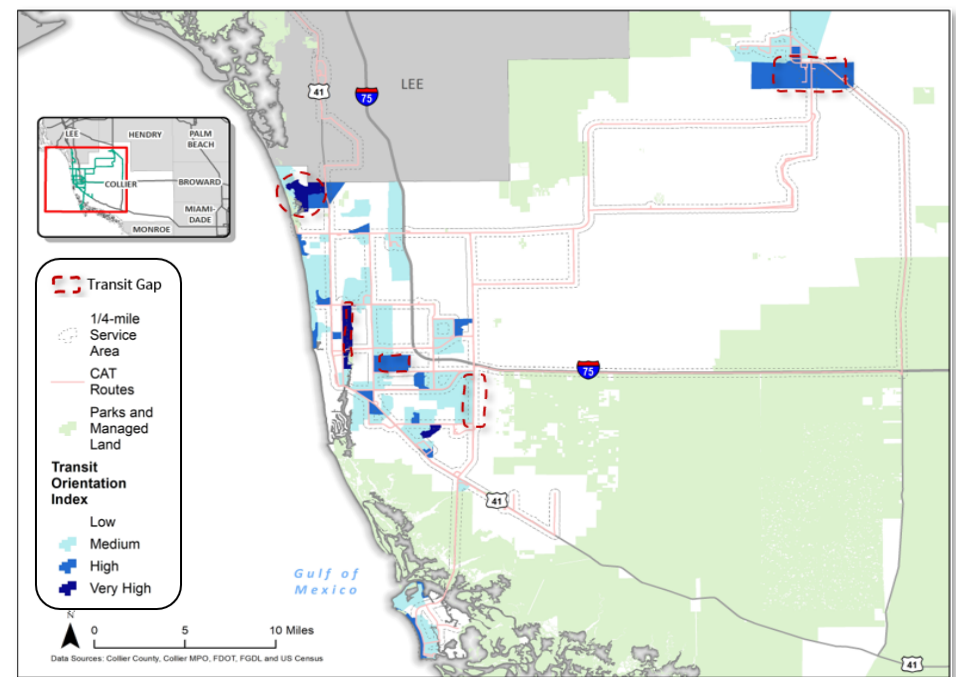


This step is vital in assessing the performance of public transit, especially in meeting the needs of transportation-disadvantaged populations and potential to attract choice riders in the CAT service area. Based on the analysis, areas that have the highest potential for being underserved are located west and east of US-41 but south of Bonita Beach Road. Other major areas that are underserved include North Naples, Immokalee, Collier Boulevard between Rattlesnake Hammock Road and Radio Road and east of Goodlette-Frank Road.

### Density Threshold Analysis



### Transit Orientation Index



These analyses of public input and technical data, combine together with the baseline conditions assessment and performance reviews were used in developing the list of potential transit alternatives as summarized in the following page.



## Alternatives Development

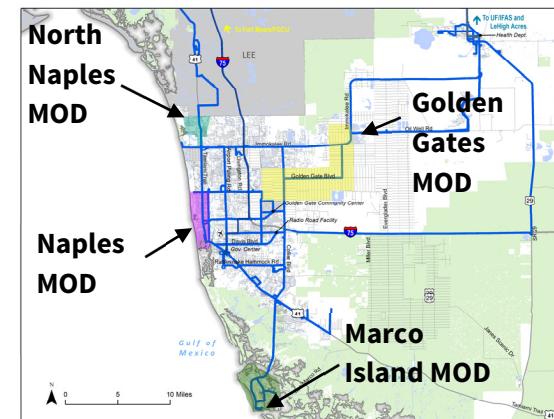
Transit improvements, referred to as alternatives, were developed based on needs without consideration of funding constraints and include improvements to existing routes, new service, mobility-on-demand, capital and technology needs. The alternatives were evaluated and prioritized using five criteria: public input, traditional market, proximity to employment, productivity, cost and efficiency impacts. The alternatives include:

- **Add trips to Route 121** – This route currently runs one AM and one PM trip but has the highest productivity, and a seating capacity that is regularly exceeded despite its two-hour travel time. Adding two morning and two evening trips during peak periods is proposed and coordinating trips with employee shift times at key locations such as the Marriott and several restaurants.
- **Improve frequency on selected routes** – According to FY 2019 performance data, the highest performing routes include the 11, 12, 13, 14, 15, 19, and 24. Based on population and employment projections, the on-board survey and review of route performance, the following headways are proposed:
  - Route 11 – currently has a 30-minute headway during peak hours; recommend a 20-minute peak headway
  - Route 12 – currently has headways of 25–90 minutes; recommend 30-minute peak headway and 60-min off-peak headway, initially improve to a 45-minute headway due to cost constraints
  - Route 13 – currently has a 60-minute headway throughout day; recommend a 30-minute headway
  - Route 14 – currently has a 60-minute headway throughout day; recommend a 30-minute headway
  - Route 15/16 – currently has a 90-minute headway; recommend a 45-minute headway
  - Route 24 – currently has a 85-minute headway; recommend a 60-minute headway to match changes to Route 17 and 18
- **Add later service** – Based on results from the on-board survey, a need for adding later service was identified as a priority. It is proposed to extend service later on routes 11, 13, 14, 17, 19, and 24. The end times for the service span of these routes currently ranges from 6:25 PM to 8:52 PM; it is recommended to extend service to 10:00 PM as a target as funding and service demand allow.
- **Realign routes** – To improve directness of service, eliminate large loops, thereby reducing network redundancy, improving travel times, providing more direct connections, improving productivity, and simplifying route information for riders, route alignment improvements were proposed for routes 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, and 28.
- **New service** – To address specific mobility, parking, and congestion concerns as well as pilot and test the application of new technologies and emerging mobility concepts, the following new services are proposed:
  - Island Trolley

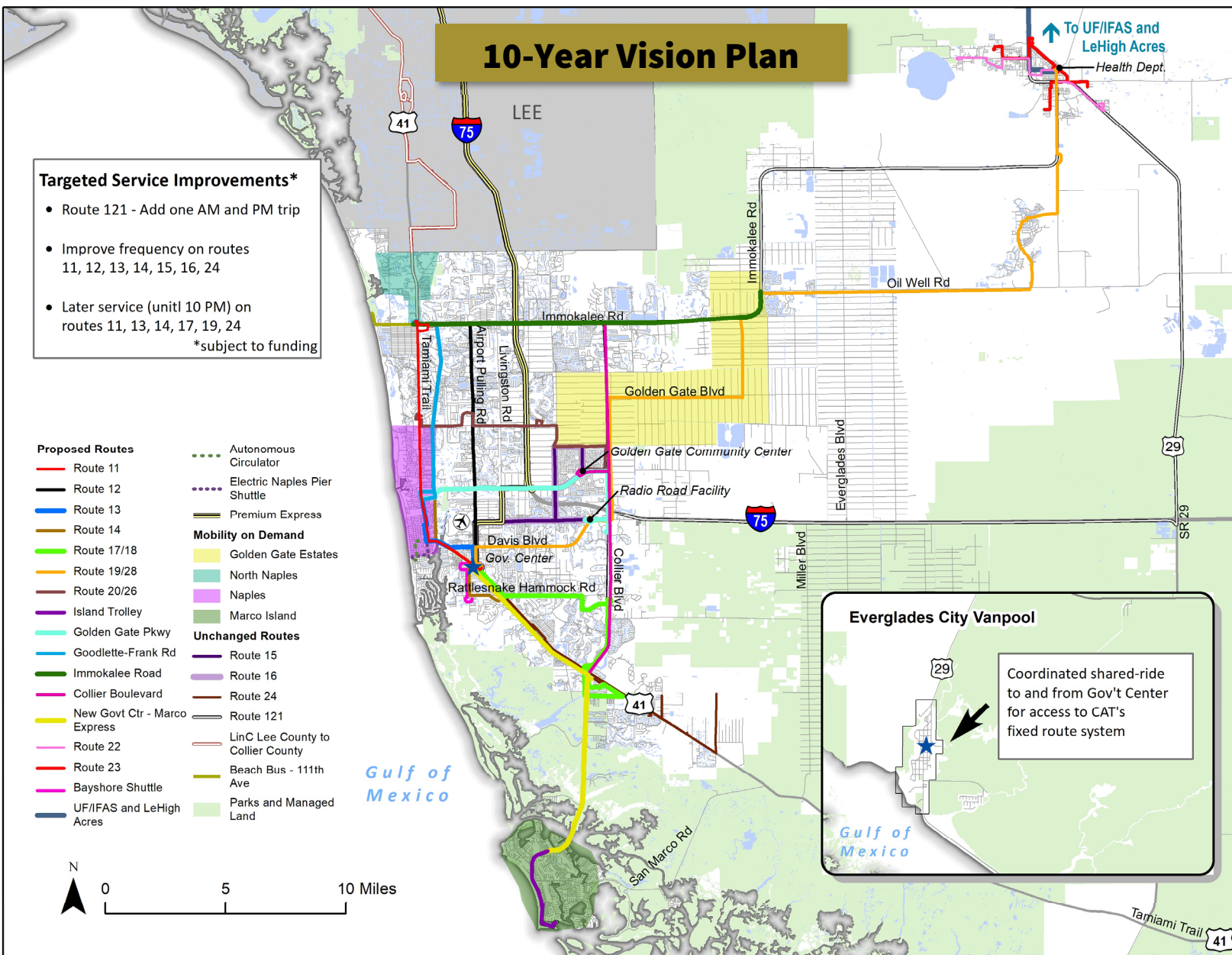
- New UF/IFAS and Lehigh Acres Route
- I-75 Premium Express
- Bayshore Drive Electric Shuttle
- Downtown Autonomous Circulator
- Electric Naples Pier Shuttle



- **Mobility on Demand** – MOD uses on-demand information, real-time data, and predictive analytics to provide travelers with transportation choices to best serve travel needs. MOD service can be requested via a mobile app or website or by calling CAT.
- **Golden Gate Zone** – This large MOD zone would include areas of Golden Gate Estates, a large development east of I-75. This zone currently has a high demand for paratransit service and would provide transit service to areas currently underserved by fixed-route transit; most are low-density and may require three vehicles in the peak and two during the off-peak to operate due to poor roadway connectivity.
- **North Naples Zone** – This MOD zone was identified in the gap analysis as an area currently underserved by transit. This zone would cover the northeast quadrant of Collier County, which includes areas with high and very high TOI. The zone borders Bonita Beach Road and extends as far south as Immokalee Road and would serve areas east and west of US-41 as well as areas east and west of Old US- 41 Road.
- **Naples Zone** – This MOD zone would cover areas associated with high employment densities and areas with high and very high TOI as well as areas that are often difficult to navigate with regular fixed-route vehicles. Zone 5 spans the beach from Broad Avenue to Pine Ridge Road as far east as Goodlette-Frank Road.
- **Marco Island Microtransit** – This microtransit service would serve Marco Island and provide transfer opportunities to the proposed Island Trolley route. This service would likely require more than one vehicle, as it would continue to provide connections to other routes in the CAT network. Marco Island is also another area in CAT service that has medium to high TOI.
- **Vanpooling** – CAT is coordinating with Everglades City and FDOT to create a vanpool program as part of a districtwide program to be implemented early next fiscal year.
- **Capital** – Bus stop infrastructure, ADA accessibility, replace/add new vehicles, technology, park-and-ride lots, safety/security program, comprehensive operational analysis, various transit feasibility studies.

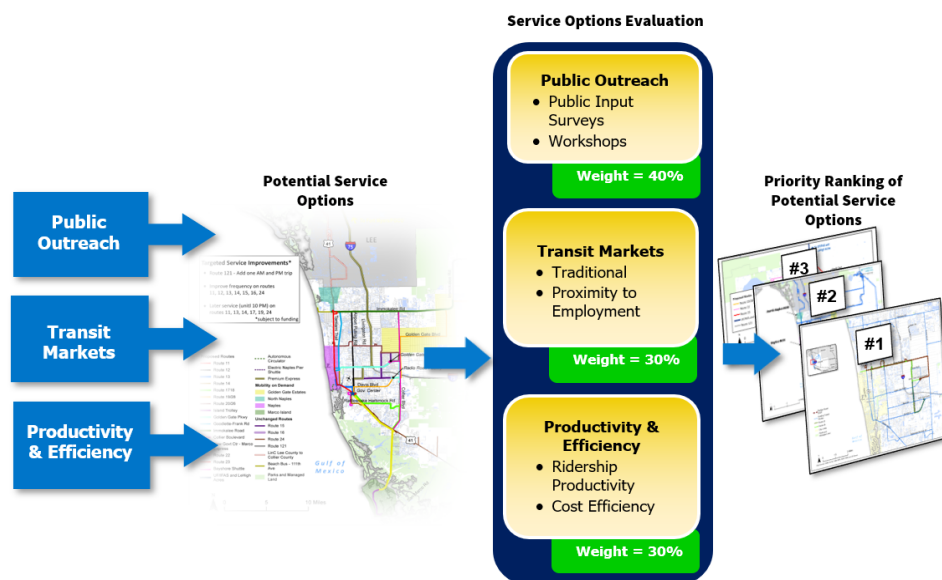






## Evaluation of Alternatives

An array of alternatives are identified, ranging from expansion of existing routes to implementation of new routes, it is important for CAT to prioritize these improvements to effectively plan and implement them within the next 10 years using existing and/or new funding sources. The alternatives were evaluated and prioritized using five criteria: public input, traditional market, proximity to employment, productivity, and cost and efficiency impacts. The rankings shown in the table below were used to identify priorities and assist in the development of the Implementation Plan.



<sup>1</sup> For illustration purposes only. See list of alternatives summarized previously.

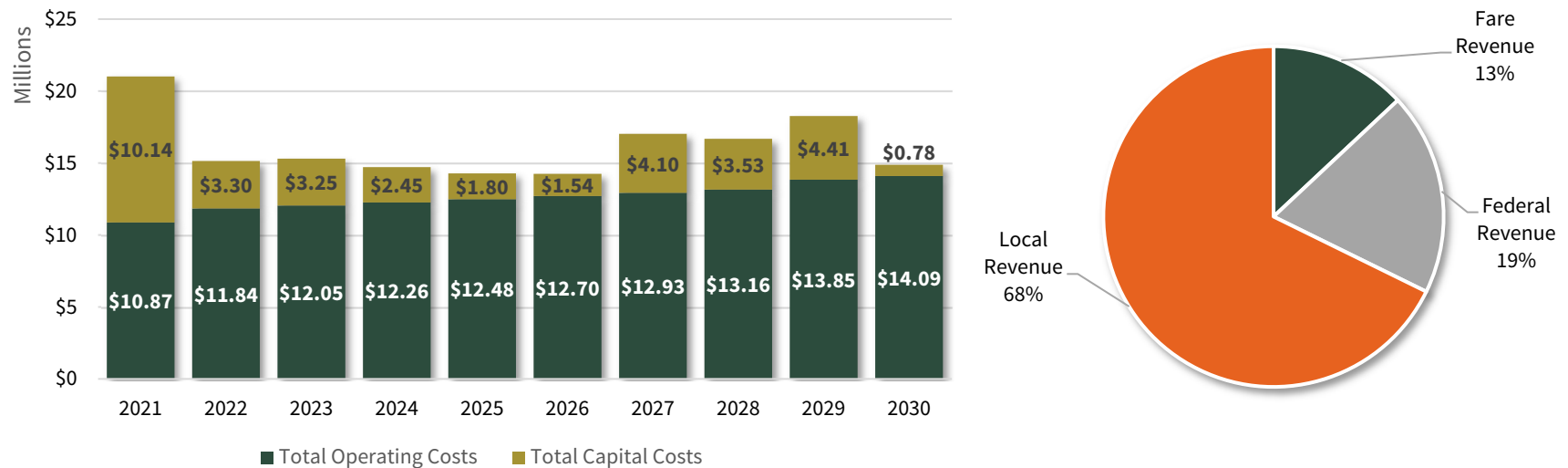
Proposed Improvement	Score	Rank
<b>Route Network and New Service</b>		
Route 22 and 23 realigned	5.1	1
Route 11 extension	4.5	2
Route 14 realign	4.3	3
Route 13 realign	4.0	4
Route 17/18 realign	4.0	4
Route 19/28 realign	3.7	6
Route 12 Extension	3.5	7
New Route 25 NS	3.1	8
Realign 20/26	2.9	9
New I-75 Premium Express	2.9	9
Route 21 New Gov Center - Marco Express	2.9	11
New Route 27 EW	2.8	12
New Route 25 EW	2.6	13
New Bayshore Shuttle	2.6	13
New Route 27 NS	2.3	15
New Island Trolley	2.3	15
<b>Frequency Improvements</b>		
Route 121 - add one AM and one PM	5.4	1
Route 15 to 45 min	5.1	2
Route 11 to 20 mins	5.1	3
Route 12 to 30-min peak. 60-off peak	5.1	3
Route 16 to 45 min	4.8	5
Route 13 to 30 min	4.5	6
Route 14 to 30 min	4.5	6
Route 24 to 60-min	4.5	6
<b>Later Service</b>		
Route 11 (until 10 PM)	4.8	1
Route 13 (until 10 PM)	4.8	1
Route 14 (until 10 PM)	4.8	1
Route 19 (until 10 PM)	4.5	4
Route 24 (until 10 PM)	4.5	4
Route 17/18 (until 10 PM)	3.9	6

## Recommended 10-Year Cost Feasible Plan

The recommended transit plan for the next 10 years is presented. The plan is “Cost Feasible” as it assumes **no new operating costs** and no additional bus vehicle purchases; no new sources of revenue are needed to maintain this plan. In addition, a needs-based plan is also presented, and the unfunded elements of the needs plan are identified.

### Costs and Revenues

A financial plan was developed to facilitate the definition and implementation of CAT TDP improvements. Costs and revenues were projected from FY 2021 to FY 2030 to for implementation of service, capital, and technology improvements. Revenue assumptions for fixed-route service are based on information from several State and local agencies. Assumptions for different revenue sources, including annual operating revenues from existing federal, State, and local sources, are based on the FDOT Adopted Five-Year Work Program (FY 2021–2025), the CAT FY 2018 TDP Annual Progress Report, and the Collier County Government FY 2021 Requested Budget. A 2020 FTA 5339 Bus and Bus Facilities discretionary grant request was submitted in January 2020; this grant was recently awarded to CAT (October 2020) during the TDP final approval process in the amount of \$9,020,000 for the purchase of six 30’ fixed route buses and the renovation of the Collier Area Transit Maintenance Facility on Radio Road. This grant is matched by \$2,051,324 in transportation development credits for a total value of \$11,071,324, to be awarded in 2021. The figure below illustrates the operating and capital costs in the constrained implementation plan.



## Implementation Plan

The implementation plan includes funded and unfunded service improvements as well as operating and capital costs associated with each service and capital improvement. Cost are identified by implementation year and note if existing or new revenues are anticipated to fund the improvement. The plan does not preclude the opportunity to delay or advance any projects. As priorities change, the schedule for project implementation will be adjusted based on funding availability. All projects are subject to annual budget approval by the Board of County Commissioners.



Service Improvements	Implementation Year	10-Year Operating Cost (YOE)	10-Year Capital Cost (YOE)	Existing or New Revenues
<b>Maintain Existing Service</b>		<b>\$117,818,191</b>	<b>\$20,796,704</b>	
Maintain Existing Fixed-Route Service	2020	\$68,693,299	\$15,863,079	Existing
Maintain Existing Paratransit Service	2020	\$49,124,892	\$4,742,027	Existing
Replacement of Support Vehicles	2020	\$0	\$191,598	Existing
<b>Route Network Modifications</b>		<b>\$9,441,652</b>	<b>\$2,153,818</b>	
Extend Route 11 into Walmart Shopping Ctr	2022	\$0	\$0	Existing
Extend Route 12 into Walmart Shopping Ctr	2022	\$0	\$0	Existing
Realign Route 13 - shorten to 40 min. headway	2022	\$0	\$0	Existing
Realign Route 14 - operate at 60 min. headway	2022	\$0	\$0	Existing
Realign Route 17 - eliminate portions of US 41	2022	\$0	\$0	Existing
Eliminate Route 18	2022	\$0	\$0	Existing
Realign Route 19/28 - eliminate portions of 846	2022	\$0	\$0	Existing
Realign Route 20/26 - eliminate Santa Barbara	2022	\$0	\$0	Existing
Realign Route 21 to create Marco Express	2024	\$0	\$0	Unfunded
Realign Route 22	2022	\$0	\$0	Existing
Realign Route 23 - reduce headway 60 to 40 minutes	2022	\$3,805,909	\$503,771	Existing
Golden Gate Pkwy - Split Route 25 creating EW Route	2027	\$0	\$0	Existing
Goodlette Frank Rd - Split Route 25 creating NS Route	2027	\$1,838,052	\$550,016	Unfunded
Immokalee Rd - Split Route 27 creating EW Route	2027	\$1,898,846	\$550,016	Unfunded
Collier Blvd - Split Route 27 creating NS Route	2027	\$1,898,846	\$550,016	Unfunded
<b>Service Expansion</b>		<b>\$2,404,181</b>	<b>\$0</b>	
Route 17/18 - Extend Hours to 10:00 PM	2023	\$1,202,011	\$0	Existing
New Route 19/28 - Extend Hours to 10:00 PM	2027	\$292,876	\$0	Unfunded
Route 24 - Extend Hours to 10:00 PM	2027	\$302,976	\$0	Unfunded
Route 11 - Extend Hours to 10:00 PM	2029	\$256,914	\$0	Existing
Route 13 - Extend Hours to 10:00 PM	2029	\$174,702	\$0	Existing
Route 14 - Extend Hours to 10:00 PM	2029	\$174,702	\$0	Existing



Service Improvements	Implementation Year	10-Year Operating Cost (YOE)	10-Year Capital Cost (YOE)	Existing or New Revenues
<b>Increase Frequency</b>		<b>\$22,092,501</b>	<b>\$4,551,796</b>	
Route 15 from 90 to 45 minutes	2022	\$1,632,384	\$503,771	Unfunded
Route 16 from 90 to 45 minutes	2023	\$1,561,054	\$503,771	Unfunded
Route 24 from 85 to 60 minutes	2022	\$2,045,921	\$503,771	Existing
Route 121 - add one AM, one PM trip	2022	\$1,632,384	\$503,771	Existing
Route 14 from 60 to 30 minutes	2023	\$2,439,146	\$512,698	Unfunded
Route 17/18 from 90 to 45 minutes	2023	\$2,585,495	\$503,771	Unfunded
Route 11 from 30 to 20 minutes	2022	\$6,529,536	\$503,771	Unfunded
Route 12 from 90 to 45 minutes	2022	\$2,829,466	\$503,771	Unfunded
Route 13 from 40 to 30 minutes	2023	\$837,115	\$512,698	Unfunded
<b>New Service</b>		<b>\$14,346,741</b>	<b>\$2,862,604</b>	
New Island Trolley	2024	\$5,510,821	\$864,368	Unfunded
New Bayshore Shuttle	2025	\$2,009,995	\$531,029	Unfunded
New Autonomous Circulator	2029	\$524,105	\$569,681	Unfunded
New Naples Pier Electric Shuttle	2029	\$822,125	\$569,681	Unfunded
MOD – Golden Gate Estates	2029	\$1,634,460	\$81,961	Unfunded
MOD – North Naples	2029	\$817,230	\$81,961	Unfunded
MOD – Naples	2029	\$1,938,887	\$81,961	Unfunded
MOD – Marco Island	2029	\$1,089,119	\$81,961	Unfunded
New Route from UF/IFAS to Lehigh Acres	2029	Unknown	Unknown	Unfunded
New I-75 Premium Express	2029	Unknown	Unknown	Unfunded
<b>Other Improvements</b>		<b>\$0</b>	<b>\$2,866,495</b>	
Technology improvements*	2021	\$0	\$2,584,908	Existing
Security - driver protection barriers	2021	\$0	\$81,587	Existing
Study: Santa Barbara Corridor	2022	\$0	\$25,000	Existing
Study: UF/IFAS Lehigh Acres Service	2022	\$0	\$25,000	Existing
Study: I-75 Premium Express	2023	\$0	\$25,000	Existing
Study: Everglades City Vanpool	2023	\$0	\$25,000	Existing
Study: Fares	2024	\$0	\$50,000	Unfunded
Study: Mobility on Demand	2024	\$0	\$50,000	Unfunded
Other Technology improvements**		TBD		Unfunded
Study: Immokalee Road Transfer Hub		TBD		Unfunded
Brand beach area buses		TBD		Unfunded
Park and Ride Lots (pending study)		TBD		Unfunded
<b>Funded Projects + Maintenance of Existing Service</b>		<b>\$127,110,733</b>	<b>\$20,796,704</b>	
<b>Unfunded Projects</b>		<b>\$37,093,687</b>	<b>\$8,156,904</b>	

\*Avail Replacement, APC, Annunciators, Onboard Information Media, Farebox Replacement, paratransit scheduling software, TSP, on-board surveillance, paratransit fare payment, IVR  
\*\*Fixed-route scheduling software