Central Florida Regional Transportation Authority

FORWARD

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LYNX SR 50

BUS RAPID TRANSIT

Station Area Analysis

Final Report

June 14, 2019

Prepared by HDR

Thank You

to all the SR 50 BRT Station Area Analysis stakeholders, community leaders, and citizens for your participation, support, and commitment.

Your contributions towards addressing Central Florida's increasing demand for mobility by further preparing the region to incorporate high capacity transit along SR 50 are vitally important.

CITY OF ORLANDO

metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

ORANGE COUNTY GOVERNMENT
FLORIDA

FDOT

Moving Forward

This report compiles the findings and recommendations for the SR 50 Bus Rapid Transit (BRT) Station Areas. In 2013, LYNX initiated an alternatives analysis for SR 50, known as the SR 50/UCF Connector Alternatives Analysis, which identified a locally preferred alternative for BRT service. The SR 50 Station Area Analysis further evaluates 14 proposed station locations identified in the SR 50 Alternatives Analysis by identifying optimum connections for users, developing strategies to increase Transit Oriented Development (TOD), completing preliminary engineering for station infrastructure, and developing recommendations and next steps.

The recommendations are provided based on existing characteristics and needs of each station area. These recommendations will be further analyzed in future phases of the project. As station areas redevelop, opportunities to move stations closer to signalized intersections should be considered to facilitate pedestrian and bicycle access. Operational characteristics for the BRT system will be ultimately defined during the design phase and recommendations from the SR 50 Alternatives Analysis will be revisited.

This effort is the product of collaboration between the Central Florida Regional Transportation Authority (LYNX), regional and local partners, and the community. To move this project forward, the support of community leaders, transportation and planning organizations, and the general public is needed.

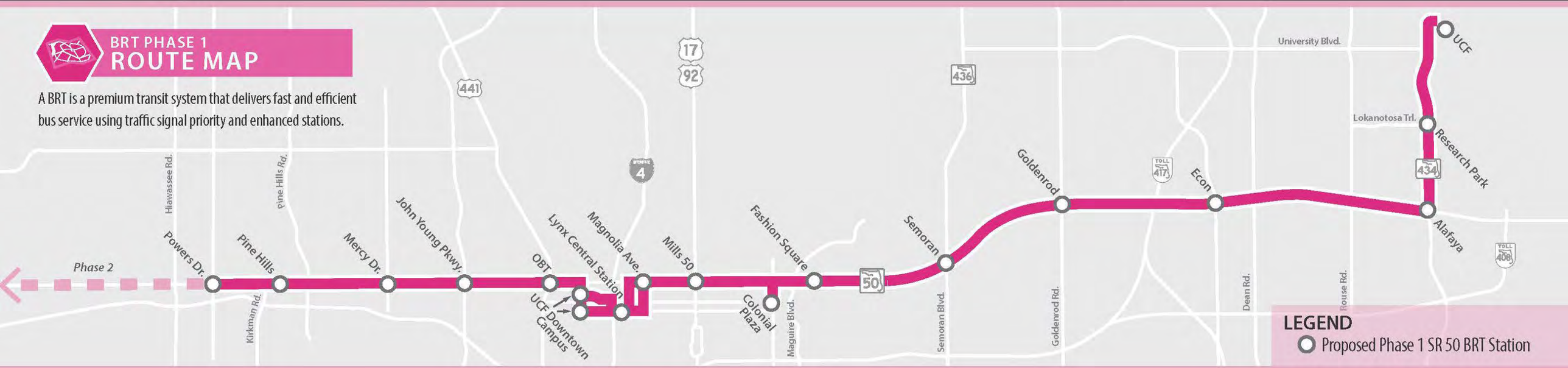
Central Florida Regional Transportation Authority

FORWARD

IMAGINE INNOVATE CONNECT ARRIVE

BRT PHASE 1 ROUTE MAP

A BRT is a premium transit system that delivers fast and efficient bus service using traffic signal priority and enhanced stations.



LEGEND

- Proposed Phase 1 SR 50 BRT Station


Orange AVE
ONE WAY
28 E COLONIAL DRIVE
enterprise

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Acronyms

AA	Alternatives Analysis
BRT	Bus Rapid Transit
FDOT	Florida Department of Transportation
FTA	Federal Transit Administration
SR	State Road
TAZ	Traffic Analysis Zone
TOD	Transit Oriented Development
TPI	Transit Propensity Index
UCF	University of Central Florida
NEPA	National Environmental Policy Act

1 Background

1.0 Background

Central Florida continues to be one of the fastest growing regions in the Unites States and also one of the most visited places in the world. Between 2010 and 2016, the region experienced a population growth of 12% with an additional 1.1 million residents projected by 2045[1]. Addressing the increasing demand for mobility requires a comprehensive transportation system that is responsive to the growth and needs of the community. Major transit investments in Central Florida, such as SunRail and LYMMO, constitute the backbone of a future, more robust multimodal network. However, to continue moving forward, the region needs to build around a more reliable and efficient transit network while integrating innovative mobility solutions and shared use services.

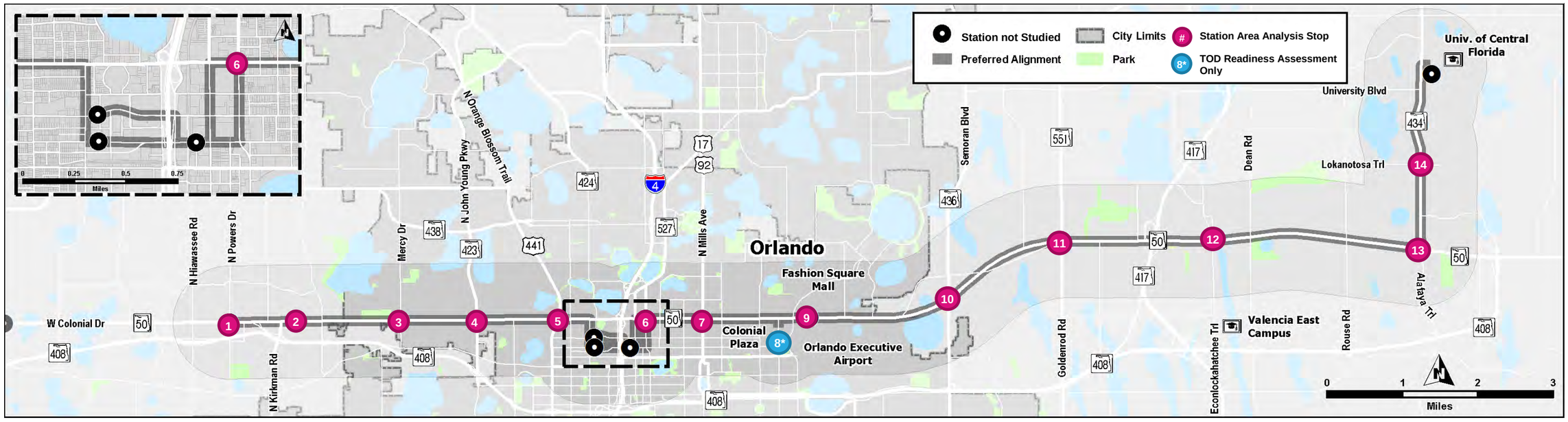
In 2011 LYNX completed Vision 2030, a comprehensive analysis of transit corridors and future transit needs for the region, which identified 22 corridors for enhanced transit service. Of those corridors, the State Road 50 (SR 50) corridor stood out as an ideal candidate for high-capacity transit including limited stop and Bus Rapid Transit (BRT) Service. The SR 50 corridor runs east-west through the heart of Central Florida, connecting thousands of people to employment, shopping, education, recreation, and other activities. Given its regional importance and high levels of transit use, SR 50 is a top transit priority corridor for LYNX. This corridor is a dynamic, diverse area that includes several existing activity centers, such as UCF, Downtown Orlando, the Mills50 Business District, and Orlando Fashion Square Mall; as well as numerous areas with strong potential for infill development and redevelopment.

In 2013, LYNX initiated an alternatives analysis for SR 50, known as the SR 50/UCF Connector Alternatives Analysis. The 2013 study identified a locally preferred alternative for BRT service with an initial operating segment between Powers Drive on the west and Goldenrod Road on the east. Since the completion of the study, the UCF Campus in Downtown Orlando is now under construction and it was determined that the initial operating segment should extend to UCF's main campus in order to better connect both campuses. This preferred alternative includes 18 proposed station locations improving access to jobs, activity centers, and educational institutions along the corridor.

The current study, SR 50 Station Area Analysis, further prepares the region to incorporate high capacity transit by analyzing 14 proposed station locations identified in the SR 50 Alternatives Analysis:

1. Powers Drive
2. Pine Hills Drive
3. Mercy Drive
4. John Young Parkway
5. Orange Blossom Trail
6. North Quarter
7. Mills Avenue
8. Primrose Super Stop
9. Fashion Square
10. Semoran Boulevard
11. Goldenrod Road
12. Econlockhatchee Trail
13. Alafaya Trail
14. Research Park

Figure 1 | SR 50 BRT Locally Preferred Alternative



[1] BERB Projections of Florida Population by County, 2020-2045, April 2017.

1.1 Report Organization

This report is divided into the following sections:

SECTION	DESCRIPTION
1.0 Background	Provides context to the SR 50 Station Area Analysis study
2.0 Corridor Analysis	Provides an overview of the existing conditions and describes the planning and land use context along the SR 50 corridor
3.0 Transit Oriented Development (TOD)	Provides a summary of the evaluation using the Florida Department of Transportation (FDOT)'s TOD Readiness Assessment Tool as the basis for analysis of land use and physical context of each station area within the corridor. Future submittal will include Conceptual TOD Site Plans
4.0 Preliminary Station Locations & Analysis	Preliminary evaluation of various elements to identify station locations that provide timely, safe, and convenient transit service to the community. This section provides a comparative analysis of potential station locations for each station area
5.0 Station Design	Describe the station design process and provides illustrative concepts for two station design options as well as station typicals for the SR 50 BRT corridor
6.0 Pedestrian/Bicycle Connectivity	Identifies required bike and pedestrian connectivity improvements for each station area.
7.0 NEPA/Environmental Assessment	Provides the FTA Region IV checklist for Information Required to Initiate NEPA for Linear Projects and Grantee Historic Preservation/Section 106 Consultation Worksheet for FTA Projects.
8.0 Public Involvement	Provides a summary of the public outreach activities and events.

LYNX customer accommodating bike to board the bus


CRIMELINE
800.423.TIPS
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49 NORTH LANE
49 NORTH LANE
FLORIDA HOSPITAL
637
LYNX
407-841-LYNX

2

Corridor Analysis

2.0 Corridor Analysis

The analysis of the corridor establishes the framework for achieving the goals of the SR 50 Station Area Analysis. The study goals include:

- Identify optimum connections for users;
- Identify TOD concepts for station areas;
- Complete preliminary engineering for the station/shelter infrastructure;
- Collaborate with agencies, partners, and the community to inform development approach; and
- Develop recommendations and next steps

The analysis identifies existing transportation and land use conditions, combined with an assessment of factors influencing transit supportive development along the SR 50 corridor.

2.1 Existing Land Use

The SR 50 corridor is mainly lined with commercial/office uses, with some mixed-use and industrial development. Beyond the commercial parcels, the majority of land use is residential as shown in **Figure 2**. Several areas along the SR 50 corridor have some of the highest concentrations of residents and businesses in the region. Areas with relatively high concentrations of population and employment have the potential to support enhanced levels of transit service. Higher density, mixed use development has the potential to generate higher levels of ridership than lower density, single use development.

2.2 Building to Market Value Ratio

The ratio of the value of buildings occupying a parcel to the property's total market value is called the "building to market value ratio." The presence of parcels with low building to market ratio along the SR 50 corridor and the potential implementation of premium transit service can help catalyze investment in these properties by improving the market position and feasibility of more urban, mixed use, higher intensity projects.

As shown in **Figure 3**, properties along SR 50 with low building to market value ratios include parcels dispersed along the western and eastern ends of the corridor with a particularly high concentration of parcels east of Downtown Orlando, near Fashion Square Mall.

2.3 Underutilized and Vacant Parcels

The SR 50 corridor has potential opportunities for redevelopment where there are large areas of vacant and underutilized properties. A low building to value ratio is an indication of the property being underutilized or not being used to its fullest potential in terms of value. Vacant refers to neglected parcels of property that have no buildings on them.

As shown in **Figure 4,** areas with concentrations of vacant and underutilized property are located along SR 50 between Kirkman Road and John Young Parkway, Downtown Orlando, Fashion Square Mall, and the area between SR 436 and Alafaya Trail. Many of these areas have been targeted by the City of Orlando and Orange County for redevelopment. Both the City and the County have crafted small area plans, vision plans, CRAs, Main Street Districts, and Neighborhood Improvement Districts to guide reinvestment.

Figure 2 | Existing Land Use

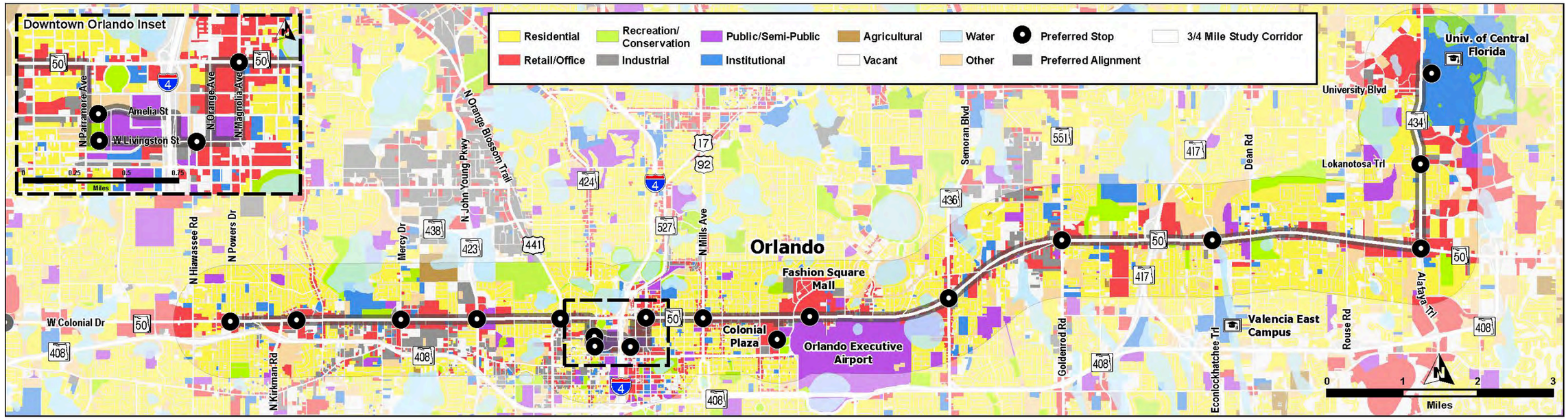


Figure 3 | Building to Market Value Ratio

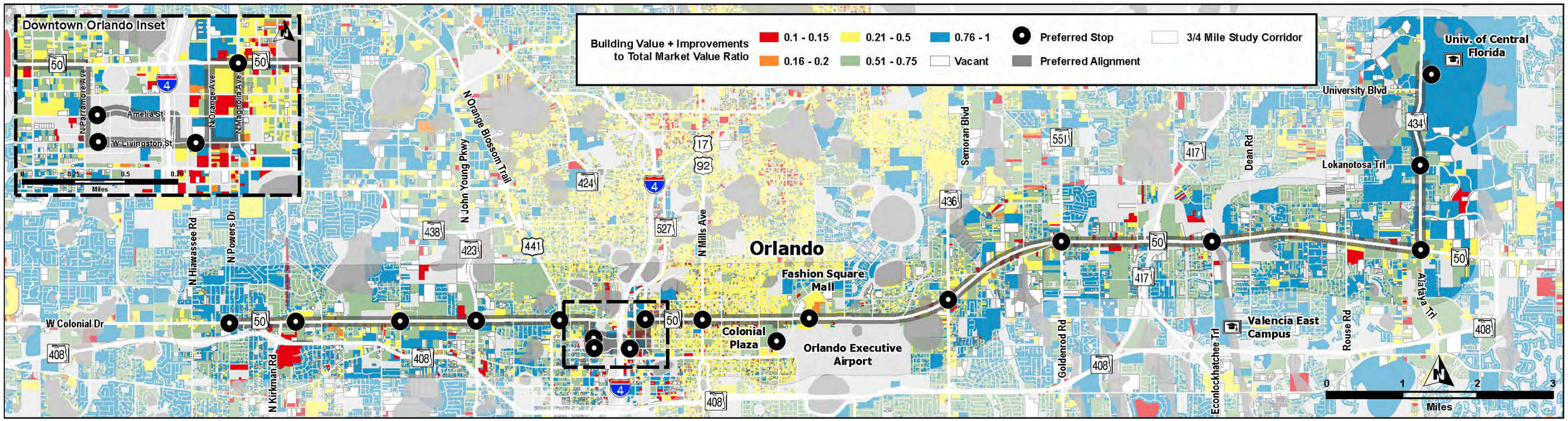
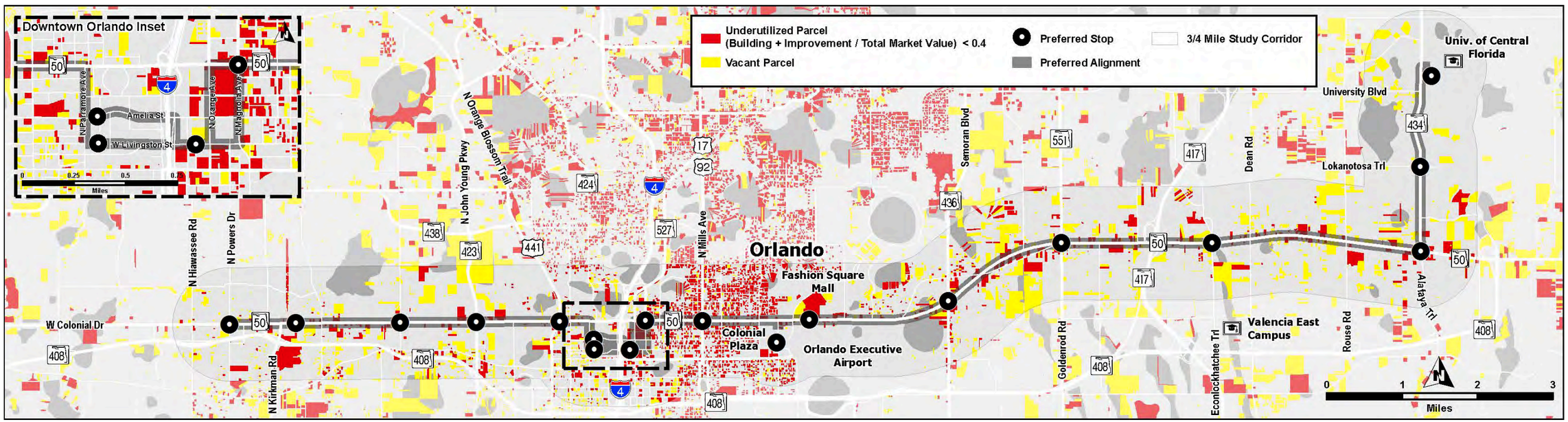


Figure 4 | Underutilized and Vacant Parcels



2.4 Employment Density

High residential densities alone cannot support transit if the network does not connect residents to employment-intensive places. Fortunately, the SR 50 corridor serves as a key regional east-west arterial connecting many of Central Florida's major employment centers.

Employment uses tend to generate significant ridership when located in close proximity to transit stations. As shown in **Figure 5**, a significant amount of jobs are centralized around the downtown core, with a high concentration of professional and office uses. Commercial uses, in particular, generate transit trips by both employees and customers. Commercial and industrial jobs are spread-out throughout the SR 50 corridor with more concentration in areas such as Colonial Plaza, Fashion Square Mall, and Alafaya Trail.

Educational institutions, in particular colleges, universities, and other post-secondary institutions also generate significant demand for transit. SR 50 provides access to UCF, Valencia College's East and West Campuses, Barry University and various technical colleges.

2.5 Population Density

Places with higher population densities tend to generate higher potential ridership which improves the feasibility of delivering premium transit service. High density neighborhoods often exhibit qualities that promote walking and biking, and allow residents to meet at least some of their daily needs without relying on automobile travel. Such neighborhoods also tend to produce a higher number of transit trips than lower density neighborhoods in more auto-oriented settings.

Several areas along the SR 50 corridor have some of the highest concentrations of residents in the region. As shown in **Figure 6**, clusters of high population density are seen around Downtown Orlando, and Colonial Plaza. The area southwest of UCF also shows a high population density due to a plethora of housing for students. Areas with medium population density are found along the entire corridor with some lower population density pockets found at UCF, the Orlando Executive Airport, and the west end of the study corridor.

2.6 Ethnicity

A clear understanding of the distribution of the study corridor's racial and ethnic minority groups helps make sure that station locations considered impacts and benefits to the populations that have historically been impacted or under served. **Figure 7** shows that along the SR 50 corridor from Hiawassee Road to Orange Blossom Trail, there is a high African American population concentration. Traveling east along the corridor, from Orange Blossom Trail to SR 436, the population is heavily White. From SR 436 to Alafaya Trail, there is a high presence of White and Hispanic populations.

The downtown core specifically, shows a mix of African American and White communities, with the concentration of African American population west of Parramore and south of SR 50, and a concentration of White population east of I-4 and north of SR 50.

Premium transit investment in areas with predominant transit-dependent populations has the ability to significantly enhance existing residents' access to jobs and services.

Figure 5 | Employment Density

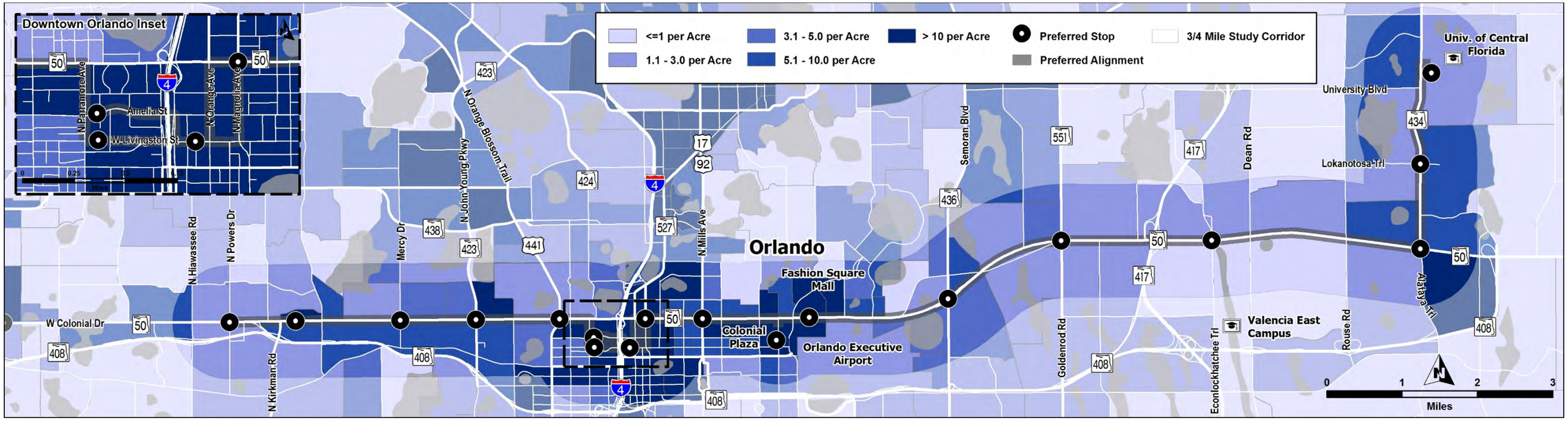


Figure 6 | Population Density

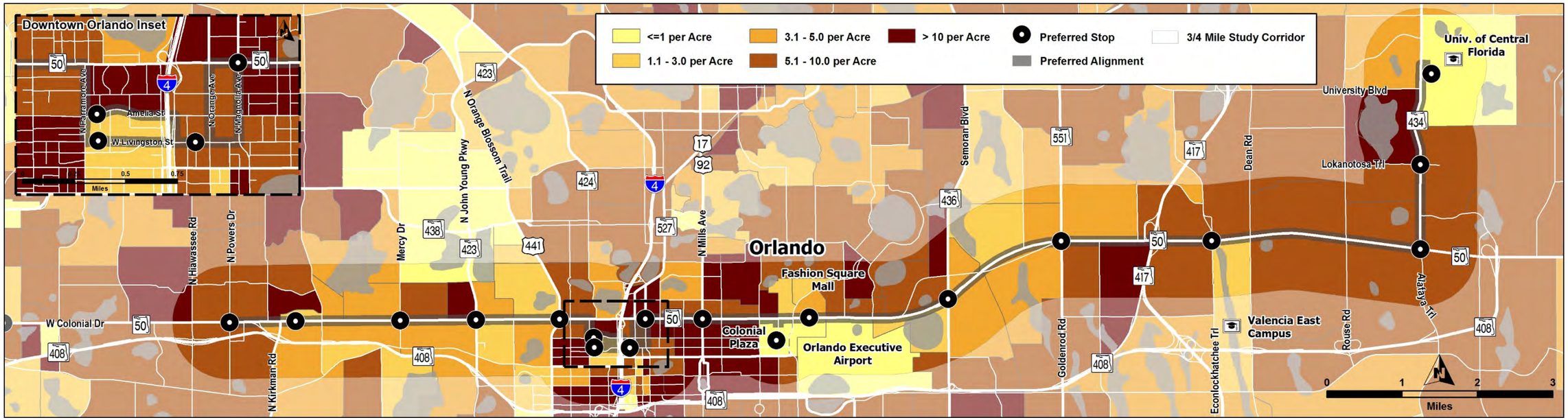
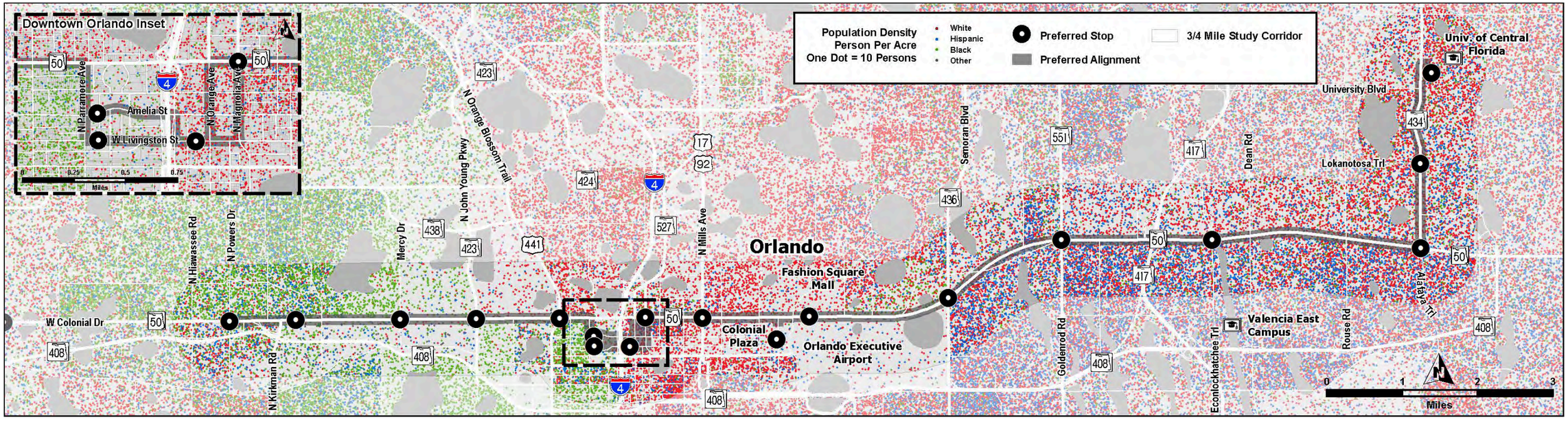


Figure 7 | Study Area Demographics



2.7 Bicycle Facilities

Overall, the study corridor is served by a well-connected network of bicycle facilities, with a few notable gaps. Bike lanes are provided on SR 50 along the western portion of the corridor from Mercy Drive to Tampa Avenue and bike lanes are currently planned west of Mercy Drive to provide better connectivity for the Pine Hills/Ocoee area. Bike lanes are also provided on SR 50 from Old Cheney Highway to Alafaya Trail, continuing north along Alafaya Trail to UCF. **Figure 8** exhibits bicycle lanes, signed routes, and shared use paths/trails throughout the study corridor.

More effective multimodal connections in the SR 50 corridor network are important not just for vehicular, pedestrian, and bicycling mobility and safety but for the effectiveness of transit. FDOT, the City of Orlando, Orange County, and other jurisdictions have had and continue to place significant focus on and investment in creating safe and efficient bicycle facilities. **Figure 8** also illustrates future investments in bike and pedestrian facilities along the SR 50 corridor.

2.8 Bicycle and Pedestrian Crashes

Traffic speeds are a significant factor for pedestrian and bicycle safety and mobility. The corridor has a posted speed limit of 35 mph near the downtown core and increases to 50 mph in more suburban sections. Certain sections of the corridor experience high levels of transit activity, and therefore high pedestrian and bicycle activity. Many of these high transit/pedestrian and bicycle activity sections experience safety issues and higher crash frequencies. Some sections of the SR 50 corridor are particularly difficult for transit users to navigate, like the SR 436/SR 50 interchange

As shown in **Figure 9**, the downtown core and the area south of downtown experience high pedestrian and bicycle crashes. Clusters of crashes can also be seen near the Colonial Plaza and Fashion Square Mall, north on SR 436, east of Kirkman Road, Dean Road, and along Alafaya Trail from SR 50 to the University of Central Florida.

2.9 Bike Share

Bicycle and pedestrian facilities can provide key first and last-mile connections to surrounding land uses when connected to transit station areas. Dockless bike sharing is a new type of mobility option recently implemented in Downtown Orlando and operated by Lime and HORP. Users can rent bikes, equipped with GPS technology, without the need to return them to specific location. This new technology replaced the JUICE bike sharing service, launched in 2015 as the first public bike share program in Orlando with bikes that were docked. **Figure 10** displays the previously existing locations of JUICE bike share stations as well as the locations experiencing low to high ridership in total trips in 2016. JUICE used GPS units on the bikes to map popular bicycle routes throughout the City. Along SR 50, the highest bike share activity can be seen in the downtown core from the SunRail stations along Orange Avenue and Magnolia Avenue. High ridership is also seen north of the downtown core following the SunRail tracks and along Mills Avenue.

Bike share complements public transit by solving the 'first-mile, last-mile' problem, wherein users have limited means of connecting to the bus stops without walking or driving the first and last mile.

Figure 8 | Bicycle Facilities

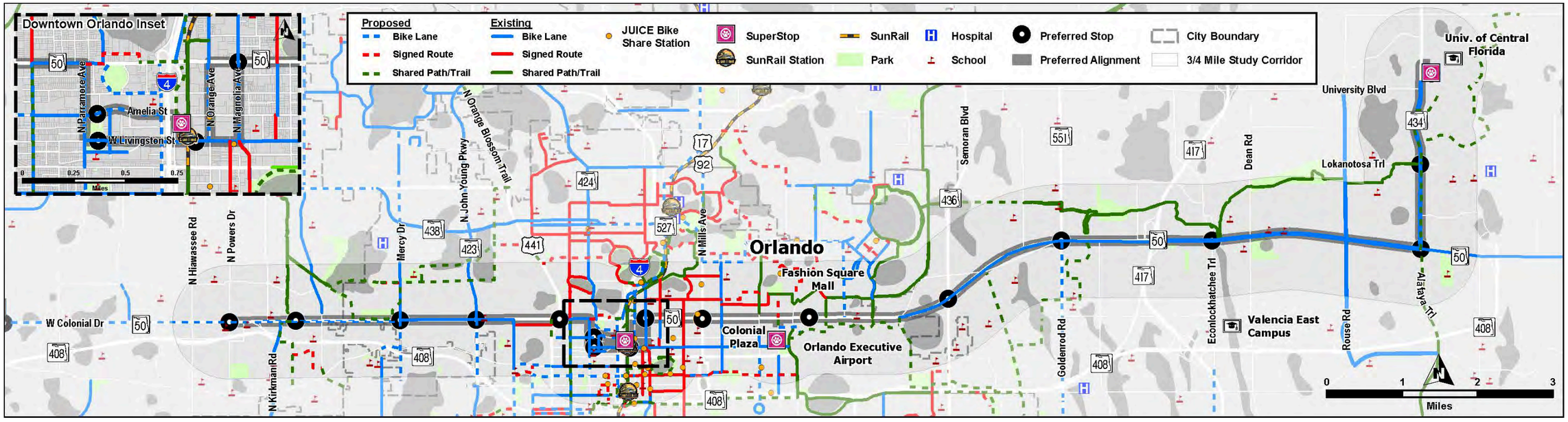


Figure 9 | Bicycle and Pedestrian Crashes

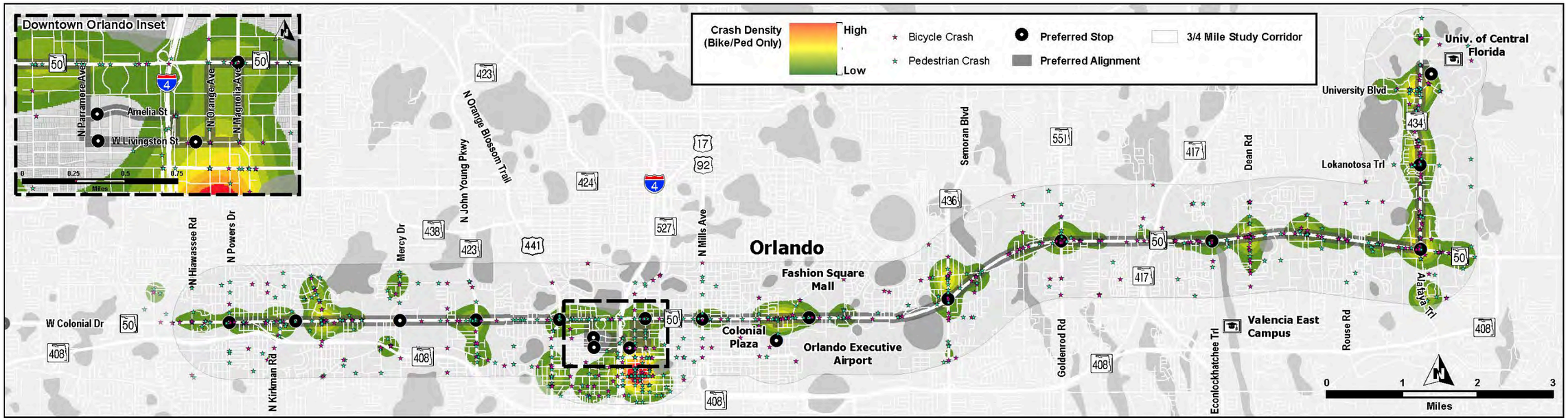
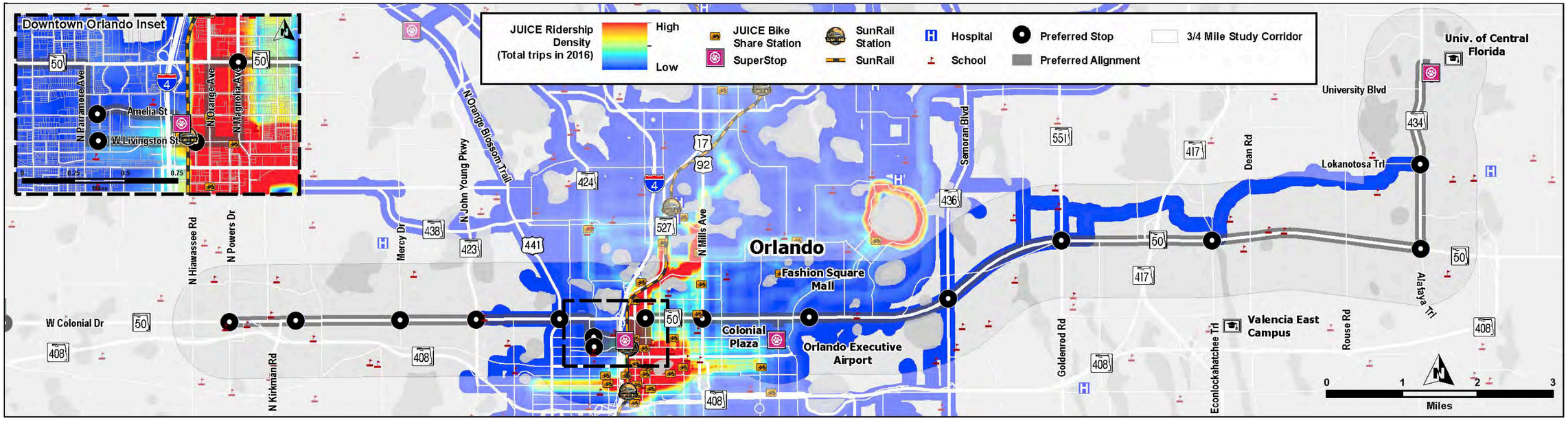


Figure 10 | JUICE Ridership and Locations



2.10 Existing Transit

Currently, the SR 50 corridor is served by six LYNX routes operating along the corridor and 18 crossing routes. Links 104, 105, 28, 29, 48, and 49 serve the SR 50 corridor at 30-minute frequencies during the day Monday-Saturday and 60-minute frequencies during weeknights, Sundays, and holidays. Three of these routes (105, 48, and 49) service the western half of the corridor (LYNX Central Station (LCS) through Pine Hills to Ocoee) and the other three routes (104, 28, and 29) service the eastern half of the corridor (LCS through Azalea Park/SR 436 area to UCF). At their peak, when all routes are operating at 30-minute frequencies, these routes combine to provide a much higher transit headway with six trips per hour per direction along SR 50 between Pine Hills and SR 436. The routes begin to deviate from the corridor beyond these points, thus reducing the number of buses per hour along those sections of the corridor.

LYNX's downtown Orlando circular system, LYMMO, is the BRT service operating in its own right-of-way for portions of its routes. Currently, there are four LYMMO routes, one of which connects to other transit services at the LYNX Central Station and provides service adjacent to the SunRail station on Church Street.

LYNX operates NeighborLink service for the Pine Hills/Ocoee area, as shown in **Figure 11**. NeighborLink is a flex-service offered to residents located in less-populated areas that allows convenient and flexible options for passengers connecting to destinations or to a local bus stop.

Two SunRail stations are located within the study corridor limits, at Church Street and the LYNX Central Station, which are both located within the downtown core.

2.11 Ridership

Current ridership levels are reasonably served by the existing combined service of the six routes along the corridor. However, the level of service will be difficult to maintain as population continues to grow and corridor congestion worsens.

Certain sections of the SR 50 corridor exhibit high transit ridership. Premium transit can build on these high ridership sections near Pine Hills, Orlando Fashion Square Mall, SR 436, and Alafaya Trail. As shown in **Figures 12** and **13**, existing stops along the SR 50 corridor with strong ridership generally align with the proposed SR 50 BRT stations.

2.12 Transit Propensity Index

The Transit Propensity Index (TPI) aggregates several factors that are typical indicators of disadvantage groups or underserved populations. These factors include population below poverty, zero-vehicle households, minorities, population under 18 and over the age of 65, as well as population with limited English proficiency. Underserved populations tend to have a higher propensity to use public transit. **Figure 14** shows high concentrations of underserved populations in areas just outside the urban core in inner ring neighborhoods such as Pine Hills, Washington Shores, and Azalea Park along SR 436.

2.13 Future LYNX Network

The future LYNX network identifies a long-term plan of new route alignments, integration with other travel modes, and innovative strategies for offering alternative mobility options for the region. As shown in **Figure 15**, the LYNX future network identifies SR 50 as a high capacity premium transit service regional corridor. This service would include a combination of frequent local bus service with frequent stop spacing to provide community access, and higher speed limited stop service with station/stop locations at major activity hubs.

Figure 11 | Existing Transit Services

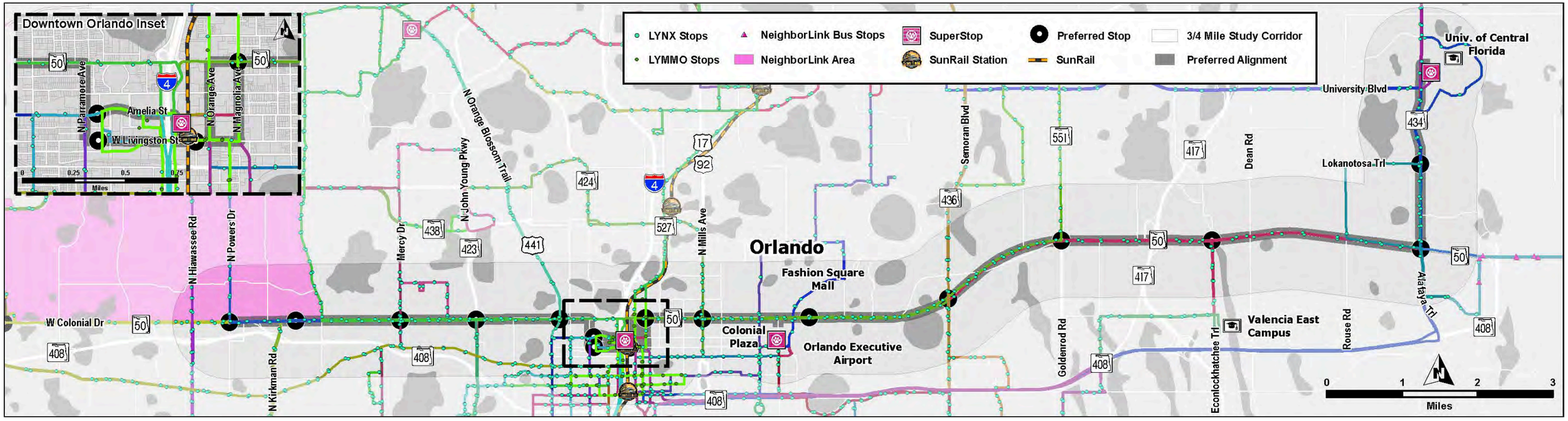


Figure 12 | LYNX Ridership

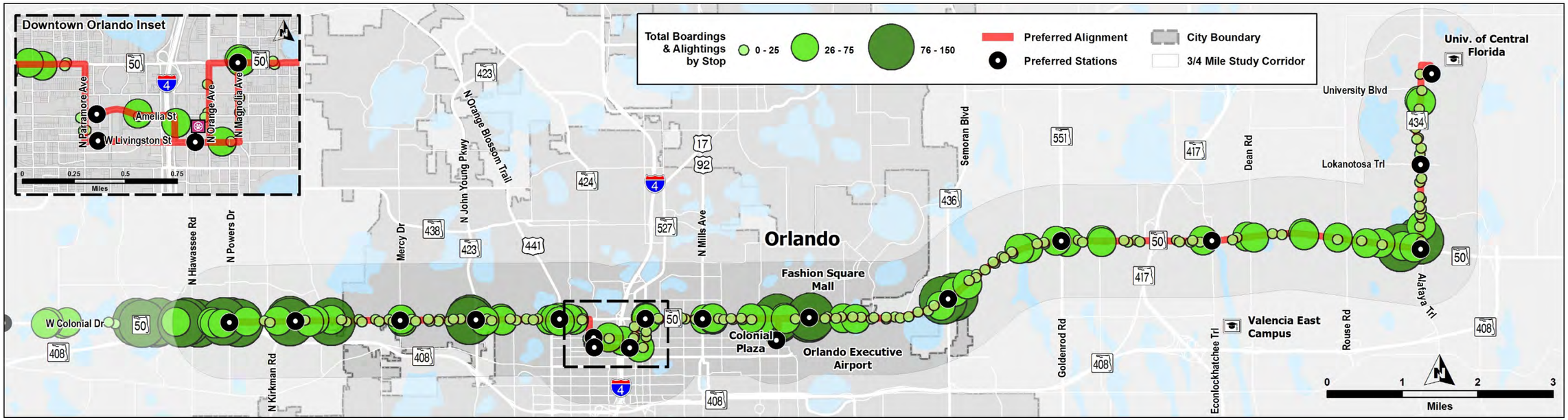


Figure 13 | Ridership Heat Map

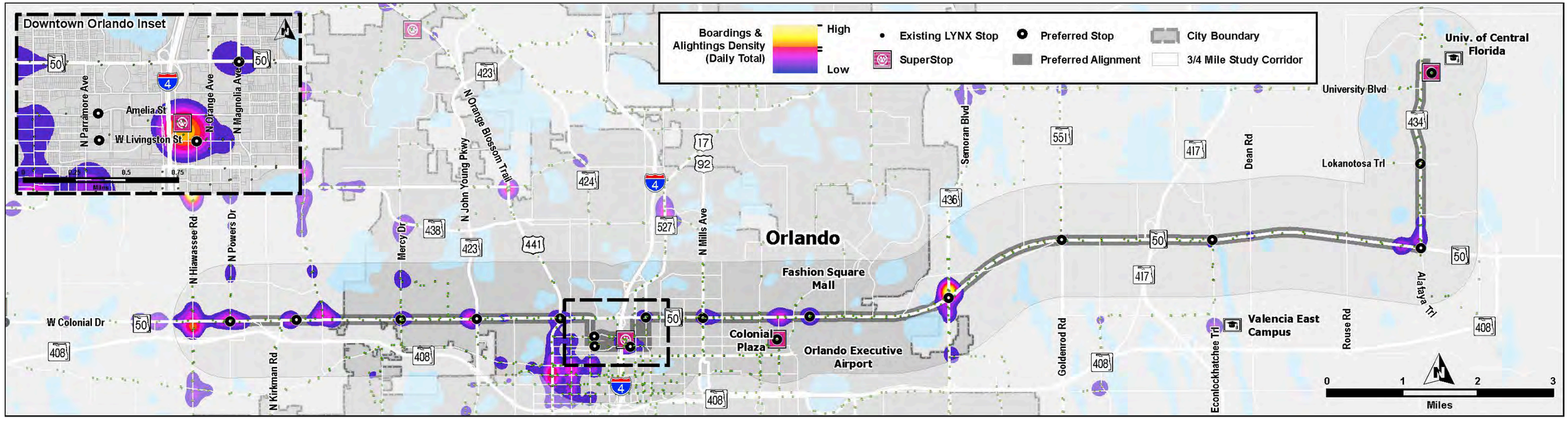


Figure 14 | Transit Propensity Index

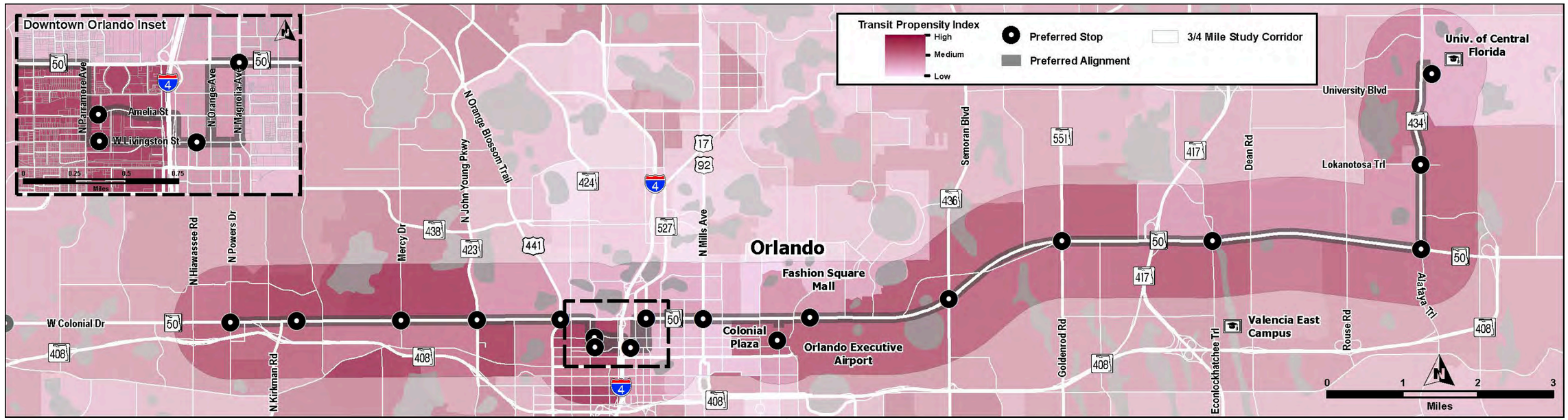
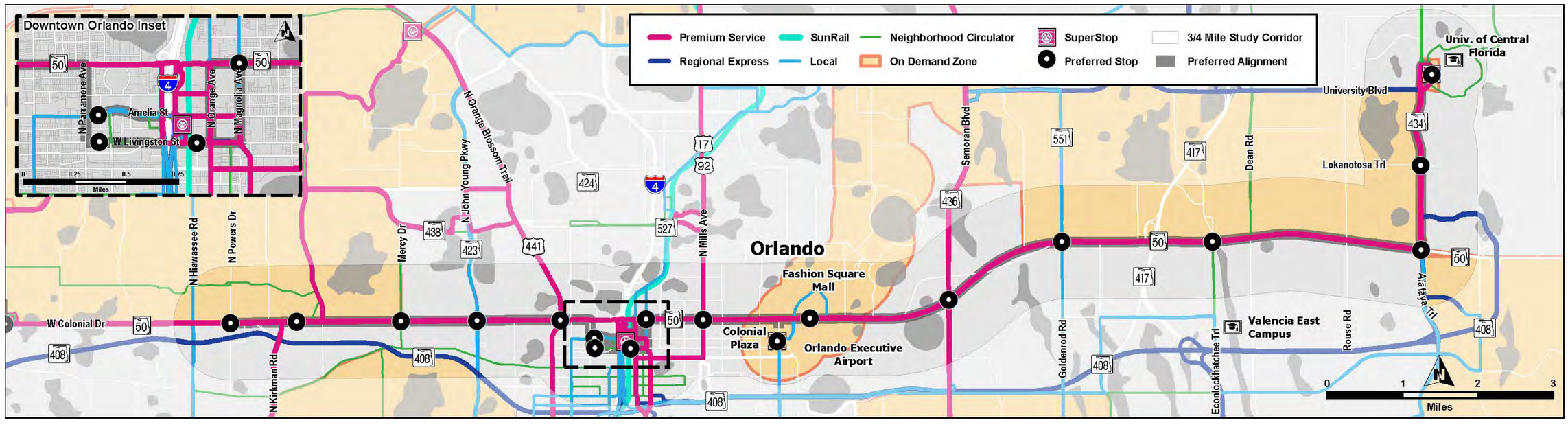


Figure 15 |Future LYNX Network



3 Transit Oriented Development (TOD)

3.0 Transit Oriented Development (TOD)

3.1 Introduction to the TOD Assessment

This evaluation uses the Florida Department of Transportation (FDOT)'s TOD Readiness Assessment Tool as the basis for analysis of land use and physical context of each station area along the corridor. The Assessment Tool provides a consistent framework for quantitatively and qualitatively evaluating different station areas and identifying the degree of compatibility of existing conditions, adopted policies, and regulations with a vision for future transit-oriented development. The assessment focuses on activity within a one-half mile radius of the proposed transit location which is defined as the station area. See a full description of the framework on the following page. The detailed TOD Readiness Assessment results for each station area are provided in Appendix A.

3.2 General Assessment of the Corridor

The following pages provide an evaluation of the strengths and weaknesses of each station area. There are some characteristics that are general to multiple stations along the corridor. All stations within the corridor are located within the City of Orlando or unincorporated Orange County for the purpose of land use regulations. Some stations areas have portions within each jurisdiction. The study area jurisdictions generally lack affordable housing policies; however, both are participating in the Regional Affordable Housing Initiative which resulted in an assessment of existing needs and recommendations which could be implemented in the near future.

In general, stations within Orange County support sufficient commercial densities for transit orientation but lack mixed use zoning or future land use categories. The Orange County zoning code is currently undergoing a substantial update which could result in more transit-supportive regulations. The majority of station areas within the City of Orlando's jurisdiction contain designated activity centers which permit mixed-use development and transit-supportive densities.

No station area along the corridor scored well on bicycle comfort. This accurately reflects limited amount of comfortable bicycle facilities within the study area though some major existing and planned trails do intersect the corridor including the Pine Hills Trail, the Orlando Urban Trail, and the Little Econ Greenway. Colonial Drive and Alafaya Trail are major arterial roadways on which the transit alignment is centered. These roads and the high-volume perpendicular roadways at most proposed station have a high level of activity justifying the station locations but they also act as barriers to pedestrian and bicycle movement with limited crossing locations and large crossing distances at intersections.

The transit travel shed, which is a measure of access to employment, is consistently high from Powers Drive to Goldenrod reflecting the job access characteristics of the corridor. While job access decreases towards the eastern edge of the corridor this measure may not reflect the travel demand of students accessing the University of Central Florida at the eastern terminus of the alignment.

LYNX customer boarding bus

3.3 What is the TOD Readiness Tool?

The FDOT TOD readiness tool evaluates the degree to which an existing or potential transit station area is "ready" for TOD. The tool is an assessment of 20 measures that reflect the full spectrum of TOD interests. By analyzing these 20 measures, planners can understand a station area's strengths and weaknesses. Planners should use the results of the tool to develop strategies to increase readiness by building upon the areas strengths, and seizing opportunities to address areas of weakness. It is not intended to compare one existing or potential station area to another. Instead, it is intended to help planners identify strategies to increase an area's readiness for TOD, regardless of whether it scored high or low relative to another station area.

Policy measures indicate the level of support the local government has demonstrated through visioning processes and documents, supportive regulations, public investments, policy adoptions, and other commitments. They also indicate the level of consistency and predictability in the process. These measures are primarily driven by local governments, and are also of interest to developers, as they can provide procedural or fiscal incentives for developers. A cooperative local government with a clear vision generally takes precedence over market conditions and transit access, although all three are important factors. What makes an area “ready” is more akin to how steady an area is in terms of politics.

Market measures assess the market potential of the area and evaluate recent real estate activity and trends. These measures are of primary interest to potential investors, i.e. developers and lenders, because they significantly affect factors like calculated risk and return on investment.

Physical measures evaluate the area’s underlying infrastructure, mix of uses, and the quality and connectivity of transportation networks. In general, these measures appeal primarily to businesses, as they indicate the propensity for potential customers to access the business without having to drive. These measures are also relevant to other audiences, including potential residents, investors, and planners because they describe the variety of destinations available and the ease with which one can access destinations by non-auto modes. Physical measures also assess the scale and orientation of the built environment (for humans or autos). Pedestrian oriented places generally have easier access to transit, and can support local businesses with greater numbers of pedestrians passing by.

Social measures reveal several facets of the vibrancy and civic resources of the community, as well as the balance of demographic and socioeconomic characteristics of the existing residents. These measures are primarily relevant to potential residents and visitors because they indicate the community assets available. Local government planners, transit service providers, and businesses are also interested in these measures.

This tool is provided by the Florida Department of Transportation. For more information visit:

https://planfortransit.com/resources-2/florida-transit-oriented-development/

P O L I C Y

Compelling Vision:
A clearly articulated adopted vision of the scale, intensity, character, amenities, and locale of development is a paramount first step towards TOD.

Supportive Regulations:
Land use and land development regulations that control densities, land use mix, pedestrian-oriented design and parking strategies are the regulatory ‘teeth’ to implement the vision.

Predictable and Consistent Political and Development Context:
Cities with a consistent and receptive approach towards development and a predictable timeline for approval and permitting processes are more attractive to developers

Affordable Housing Policies:
Policies to maintain a diverse housing stock with workforce housing increases access to transit and ridership potential.

Public Investment:
Capital program planning, infrastructure investments and related financial incentives ensure adequate capacity for higher density development and demonstrate public sector commitment.

M A R K E T

Recent Development Activity:
Proposed, under construction, and new residential, mixed-use and commercial development indicate developer interest.

Redevelopment Potential:
The ease with which redevelopment can occur based on underutilized or vacant parcels, land uses, parcel size, and ownership.

Real Estate Values:
Property values measure market strength and the desire for compact development.

Financial Incentives for Development:
Mixed-use TOD projects are typically more expensive to construct and may require financial incentives to bridge the gap in a project’s pro forma.

Trends in Income and Educational Attainment Data:
Increases in income and education levels indicate a growing interest in the neighborhood and the potential for capturing choice ridership.

P H Y S I C A L

Transit Travel Shed:
The number of jobs accessible by transit influences how desirable a station area is to potential new businesses or residents.

Transit Service and Infrastructure:
Areas with existing or funded transit service are more likely to attract development. The type of transit service and the amenities at the station are also influential.

Block Size:
Smaller block sizes promote pedestrian scaled development and walkability.

Path Connectivity:
Physical barriers to connectivity inhibit pedestrian and bicyclist access to transit, shopping, jobs, and services.

Bicycle Comfort:
Accommodating bicyclists can expand transit station catchment areas far beyond the typical pedestrian shed.

Community Gathering Places:
Parks, public plazas and squares, and other areas of public open space are essential amenities and social catalysts for TOD.

S O C I A L

Diversity of Existing Uses:
A measure of whether daily errands can be made by walking as determined by Walk Score.

Civic or Educational Uses:
Civic, cultural and educational institutions can function as anchors for development and as destinations attracting people to the station area.

Community Events and Branding:
Hosting community events can develop an identity for the area, celebrating its unique character and market the area as an attractive place.

Housing and Transportation Affordability:
Affordability of living in a location depends on the combined costs of housing and transportation, and captures the location-efficiency of the area.

A s s e s s m e n t L e g e n d

- Conditions in the earliest stage of development
- Conditions moving towards TOD
- Conditions supportive of TOD

3.4 TOD Policy Recommendations

The incorporation of strategies that encourage transit-oriented development will support the success of a Bus Rapid Transit System in the SR 50 Corridor.

Transportation Demand Management is a strategy that managed districts or major developments can use to reduce congestion by encouraging residents, employees, and visitors to take advantage of transportation alternatives such as transit, walking, carpooling, and bicycling. These could include free or discounted transit passes, parking cash-out programs, carpooling incentives, educational programs, or other programs and incentives.

Leaders in Central Florida have recognized a need for attainable housing options in the region and have developed a Regional Affordable Housing Initiative. The FDOT TOD Assessment Tool and the Regional Affordable Housing Initiative Report both recognize the connection between housing affordability and transportation affordability. The report identifies proximity to transit as an important factor in the location of affordable housing in order to ensure that residents also have access to affordable transportation options. The report also includes a collection of strategies to provide more affordable housing options. It is important that strategies that support affordable or mixed-income housing be in place before investment in a high-quality transit corridor because high-quality transit can increase property values. It is essential that any policies or programs to maintain affordability be in place before price escalation or real estate speculation based on the expectation of public investment in transit.

Land development regulations should support the provision of pedestrian and bicycle connectivity in new developments including sidewalks, bikeways, on-site pedestrian and bicycle circulation, and connections between bicycle/pedestrian networks and existing or proposed transit. One major challenge for infill areas is that while new land development regulations may require on-site pedestrian and bicycle infrastructure, existing developments are not required to install such infrastructure unless or until they redevelop or make significant improvements. This results in discontinuous pathways for people trying to navigate the transportation system. Jurisdictions may want to consider grants or matching funds for such improvements on private properties that represent important system gaps or major potential generators of bicycle and pedestrian trips. Important improvements could include the addition of pedestrian pathways or bicycle parking.

An effective pedestrian network requires coordination between public sidewalk investments and on-site pedestrian circulation within new and existing development. Public investments in the local transportation environment can support transit-oriented development including transit shelters, public seating near stops, streetscaping (including shade), bicycle, and pedestrian infrastructure. Investments in bicycle and pedestrian infrastructure within station areas should be prioritized. Local policies and ordinances should permit investment of transportation impact fees, mobility fees, or other public sources in these types of investments. Assessing the capacity of existing utility infrastructure to support increases in population and employment density is important to making redevelopment a reality; this could include efforts to offset higher costs associated with redevelopment by making public investments in stormwater or utility infrastructure.

In addition to horizontal pedestrian infrastructure, urban design details impact people's comfort walking from transit stations to destinations within the station area. Urban design issues include shade (trees, awnings, colonnades), street furniture (trash receptacles, seating),

Resident crossing SR 50 under SR 436 overpass

building and entrance placement (adjacent to the public sidewalk), minimizing voids (maximum setbacks, screening parking areas adjacent to the sidewalk), and pedestrian scale design details (windows, architectural interest at ground level). The incorporation of greens and civic spaces that encourage people to linger and provide activities for people of all ages also contribute to the livability of higher-density transit-oriented environments. These issues are addressed in detail in the FDOT Florida TOD Guidebook.

Orange County Stations

The most significant impediment to transit-oriented development in the Orange County station areas is that the Commercial Future Land Use designation which contains the majority of properties with redevelopment potential in the station areas does not permit residential development. A Future Land Use category which permits a mix of uses would be preferable in the station areas to allow higher intensity mixed-use development that supports transit ridership. The County is currently in the process of updating the Comprehensive Plan and the Land Development Code. These updates are anticipated to encourage more mixed-use development and redevelopment.

City of Orlando Stations

The majority of proposed stations within the City of Orlando already center on areas designated in the Comprehensive Plan as Activity Centers which provides for a mix of uses and higher densities and intensities. Station areas that are not currently activity centers may re-evaluated when transit investment is anticipated. Areas within the Traditional City are subject to form-based standards which require building siting consistent with transit-oriented design such as minimum intensities and maximum setbacks. For stations located outside the Traditional City it will be important to ensure that zoning requirements provide for pedestrian-oriented building placement and site design.

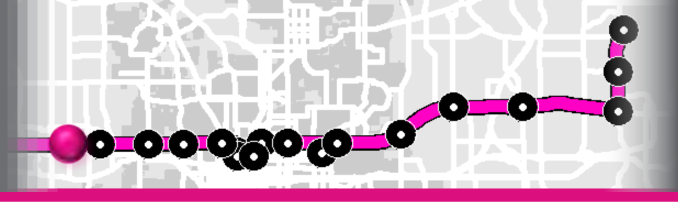
Successful TOD depends on access and density around the transit station. Convenient access to transit fosters development, while density encourages people to use the transit system

3.5 Station Assessment and TOD Concepts

The FDOT's TOD Readiness Assessment Tool was used to assess each station area and develop strategies to increase TOD by building upon the area's strengths and strategically improving its weaker areas. The identified TOD policy recommendations are specifically targeted to the station area, recognizing each station area's vision and function is different and unique.

The highest impact TOD plans incorporate feasibility with density, pedestrian connectivity and urban design that encourage users to engage with both the place and the transit options. Mixed uses also balance transit flows and creates a more attractive destination for living or working, especially for those without access to a car. TOD concept plans were developed for 11 station areas based on the results from the TOD assessment and input from stakeholders and community leaders. The TOD concepts plans for the SR 50 BRT station areas, maximize opportunities to use transit by addressing a mix of land uses, employment centers, building design, and recommended walking and bicycling access improvements.

Resident crossing SR 50 near Pine Hills



01 POWERS DRIVE

Station Area Type: Community Center

TOD Readiness Assessment

Strengths

The Powers Drive area is the westernmost station in the Phase One study area and is located within unincorporated Orange County. The strongest assets are the physical layout such as the gridded street network to the north of Colonial Drive and a moderate mix of existing uses. Housing and transportation costs are currently low making the station area affordable to residents of varying income levels. The area has also seen increasing income and education levels in recent years. Commercial shopping centers adjacent to proposed stations may provide redevelopment opportunities.

Weaknesses

The station area does not have an adopted vision or policy measures that anticipate transit-oriented development. The lack of targeted financial incentives to promote private investment coupled with low real estate values may prove a challenge for redevelopment. The area also lacks public gathering places, bicycle facilities, and strong markers of identity or unique character.

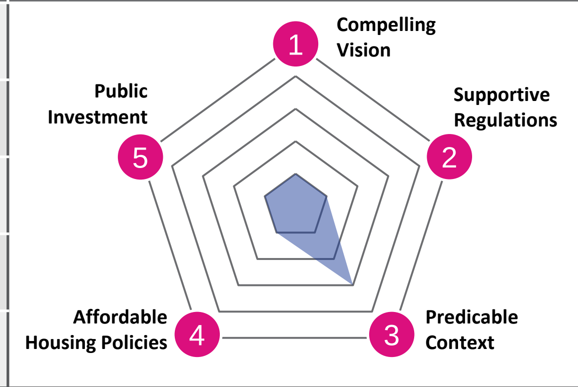
Policy Recommendations

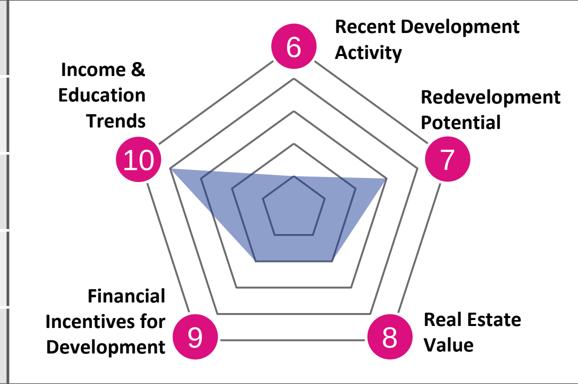
There are several large parcels with Commercial future land use and zoning within the station area. Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development. These amendments should include requirements for pedestrian connectivity and urban form standards for new construction.

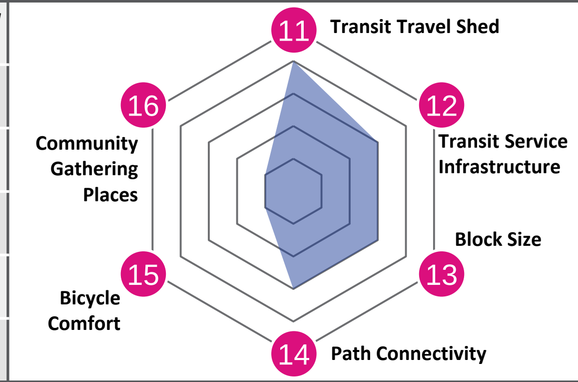
20 MEASURE ASSESSMENT

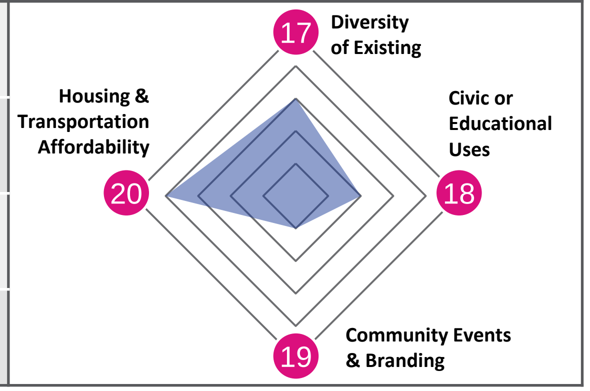
Category	#	Existing Conditions	Readiness*
POLICY	1	Compelling Vision:	Develop a Shared Vision
	2	Supportive Regulations:	Permit Vertical Mixed-Uses
	3	Predictable Context:	By-Right Zoning for TOD
	4	Affordable Housing Policies:	Implement Regional Plan
	5	Public Investment:	Assess Infrastructure
MARKET	6	Recent Development Activity:	More Activity
	7	Redevelopment Potential:	Leverage Consolidated Parcels
	8	Real Estate Values:	Higher Values
	9	Financial Incentives for Development:	Waive Fees Where Feasible
	10	Income & Education Trends:	Maintain Mix of Incomes
PHYSICAL	11	Transit Travel Shed:	Improve Regional Transit Service
	12	Transit Service Infrastructure:	Improve Stations
	13	Block Size:	Smaller Block Sizes
	14	Path Connectivity:	Increase Connectivity
	15	Bicycle Comfort:	More Bikeways
	16	Community Gathering Places:	New Community Spaces
SOCIAL	17	Diversity of Existing Uses:	More Parks & Entertainment
	18	Civic or Educational Uses:	More Civic Venues
	19	Community Events & Branding:	Identify Brand and Leadership
	20	Housing & Transportation Affordability:	Decrease Combined Cost

READINESS ASSESSMENT

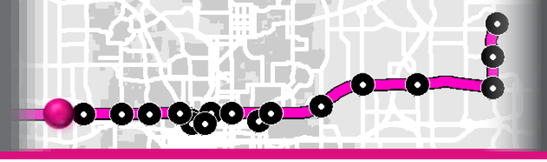




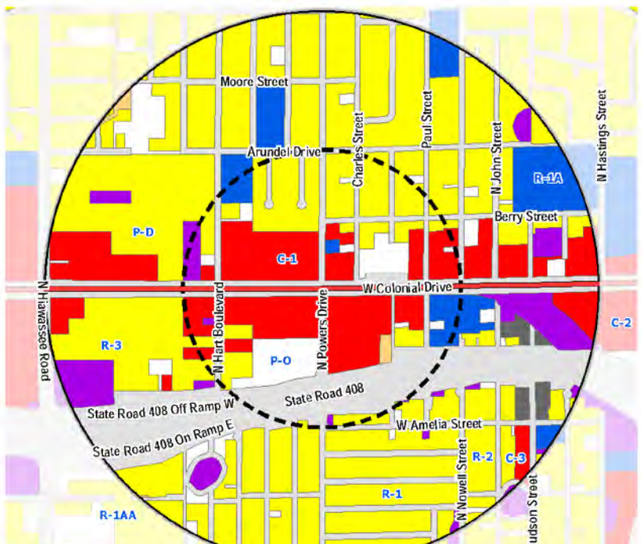




01 POWERS DRIVE

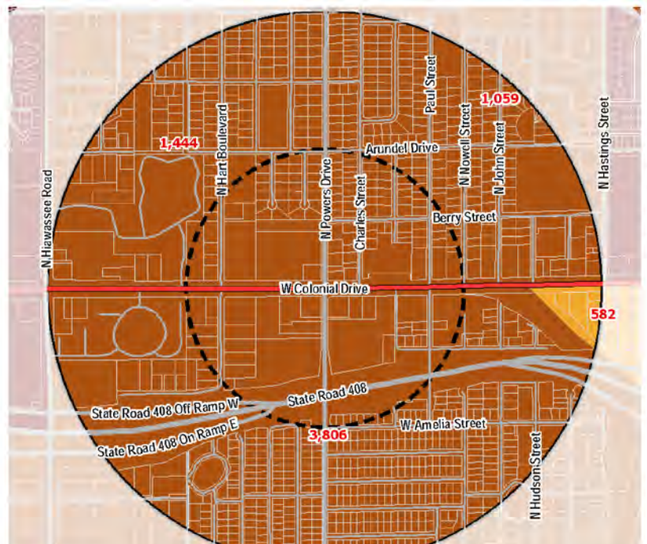


Station Area Type: Community Center



Land Use and Zoning

Residential | Public/Semi-Public | Vacant | Industrial
Retail/Office | Institutional | Other | Water
Recreation | Agricultural | AC-2 Zoning



Population Density

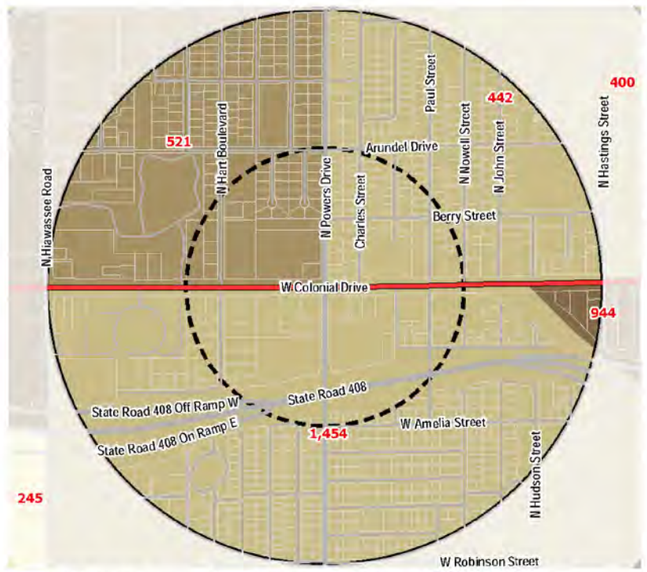
<=1 per Acre | 3.1 - 5.0 per Acre | > 10 per Acre
1.1 - 3.0 per Acre | 5.1 - 10.0 per Acre | 1,123 Total Population (TAZ)

Transit and Ridership

Bus Stop | Ridership Intensive Areas | Quarter Mile Buffer
Bus Route | Half Mile Buffer

Parcels and Buildings

Vacant Parcel | Parcels | Proposed BRT Corridor
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4



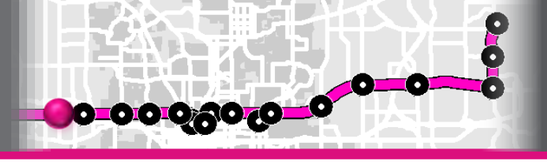
Employment Density

<=1 per Acre | 3.1 - 5.0 per Acre | > 10 per Acre
1.1 - 3.0 per Acre | 5.1 - 10.0 per Acre | 4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed | Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

01 POWERS DRIVE



Station Area Type: Community Center

TOD Concept Plan

The Powers Drive TOD concept is organized around a “green loop”, formed by tree lined streets and a variety of open spaces along Colonial Drive and within the development.

Transportation:

- Concord Street is extended to the west and provides – in conjunction with two new north-south streets – access and local circulation routes.

Open Space:

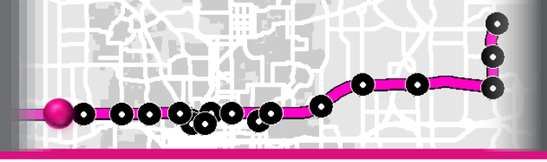
- Linear parks along Colonial Drive on both sides of the Powers Drive intersection widen to corner plazas near the BRT station locations. New tree lined boulevards lead to smaller scaled neighborhood greens along the extension of Concord Street, creating a “green loop”.
- The neighborhood greens include a quarter-acre park in the southwest quadrant, and an attached half-acre park in the southeast quadrant, both acting as the focal points and providing outdoor recreation for residents.
- Smaller stormwater management features are included at the edges of the development.

Development and Urban Design:

- The blocks are redeveloped with building frontages aligned along sidewalks, except where buildings are set back to accommodate attached plaza areas. The highest intensity of development is located between Powers Drive and Paul Street. Parking is provided in surface lots in the rear, except between Powers Drive and Paul Street, where parking structures wrapped with liner buildings provide off-street parking.
- Buildings fronting on Colonial Drive are generally envisioned as mixed-use buildings that may include ground floor retail or office uses and office or residential uses on upper stories.
- Buildings fronting on cross streets are generally envisioned as residential, either as rowhouses or flats, except on Powers Drive, where a mix of retail, office and residential is envisioned.

3D illustration not included for this station

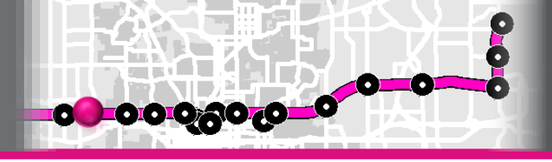
01 POWERS DRIVE



Station Area Type: Community Center

ACCESS LYNX Vehicle near Powers Dr

02 PINE HILLS ROAD



Station Area Type: Regional Center

TOD Readiness Assessment

Strengths

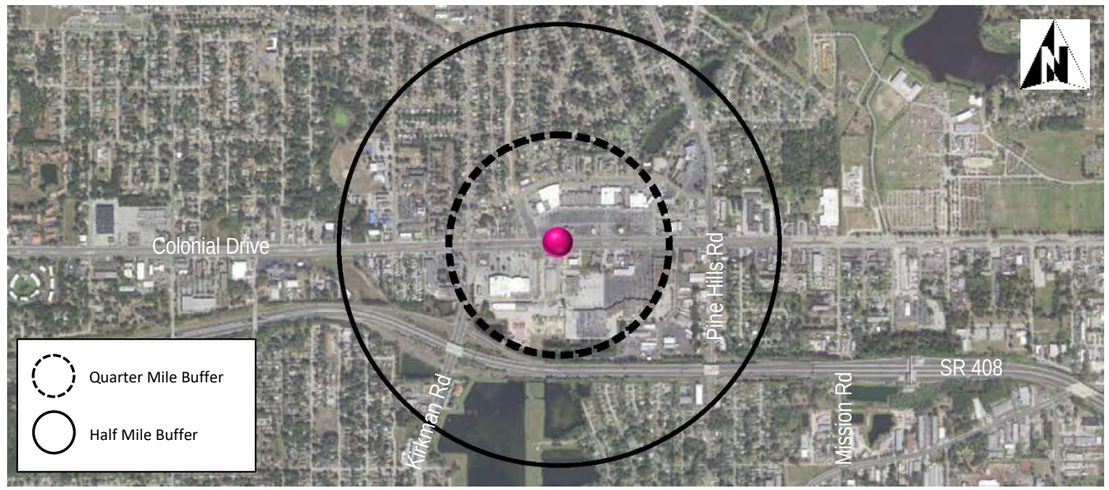
The Pine Hills station area is primarily in the jurisdiction of unincorporated Orange County. The area is part of the Pine Hills Neighborhood Improvement District (NID) and benefits from a unique mix of cultural identities and assets. The NID can secure funding and has commissioned visioning initiatives and market studies although these have primarily been focused north of the station area. A major recent investment in bicycle and pedestrian infrastructure in the Pine Hills Trail, which terminates at Alhambra Drive, is an asset. There have also been rising income and education levels in the area in recent years.

Weaknesses

While the NID has envisioned a mixed-use future, existing policies do not support or require more intensive, mixed use development or pedestrian infrastructure necessary for transit-oriented development. While the area has affordable housing today, it lacks policies that will ensure a mix of housing values in the future. Low real estate values may be a challenge for redevelopment.

Policy Recommendations

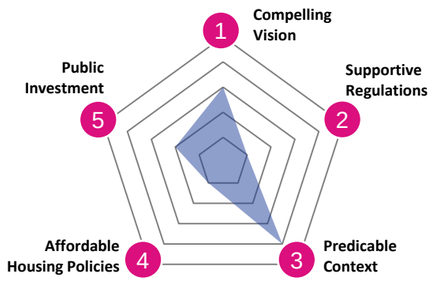
This station area includes large parcels with Commercial future land use and zoning. Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development. These amendments should include requirements for pedestrian connectivity, urban block sizes, and urban form standards for new construction.

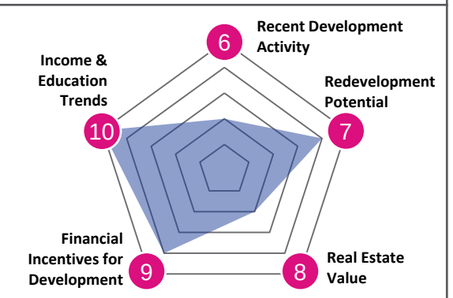


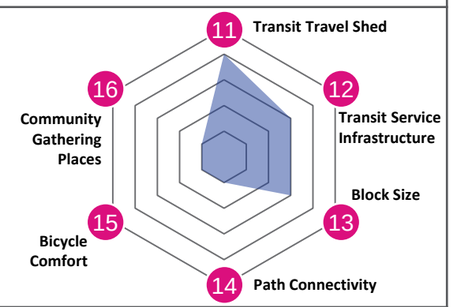
20 MEASURE ASSESSMENT

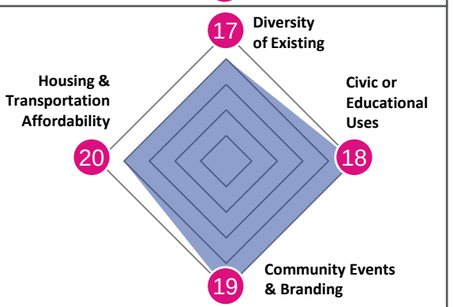
		EXISTING CONDITIONS	READINESS*	
POLICY	1	Compelling Vision:		*Update and Adopt Vision*
	2	Supportive Regulations:		*Permit Vertical Mixed-Use*
	3	Predictable Context:		*By-Right Zoning for TOD*
	4	Affordable Housing Policies:		*Implement Regional Plan*
	5	Public Investment:		*Assess Infrastructure*
MARKET	6	Recent Development Activity:		*More Activity*
	7	Redevelopment Potential:		*Leverage Consolidated Parcels*
	8	Real Estate Values:		*Higher Values*
	9	Financial Incentives for Development:		*Waive Fees Where Feasible*
	10	Income & Education Trends:		*Maintain Mix of Incomes*
PHYSICAL	11	Transit Travel Shed:		*Improve Regional Transit Service*
	12	Transit Service Infrastructure:		*Improve Stations*
	13	Block Size:		*Smaller Block Sizes*
	14	Path Connectivity:		*Increase Connectivity*
	15	Bicycle Comfort:		*More Bikeways*
	16	Community Gathering Places:		*New Community Spaces*
SOCIAL	17	Diversity of Existing Uses:		*More Parks & Entertainment*
	18	Civic or Educational Uses:		*Maintain Civic Venues*
	19	Community Events & Branding:		*Continue Building Brand & Events*
	20	Housing & Transportation Affordability:		*Decrease Combined Cost*

READINESS ASSESSMENT

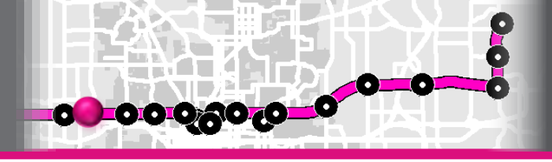








02 PINE HILLS ROAD



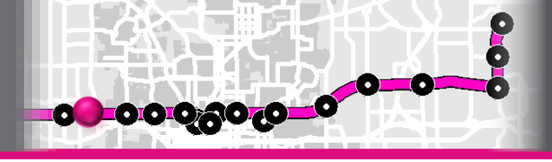
Station Area Type: Regional Center

Pine Hills has several community organizations and a Neighborhood Improvement District. Must of the focus to date has been on development in the Silver Star Road area. This community interest can be leveraged to enhance the 2004 community vision to address transit-oriented development and opportunities along Colonial Drive. Pine Hills can also continue to build its brand through more events like the Taste of Pine Hills to attract new interest in redeveloping under-utilized properties in the station area.

Bicyclist crossing SR 50 at Emeralda Rd

Pine Hills Trail

02 PINE HILLS ROAD

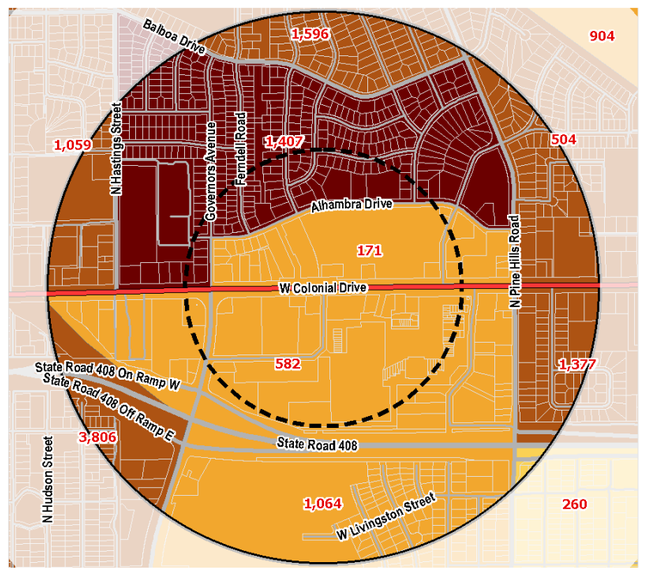


Station Area Type: Regional Center

Land Use and Zoning

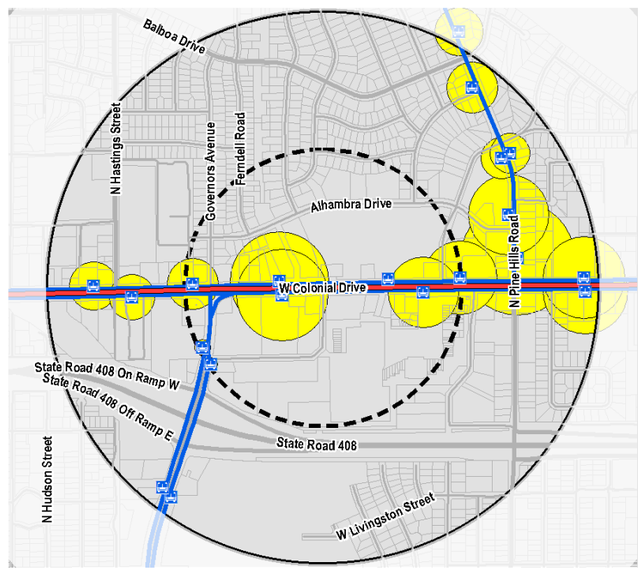
Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



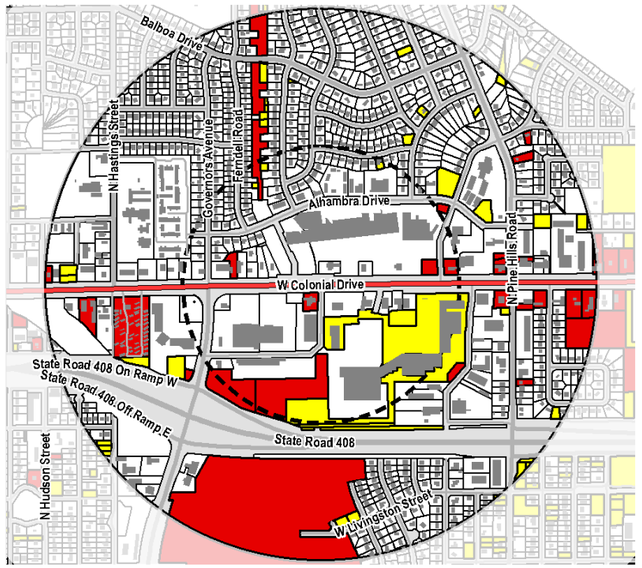
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



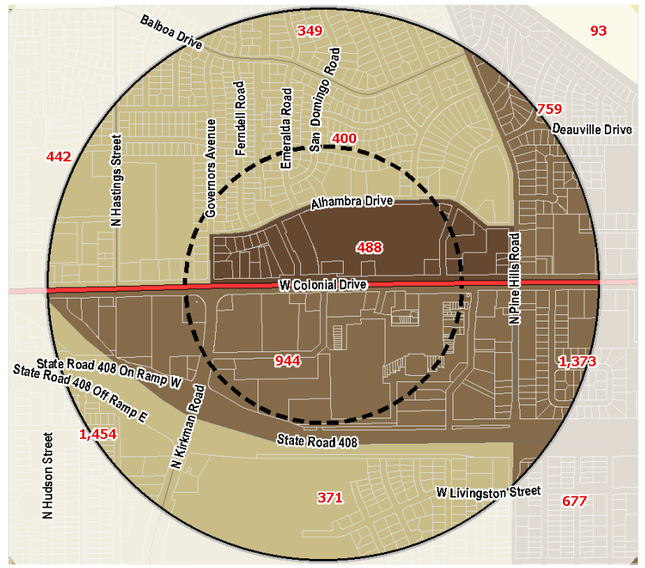
Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



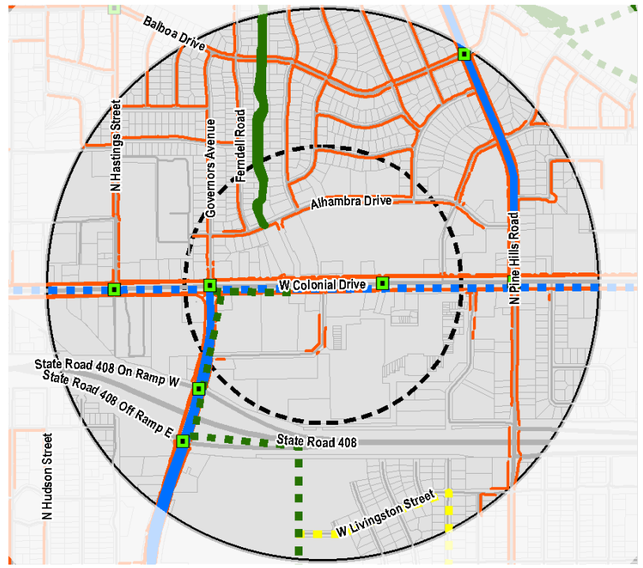
Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density



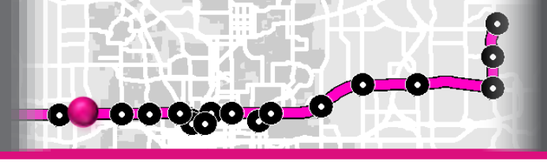
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities



Proposed / Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

02 PINE HILLS ROAD



Station Area Type: Regional Center

TOD Concept Plan

Pine Hills is designed as a regional urban center, the most intense center on the corridor west of Interstate 4. With strong community involvement, access to the 408 expressway, and large contiguous ownerships, this center has the potential to be a major hub on the SR 50 BRT corridor.

Transportation:

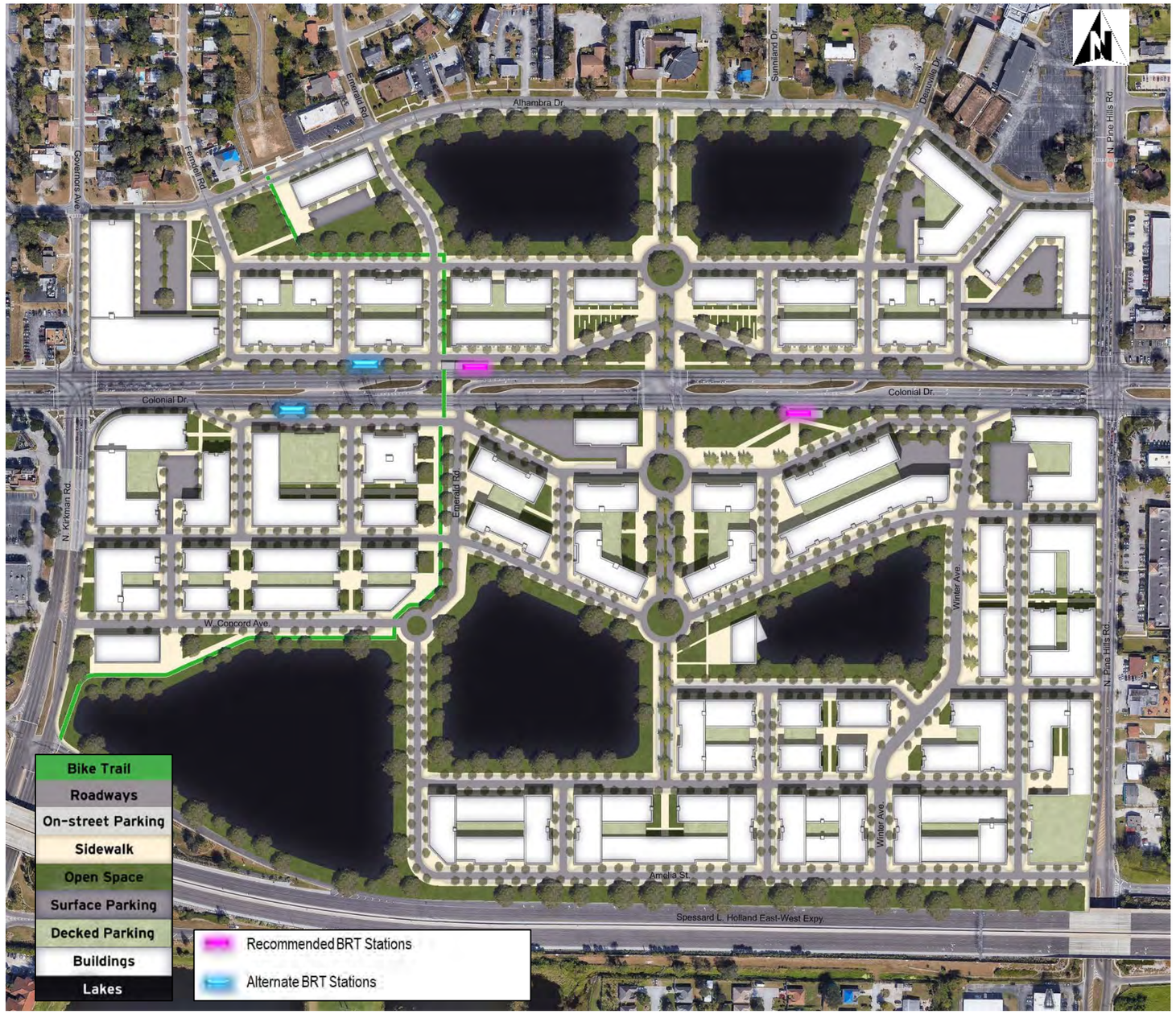
- Frontage lanes are incorporated to provide lower-speed local access to businesses.
- A central avenue perpendicular to SR 50 increases and encourages connectivity between the north and south neighborhoods.
- Roundabouts provide traffic calming and beautification.
- Consistent sidewalks are provided in all new development.
- Additional pedestrian walkways are provided through block interiors.
- Provides a bicycle trail from the current terminus of the Pine Hills Trail to the planned bikeway network to the south.
- Midblock crossing is located near the westbound BRT station providing connectivity for transit and trail users.

Open Space:

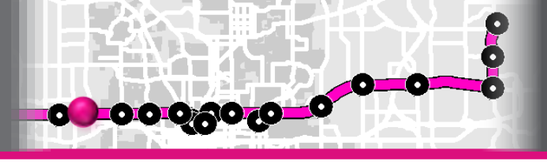
- Wide array of public spaces of different scales and characteristics.
- Significant public spaces have been designed close to potential BRT station locations.
- Proposed large park on the northern boundary is shared with existing neighborhood raising property values.
- Stormwater management features also serve as park space.

Development and Urban Design:

- Street trees enhance frontages and provide shade for people walking.
- Continuous building frontage is designed on key streets providing pedestrian entrances directly from the public sidewalk.
- Structured parking allows for increased densities near the BRT stations and more continuous frontage than would be possible with surface parking.
- Office uses of greater height are located along the SR 408 Expressway to increase business visibility.
- Commercial uses are concentrated near major intersections with Colonial Drive.
- Road network promotes visual terminations.

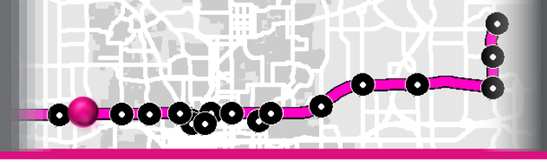


02 PINE HILLS ROAD



Station Area Type: Regional Center

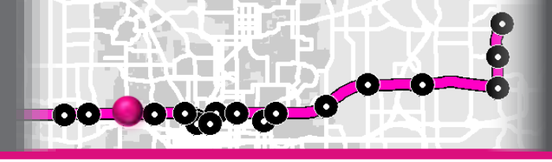
02 PINE HILLS ROAD



Station Area Type: Regional Center

Station Area Long -Term 3D Illustration

03 MERCY DRIVE



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

The Mercy Drive station area is primarily located within the City of the Orlando. The station area is located within the West Colonial and Mercy Drive Opportunity Zones. The Opportunity Zones program incentivize investment in targeted communities to promote inclusive and equitable growth for businesses and residents. The station area includes the Central Florida Fairgrounds which draws large events with regional attendance. Nearby Barnett Park is a 159-acre County park located slightly outside the station area. The recently completed Mercy Drive Neighborhood Vision Plan overlaps the study area but does not address the core of the station area. Outside of the fairgrounds, the area benefits from a relatively well- connected street network which includes sidewalks and bicycle lanes. Underutilized land coupled with positive trends in income and educational attainment suggest opportunities for redevelopment.

Weaknesses

The area struggles with a negative brand and low levels of real estate development activity. It also lacks an existing diversity of uses or supportive land use regulations with a significant amount of land zoned for industrial and auto-oriented, single-use commercial.

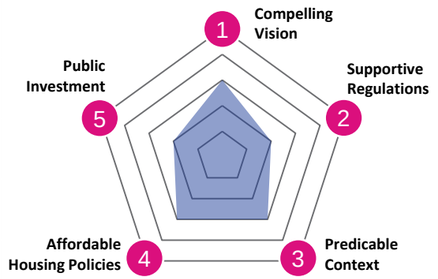
Policy Recommendations

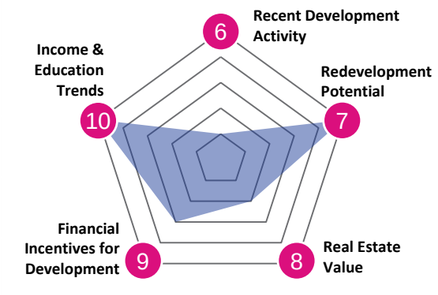
Mercy Drive is one of the two stations in the City of Orlando that is not currently designated as an activity center and is outside the Traditional City. The Future Land Use and zoning in this station area primarily supports industrial development. Industrial development can be part of transit-oriented development and provides important job-centered destinations on the transit route.

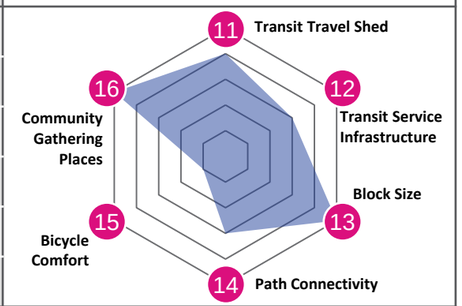
20 MEASURE ASSESSMENT

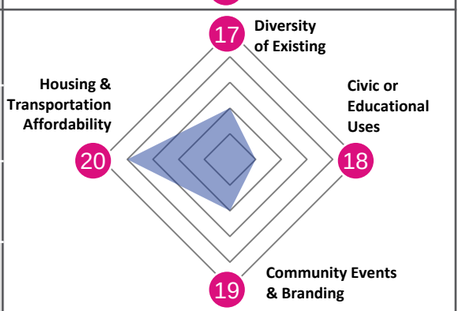
	EXISTING CONDITIONS	READINESS*	
POLICY	1 Compelling Vision:		*Expand Vision to Station Area*
	2 Supportive Regulations:		*Shift from Industrial to Mixed--Use*
	3 Predictable Context:		*Identify Champions*
	4 Affordable Housing Policies:		*Implement Regional Plan*
	5 Public Investment:		*Assess Infrastructure*
MARKET	6 Recent Development Activity:		*More Activity*
	7 Redevelopment Potential:		*Leverage Consolidated Parcels*
	8 Real Estate Values:		*Higher Values*
	9 Financial Incentives for Development:		*Waive Fees Where Feasible*
	10 Income & Education Trends:		*Maintain Mix of Incomes*
PHYSICAL	11 Transit Travel Shed:		*Improve Regional Transit Service*
	12 Transit Service Infrastructure:		*Improve Stations*
	13 Block Size:		*Some Smaller Block Sizes*
	14 Path Connectivity:		*Increase Connectivity*
	15 Bicycle Comfort:		*More Bikeways*
	16 Community Gathering Places:		*Improve Access*
SOCIAL	17 Diversity of Existing Uses:		*More Retail Services & Dining*
	18 Civic or Educational Uses:		*Increase Cultural Venues & Schools*
	19 Community Events & Branding:		*Improve Branding & Increase Neighborhood Events*
	20 Housing & Transportation Affordability:		*Decrease Combined Cost*

READINESS ASSESSMENT

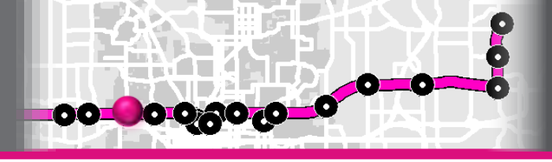








03 MERCY DRIVE



Station Area Type: Community Center

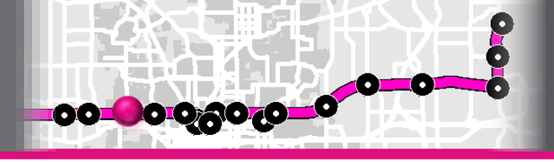
To encourage transit-oriented development in this station area the Comprehensive Plan and zoning designations should be revisited to permit a broader range of uses within at least some parts of the station area. Economic development efforts could consider opportunities to focus industrial uses with higher employment densities in this location. The City could also review models of job-centered and industrial transit-oriented development from other cities.

The Mercy Drive Vision Plan focuses on the residential areas north of the station area. This vision could be expanded to include transit-oriented development potential centered on Colonial Drive. The vision plan proposes improved non-motorized access between Mercy Drive and Barnett Park for the residential of the Mercy Drive area. Such access would also enhance livability for transit-oriented development in the station area. It is notable that the Central Florida Fairgrounds stages large-scale events. Noise considerations should be taken into account when determining whether to locate new residential development immediately adjacent to the fairgrounds. While the Fairgrounds hosts major regional events, this does not necessarily fill the void for more locally focused events which would help build a community-focused brand.

Bicyclists crossing SR 50 at Mercy Dr

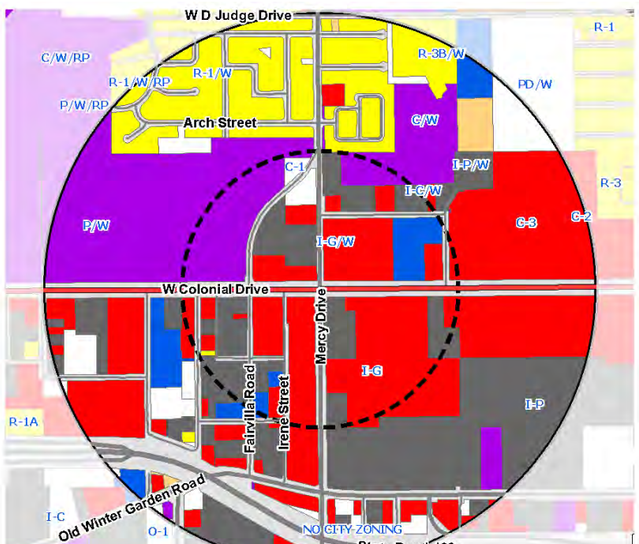
Residents crossing SR 50 at Mercy Dr

03 MERCY DRIVE



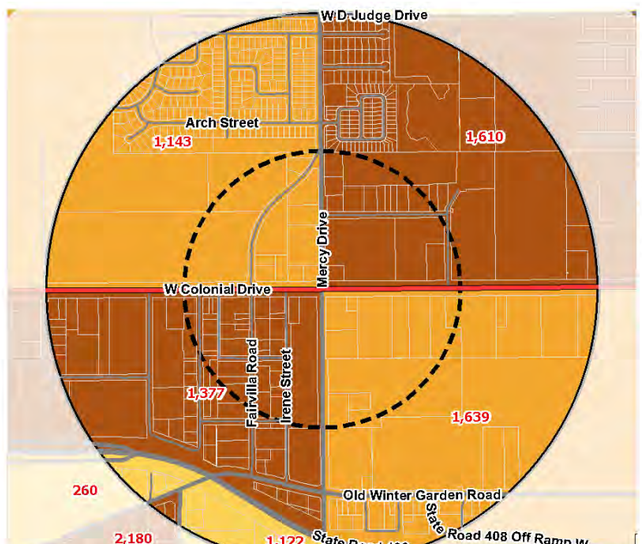
Station Area Type: Community Center

Land Use and Zoning



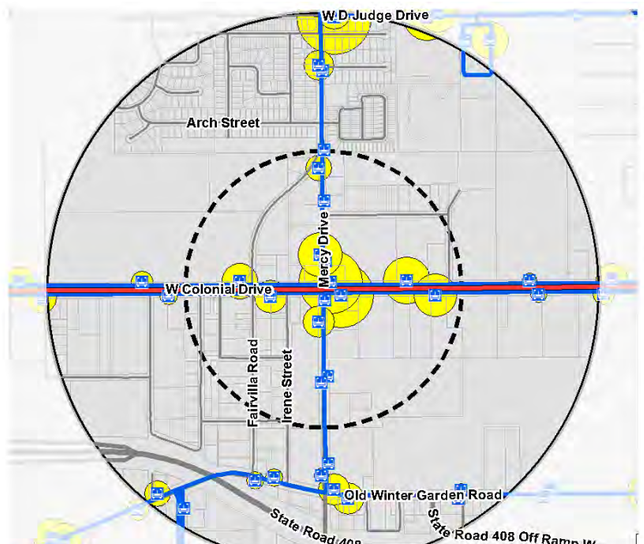
Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



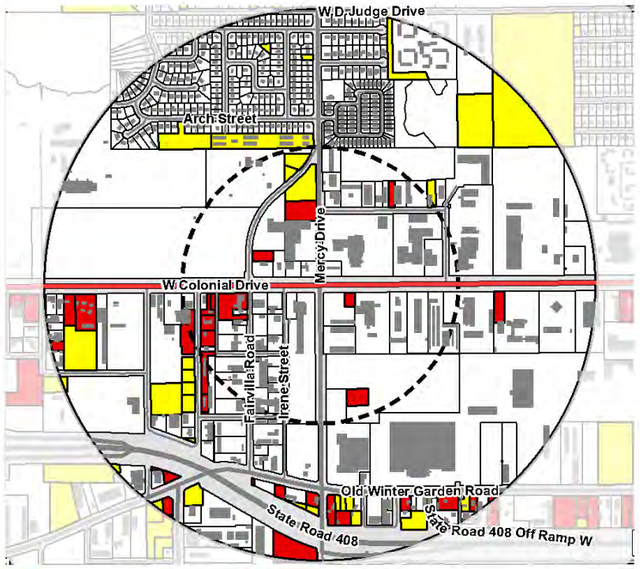
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

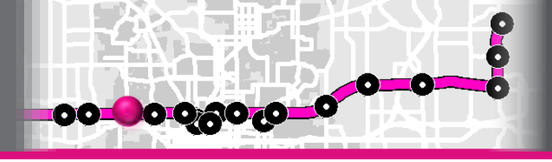
Employment Density

<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

03 MERCY DRIVE



Station Area Type: Community Center

TOD Concept Plan

Mercy Drive is designed as an urban neighborhood, connecting the proposed BRT stations to the existing Mercy Drive neighborhood to the north and Old Winter Garden Road to the south. Smaller commercial and industrial lots are redeveloped into a residentially-based mixed-use neighborhood transitioning to continuing light industrial activities.

Transportation:

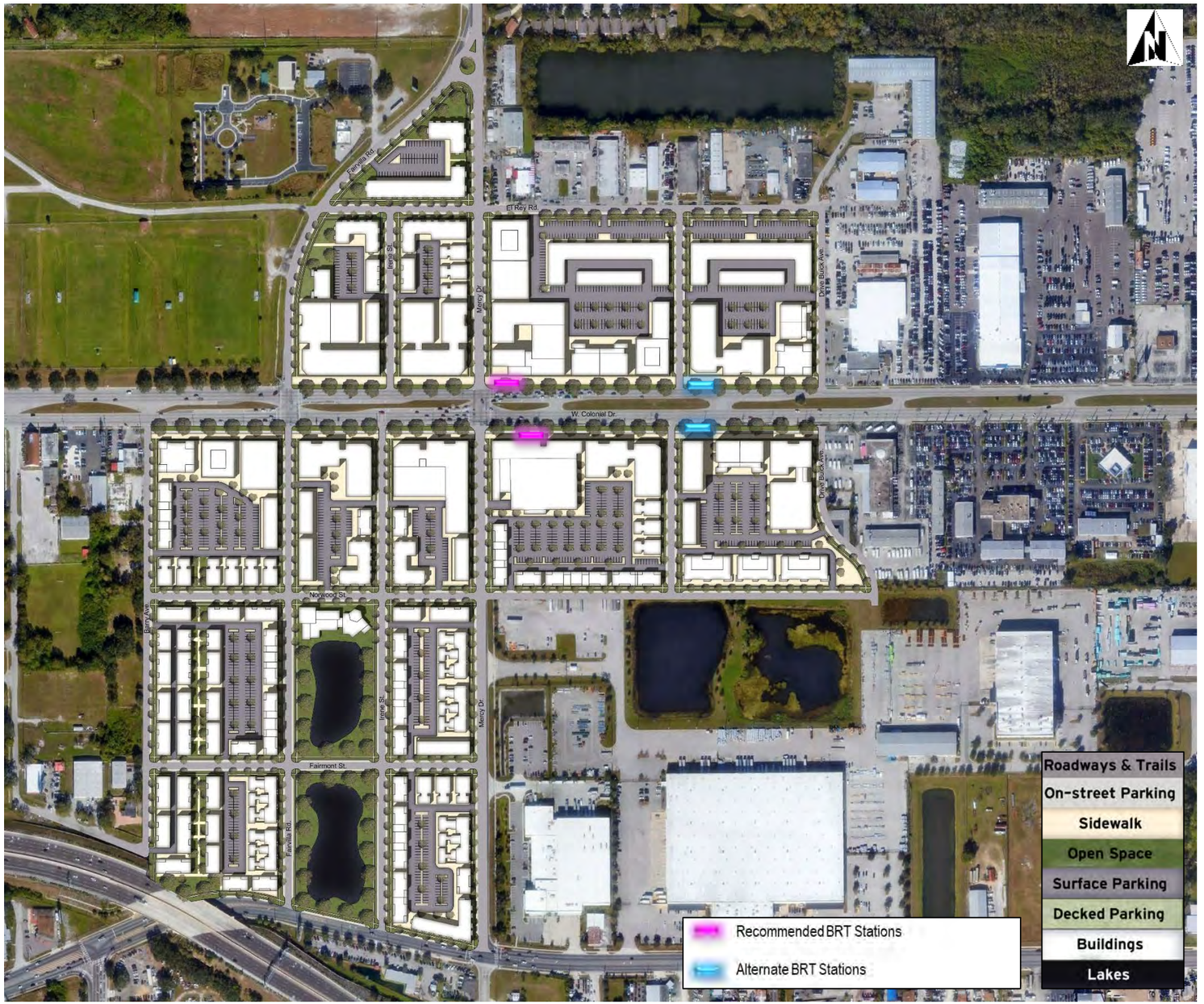
- Existing streets are connected and continued through the new development, completing the block grid and improving connectivity.
- Consistent sidewalks are provided in all new development.
- A roundabout is incorporated at the intersection of Fairvilla Road and Mercy Drive consistent with the recommendations of the Mercy Drive Vision Plan.
- Properties are accessed from local streets perpendicular to SR 50 and Old Winter Garden Road to maintain access management.

Open Space:

- Residential redevelopment is centered on a large neighborhood park in the southern portion of the plan.
- Stormwater management features also provide park space.

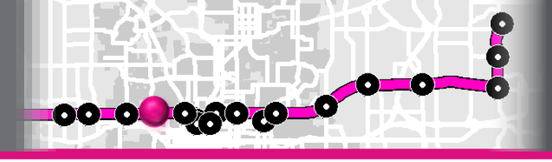
Development and Urban Design:

- Street trees enhance frontages and provide shade for people walking.
- A variety of housing typologies are included.
- Several blocks south of Colonial Drive are design as “mews” with pedestrian access provided along a dedicated pedestrian passage and vehicular access from rear alleys.
- Live-work units are encouraged as a transition from the commercial corridor to the residential areas.
- The majority of parking is provided through surface lots consistent with the lower scale development of a neighborhood center.
- Light industrial uses are encouraged in the north-east quadrangle.



3D illustration not included for this station

04 JOHN YOUNG PARKWAY



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

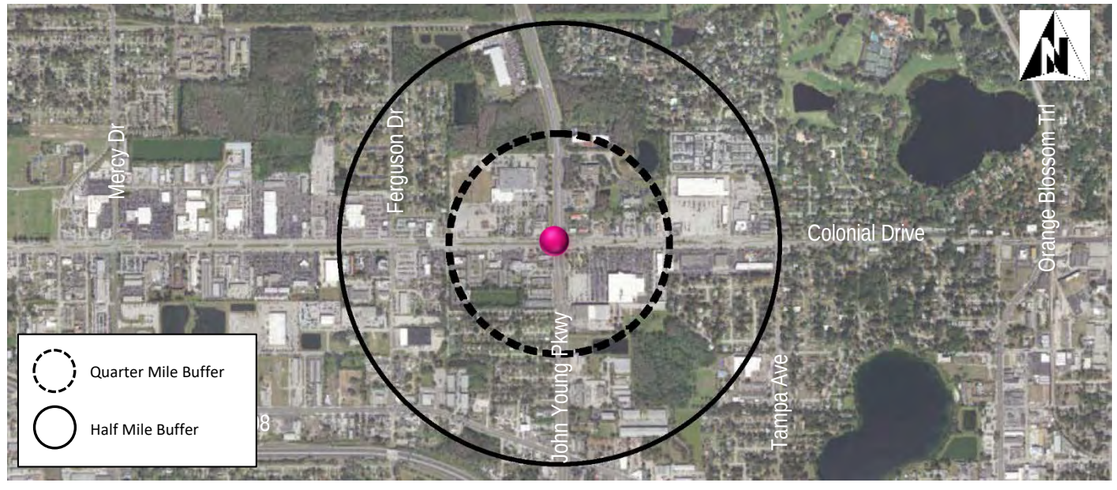
The John Young Parkway station area is primarily within the jurisdiction of the City of Orlando. The station area is located within the West Colonial and Mercy Drive Opportunity Zones providing incentives for investments that promote community economic development in the area. Residential values and rents in this area suggest a healthy real estate market. In addition, the area has a high opportunity for redevelopment based on underutilized properties and ownership patterns coupled with incentives associated with being in an opportunity zone which provides support for redevelopment. In addition, rising income and education levels and land use regulations support an anticipated activity center with a mix of uses.

Weaknesses

Much of the station area lacks existing physical attributes supportive of transit-oriented development including connected streets, small blocks, diversity of uses, and community gathering places. The area lacks an identifiable community brand or vision. One barrier to redevelopment within the station area is the location and auto-oriented configuration of the Orange County Sheriff's office in the southeast corner of the station area. Although the publicly owned parcel may present a Public Partnership Opportunity.

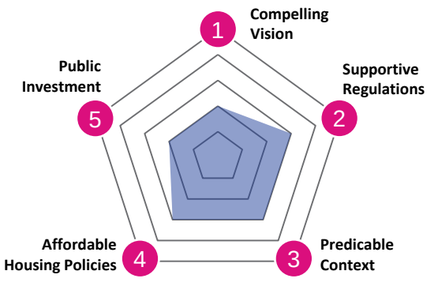
Policy Recommendations

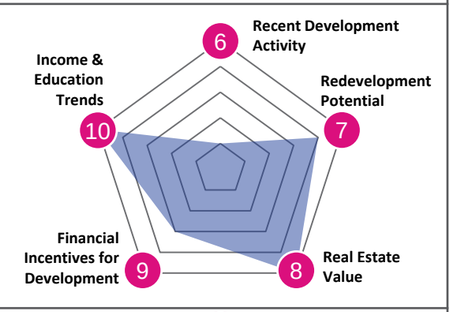
John Young Parkway is designated an Urban Activity Center by the City of Orlando but is outside the Traditional City boundary. No established vision plan was identified associated within this area; a compelling vision for transit-oriented development would help to encourage private investment and identify needed public investments.

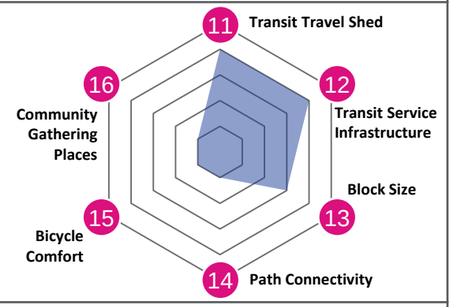


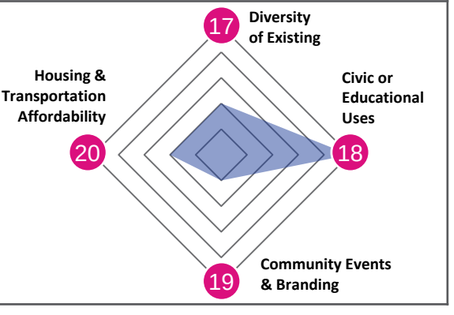
20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLCIY	1	Compelling Vision:	*Develop a Shared Vision*	
	2	Supportive Regulations:	*Add Form-Based Standards*	
	3	Predictable Context:	*Identify Champions*	
	4	Affordable Housing Policies:	*Implement Regional Plan*	
	5	Public Investment:	*Assess Infrastructure*	
MARKET	6	Recent Development Activity:	*More Activity*	
	7	Redevelopment Potential:	*Leverage Consolidated Parcels*	
	8	Real Estate Values:	*Higher Values*	
	9	Financial Incentives for Development:	*Waive Fees Where Feasible*	
	10	Income & Education Trends:	*Maintain Mix of Incomes*	
PHYSICAL	11	Transit Travel Shed:	*Improve Regional Transit Service*	
	12	Transit Service Infrastructure:	*Improve Stations*	
	13	Block Size:	*Smaller Block Sizes*	
	14	Path Connectivity:	*Increase Connectivity*	
	15	Bicycle Comfort:	*More Separated Bikeways*	
	16	Community Gathering Places:	*New Community Spaces*	
SOCIAL	17	Diversity of Existing Uses:	*Add Grocery and Entertainment*	
	18	Civic or Educational Uses:	*Maintain Civic Venues*	
	19	Community Events & Branding:	*Build Brand & Events*	
	20	Housing & Transportation Affordability:	*Decrease Combined Cost*	

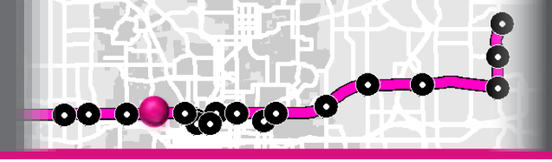








04 JOHN YOUNG PARKWAY



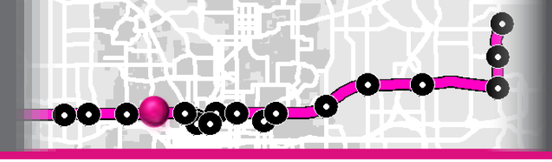
Station Area Type: Community Center

The Activity Center policies include some urban form standards. To improve return on public investments in transit in terms of ridership, it may be advisable to address minimum intensity requirements for activity centers within BRT station areas. A significant landowner in the area is the Orange County Sherriff's Office. Coordination with this office should determine whether some surface parking could be relocated in favor of more intense uses that will benefit from transit access.

Residents crossing SR 50 near John Young Parkway

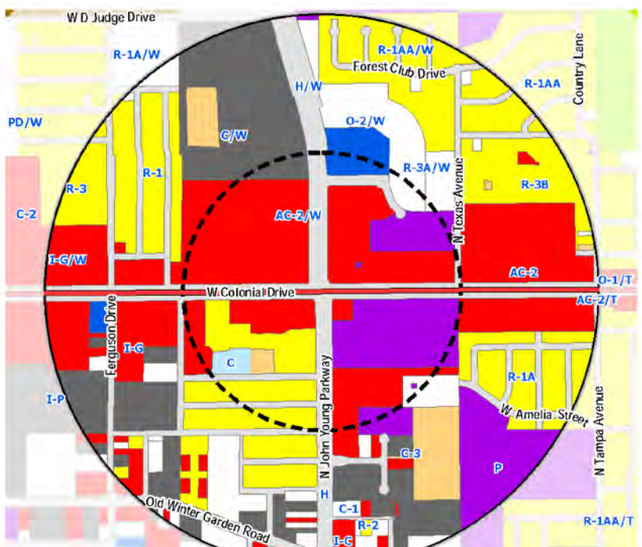
LYNX customers waiting to board bus at existing stop

04 JOHN YOUNG PARKWAY



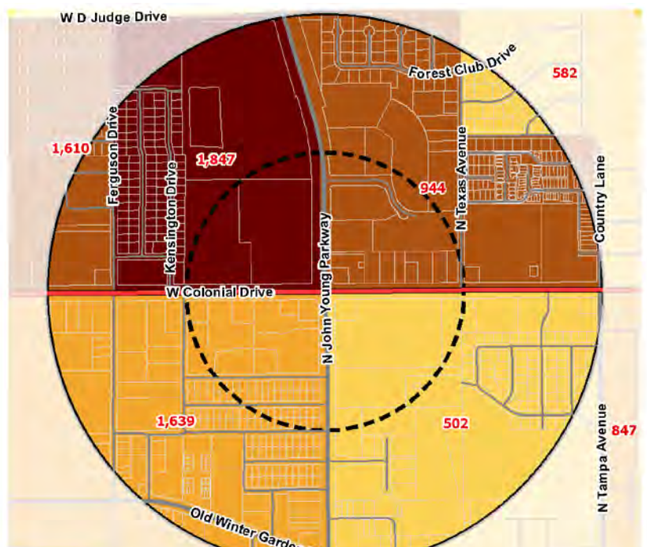
Station Area Type: Community Center

Land Use and Zoning



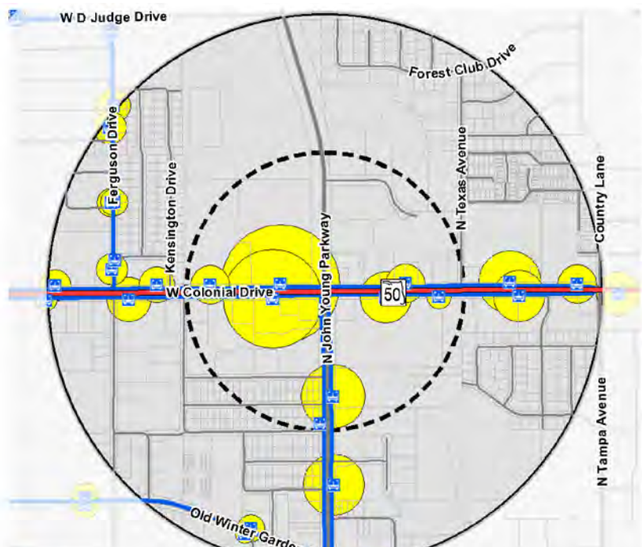
Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



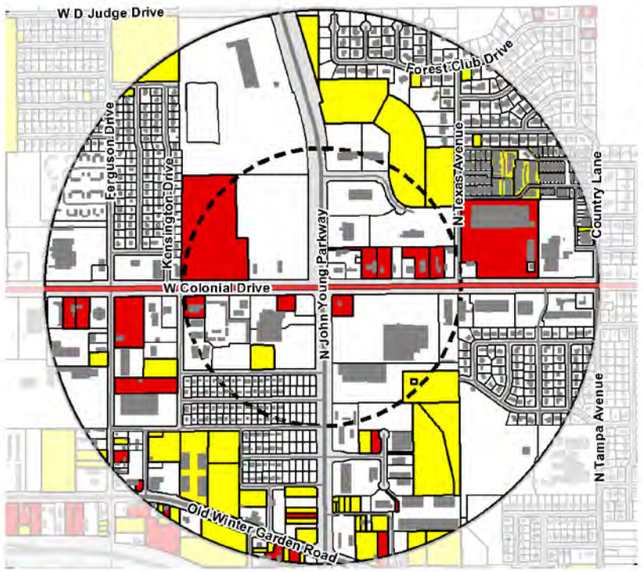
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



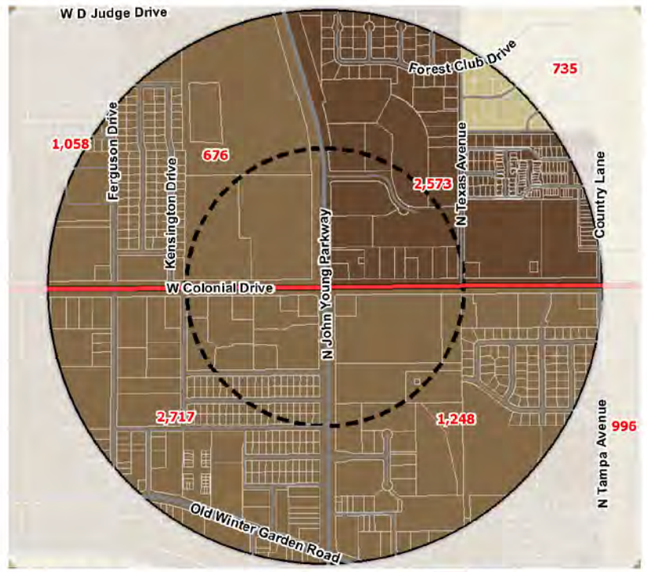
Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density

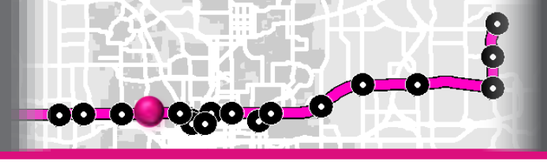


<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

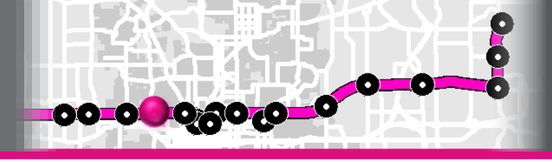
04 JOHN YOUNG PARKWAY



Station Area Type: Community Center

Existing LYNX stop adjacent to Orange County Sheriff's Central Operations Center

04 JOHN YOUNG PARKWAY



Station Area Type: Community Center

TOD Concept Plan

The John Young TOD concept includes compact, relatively high intensity development near Colonial Drive with a transition in scale to the adjoining single-family neighborhoods. The development includes an interconnected sequence of public open spaces as an organizing element.

Transportation:

- A network of new streets provides access from Colonial Drive and John Young Parkway as well as connections to Cherry Lane and Goldwyn Avenue.

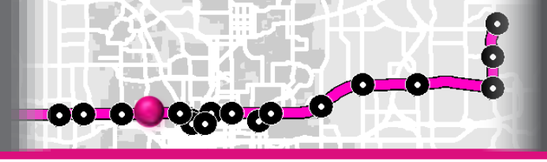
Open Space:

- Linear parks along both sides of Colonial Drive provide walking access to the BRT stations from the remainder of the development. Corner plazas at the intersection of Colonial Drive and John Young Parkway function as entry plazas and outdoor areas for the abutting office buildings.
- An attached ¾-acre park is the focal point of the northwest quadrant and provides outdoor recreation within a short walk of every residence.
- The southwest quadrant includes two formal half-acre parks as well as a large passive open space that incorporates stormwater management.

Development and Urban Design:

- The development intensity is highest along the Colonial Drive frontage and transitions to smaller scale buildings abutting existing neighborhoods to the northwest and south.
- Office uses are envisioned surrounding the intersection of Colonial Drive and John Young Parkway, and along Colonial Drive east of the intersection. West of the intersection, a mix of ground floor retail, office and residential uses is envisioned along the Colonial Drive frontage, with a range of residential uses occupying the remainder of the area. The southern edge of the development includes rowhouses as a transition to the existing single-family neighborhood.
- The existing parking lot in the southeast quadrant is redeveloped with higher intensity office uses, including new facilities intended for Orange County Sheriff use along the Colonial Drive frontage.

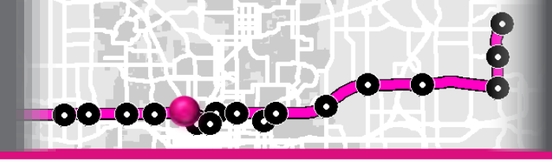
04 JOHN YOUNG PARKWAY



Station Area Type: Community Center

Station Area 3D Illustration

05 ORANGE BLOSSOM TRAIL



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

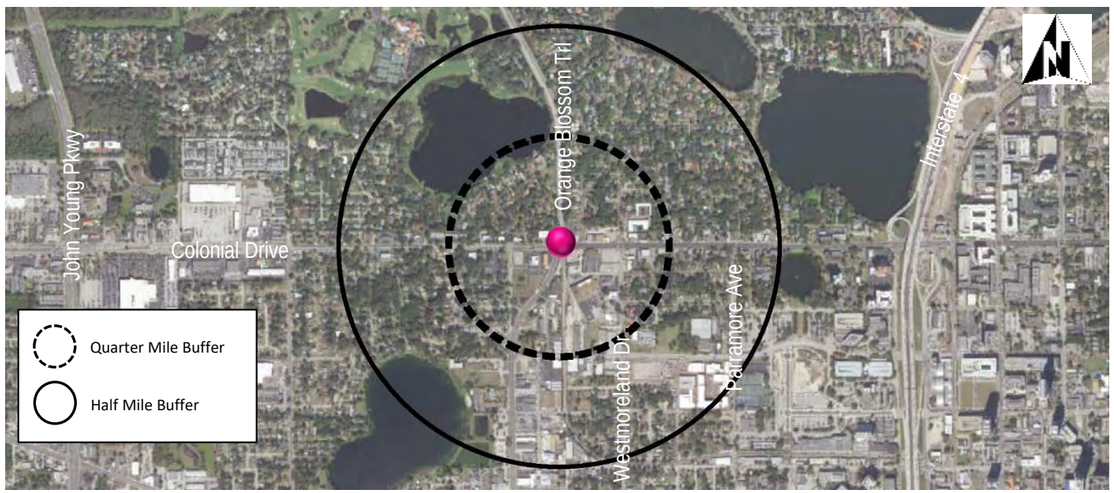
The Orange Blossom Trail station area is located within the City of Orlando. Income has trended upward in recent years and real estate values reflect a strong housing market. The southern portion of the station area was part of the OBT NEXT plan which included significant public involvement and identified pedestrian and transit-supportive design goals, but was not officially adopted. The combined cost of housing and transportation is attainable for residents of various income levels but does not reflect cost-burdened households. Also worth highlighting are the land use and land development regulations that are largely consistent with best practices for TOD.

Weaknesses

Physical barriers, including major roads and railroad tracks, present challenges for people walking and bicycling. While zoning and future land use policies for this area are supportive of mixed uses, there are also single use residential and industrial zones within a significant portion of the station area which limit the potential for transit-supportive development. The Orange Blossom Trail area lacks community events and branding, along with minimal civic, cultural and institutional uses.

Policy Recommendations

The Orange Blossom Trail station area is one of the two stations in the City of Orlando that is not currently designated as an activity center. It includes mixed-use, office, industrial, and residential zoning. This station area includes a higher percentage of lower density single family and duplex zoning. The zoning and future land use categories applicable in this station do not have minimum density standards. The majority of the station area is inside the Traditional City and is therefore subject to associated transit-supportive standards.



20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1	Compelling Vision:	*Expand and Formally Adopt Vision*	
	2	Supportive Regulations:	*Enhance Form Standards*	
	3	Predictable Context:	*Identify Champion for TOD*	
	4	Affordable Housing Policies:	*Implement Regional Plan*	
	5	Public Investment:	*Assess Infrastructure*	
MARKET	6	Recent Development Activity:	*More Activity*	
	7	Redevelopment Potential:	*Consolidate Parcels*	
	8	Real Estate Values:	*Maintain Values*	
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	10	Income & Education Trends:	*Maintain Mix of Incomes*	
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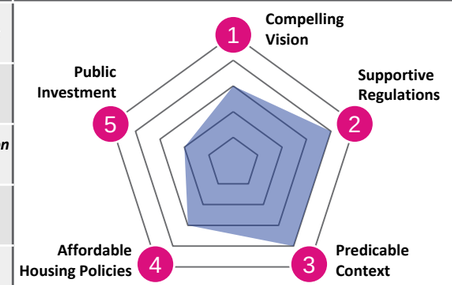
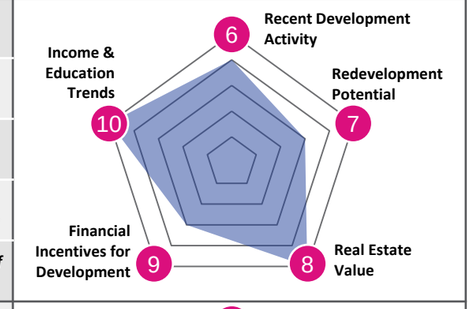
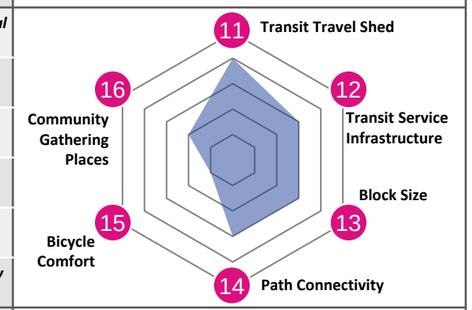
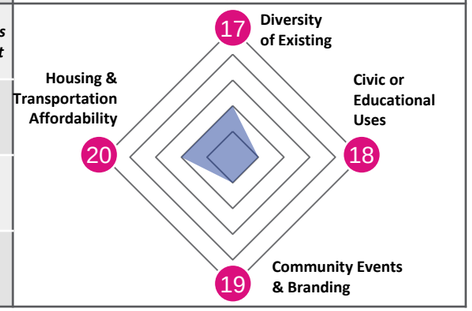
SOCIAL	17	Diversity of Existing Uses:	*Diversify Services & Entertainment*	
	18	Civic or Educational Uses:	*Establish Civic Venues*	
	19	Community Events & Branding:	*Build Brand & Local Events*	
	20	Housing & Transportation Affordability:	*Decrease Combined Cost*	

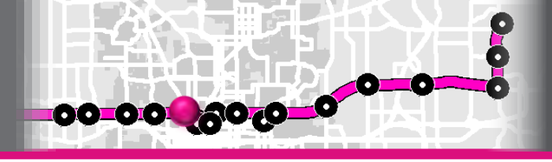








05 ORANGE BLOSSOM TRAIL



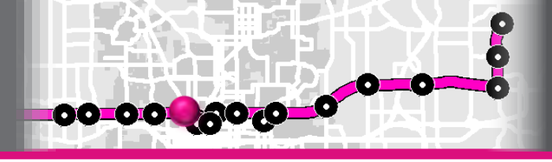
Station Area Type: Community Center

The recently completed OBT Next Plan includes the portion of the station area south of Colonial Drive. The plan included significant public engagement. This presents the opportunity to build on the OBT Next Plan and engage the leaders in that effort in a conversation around transit-oriented development at the intersection with Colonial Drive. An established vision may improve opportunities to increase minimum and maximum intensities in the area to better support transit-oriented development.

Looking south along Westmoreland Trail

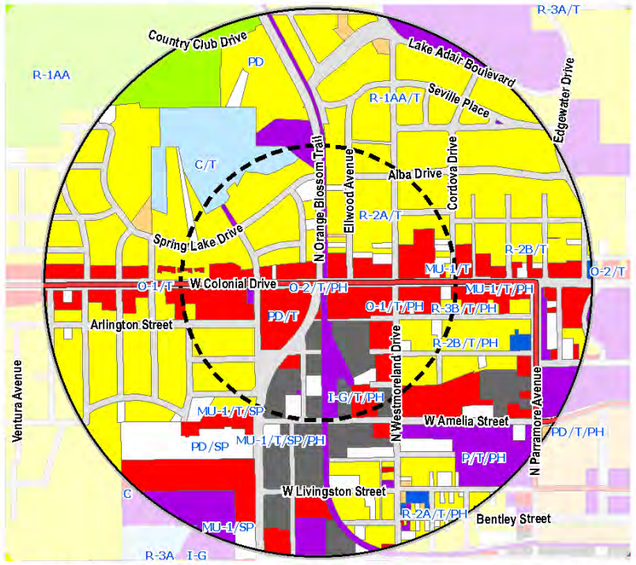
LYNX customers waiting at existing stop near Westmoreland Dr

05 ORANGE BLOSSOM TRAIL



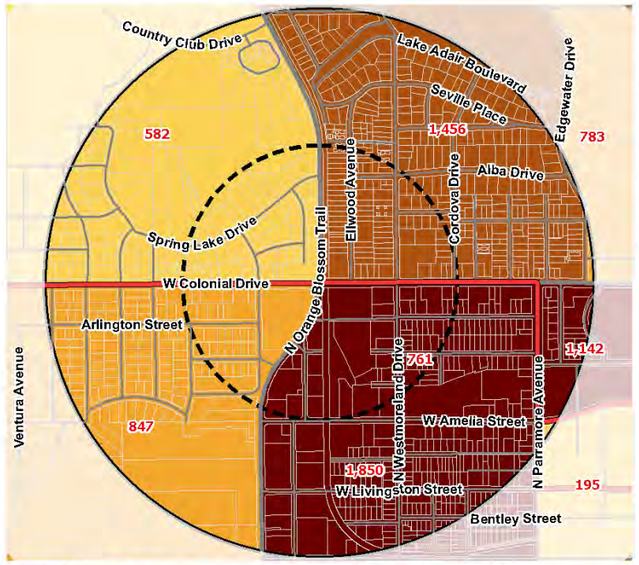
Station Area Type: Community Center

Land Use and Zoning



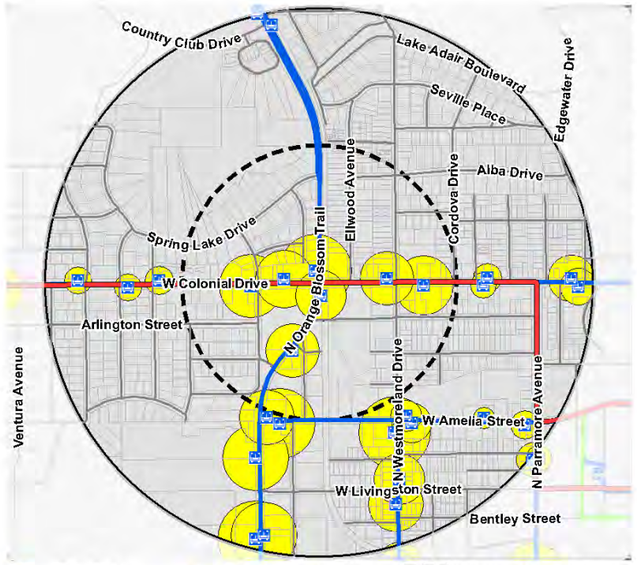
- Residential
- Retail/Office
- Recreation
- Public/Semi-Public
- Institutional
- Agricultural
- Vacant
- Other
- AC-2 Zoning
- Industrial
- Water

Population Density



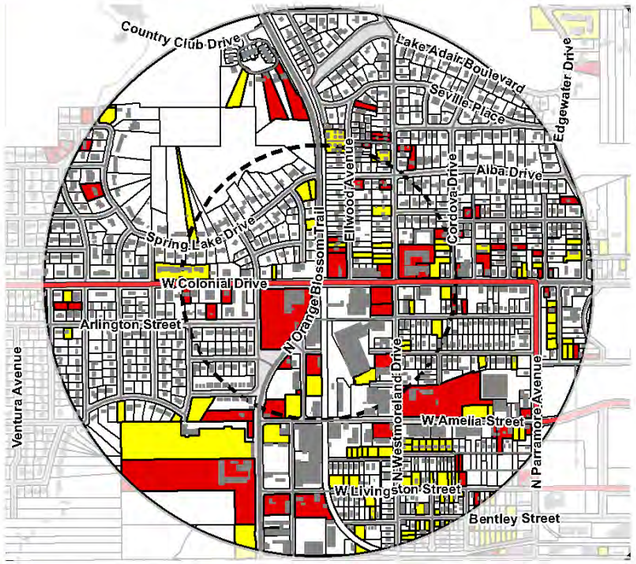
- <=1 per Acre
- 1.1 - 3.0 per Acre
- 3.1 - 5.0 per Acre
- 5.1 - 10.0 per Acre
- > 10 per Acre
- 1,123 Total Population (TAZ)

Transit and Ridership



- Bus Stop
- Bus Route
- Ridership Intensive Areas
- Quarter Mile Buffer
- Half Mile Buffer

Parcels and Buildings



- Vacant Parcel
- Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
- Parcels
- Proposed BRT Corridor

Employment Density

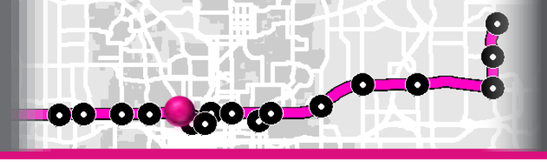
- <=1 per Acre
- 1.1 - 3.0 per Acre
- 3.1 - 5.0 per Acre
- 5.1 - 10.0 per Acre
- > 10 per Acre
- 4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed / Existing

- Bike Lane/Path or Paved Shoulder
- Shared Path/Trail
- Signed Route
- JUICE Bike Share Station
- Signalized Intersection
- Sidewalk

05 ORANGE BLOSSOM TRAIL



Station Area Type: Community Center

TOD Concept Plan

The Orange Blossom Trail TOD concept is organized around a large urban space along Colonial Drive that includes the BRT stations and is surrounded by fairly intense development.

Transportation:

- New streets divide the large block bounded by Colonial Drive, Westmoreland Drive, Amelia Street and the railroad tracks and enhance the overall connectivity of the area.
- A new north-south street provides walking access to the central open space feature and BRT stations for many of the development's residents.

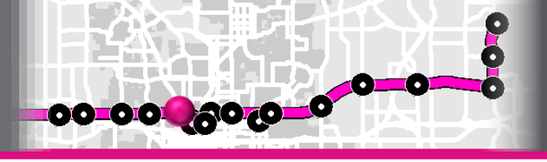
Open Space:

- The BRT stations are situated within a large urban space formed by building frontages on all sides and traversed by Colonial Drive, creating two linear park/plaza spaces with a combined area in excess of one acre.
- Two smaller scale neighborhood greens – a quarter acre and a half acre in size, respectively – terminate the vistas of local streets (Arlington Street and Concord Street) and provide outdoor recreation for residents.

Development and Urban Design:

- Buildings east of the railroad tracks fronting on Colonial Drive are envisioned as mixed-use buildings with ground floor retail and office uses, whereas buildings along cross streets and south of Colonial Drive are generally envisioned as residential, ranging from multi-story "Texas donut" buildings with integrated parking structures to standalone multifamily buildings and rowhouses.
- The block west of Orange Blossom Trail is redeveloped and includes a parking structure wrapped with a mix of office and residential uses, with limited ground floor retail space envisioned along the Colonial Drive frontage.

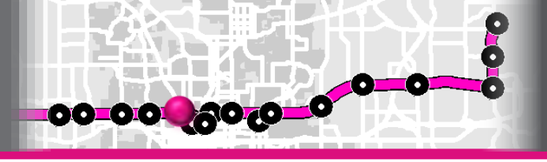
05 ORANGE BLOSSOM TRAIL



Station Area Type: Community Center

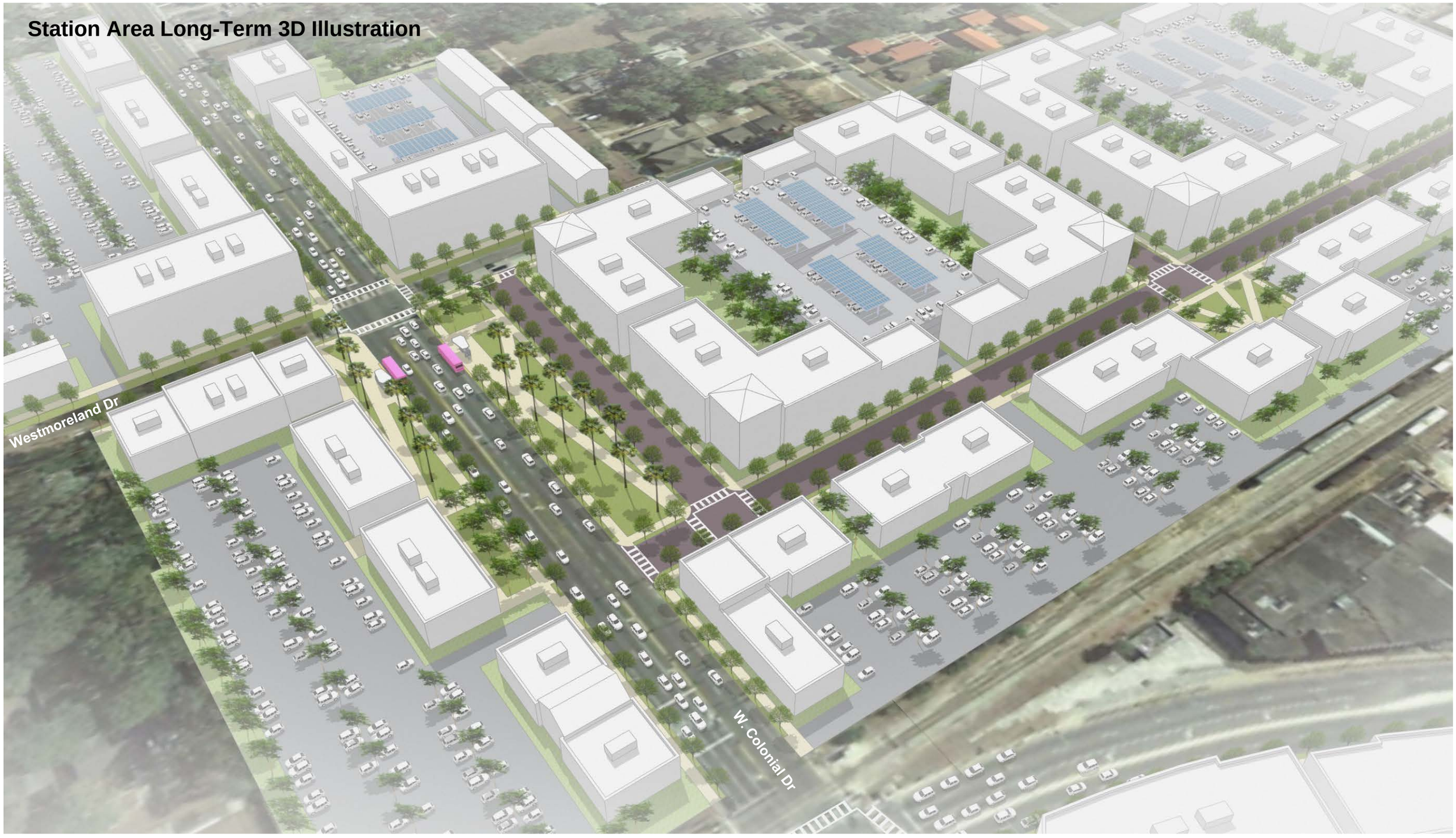
Station Area Short-Term 3D Illustration

05 ORANGE BLOSSOM TRAIL



Station Area Type: Community Center

Station Area Long-Term 3D Illustration



06 NORTH QUARTER

Station Area Type: Regional Center

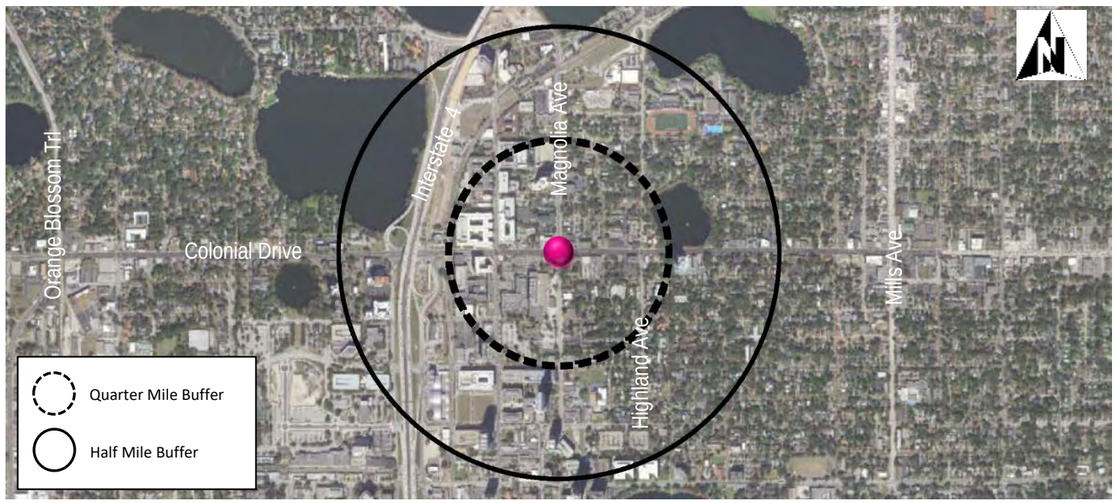
TOD Readiness Assessment

Strengths

North Quarter has the most transit-supportive existing conditions and policy/regulatory characteristics of the stations assessed along the corridor. This is due to the station area's downtown location within the City of Orlando's Community Redevelopment Area, which provides a strong vision for transit-supportive development and mix of uses. The City recently conducted a North Quarter Transportation Vision to improve travel conditions in the area; the vision includes reintroduction of two-way traffic on the major avenues for motor vehicles and bicyclists, the extension of the Urban Trail, and increased pedestrian crossing opportunities. The station area includes two additional existing transit modes (SunRail and Lymmo). Increases in income, education levels, and real estate values indicate a strong market for continued development. Higher housing costs are moderated by low transportation costs. The area has its own brand and benefits from access to cultural assets within Downtown Orlando.

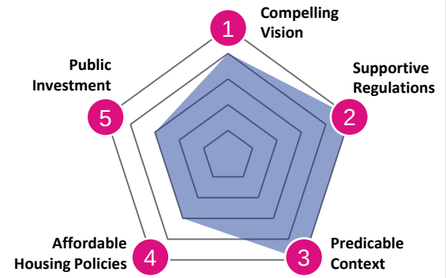
Weaknesses

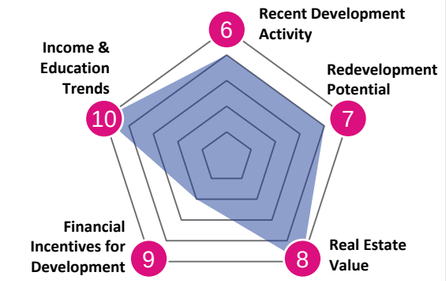
A weakness in this area is the relatively large block sizes west of Magnolia Avenue and the presence of one-way streets which creates a challenge for siting station pairs that facilitate pedestrian and bicycle accessibility. One percent of the land in the station area is currently devoted to park space; proposed pedestrian connectivity improvements would improve access to existing parks at the edge of the study area.

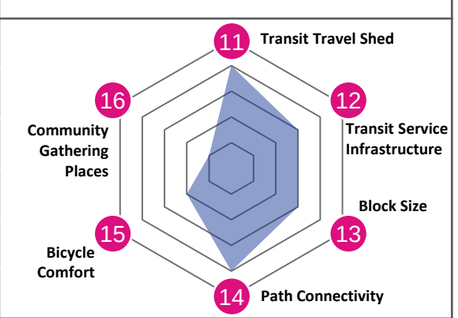


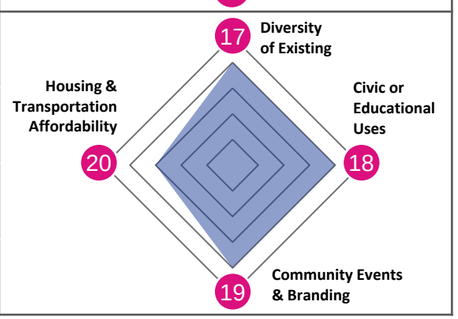
20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1	Compelling Vision:	Expand Vision Around TOD	
	2	Supportive Regulations:	Continue Compact Development	
	3	Predictable Context:	Continue Coordination	
	4	Affordable Housing Policies:	Implement Regional Plan	
	5	Public Investment:	Continue Bike/Ped Investment	
MARKET	6	Recent Development Activity:	Continue Activity	
	7	Redevelopment Potential:	Consolidate Small Parcels	
	8	Real Estate Values:	Maintain Values	
	9	Financial Incentives for Development:	Waive Fees Where Feasible	
	10	Income & Education Trends:	Puruse Mix of Incomes	
PHYSICAL	11	Transit Travel Shed:	Improve Regional Transit Service	
	12	Transit Service Infrastructure:	Improve Bus Stops	
	13	Block Size:	Smaller Block Sizes	
	14	Path Connectivity:	Increase Connectivity	
	15	Bicycle Comfort:	More Separated Bikeways	
	16	Community Gathering Places:	More Community Spaces	
SOCIAL	17	Diversity of Existing Uses:	Full-Service Grocery	
	18	Civic or Educational Uses:	Maintain Civic Venues	
	19	Community Events & Branding:	Continue Building Brand & Events	
	20	Housing & Transportation Affordability:	Mixed-Income Housing	









06 NORTH QUARTER

Station Area Type: Regional Center

Policy Recommendations

The North Quarter station area is located within the Downtown Activity Center. This area has strong policies in place to support transit-oriented development and comparatively good infrastructure for walking and bicycling. In addition, the Apperance Review Board has authority to review development plans in the area. Transit-orientation in this area could be further enhanced by transportation demand management and parking management strategies. Policies requiring pedestrian connectivity through new developments should deter the creation or retention of superblocks which are an impediment to pedestrian mobility. Implementing the North Quarter Transportation Vision would provide an enhanced bicycle and pedestrian environment within the portion of the station area north of Amelia Street. Similar improvements should be evaluated from Amelia Street to the southern boundary of the station area.

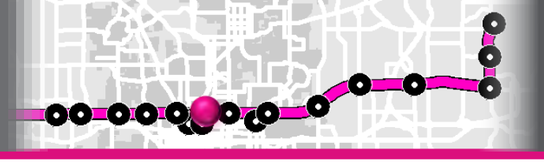
It would be ideal to have additional small civic spaces closer to the station locations and residential density. There are currently no public parks within a 5-minute walking distance of Orange Avenue between Park Lake Street and Amelia Street serving the growing number residential units in that area.

Existing on-street parking along Magnolia Ave

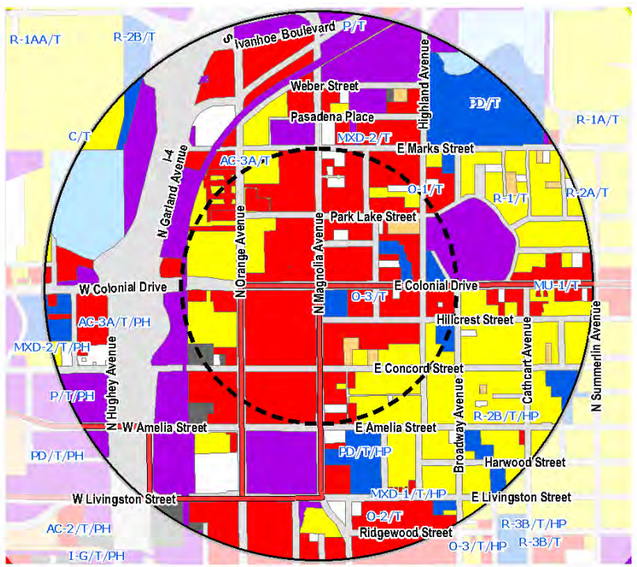
Existing businesses on Magnolia Ave

06 NORTH QUARTER

Station Area Type: Regional Center

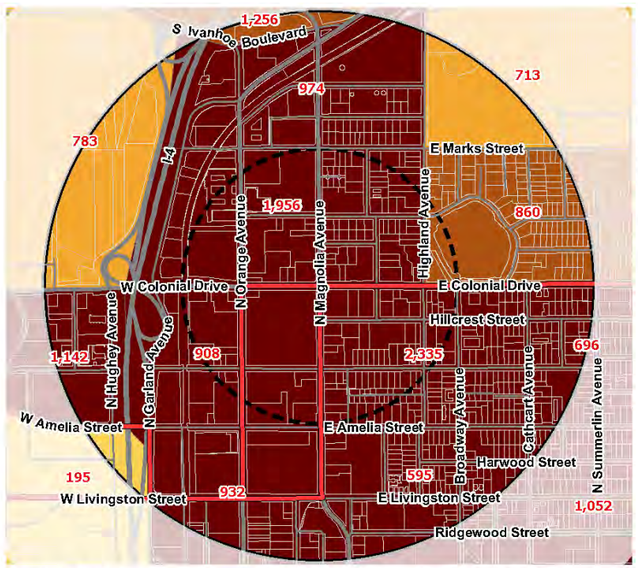


Land Use and Zoning



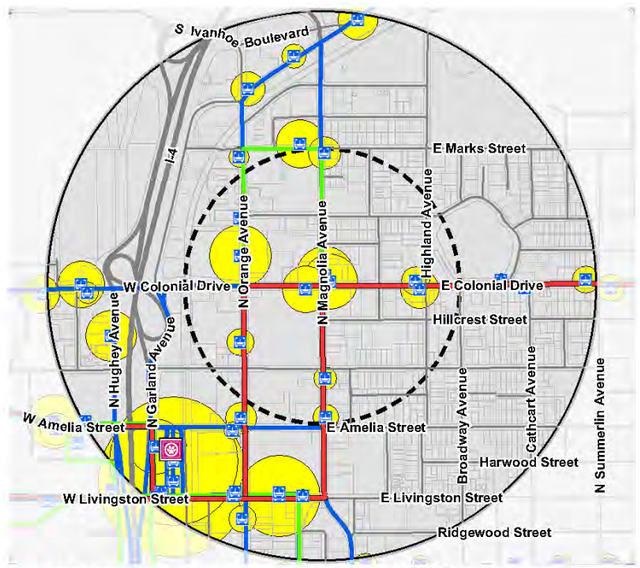
Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



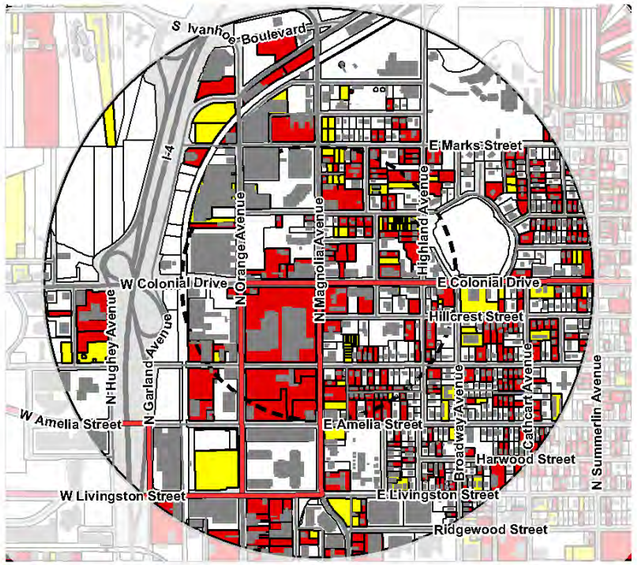
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



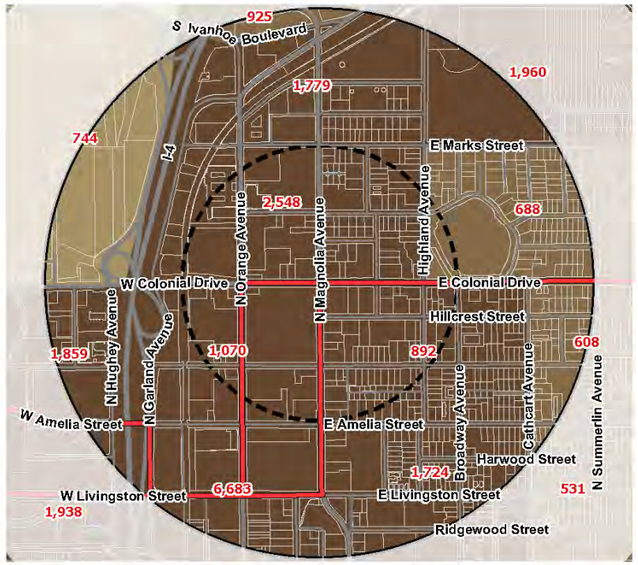
LYMMO Route
Bus Route
Super Stop
Ridership Intensive Areas
Bus Stop
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density



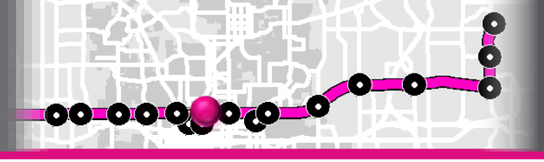
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

06 NORTH QUARTER

Station Area Type: Regional Center



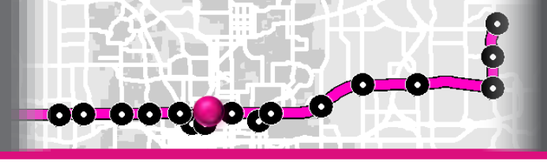
Looking south along Magnolia Ave near SR 50

SR 50 Bus Rapid Transit (BRT)

3-34

Transit Oriented Development (TOD)

06 NORTH QUARTER



Station Area Type: Regional Center

TOD Concept Plan

The North Quarter is part of Downtown Orlando. The plan incorporates the redevelopment of the historic newspaper plant and lower scale existing development in this central location around existing streets and new public spaces.

Transportation:

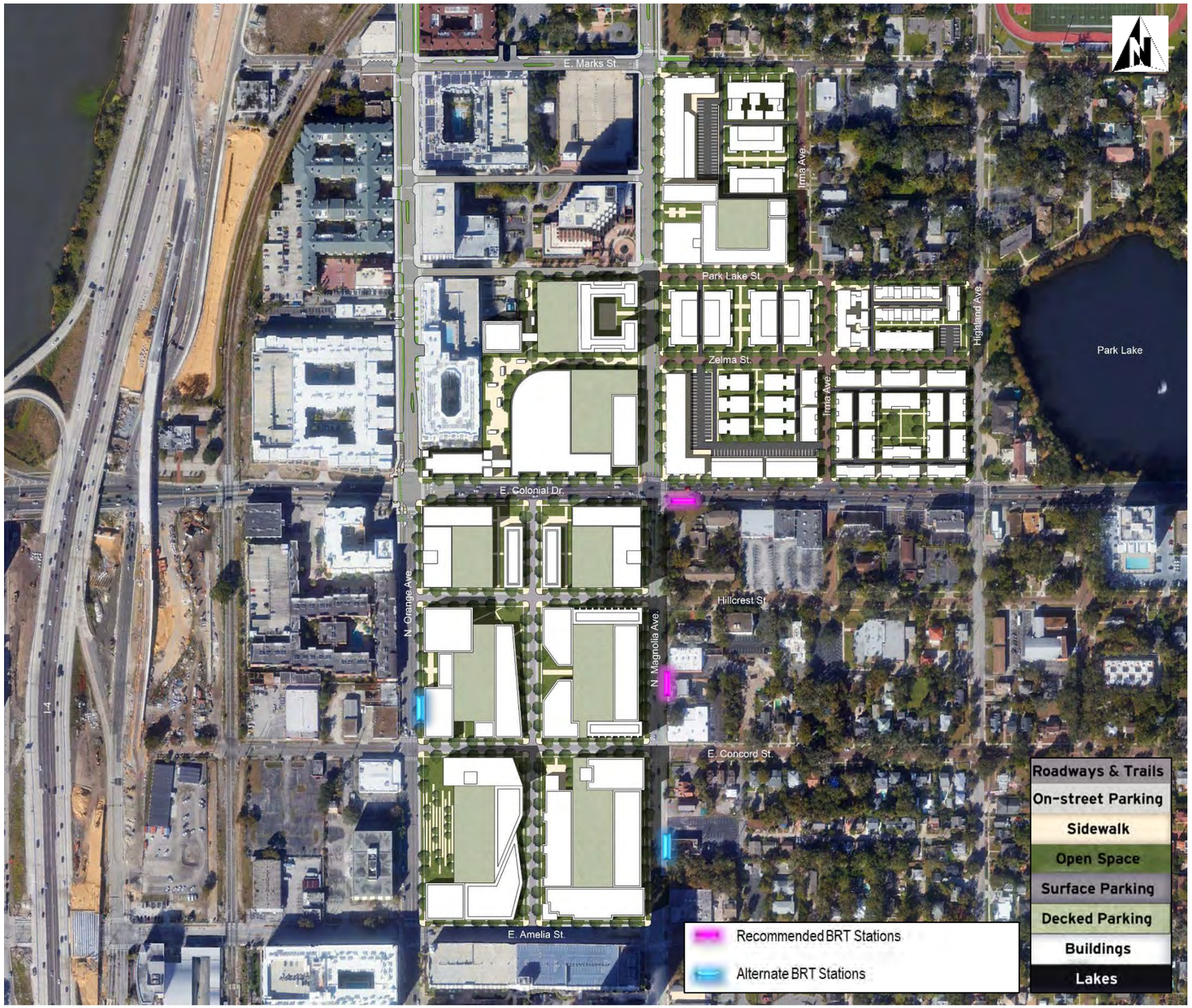
- Assumes implementation of the City of Orlando's North Quarter Transportation Vision which includes two-way motor vehicle and bicycle travel on both Orange Avenue and Magnolia Avenue north of Colonial Drive and new pedestrian enhanced such as crosswalks and curb extensions.
- Pedestrian walkways through block interiors.
- Pedestrian open-air mall passage.

Open Space:

- Structured parking is designed to include elevated public or semi-public spaces on the roof tops to help address the lack of public space in the neighborhood.
- Homes fronting on pedestrian pathways or green spaces are incorporated into new development in the Park Lake / Highland neighborhood.

Development and Urban Design:

- Street trees enhance the value of streets as public space and provide shade for people walking.
- High intensity development using structured parking is designed west of Magnolia Avenue consistent with the downtown location.
- Existing mega blocks are subdivided to better connectivity for people walking.
- Medium scale development with a mix of surface and structured parking is shown west of Magnolia Avenue transition to the residential Park Lake / Highland neighborhood,.

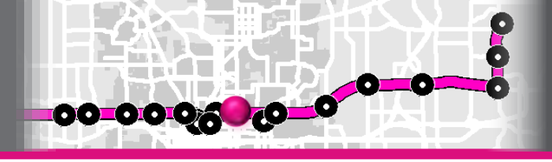


06 NORTH QUARTER

Station Area Type: Regional Center

Station Area 3D Illustration

07 MILLS 50



Station Area Type: Neighborhood Center

TOD Readiness Assessment

Strengths

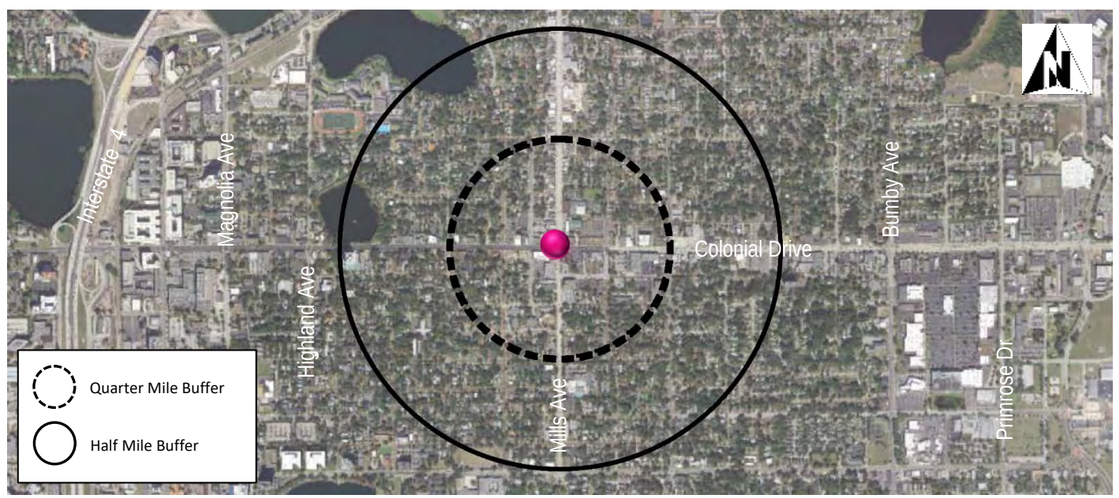
The Mills 50 station area is located within the Colonialtown South Opportunity Zone with a vision that encourages growth in the community to transform the area into a high intensity, mixed-use town center supported by inter-connected street networks and transit. Community identity and a strong real estate market area are assets of the Mills 50 station area. The Mills & Colonial Urban Design & Strategic Plan identifies the potential for several mutti-parcel redevelopment projects to add residential uses and development intensity to the area. The active Main Street District promotes the area's brand, encourages community events, and offers support for small businesses. There is also a diversity of existing land uses and high path connectivity which encourages residents and visitors to walk for everyday activities. Income and education levels have increased in recent years reflecting a growing interest in the neighborhood.

Weaknesses

This station area lacks community gathering spaces and formalized bicycle infrastructure is limited. The City recently completed a bicycle and pedestrian study of the area which included proposed improvements. While policies are supportive of mixed uses, the area lacks a clear vision for transit-oriented development and recent public investment has been limited.

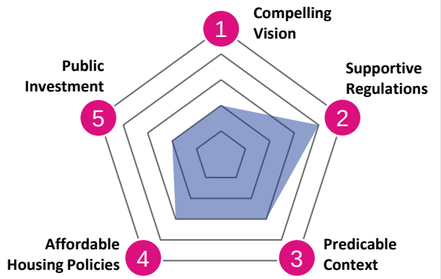
Policy Recommendations

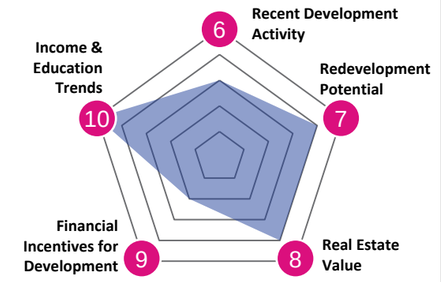
The Mills 50 area has a strong brand but lacks a recent community vision which could address enhanced transit. The station area is identified as a Community Activity Center by the City of Orlando Comprehensive Plan which allows up to 40 units per acre and 0.7 FAR.

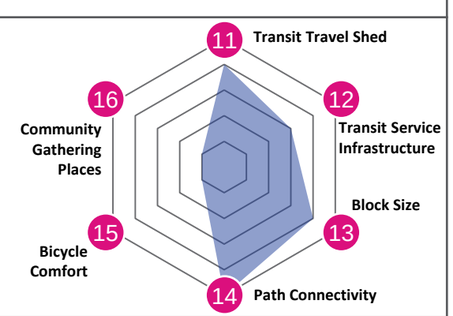


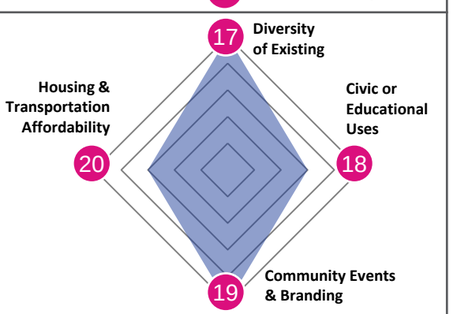
20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1	Compelling Vision:	Adopt Land Use Vision	
	2	Supportive Regulations:	Maintain Form-Based Standards	
	3	Predictable Context:	Identify Champion for TOD	
	4	Affordable Housing Policies:	Implement Regional Plan	
	5	Public Investment:	Continue Bike/Ped Investment	
MARKET	6	Recent Development Activity:	More Activity	
	7	Redevelopment Potential:	Consolidate Parcels	
	8	Real Estate Values:	Higher Values	
	9	Financial Incentives for Development:	Waive Fees Where Feasible	
	10	Income & Education Trends:	Maintain Mix of Incomes	
PHYSICAL	11	Transit Travel Shed:	Improve Regional Transit Service	
	12	Transit Service Infrastructure:	Improve Stations	
	13	Block Size:	Mid Block Pathways	
	14	Path Connectivity:	More Midblock Crossings	
	15	Bicycle Comfort:	More Bikeways	
	16	Community Gathering Places:	New Community Spaces	
SOCIAL	17	Diversity of Existing Uses:	Maintain Diversity of Uses	
	18	Civic or Educational Uses:	Increase Civic Venues	
	19	Community Events & Branding:	Continue Building Brand & Events	
	20	Housing & Transportation Affordability:	Decrease Combined Cost	



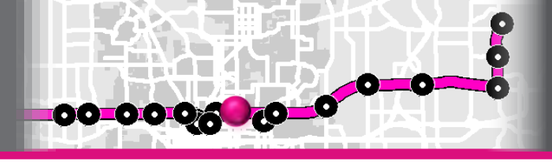






07 MILLS 50

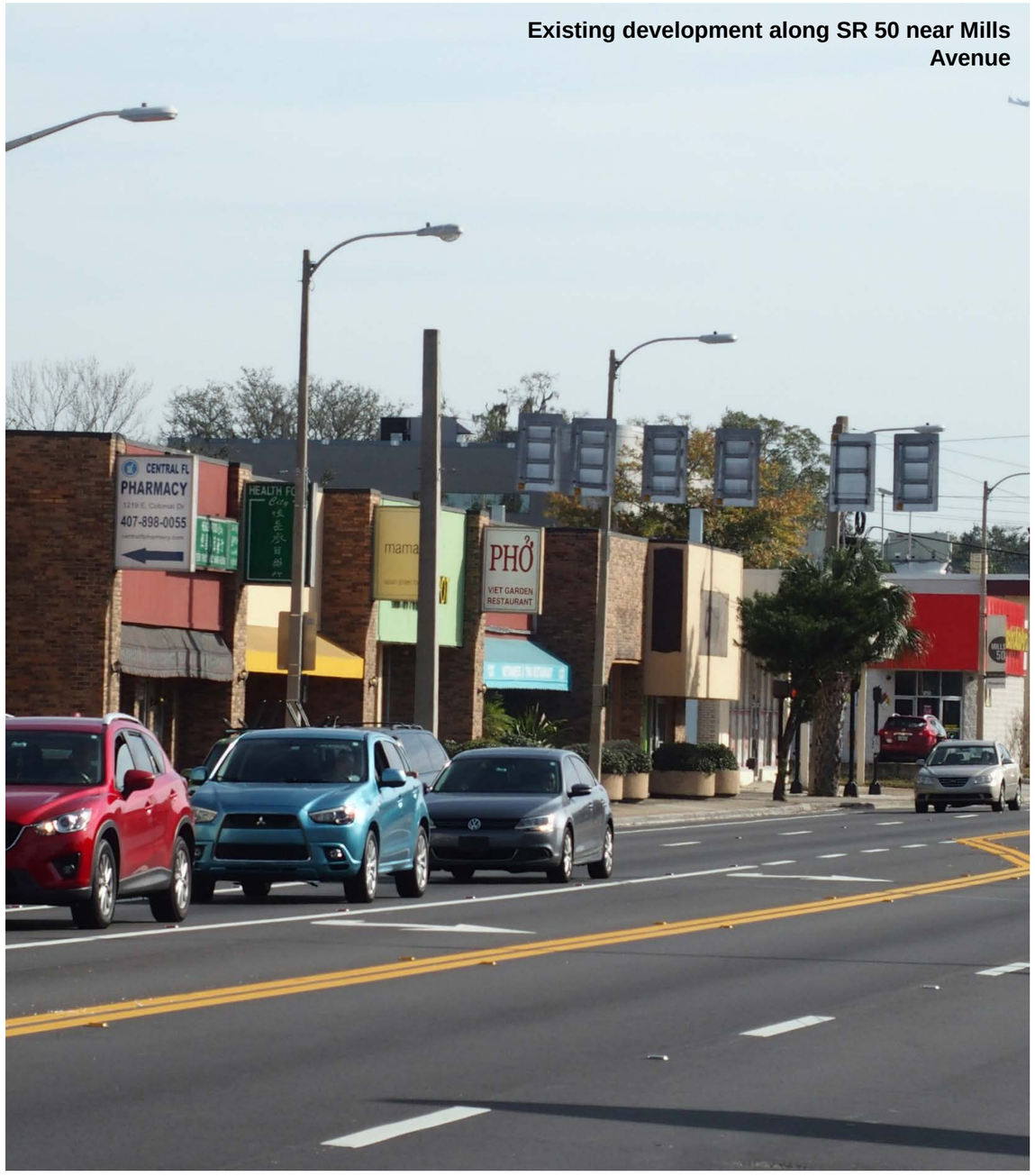
Station Area Type: Neighborhood Center



The area has seen minor redevelopments and adaptive reuse projects but little change on Colonial Drive. As part of the development of a land use vision, it may be helpful to consider how density and parking constraints apply to small parcels given highly fragmented ownership.

Implementation of the recently completed Main Street Bicycle/Pedestrian Plan would enhance bicycle and pedestrian access within the area. Some block faces exceed 600 feet creating the potential need for through-block pedestrian connections especially near commercial activities on Colonial Drive and Mills Avenue.

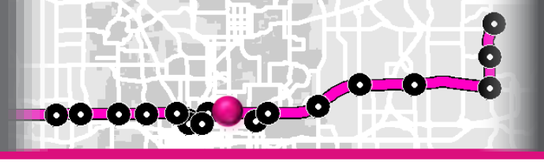
Mills 50 bike-shaped bike rack



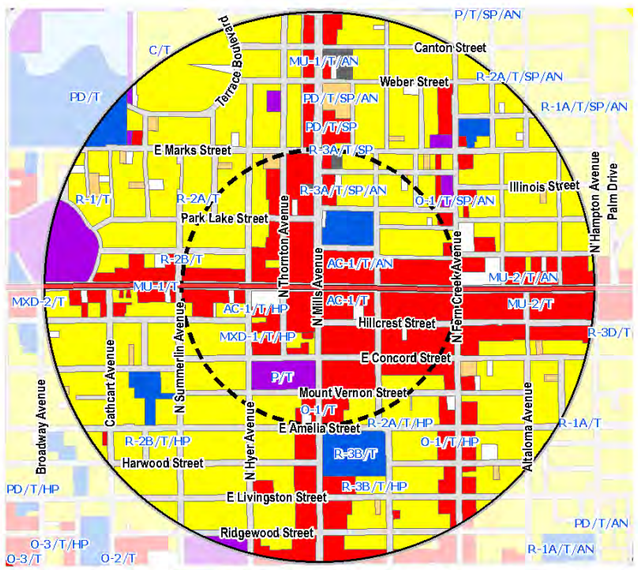
Existing development along SR 50 near Mills Avenue

07 MILLS 50

Station Area Type: Neighborhood Center

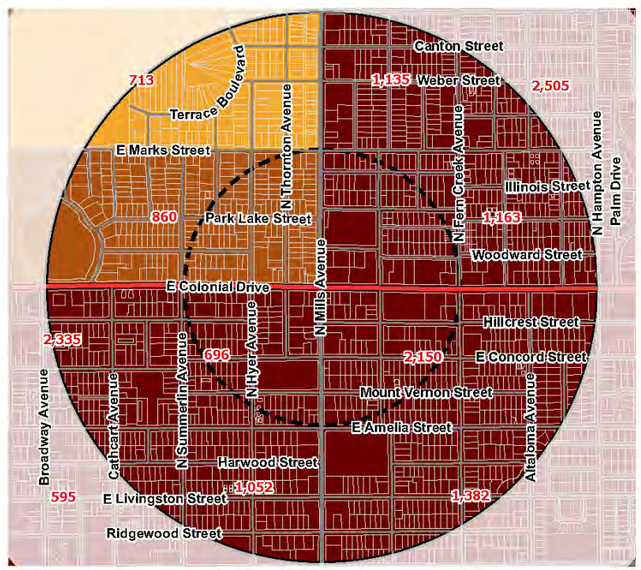


Land Use and Zoning



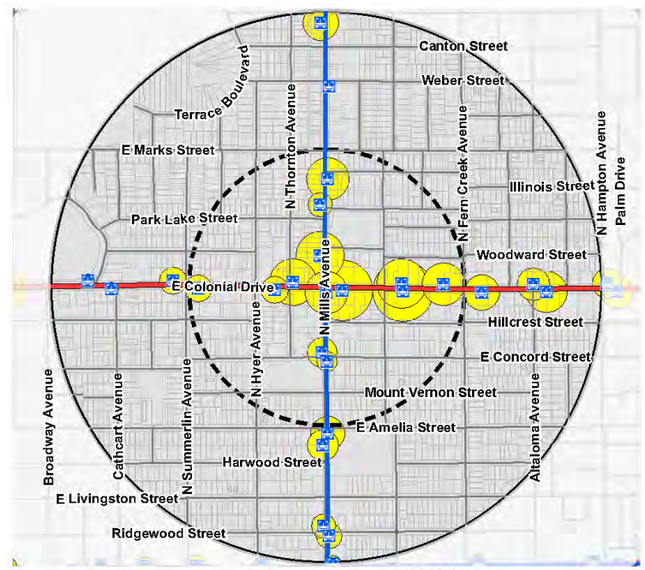
Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



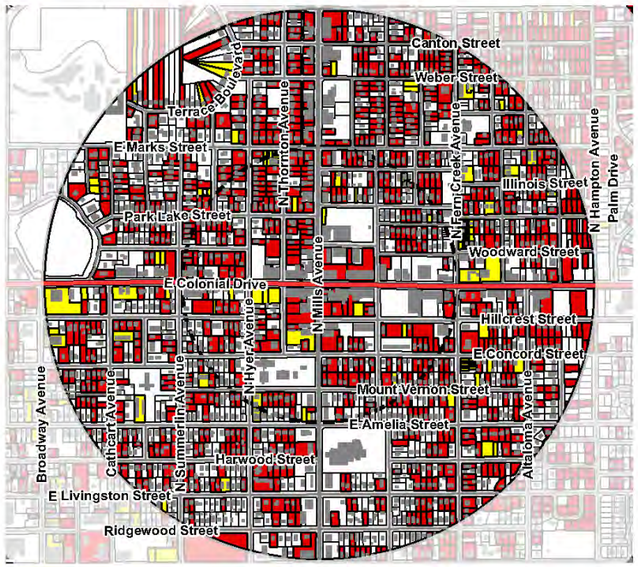
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



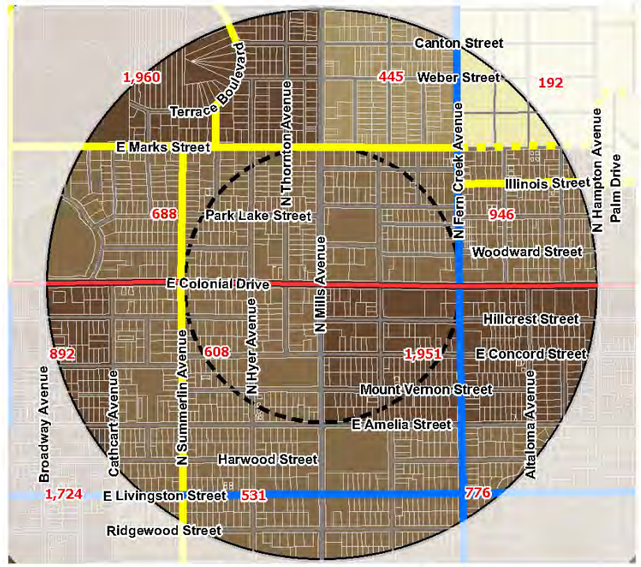
Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density

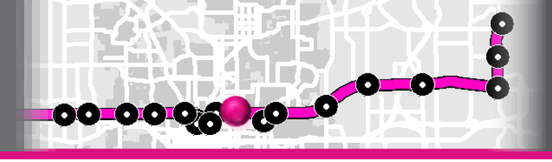


<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

07 MILLS 50



Station Area Type: Neighborhood Center

TOD Concept Plan

The Mills 50 TOD concept utilizes the existing block structure and integrates a number of existing buildings, complemented by a range of new structures.

Transportation:

- The concept utilizes the existing street network, with the exception of one new north-south street between Hillcrest and Concord Streets that delineates a new neighborhood park.

Open Space:

- A nearly one-acre neighborhood park along Fern Creek Avenue provides outdoor space for nearby residents and a transition to the existing single family neighborhood.
- Linear plazas along Colonial Drive between Shine and Fern Creek Avenues accommodate the BRT stations.
- A corner green space at Mills Avenue functions as gateway feature and provides an entry plaza and outdoor area for the abutting office building.

Development and Urban Design:

- A range of new office, mixed use and residential buildings complements the remaining existing retail and office buildings.
- Parking structures lined with office or residential space replace the existing surface lots and provide urban street frontage.
- A larger office building situated behind a corner plaza marks the intersection of Colonial Drive and Mills Avenue.
- The Colonial Drive frontage generally consists of retail and office uses, with residential uses along other frontages. Along Woodward and Concord Streets the concept includes rowhouses that provide a transition to the abutting single family neighborhoods.

3D illustration not included for this station

08 PRIMROSE DRIVE

Station Area Type: Regional Center

TOD Readiness Assessment

Strengths

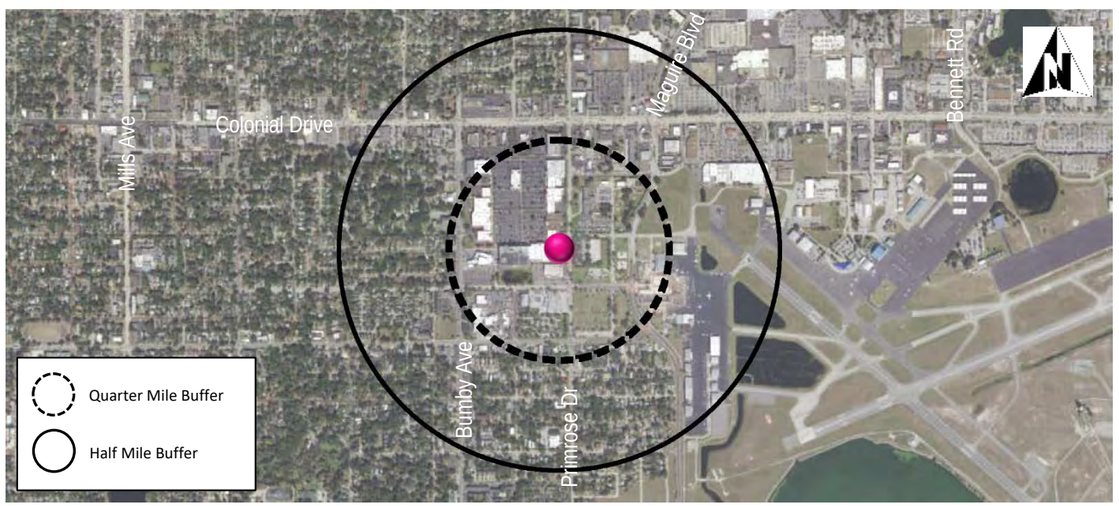
The Primrose station area in the City of Orlando includes the newly formed Milk District Main Street which provides identity and branding through Main Street's activities and promotes an active restaurant and entertainment district. It also has potential for redevelopment supported through available financial incentives. Trends in income and education reflect growing interest in the neighborhood, and small-scale residential redevelopment is occurring. The area is host to the Orlando Philharmonic and a charter school. The City owns a significant amount of land in study area including Festival Park which features green space, the Orlando Skate Park, volleyball, a community garden and outdoor fitness equipment.

Weaknesses

Comfortable routes for riding bicycles are limited and a lack of connectivity limits pedestrian access. The City recently completed the Main Street Bicycle/Pedestrian Plan which includes recommendations for improvements. While zoned for mixed uses, the core of the station area consists primarily of an auto-oriented commercial shopping center lacking a residential component. The study area includes portions of the Executive Airport which limits development opportunities both on and off the property.

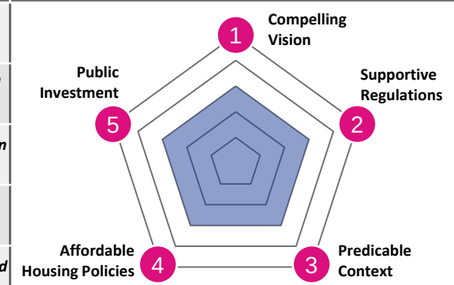
Policy Recommendations

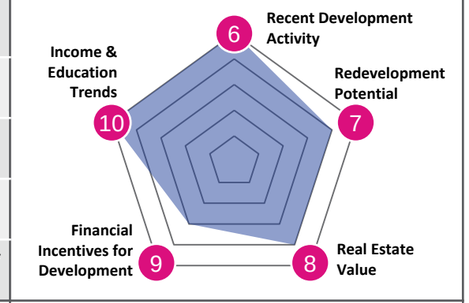
Much of the Primrose Drive station area is identified as a Metropolitan Activity Center which allows the highest intensity of development outside of downtown. It is outside of the Traditional City boundary which means that minimum densities and some form standards are not applicable.

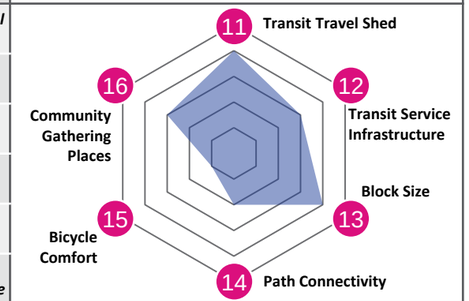


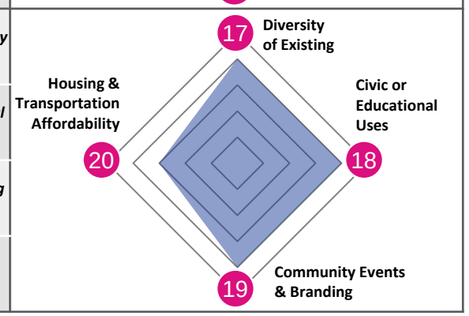
20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1	Compelling Vision:	*Updated & Expand Vision*	
	2	Supportive Regulations:	*Add Form-Based Standards*	
	3	Predictable Context:	*Identify Champion for TOD*	
	4	Affordable Housing Policies:	*Implement Regional Plan*	
	5	Public Investment:	*Continue Bike/Ped Investment*	
MARKET	6	Recent Development Activity:	*Larger-Scale Activity*	
	7	Redevelopment Potential:	*Maintain Consolidated Parcels*	
	8	Real Estate Values:	*Higher Values*	
	9	Financial Incentives for Development:	*Waive Impact Fees*	
	10	Income & Education Trends:	*Maintain Mix of Incomes*	
PHYSICAL	11	Transit Travel Shed:	*Improve Regional Transit Service*	
	12	Transit Service Infrastructure:	*Improve Stations*	
	13	Block Size:	*Smaller Block Sizes*	
	14	Path Connectivity:	*Increase Connectivity*	
	15	Bicycle Comfort:	*More Bikeways*	
	16	Community Gathering Places:	*Central Community Space*	
SOCIAL	17	Diversity of Existing Uses:	*Maintain Diversity of Uses*	
	18	Civic or Educational Uses:	*Maintain Cultural Venues*	
	19	Community Events & Branding:	*Continue Building Brand & Events*	
	20	Housing & Transportation Affordability:	*Decrease Combined Cost*	









08 PRIMROSE DRIVE

Station Area Type: Regional Center

The Activity Center policies includes some urban form standards. To improve return on public investments in transit in terms of ridership, it may be advisable to address minimum intensity requirements for activity centers within BRT station areas. There is an East Colonial Drive Vision Plan which could be updated to address the potential for BRT. The plan was primarily focused on the commercial corridor and business stakeholders; to address the station area, the plan would need to be expanded to engage residents and address a larger land area. Implementation of the recently completed Main Street Bicycle/Pedestrian Plan would enhance bicycle and pedestrian access within the area as would implementation of the FDOT Robinson Street Corridor Planning Study.

The redevelopment potential of this station area will be largely driven by the Colonial Plaza, an existing retail center which includes a substantial portion of the station area. Redevelopment of this site has the potential to restore connectivity in the street grid, provide civic green space, and increase potential ridership. Should major redevelopment occur, one consideration would be the potential to relocate the Lynx Superstop which now requires a diversion from the Colonial Drive route for SR 50 BRT. However, this is complex as the Superstop serves several different bus lines as well as a charter school and the historic heart of the Milk District on Robinson Street. In addition to major redevelopment there may be opportunities to encourage moderate increases in density in the residential areas currently zoned R1-A which allows single-family and accessory dwelling units.

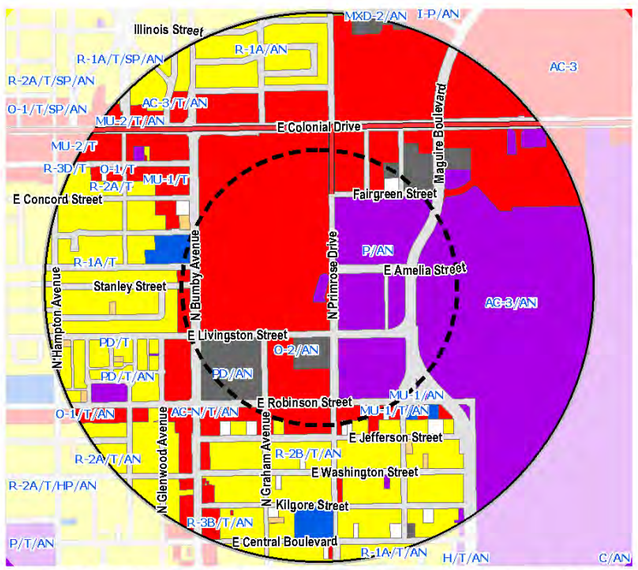
Bicyclist near Primrose SuperStop

Primrose SuperStop

08 PRIMROSE DRIVE

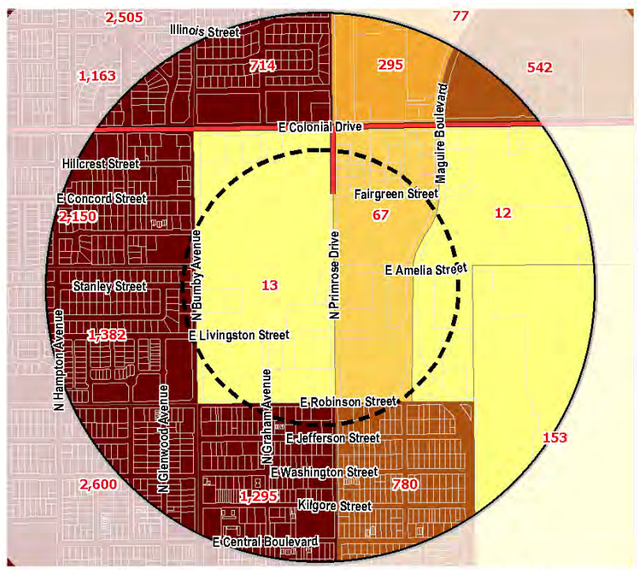
Station Area Type: Regional Center

Land Use and Zoning



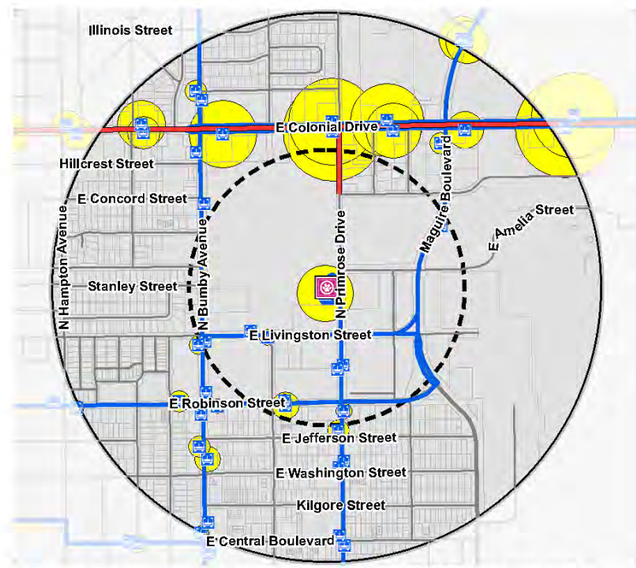
Residential | Public/Semi-Public | Vacant | Industrial
Retail/Office | Institutional | Other | Water
Recreation | Agricultural | AC-2 Zoning

Population Density



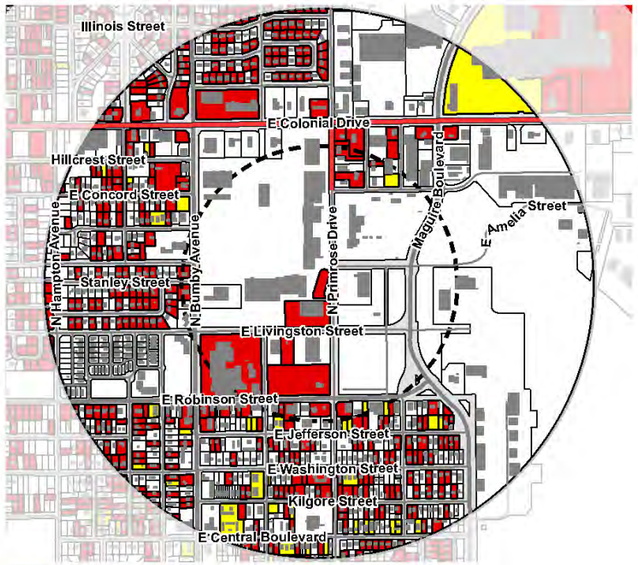
<=1 per Acre | 3.1 - 5.0 per Acre | > 10 per Acre
1.1 - 3.0 per Acre | 5.1 - 10.0 per Acre | 1,123 Total Population (TAZ)

Transit and Ridership



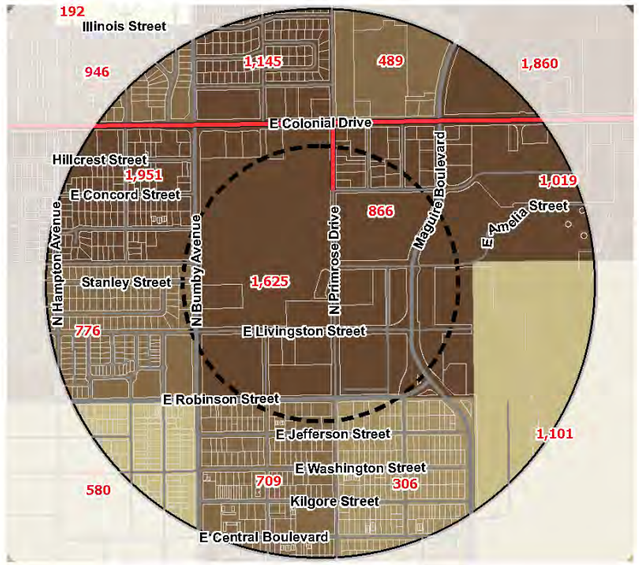
Bus Stop | Ridership Intensive Areas | Quarter Mile Buffer
Bus Route | Half Mile Buffer

Parcels and Buildings



Vacant Parcel | Parcels | Proposed BRT Corridor
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4

Employment Density



<=1 per Acre | 3.1 - 5.0 per Acre | > 10 per Acre
1.1 - 3.0 per Acre | 5.1 - 10.0 per Acre | 4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder | JUICE Bike Share Station
Shared Path/Trail | Signalized Intersection
Signed Route | Sidewalk

08 PRIMROSE DRIVE

Station Area Type: Regional Center

TOD Concept Plan

The Primrose Drive Plan shows the redevelopment of the existing Colonial Plaza mall into a medium-scale mixed use center transition between the Fashion Square regional center and existing neighborhoods to the west.

Transportation:

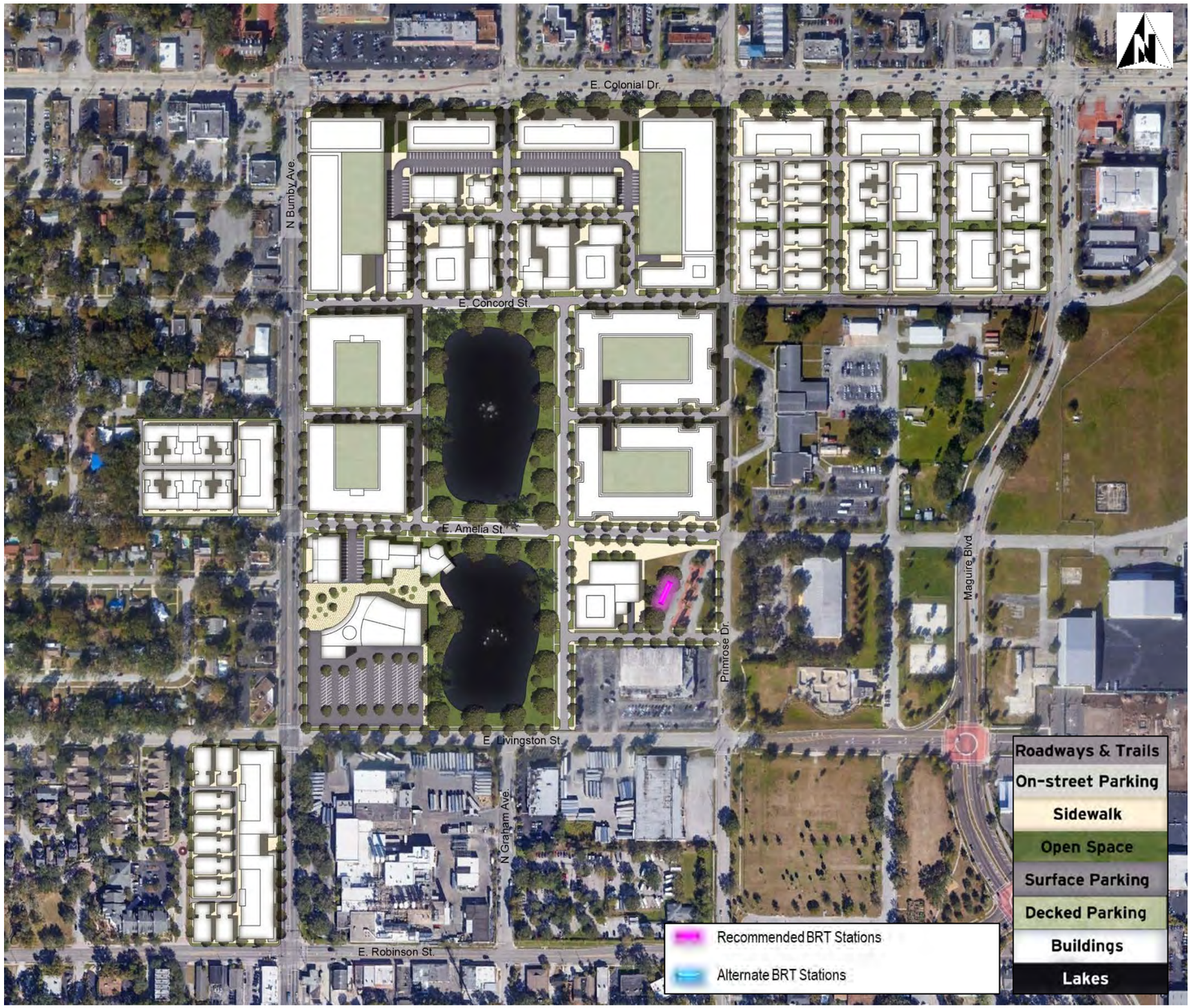
- The planned Primrose Bike Trail is incorporated into new development east of Primrose Drive.
- Existing streets are connected and continued through the new development, completing the block grid and improving connectivity.
- Consistent sidewalks are provided in all new development.

Open Space :

- A new plaza north of the Plaza Live concert hall provides both open space and pedestrian connectivity.
- Redevelopment revolves around a large neighborhood park.
- Existing buildings like The Plaza Live concert hall enhanced with public spaces and other attractive uses like restaurants.
- Significant public spaces have been designed where the potential BRT station will be located.
- Stormwater management features also serve as park space.
- Limited driveway access on main streets that front the large central public park.

Development and Urban Design:

- Street trees enhance frontages and provide shade for people walking.
- Continuous building frontage is designed on key streets providing pedestrian entrances directly from the public sidewalk.
- A variety of housing typologies.
- Higher density residential buildings have views of the park and lakes.
- Duplex and multi-family units are alley-loaded reducing sidewalk interruptions.



3D illustration not included for this station

09 FASHION SQUARE

Station Area Type: Regional Center

TOD Readiness Assessment

Strengths

The Fashion Square area in the City of Orlando has historically represented a major regional destination though retail performance has suffered over recent years. The Fashion Square Mall campus is undergoing partial redevelopment including the addition of new apartments and updated retail concepts. The mall also hosts regional cultural events but lacks a distinct identity apart from the branding of the mall. Certain properties are also eligible for incentives including the City-designated Opportunity Zone and the Targeted Site Revitalization Pilot Program. Incomes and education levels are trending upward. This station area has a high degree of overlap with the Primrose station area. The station area includes built and planned portions of the Orlando Bicycle Beltway.

Weaknesses

Physical conditions present barriers to pedestrians and bicyclist navigating the area including a lack of path connectivity, large blocks, the Executive airport, and major roads. The Orlando Executive Airport controls development of much of the land south of Colonial Drive which provides public control but also limits some opportunities due the presence of active air traffic.

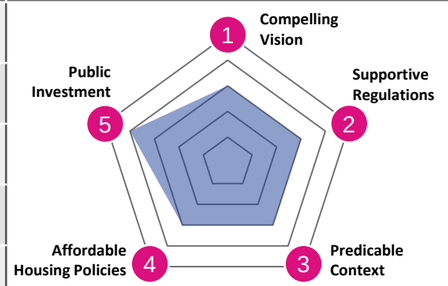
Policy Recommendations

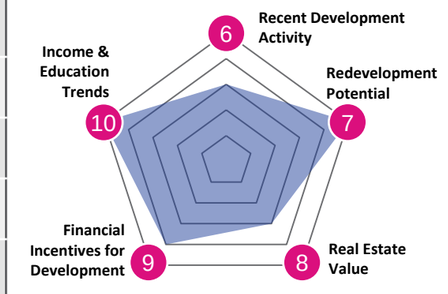
Most of the Fashion Square station area is identified as a Metropolitan Activity Center which allows the highest intensity of development outside of downtown. It is outside of the Traditional City boundary which means that minimum densities and some form standards are not applicable.

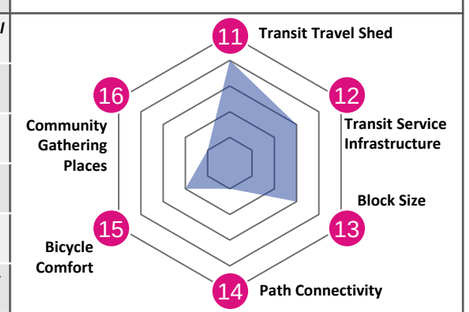
20 MEASURE ASSESSMENT

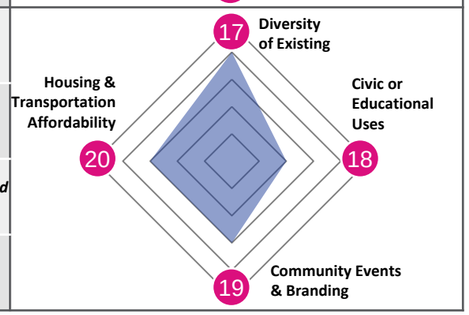
		EXISTING CONDITIONS	READINESS*	
POLICY	1	Compelling Vision:		*Update Vision to Include TOD*
	2	Supportive Regulations:		*Add Form-Based Standards*
	3	Predictable Context:		*Identify TOD Champion*
	4	Affordable Housing Policies:		*Implement Regional Plan*
	5	Public Investment:		*Assess Infrastructure*
MARKET	6	Recent Development Activity:		*More Activity*
	7	Redevelopment Potential:		*Maintain Consolidated Parcels*
	8	Real Estate Values:		*Higher Values*
	9	Financial Incentives for Development:		*Waive Fees Where Feasible*
	10	Income & Education Trends:		*Maintain Mix of Incomes*
PHYSICAL	11	Transit Travel Shed:		*Improve Regional Transit Service*
	12	Transit Service Infrastructure:		*Improve Frequencies*
	13	Block Size:		*Smaller Block Sizes*
	14	Path Connectivity:		*Increase Connectivity*
	15	Bicycle Comfort:		*More Bike Connectivity*
	16	Community Gathering Places:		*New Community Spaces*
SOCIAL	17	Diversity of Existing Uses:		*More Grocery and Parks*
	18	Civic or Educational Uses:		*Increase Civic Venues*
	19	Community Events & Branding:		*Rebrand for Mixed Use Community*
	20	Housing & Transportation Affordability:		*Decrease Combined Cost*

READINESS ASSESSMENT









09 FASHION SQUARE

Station Area Type: Regional Center

The Activity Center policies includes some urban form standards. To improve return on public investments in transit in terms of ridership, it may be advisable to address minimum intensity requirements for activity centers within BRT station areas. There is an East Colonial Drive Vision Plan which could be updated to address the potential for BRT.

The redevelopment potential of this station area will be largely driven by the Fashion Square Mall property, an existing indoor mall that includes a substantial portion of the station area. Redevelopment of this site has the potential to create a connected street grid, provide civic green space, and increase potential ridership. The media has reported active interest by a potential buyer in leading significant redevelopment on the site. This station area includes major links in the bicycle network including the Cady Way Trailhead. The City has been adding bicycle connections incrementally with redevelopment. A major redevelopment provides the opportunity to significantly improve bicycle and motor vehicle connectivity with direct connections through the site.

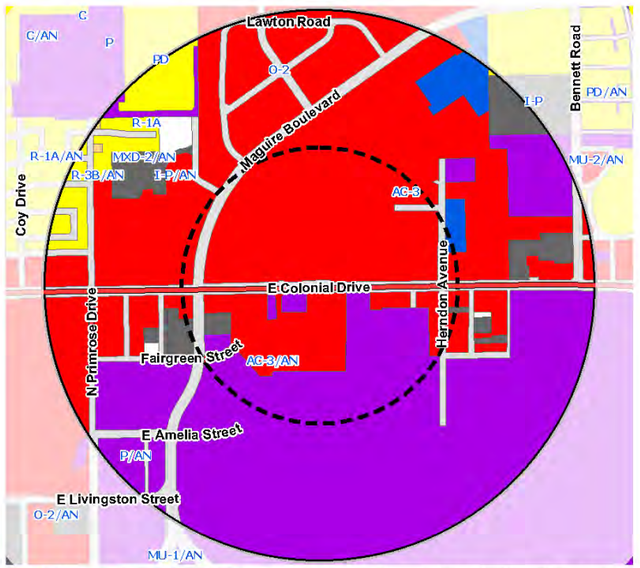
The Fashion Square Mall has a recognizable brand, but that brand is retail oriented and is not necessarily positive due to the recent struggles the property has faced, like many indoor malls, in maintaining tenants. So, there will likely be a need to rebrand the area as a mixed-use community for redevelopment purposes.

Residents crossing SR 50 at Fashion Square

Fashion Square Mall

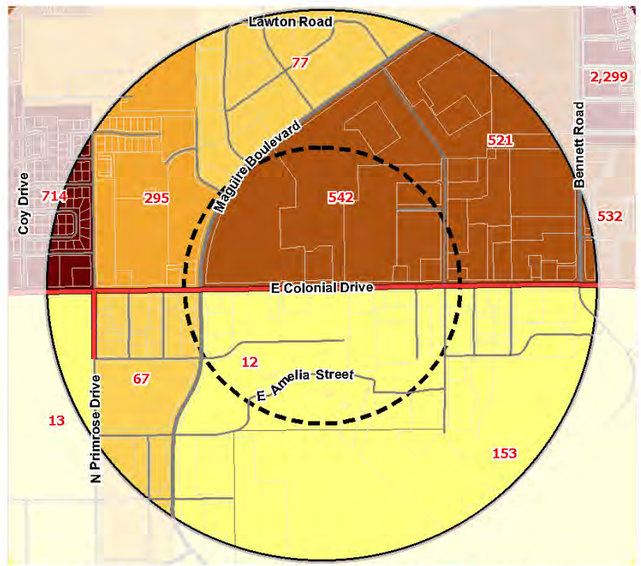
09 FASHION SQUARE

Station Area Type: Regional Center



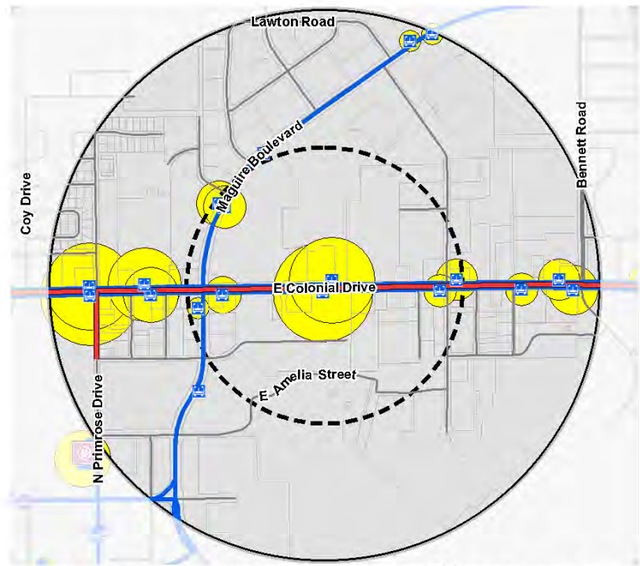
Land Use and Zoning

- Residential
- Retail/Office
- Recreation
- Public/Semi-Public
- Institutional
- Agricultural
- Vacant
- Other
- Industrial
- Water
- AC-2 Zoning



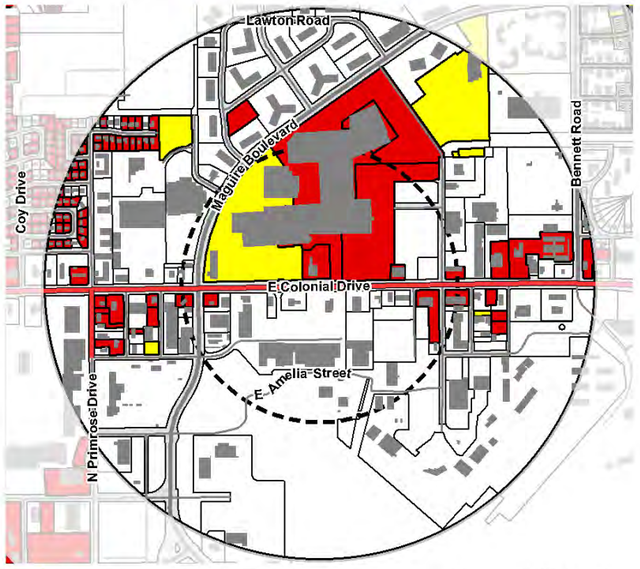
Population Density

- <=1 per Acre
- 1.1 - 3.0 per Acre
- 3.1 - 5.0 per Acre
- 5.1 - 10.0 per Acre
- > 10 per Acre
- 1,123 Total Population (TAZ)



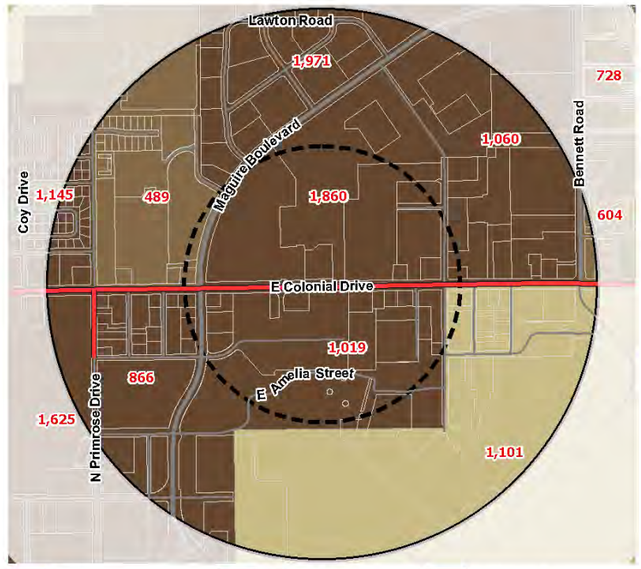
Transit and Ridership

- Bus Stop
- Bus Route
- Ridership Intensive Areas
- Quarter Mile Buffer
- Half Mile Buffer



Parcels and Buildings

- Vacant Parcel
- Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
- Parcels
- Proposed BRT Corridor



Employment Density

- <=1 per Acre
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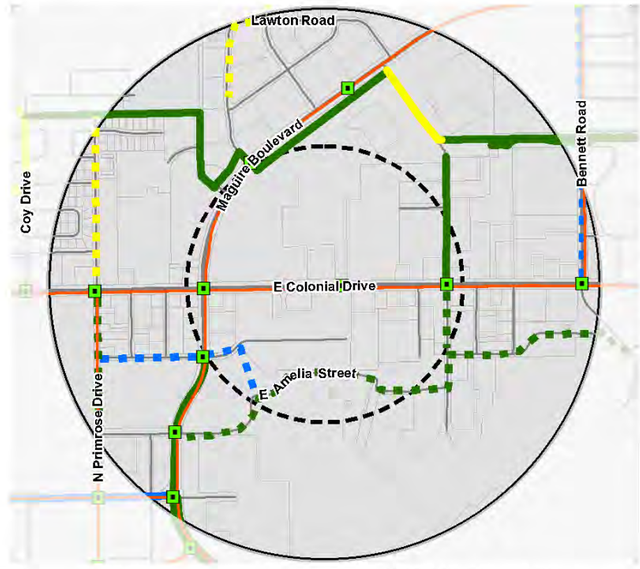
- 4,321 Total Employment (TAZ)



Bicycle and Pedestrian Facilities

Proposed / Existing

- Bike Lane/Path or Paved Shoulder
- Shared Path/Trail
- Signed Route
- JUICE Bike Share Station
- Signalized Intersection
- Sidewalk

09 FASHION SQUARE

Station Area Type: Regional Center

TOD Concept Plan

The Fashion Square TOD concept complements the Fashion Square Mall Redevelopment Concept north of Colonial Drive, albeit with a greater residential focus and more complete street frontage.

Transportation:

- A new east-west street ties into Fairgreen Street to the west and Concord Street to the east, creating a parallel route to Colonial Drive.
- A pair of new north-south streets provides access from Colonial Drive. The easternmost street is aligned with the primary access into the redeveloped mall site north of Colonial Drive and allows for enhanced connectivity to the north.

Open Space:

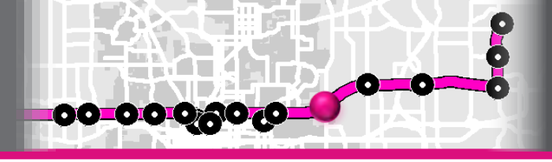
- A central one-acre green space lines the primary north-south street and provides recreational space for residents and shoppers and functions as a gateway feature for the development.
- A linear plaza along Colonial Drive includes the eastbound BRT station.
- Smaller scaled public green spaces along the new east-west street provide outdoor space for nearby residents.

Development and Urban Design:

- New streets create a finer grained network of streets and blocks. Streets are generally lined with buildings along the sidewalks, except to allow for parks and plazas.
- Buildings near the central park with frontage on Colonial Drive or the primary north-south street are envisioned to have ground floor retail uses, with office or residential uses on upper floors.
- The remaining buildings are envisioned generally as higher density residential uses, with parking in rear lots or integrated structures.

3D illustration not included for this station

10 SEMORAN BOULEVARD



Station Area Type: Regional Center

TOD Readiness Assessment

Strengths

The Semoran Boulevard station area is primarily located in unincorporated Orange County. Adjacency to the successful Baldwin Park development and the Cady Way Trail provide strong real estate opportunities. Analysis indicates redevelopment potential on underutilized properties. This area benefits from the convergence of multiple bus routes.

Weaknesses

The biggest challenge for the Semoran Boulevard station area is connectivity barriers. These include Semoran/Colonial overpass, stormwater facilities, and constrained connectivity within the southwest and northeast quadrants. This area lacks policy and regulation measures that would enable transit-oriented development, especially a mix of uses. In addition, the station area lacks a clear vision for the future, and there has been little recent development activity. Community spaces are limited to trails. The area lacks strong identity and branding although the northeast quadrant may benefit from associating with Baldwin Park's brand.

Policy Recommendations

The Semoran Boulevard station area is important as a transit connection to other lines but is challenge from a transit-oriented development perspective because of the existing infrastructure barriers. There is an existing SR 50 SR 436 Vision Plan developed by Orange County that mentions transit but was not guided by the expectation of a significant transit investment. Also underway is the SR 436 Transit Corridor Study which has the potential to further enhance the transportation value of this station.

20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	
POLICY	1	Compelling Vision:		*Update and Expand Plan*
	2	Supportive Regulations:		*Permit Vertical Mixed-Use*
	3	Predictable Context:		*By-Right Zoning for TOD*
	4	Affordable Housing Policies:		*Implement Regional Plan*
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PHYSICAL	11	Transit Travel Shed:		*Improve Regional Transit Service*
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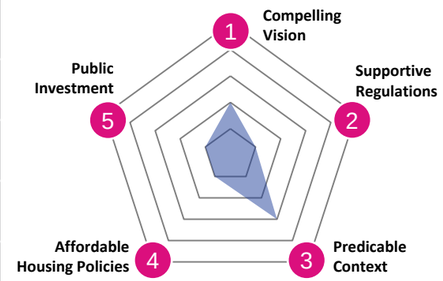
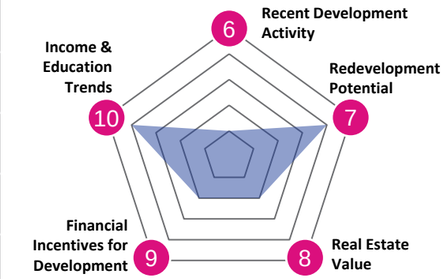
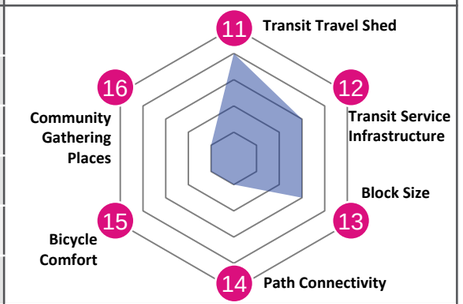
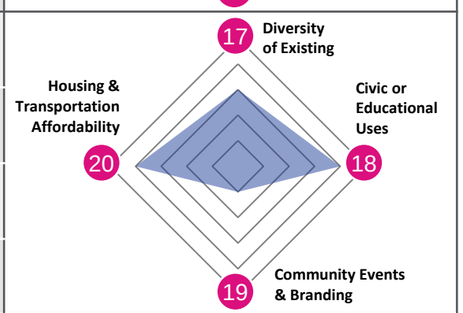
READINESS ASSESSMENT

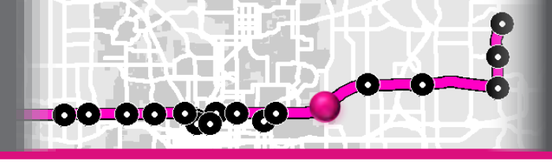








10 SEMORAN BOULEVARD



Station Area Type: Regional Center

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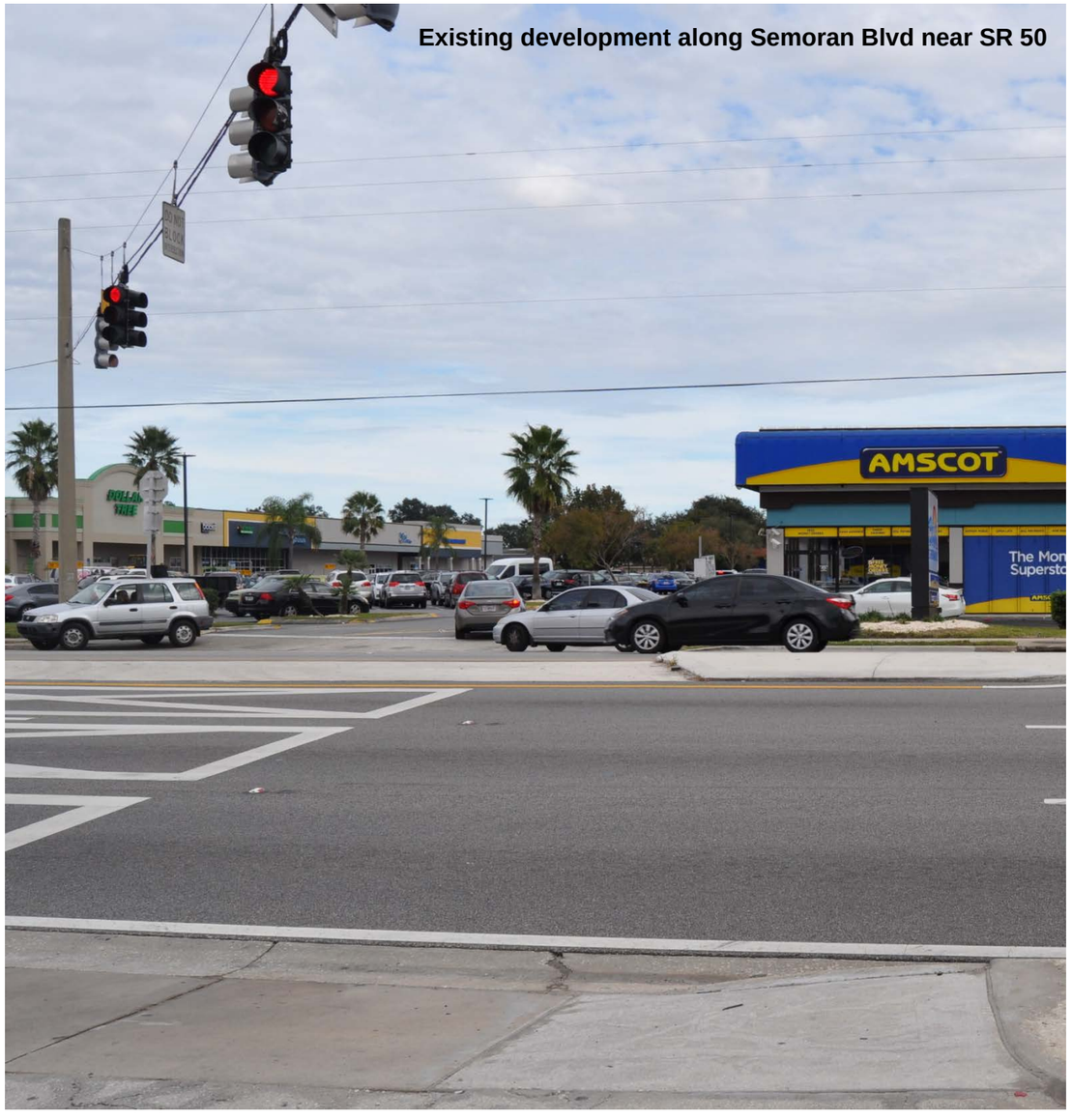
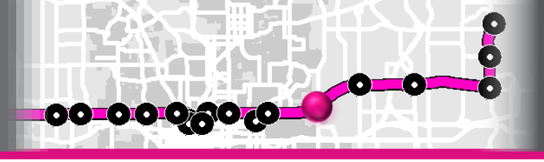


Existing development along Semoran Blvd near SR 50

LYNX customers waiting for bus at existing stop

10 SEMORAN BOULEVARD

Station Area Type: Regional Center



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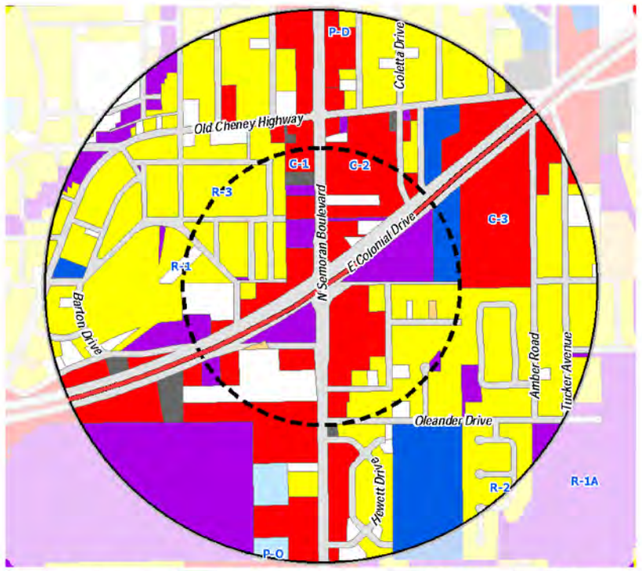

Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
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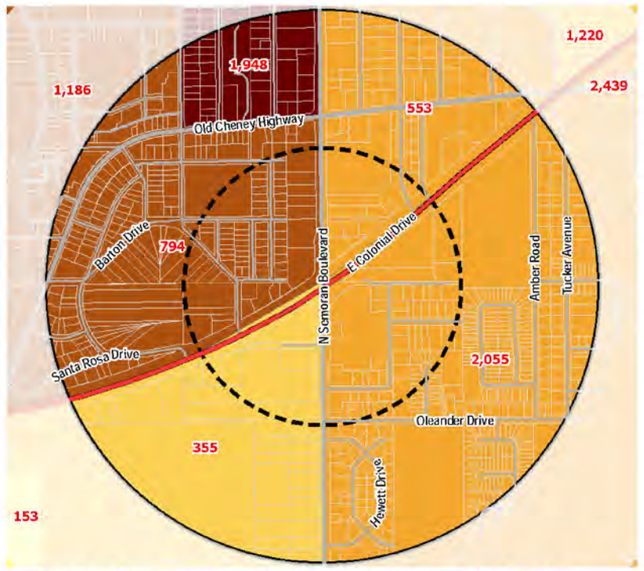
Water

Population Density



<1 per Acre
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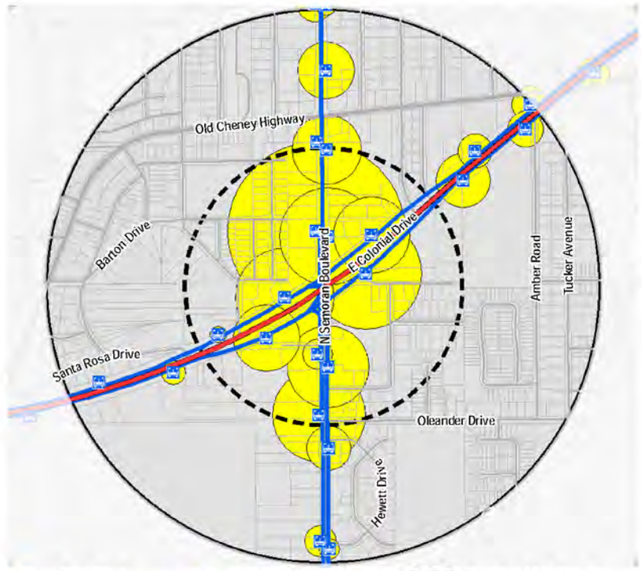
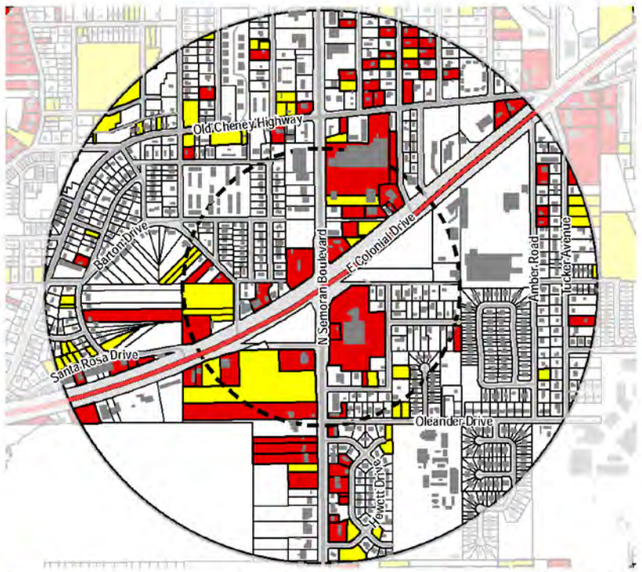
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



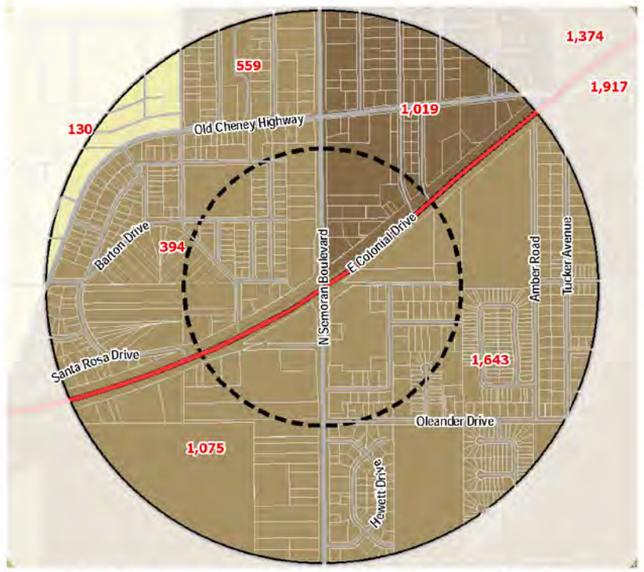
Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density



<1 per Acre
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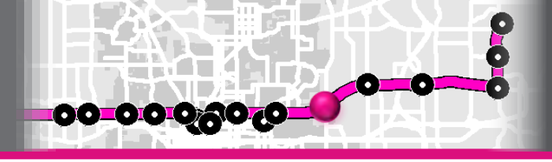
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed
Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

10 SEMORAN BOULEVARD



Station Area Type: Regional Center

TOD Concept Plan

The concept for the Semoran TOD assumes the alternate BRT station locations are utilized. The development is organized around a central park as a focal feature and includes a variety of commercial and residential uses.

Transportation:

- A pair of new east-west streets divides the area into more reasonably sized blocks and enhances connectivity. Roush Avenue is extended eastward, and a new street provides a connection to Coletta Drive.

Open Space:

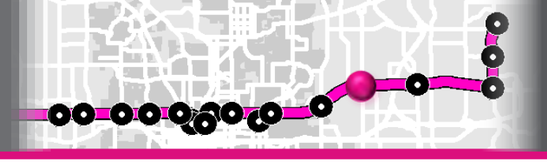
- A central one-acre park, bounded by an offset pair of new east-west streets, provides outdoor recreational space for residents, workers and shoppers. The park also integrates the northbound BRT station.
- A corner plaza/green space accommodates the southbound BRT station and provides outdoor space for employees in the abutting office development.
- Smaller scaled green spaces and courtyards provide outdoor space for tenants and visitors.

Development and Urban Design:

- Mixed use buildings line the western frontage of Semoran Boulevard and the block south of the central park, with surface parking lots in the rear. Uses along Semoran Boulevard generally include ground floor retail or office use and upper floor office or residential space.
- The new block north of the central park accommodates a larger footprint retail space (e.g. specialty grocery store or drug store), integrated into a mixed-use development that includes a parking structure and residential units organized around internal and external courtyards.

3D illustration not included for this station

11 GOLDENROD ROAD



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

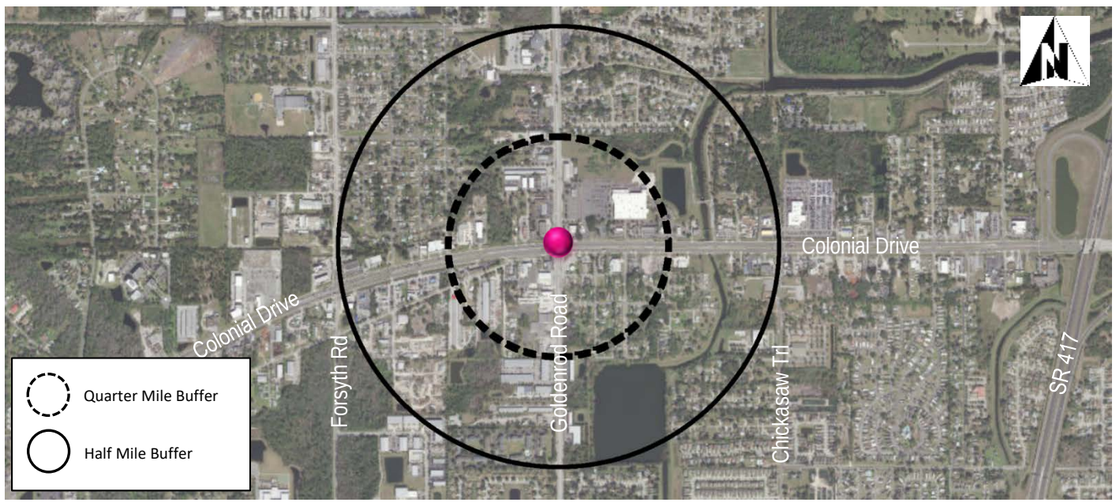
The Goldenrod station area, located in unincorporated Orange County, exhibits recent development activity and the potential for future redevelopment due to a number of vacant or underutilized parcels. Income and educational attainment data have trended upward in recent years. The Little Econ Greenway bicycle and jogging trail passes through the north portion of station area. The southeast corner exhibits relatively good connectivity. There is the opportunity to improve path connectivity in the other quadrants through redevelopment of nonresidential properties.

Weaknesses

The station area lacks a vision for future development. Current policy, including land use regulations, does not support transit-oriented development. Zoning and future land use specifies low density residential, industrial, or single-use commercial. The area lacks path connectivity due in part to water and environmentally preserved land. Public park space is limited to the share use path and transit service is infrequent. There is no evidence of a shared community identity or brand.

Policy Recommendations

Most parcels along Colonial Drive and Goldenrod Road in the station area have Commercial future land use and zoning within the station area. Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development.



20 MEASURE ASSESSMENT

		EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1	Compelling Vision:	*Develop a Shared Vision*	
	2	Supportive Regulations:	*Zone for Mixed-Use*	
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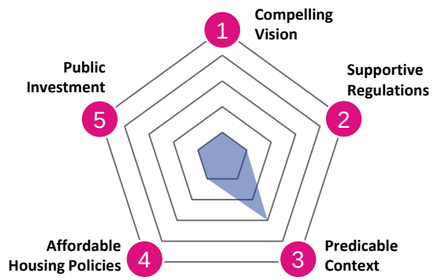
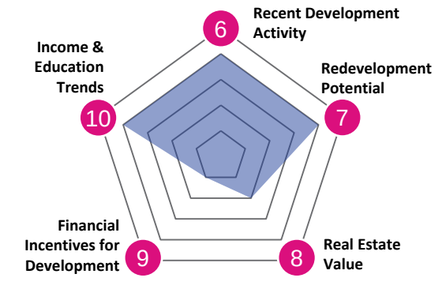
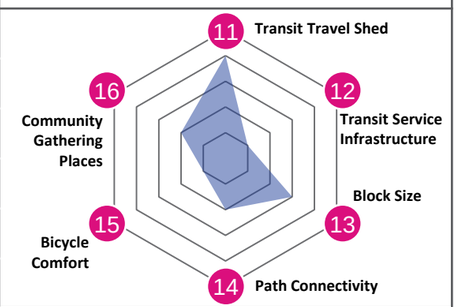
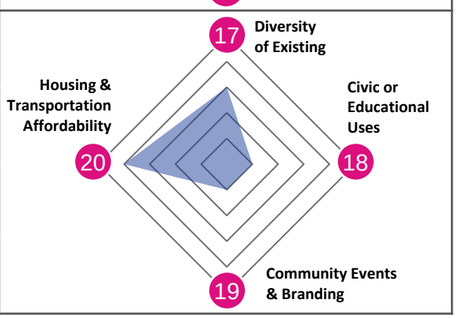
	20	Housing & Transportation Affordability:	*Decrease Combined Cost*	

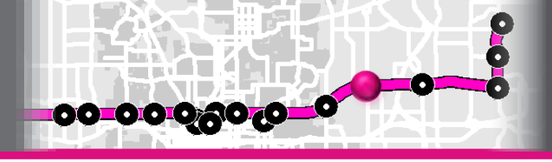








11 GOLDENROD ROAD



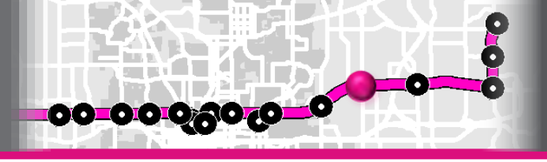
Station Area Type: Community Center

These amendments should include requirements for urban block sizes, pedestrian connectivity, and urban form standards for new construction. no established vision plan was identified associated within this area; a compelling vision for transit-oriented development would help to encourage private investment and identify needed public investments.

LYNX customer boarding bus at existing stop

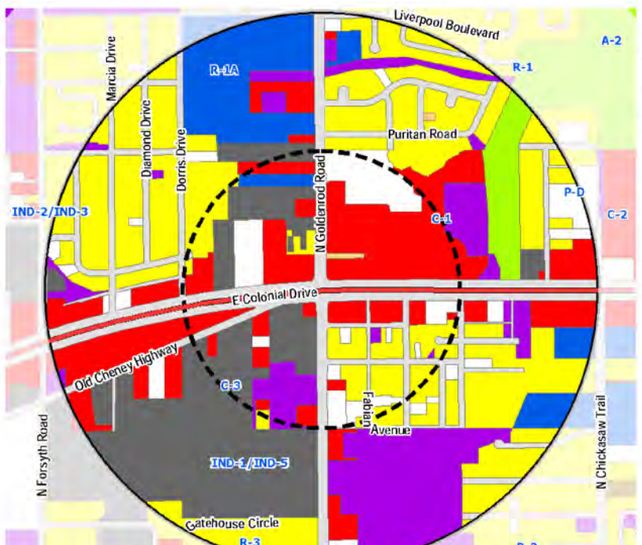
Resident crossing SR 50 at Goldenrod Rd

11 GOLDENROD ROAD



Station Area Type: Community Center

Land Use and Zoning



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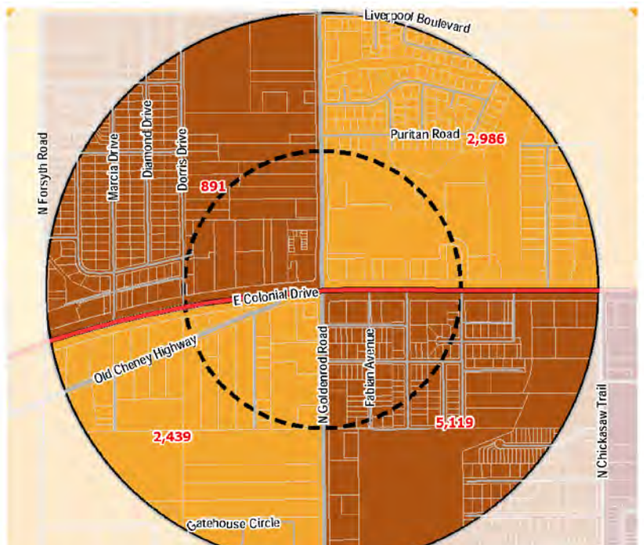

<=1 per Acre
1.1 - 3.0 per Acre
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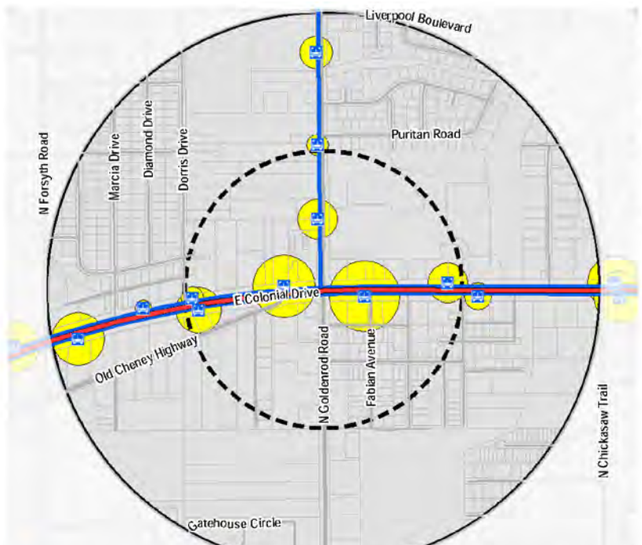
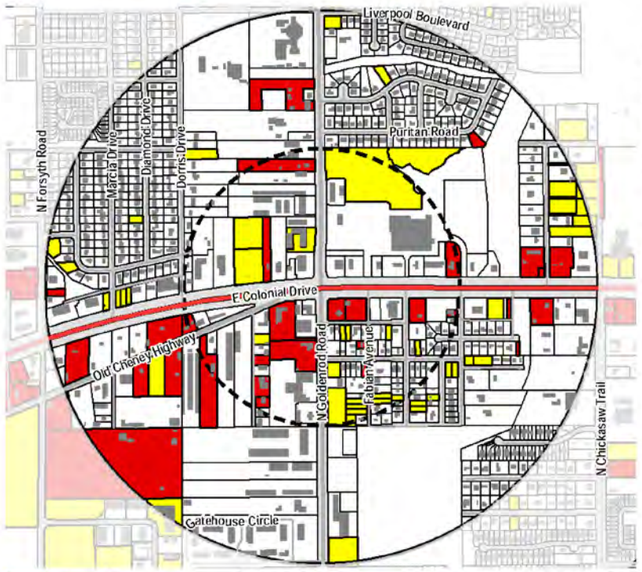
1,123 Total Population (TAZ)

Transit and Ridership



Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



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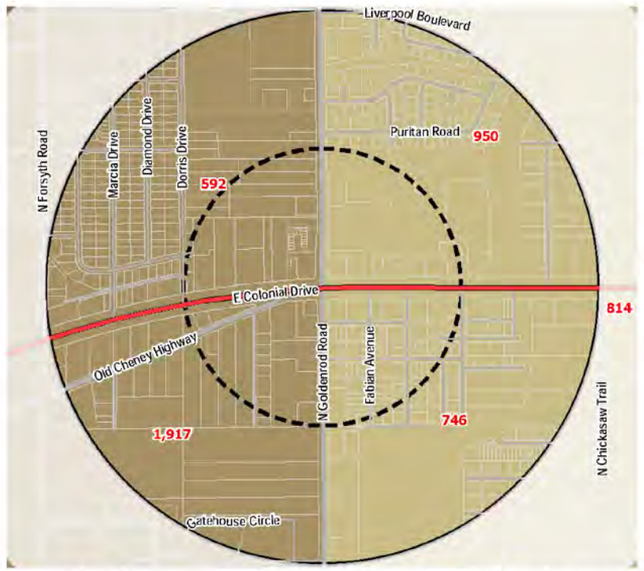
Employment Density



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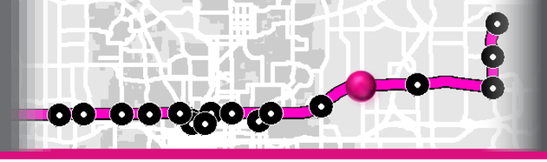


Station Area Type: Community Center

TOD Concept Plan

Goldenrod is planned as a small community center based on its regional location and the relatively low intensity of surrounding development.

Transportation:

- Two new connections are created between Flowerdale Avenue and Goldenrod Road providing parallel connectivity to the Colonial/Goldenrod Intersection.

Open Space:

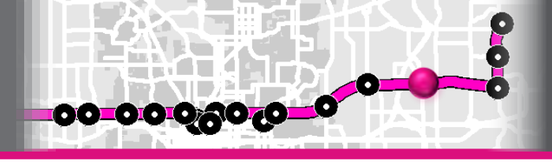
- A significant public space is incorporated adjacent to the westbound BRT station which also includes existing natural features.
- Interior block parks with stormwater management features also function as park spaces.

Development and Urban Design:

- Street trees enhance frontages and provide shade for people walking.
- Continuous building frontage is designed on key streets providing pedestrian entrances directly from the public sidewalk.
- Development south of Colonial is residential, consistent with the residential character to the east with the inclusion of live-work units to provide small-scale business opportunities.
- Development to north contains commercial uses along Colonial Drive and higher density residential buildings with views to proposed public park.

3D illustration not included for this station

12 ECONLOCKHATCHEE TRAIL



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

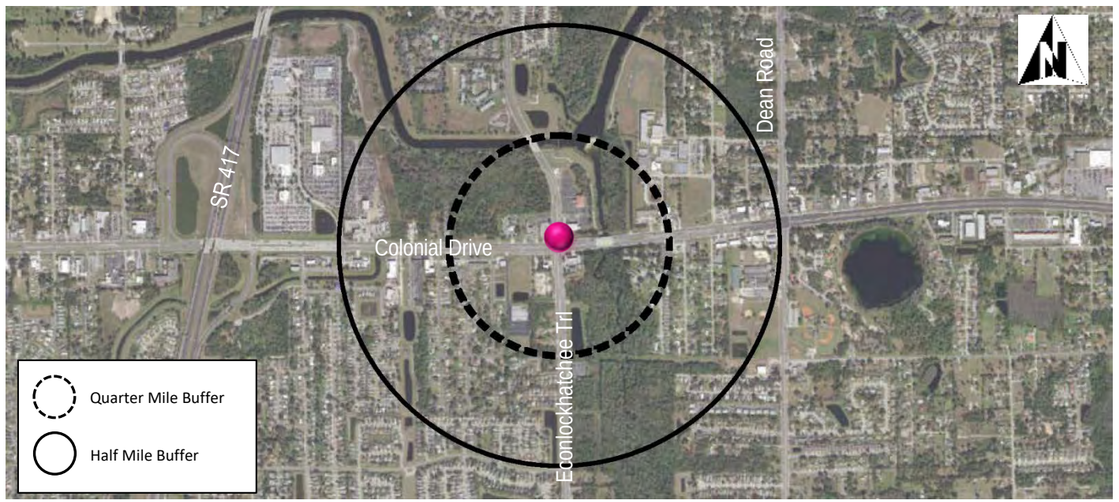
The Econlockhatchee station area is located in unincorporated Orange County. The Little Econ Greenway bicycle and jogging trail passes through this station area which also bears its namesake roadway. There are indicators of market potential including rising education and income levels, vacant or underutilized land, and strong residential real estate values. The Acacia Banquet Hall currently provides a commercial event space.

Weaknesses

Physical markers of transit-oriented infrastructure are poor including low path connectivity, large block sizes, and a lack of community gathering places outside of the trail. The low connectivity results in part from the presence of natural barriers. The station area lacks a vision for future development. Current policy, including land use regulations, does not support transit-oriented development. Zoning and future land use specifies low density residential, industrial, or single-use commercial. A large percentage of the station area is public or semi-public which provides the public with control of the property however much of this is environmental land that is unlikely to support development.

Policy Recommendations

This station area has a reduced developable area due to the presence of wetlands and waterways in the north portion of the site. Developed parcels along the corridor have Commercial future land use and zoning within the station area.



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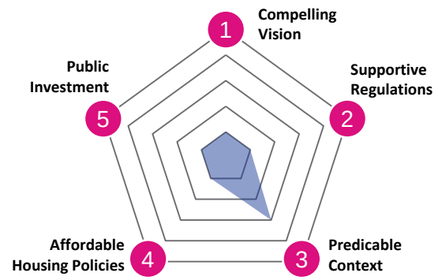
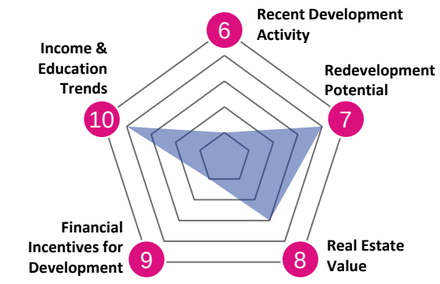
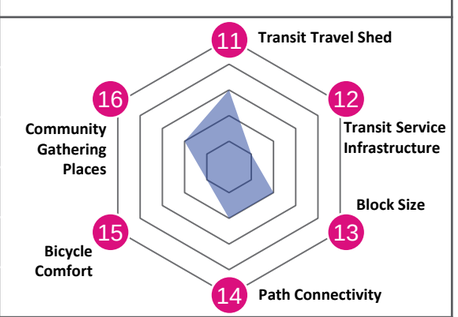
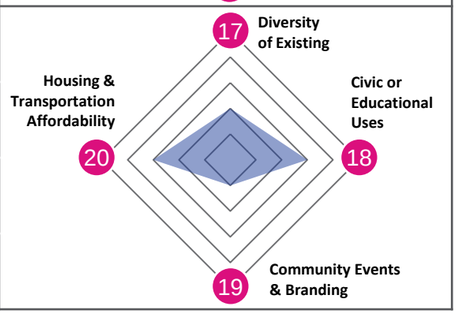
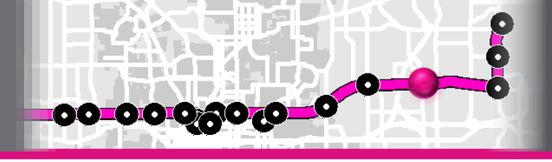








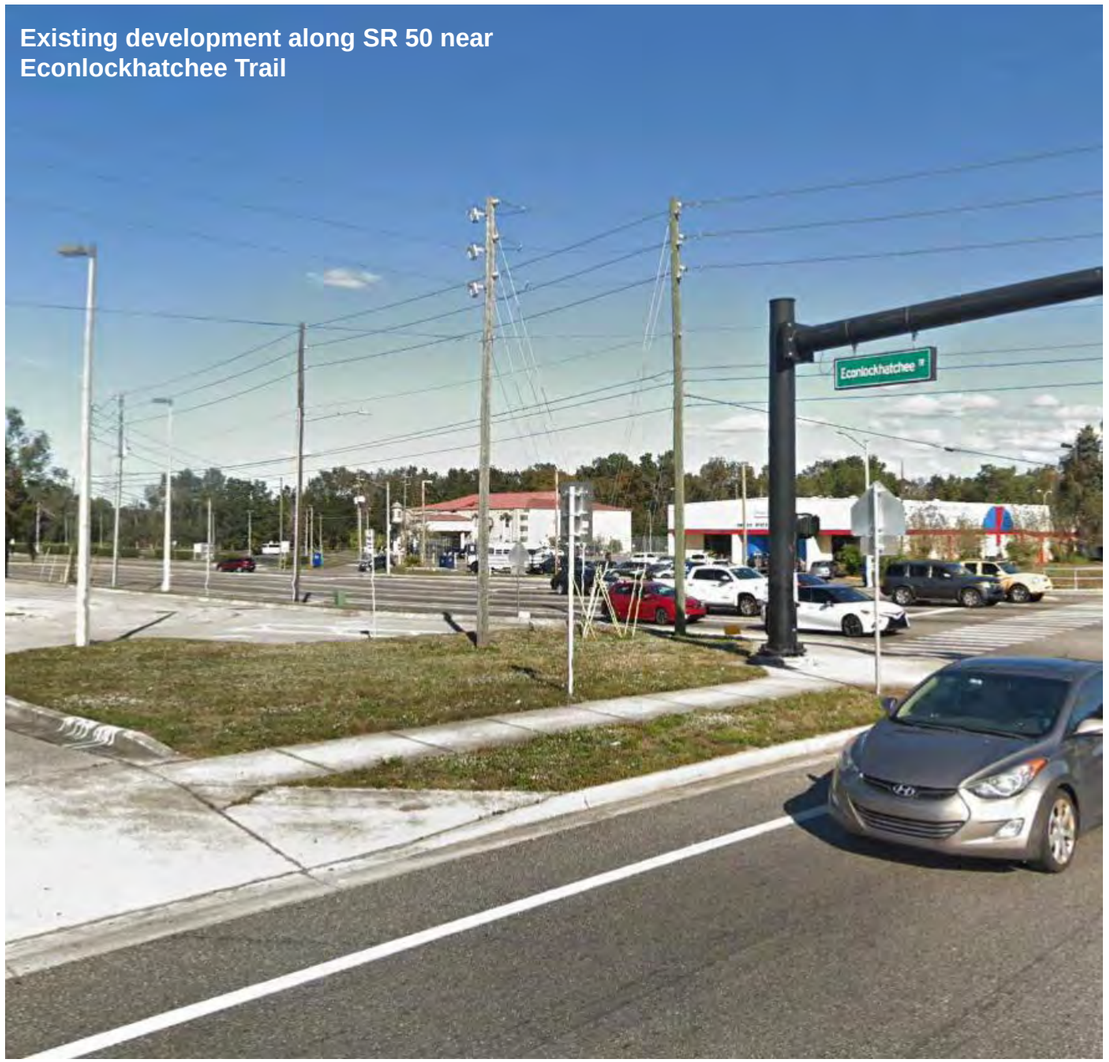
12 ECONLOCKHATCHEE TRAIL



Station Area Type: Community Center

Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development. These amendments should include requirements for urban block sizes, pedestrian connectivity, and urban form standards for new construction. No established vision plan was identified associated within this area; a compelling vision for transit-oriented development would help to encourage private investment and identify needed public investments.

Existing development along SR 50 near Econlockhatchee Trail

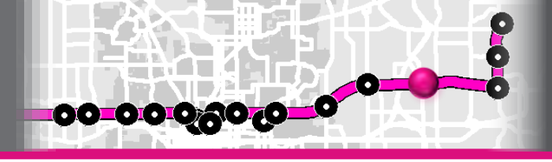


LYNX Customer boarding bus at existing stop

SR 50 Bus Rapid Transit (BRT)

Transit Oriented Development (TOD)

12 ECONLOCKHATCHEE TRAIL



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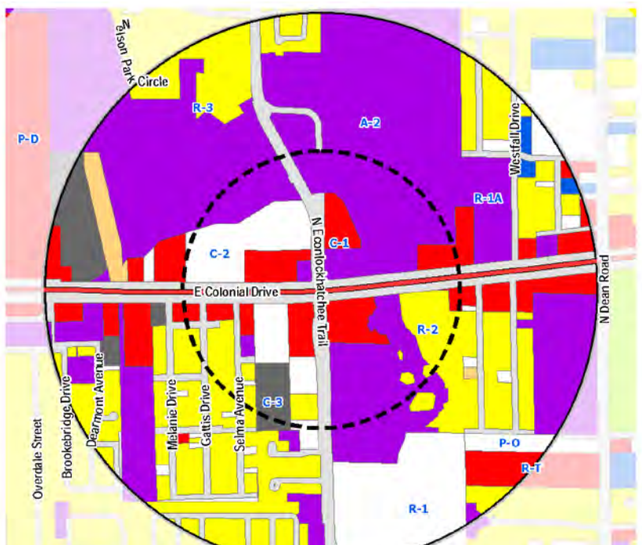
Land Use and Zoning



Residential
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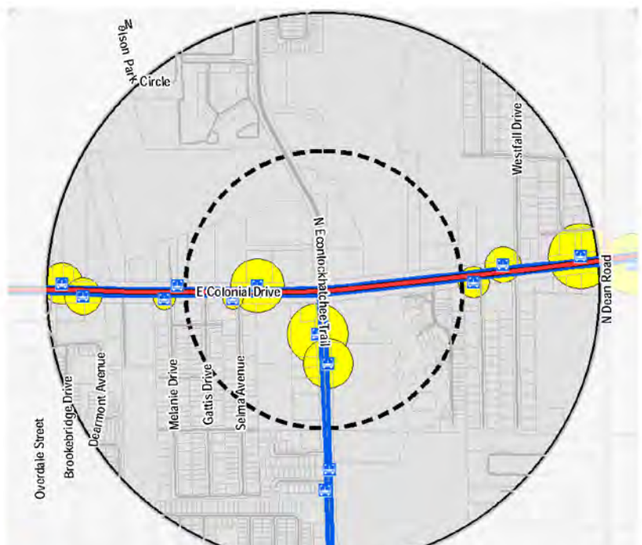
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density

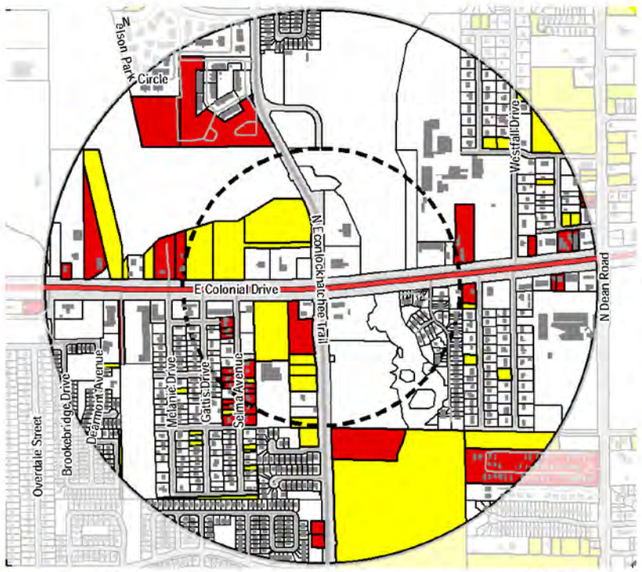
<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
1,123 Total Population (TAZ)

Transit and Ridership



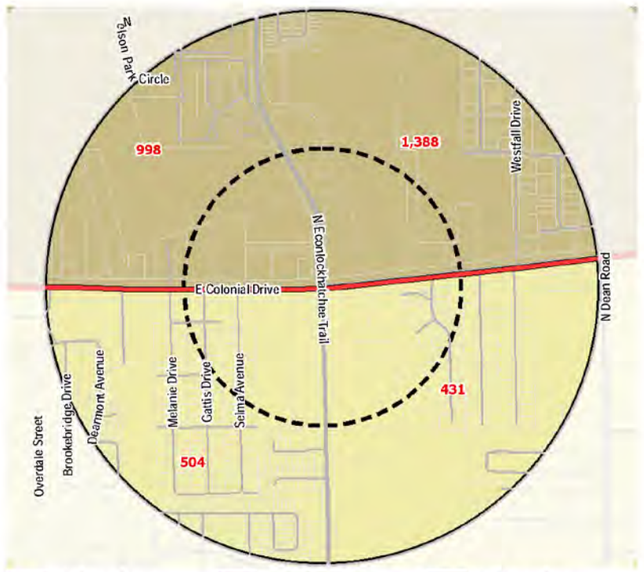
Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

Employment Density

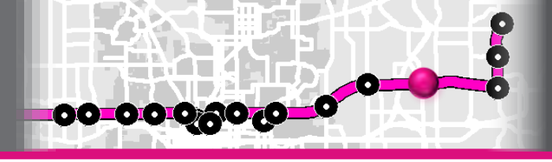


<=1 per Acre
1.1 - 3.0 per Acre
3.1 - 5.0 per Acre
5.1 - 10.0 per Acre
> 10 per Acre
4,321 Total Employment (TAZ)

Bicycle and Pedestrian Facilities

Proposed Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

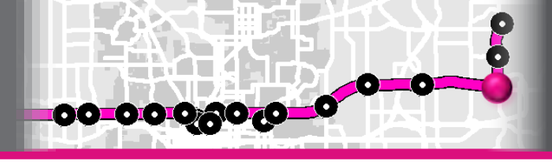
12 ECONLOCKHATCHEE TRAIL



Station Area Type: Community Center

Looking east along SR 50 near Econlockhatchee Trail

13 ALAFAYA TRAIL



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

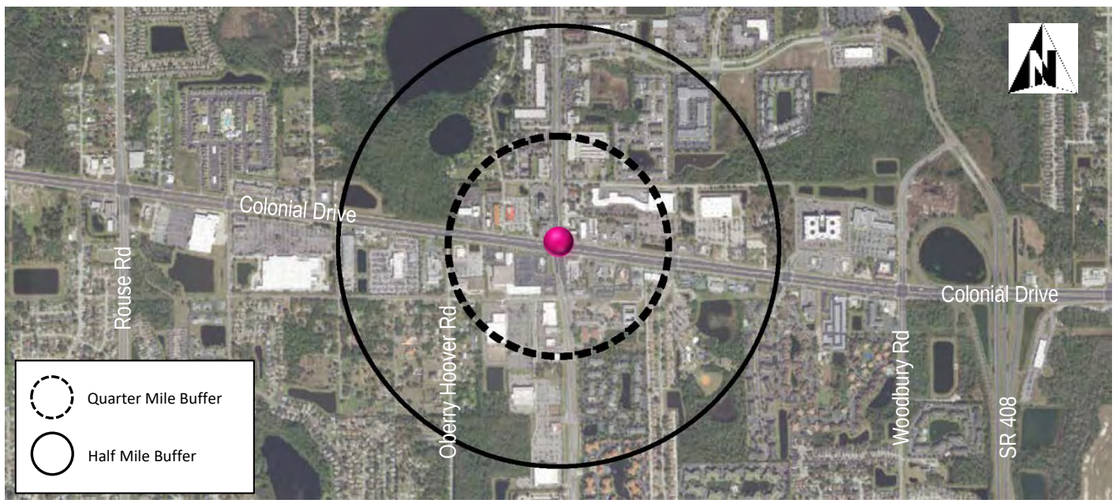
The Alafaya Trail station area, in unincorporated Orange County, includes a significant suburban activity center, much of which is centered south of the station area at Waterford Lakes Town Center. This area has experienced recent development activity and more redevelopment opportunity exists on underutilized parcels. The station area includes a diversity of land uses though not well-connected. East Orange Park and a branch library are civic assets within the station area.

Weaknesses

The area lacks a high quality pedestrian or bicycle environment with limited path connectivity and a lack of a vision for transit-oriented development or policy controls encouraging pedestrian-oriented design. Current zoning prohibits mixed use development. The census blocks in this area have changed significantly due to high growth making it difficult to track real estate, income, and educational trends with a high level of accuracy.

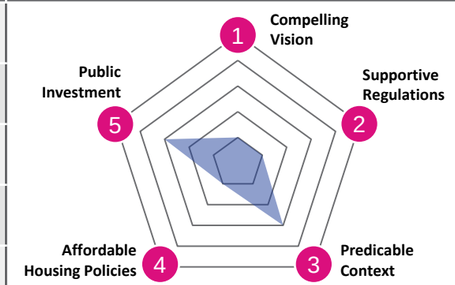
Policy Recommendations

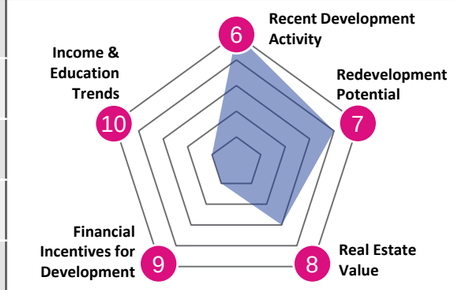
Alafaya Trail as a brand is primarily associated with Waterford Lakes, which is south of the station area, and the University of Central Florida to the north. The station area lacks a distinct brand and no existing area vision was identified. A compelling vision for transit-oriented development would help to encourage private investment and identify needed public investments. Underutilized parcels in the station area have Commercial future land use and zoning within the station area.

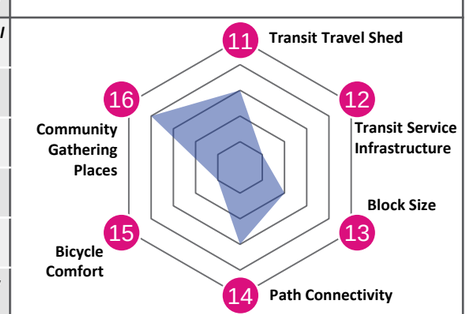


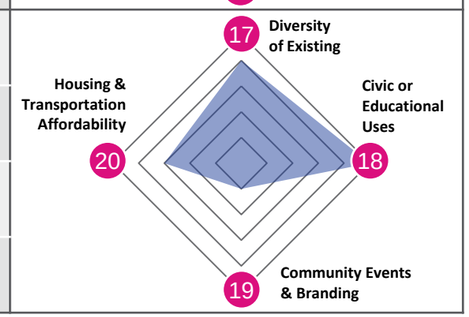
20 MEASURE ASSESSMENT

	EXISTING CONDITIONS	READINESS*	READINESS ASSESSMENT
POLICY	1 Compelling Vision:	*Develop a Shared Vision*	
	2 Supportive Regulations:	*Zone for Mixed-Use*	
	3 Predictable Context:	*By-Right Zoning for TOD*	
	4 Affordable Housing Policies:	*Implement Regional Plan*	
	5 Public Investment:	*Assess Infrastructure*	
MARKET	6 Recent Development Activity:	*Maintain Activity*	
	7 Redevelopment Potential:	*Consolidate Parcels*	
	8 Real Estate Values:	*Higher Values*	
	9 Financial Incentives for Development:	*Waive Fees Where Feasible*	
	10 Income & Education Trends:	*Increase Education Levels*	
PHYSICAL	11 Transit Travel Shed:	*Improve Regional Transit Service*	
	12 Transit Service Infrastructure:	*Improve Stations*	
	13 Block Size:	*Smaller Block Sizes*	
	14 Path Connectivity:	*Increase Connectivity*	
	15 Bicycle Comfort:	*More Bikeways*	
	16 Community Gathering Places:	*New Community Spaces*	
SOCIAL	17 Diversity of Existing Uses:	*More Apartments*	
	18 Civic or Educational Uses:	*Maintain Civic Venues*	
	19 Community Events & Branding:	*Build Brand & Events*	
	20 Housing & Transportation Affordability:	*Decrease Combined Cost*	

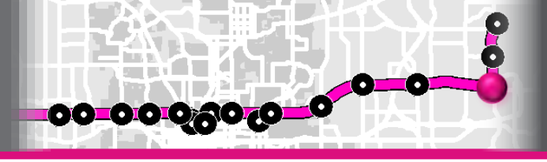






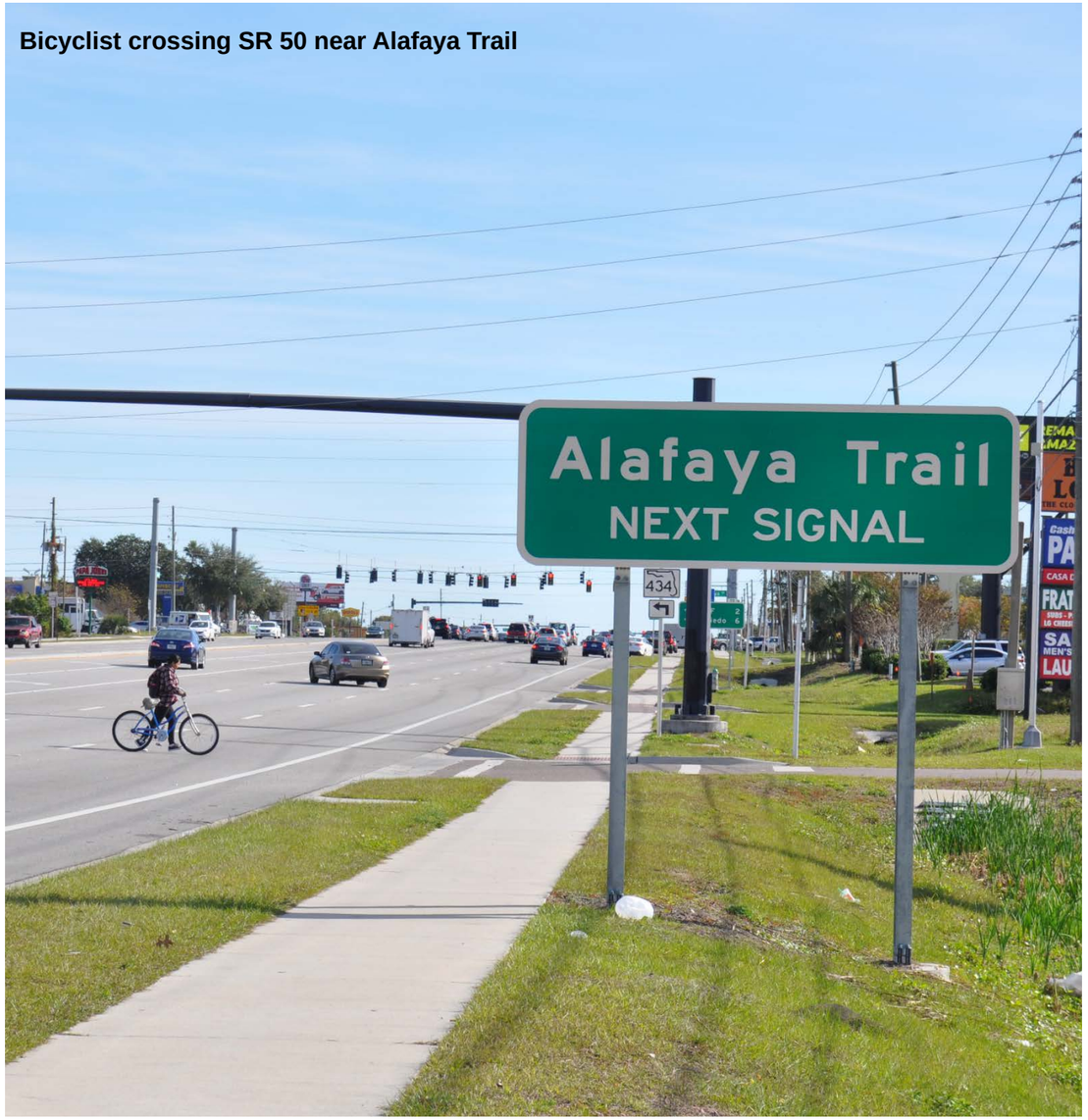


13 ALAFAYA TRAIL



Station Area Type: Community Center

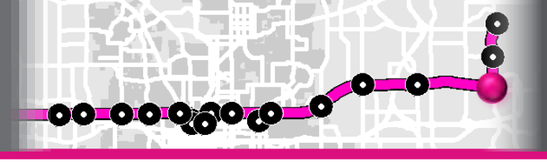
Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development. These amendments should include requirements for urban block sizes, pedestrian connectivity, and urban form standards for new construction.



Bicyclist crossing SR 50 near Alafaya Trail

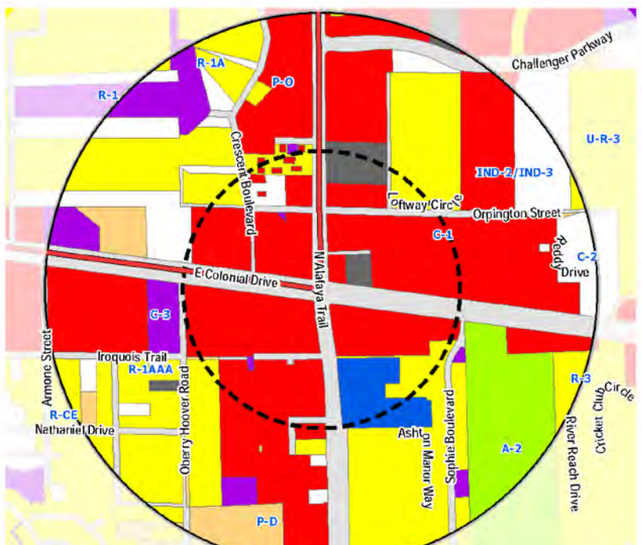
Residents crossing Alafaya Trail near existing stop

13 ALAFAYA TRAIL



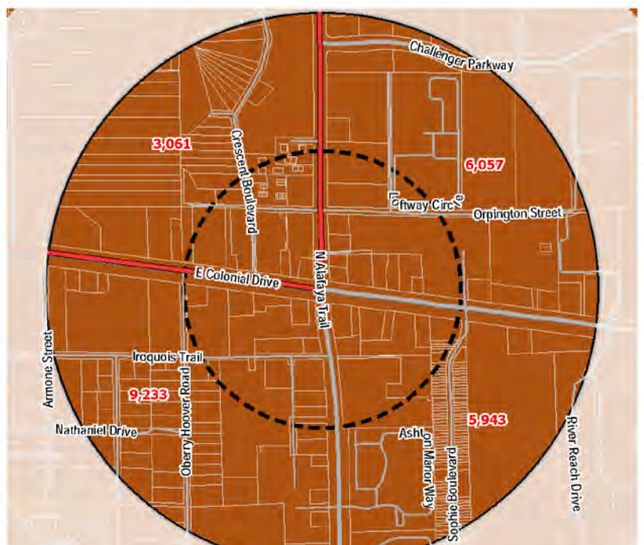
Station Area Type: Community Center

Land Use and Zoning



Residential
Retail/Office
Recreation
Public/Semi-Public
Institutional
Agricultural
Vacant
Other
AC-2 Zoning
Industrial
Water

Population Density



<=1 per Acre
1.1 - 3.0 per Acre
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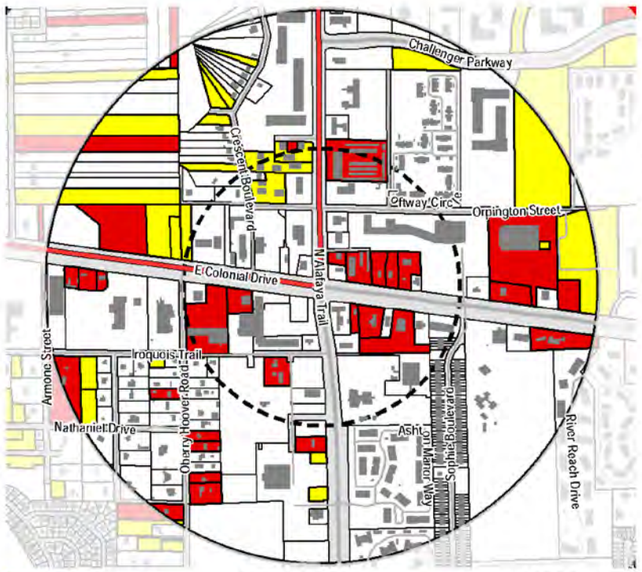
Transit and Ridership

Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
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Parcels
Proposed BRT Corridor

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Bicycle and Pedestrian Facilities

Proposed
Existing
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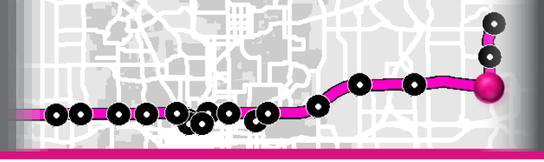
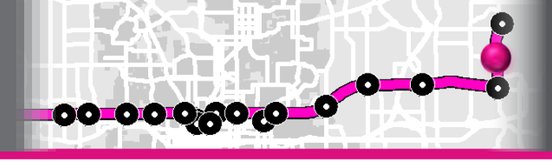
Station Area Type: Community Center



Existing stop along Alafaya Trail

14 RESEARCH PARK



Station Area Type: Community Center

TOD Readiness Assessment

Strengths

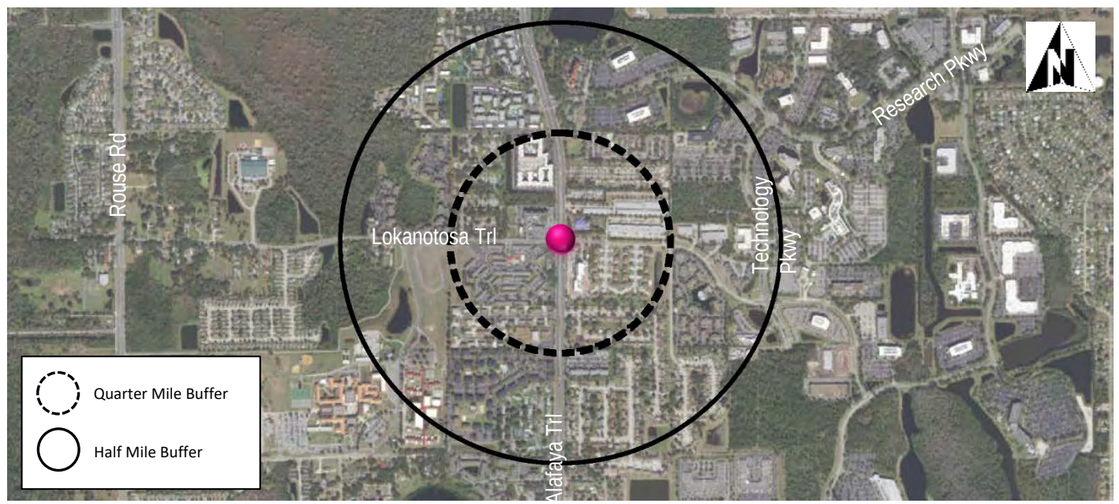
The Research Park station area is located in unincorporated Orange County. This station area is located at an access point to Central Florida Research Park which is a significant regional employment center. There are also a large number of existing suburban apartments and attached housing likely drawn to this area by the presence of the Research Park and the University. Portions of University High School are also within the station area. Some indicators of redevelopment potential exist.

Weaknesses

While the Research Park has a strong vision around employment and innovation, the vision does not emphasize transit or pedestrian mobility. The walking and bicycling environmental is poor with a lack of connectivity, a “car-dependent” rating by Walk Score, and a lack of bicycle infrastructure. The majority of the jobs in Research Park are not within walking distance of the station so a secondary transit connection and/or high-quality bicycle infrastructure would likely be necessary to provide significant utility for employees.

Policy Recommendations

Research Park has a highly unique brand identity for high-quality office and research associated with the University of Central Florida. A vision should be developed in cooperation with the Research Park and UCF leadership if more a transit-oriented approach is to be achieved in this station area. Such a vision could include new transit-oriented development as well as internal transportation accessing existing places of employment within Research Park.



20 MEASURE ASSESSMENT

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	3	Predictable Context:	By-Right Zoning for TOD	
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	5	Public Investment:	Assess Infrastructure	
MARKET	6	Recent Development Activity:	Maintain Activity	
	7	Redevelopment Potential:	Consolidate Parcels	
	8	Real Estate Values:	Higher Values	
	9	Financial Incentives for Development:	Waive Fees Where Feasible	
	10	Income & Education Trends:	Maintain Mix of Incomes	
PHYSICAL	11	Transit Travel Shed:	Improve Regional Transit Service	
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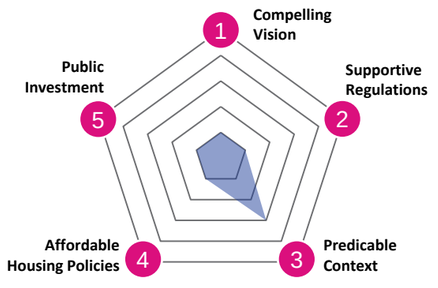
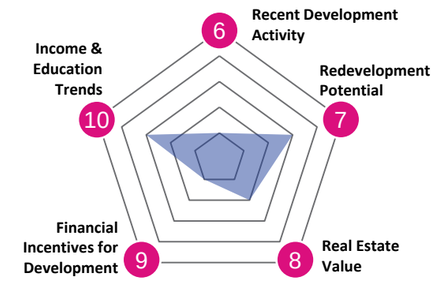
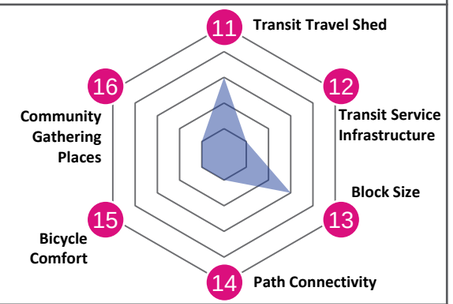
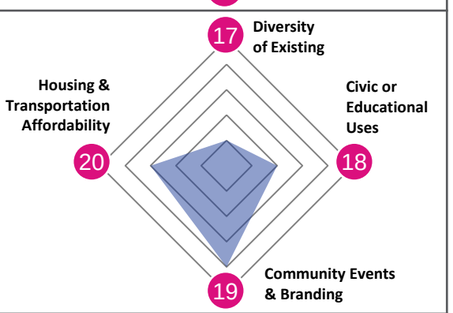
	19	Community Events & Branding:	Expand Brand	
	20	Housing & Transportation Affordability:	Decrease Combined Cost	









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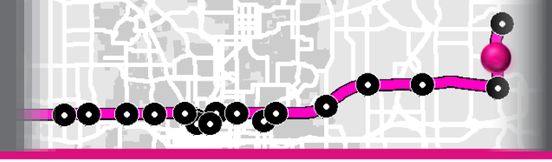


Station Area Type: Community Center

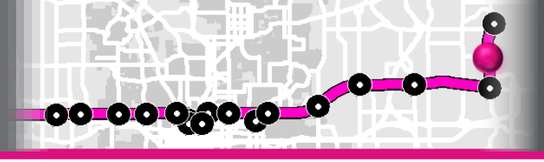
The Orange County Comprehensive Plan in this area is a combination of industrial and high density residential. Amending the Comprehensive Plan and zoning to permit mixed-use development would support future transit-oriented development. Existing residential development could incorporate retail services increasing the ability of residents to reduce car reliance and move towards transit for longer trips. These amendments should include requirements for urban block sizes, pedestrian connectivity, and urban form standards for new construction.

Little Econ Greenway along Lokanotosa Trail

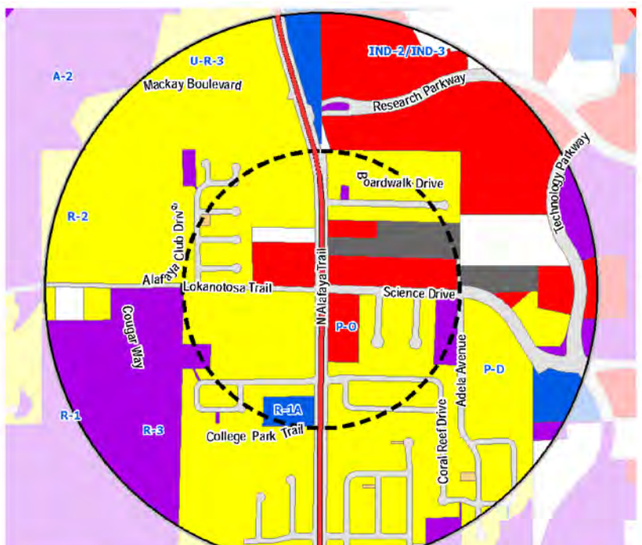
Existing Development along Alafaya Trail near Lokanotosa Trail

14 RESEARCH PARK

Station Area Type: Community Center



Land Use and Zoning



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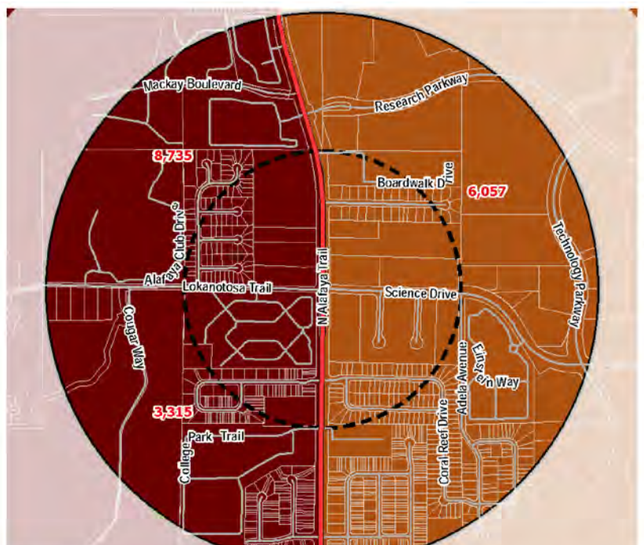
Population Density



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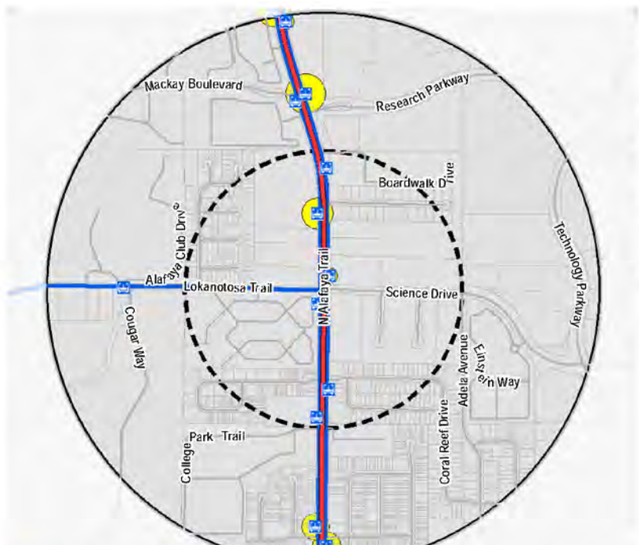
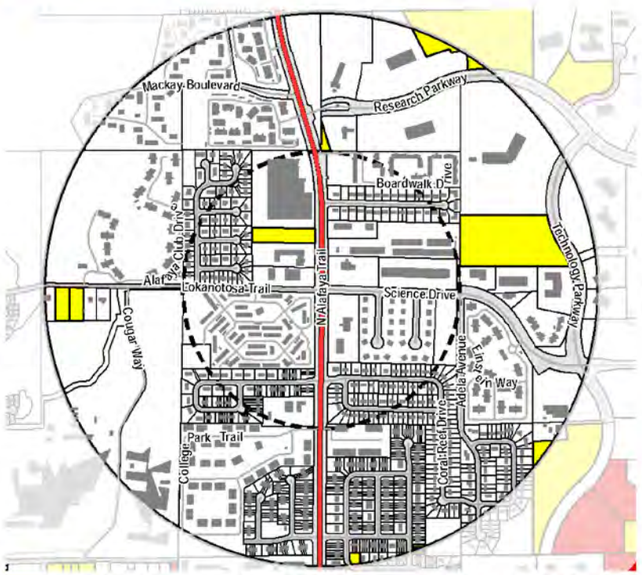
Transit and Ridership



Bus Stop
Bus Route
Ridership Intensive Areas
Quarter Mile Buffer
Half Mile Buffer

Parcels and Buildings



Vacant Parcel
Underutilized Parcel (Building + Improvement / Total Market Value) < 0.4
Parcels
Proposed BRT Corridor

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Bicycle and Pedestrian Facilities

Proposed
Existing
Bike Lane/Path or Paved Shoulder
Shared Path/Trail
Signed Route
JUICE Bike Share Station
Signalized Intersection
Sidewalk

4

Preliminary Station Locations & Analysis


McDonald's
104 E COLONIAL DRIVE
4-409
LYNX
ACCIDENT? CALL
PENDAS

4.0 Preliminary Station Locations & Analysis

The analysis includes a comprehensive evaluation of elements to identify the preliminary footprint of station locations. Two station locations per direction were identified for each station area. The comparative analysis for each station site identified the preferred and alternate locations in order to provide flexibility in the identification of final station locations during the next phases of the project. The Primrose SuperStop is not included in this analysis as this is an existing transit center with the infrastructure to support the SR 50 BRT operations.

Community Enhancement & Economic Development

The efficient placement of stations with respect to surrounding land uses and major destinations is critical to enhancing customer's overall accessibility and ability to reach their desired destination. Convenient access to transit fosters TOD opportunities resulting in better access to jobs, economic growth and healthier lifestyles.

Transit Operations

Transit travel times are significantly influenced by the placement of stations, impacting overall service attractiveness, costs, and efficiency. Slow and unreliable transit service may increase transit user costs in the short term and reduce transit ridership in the long term.

Transit stations that are strategically located to connect people to where they want to be by facilitating pedestrian/bicycle access and effective connections within the transit system, provide enhanced customer's experience.

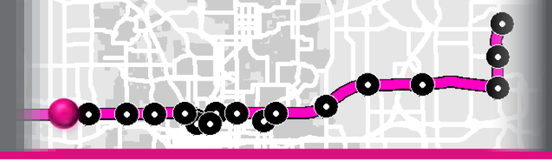
Ease of Implementation

Businesses generally benefit from being close to transit stations due to shorter commute times for their employees and new potential customers. However, the placement of transit stations should minimize conflicts with storefronts and access to avoid adverse impacts to nearby businesses.

The timing and ability to implement improvements to transit systems is influenced by the overall cost of such improvements. Transit station costs are greatly dependent on the availability of ROW, the need for relocating utilities or drainage structures, and long-term maintenance and operating costs.

EVALUATION CRITERIA	DESCRIPTION
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT	
Supports existing development	Station placement with respect to transit-supportive land uses and densities. Effective transit service encourages surrounding development, which, in turn, supports transit.
Supports TOD potential	Provide convenient access to transit in locations that foster mixed-use development, increasing economic development potential and enabling sustainable communities.
TRANSIT OPERATIONS	
Supports transit travel time	Far-side stops are generally preferred because they allow transit vehicles to clear an intersection before stopping, resulting in fewer traffic delays. Far-side stops also have fewer impacts to sight lines for drivers to maneuver through an intersection.
Facilitates transfers	Stations should be provided in locations that facilitate transferring between LYNX routes and between other travel modes.
Facilitates pedestrian & bicycle access	Stations must be located to effectively serve a wide range of passengers with various accessibility needs and to provide the safest and most convenient pedestrian and bicycle access possible.
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS	
Minimizes additional right-of-way	Station located in an area with sufficient right-of-way for station improvements and safe boarding & alighting areas. Preference is given to locations with adequate right-of-way or existing transit easements.
Minimizes conflicts with businesses / signs	Locating the shelters and amenities to maximize visibility while maintaining views of storefronts, main business accesses, or signage is desired.
Minimizes driveway conflicts	Locating stations downstream of a traffic movement from a driveway to minimize conflicts between buses and other vehicles leaving or entering driveways, is recommended.
Minimizes impacts to traffic operations	Far-side stops are generally preferred because they minimize conflicts with right-turning vehicles and sight distance problems on approaches to intersections.
Minimizes impacts to utilities	Station placement with respect to existing utilities. Impacts to utilities typically result in additional cost and maintenance issues.
Minimizes impacts to drainage structures	Station placement with respect to existing drainage structures. Curb inlets on roads are typically placed near intersections and usually located right next to the crosswalk. Impacts to drainage structures usually result in additional costs.

01 POWERS DRIVE



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The Powers Drive recommended Eastbound (EB-R) and Westbound (WB-R) stations are primarily surrounded by commercial development and some residential land uses; the existing land use pattern helps in promoting the use of public transit, ultimately leading to opportunities for future growth and Transit-Oriented Development (TOD) potential. In addition, the vacant property adjacent to the WB-R station provides redevelopment opportunities.

Transit Operations

The EB-R stations is proposed at an existing stop, providing opportunities for stop colocation. The recommended stations facilitate transfers to the existing LYNX routes serving the Pine Hills, Ocoee, and Winter Garden communities (Links 48 and 105). Transit travel time is supported by the EB-R station, located far-side, resulting in fewer traffic delays, better vehicle and pedestrian sight distances, and fewer conflicts among buses, cars, pedestrians, and bicyclists. Existing sidewalks along SR 50 facilitate movement of passengers to and from the transit stations with crossing opportunities provided at the signalized intersections on Power Drive and Paul Street. The planned designated bicycle lanes along this segment of SR 50 will enhance bicycle connectivity for the station area.

Ease of Implementation & Potential Impacts

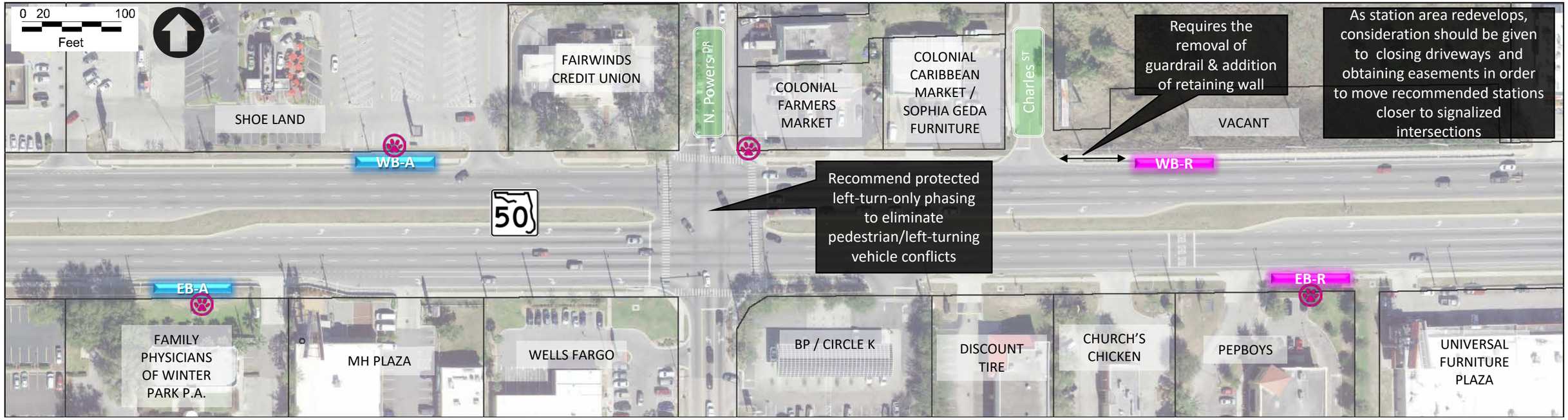
The existing shelter at the EB-R station provides space to accommodate BRT station improvements. The WB-R station does not likely require right-of-way, but does have an increased cost impact due to the removal of the existing guard rail and the addition of a retaining wall due to the vertical slope of the adjacent parcel.

EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	◒	●
Supports TOD potential	◒	◒	●	●
TRANSIT OPERATIONS				
Supports transit travel time	●	◒	◒	●
Facilitates transfers	●	●	●	◑
Facilitates pedestrian & bicycle access	●	◒	●	●
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	●	●	◑
Minimizes conflicts with businesses / signs	●	○	●	●
Minimizes driveway conflicts	◒	◒	●	◒
Minimizes impacts to traffic operations	●	◒	◒	●
Minimizes impacts to utilities	◒	●	◒	◒
Minimizes impacts to drainage structures	◒	◒	●	◒

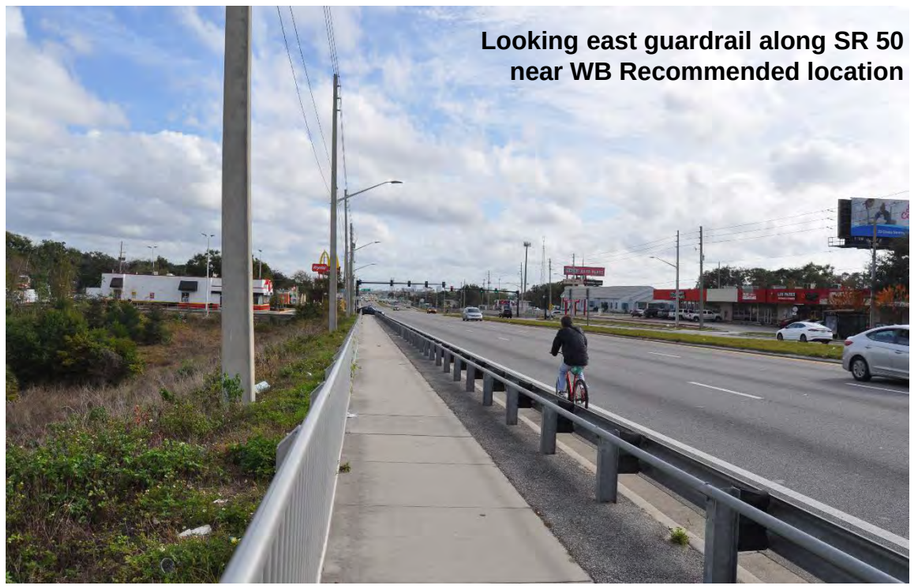
▲ Recommended Alternative

01 POWERS DRIVE

Station Area Type: **COMMUNITY CENTER**



Existing Stop

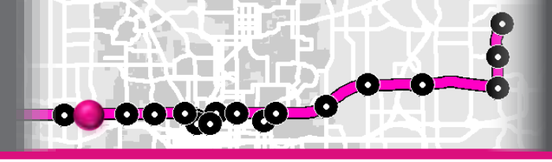


Looking east guardrail along SR 50 near WB Recommended location

Looking south at the EB Recommended location

Resident waiting to cross SR 50

02 PINE HILLS ROAD



Station Area Type: **REGIONAL CENTER**

Considerations for Recommended Station

Community Enhancement & Economic Development

The area surrounding the proposed Pine Hills Road EB-R and WB-R stations has a variety of land uses, including residential, institutional, retail, and office. The presence of large retail developments creates the opportunity for TOD potential. The recent investments in bicycle and pedestrian infrastructure in the Pine Hills Trails aide the stations in supporting the vision to create a multimodal and mixed-use community

Transit Operations

The recommended far-side stations benefit transit travel time by reducing traffic delays and causing fewer conflicts with cars, pedestrians, and bicyclists. Facilitation of transfers occur primarily for existing routes serving communities along Pine Hills Road and west SR 50 (Links 48, 49, 109, and 301). Collocating stops with Link 301 could be problematic for the EB-R station due to the proximity with the in Pine Hills Road intersection, where the route alignment requires a left turn. The existing signalized intersection providing access to the Pine Hills Market Plaza promotes the facilitation of pedestrian and bicycle access, in addition to the sidewalks and bike lanes along the SR 50 corridor.

Ease of Implementation & Potential Impacts

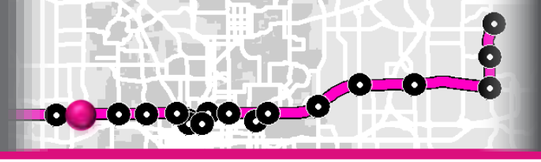
The existing right-of-way (ROW) provides space to accommodate station improvements without adverse impacts to nearby businesses. The existing shelter at the EB-R station provides space to accommodate BRT station improvements and the WB-R location can be accommodated within the available ROW avoiding conflicts with the storefront of the existing Bank of America building .

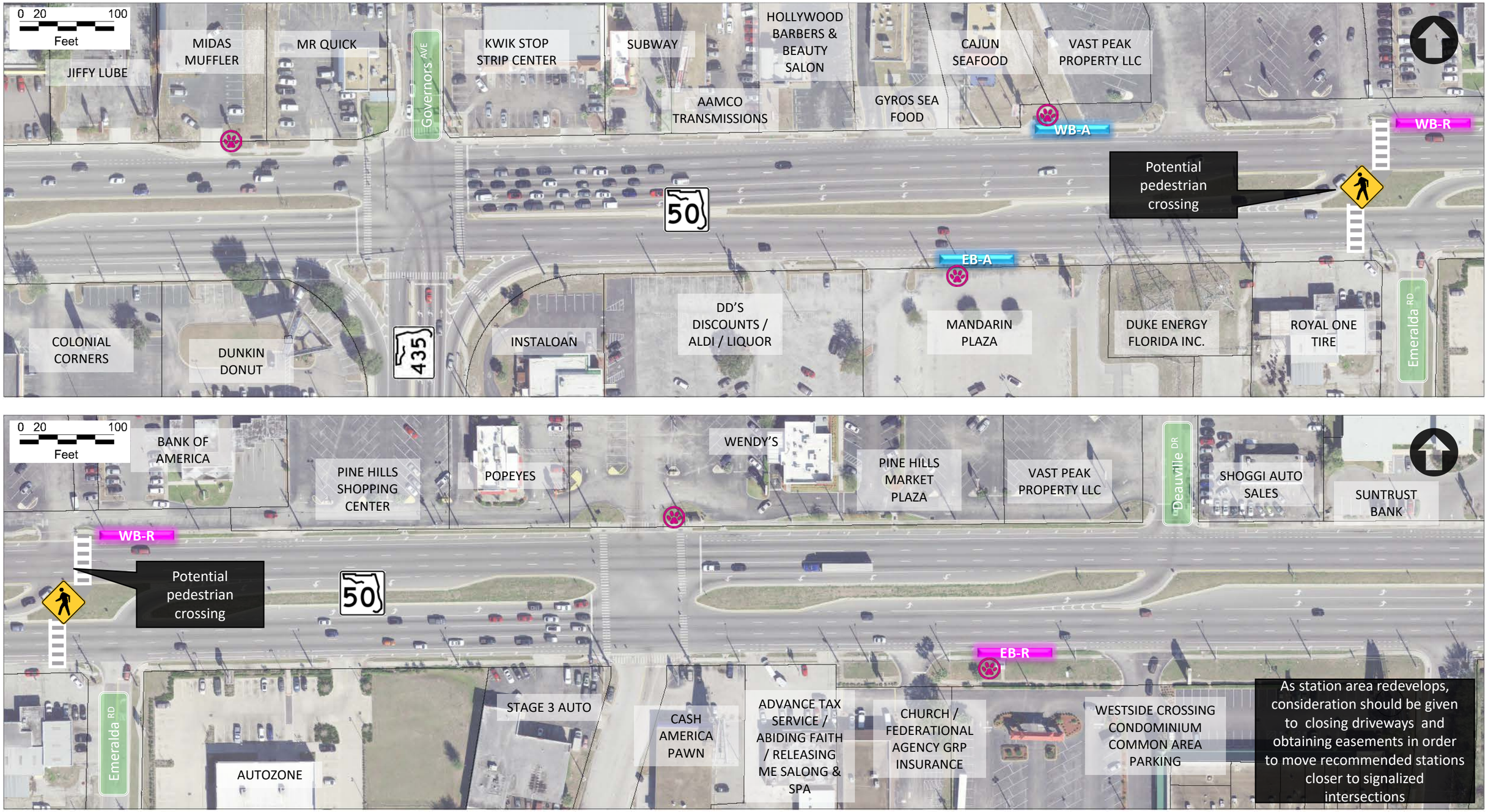
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	◒
Supports TOD potential	●	●	●	◒
TRANSIT OPERATIONS				
Supports transit travel time	●	◒	●	●
Facilitates transfers	◓	●	◓	◓
Facilitates pedestrian & bicycle access	●	◒	◒	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	◒	●	●
Minimizes conflicts with businesses / signs	◓	●	●	◓
Minimizes driveway conflicts	◓	◒	◒	◒
Minimizes impacts to traffic operations	●	◒	●	◒
Minimizes impacts to utilities	◓	◒	◒	◒
Minimizes impacts to drainage structures	●	◒	●	◒

▲ Recommended Alternative

02 PINE HILLS ROAD

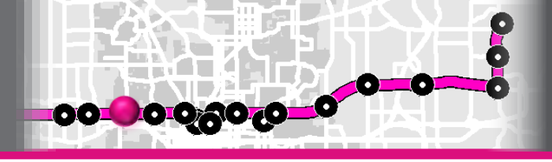
Station Area Type: REGIONAL CENTER





Existing Stop

03 MERCY DRIVE



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The Mercy Drive EB-R and WB-R stations are proposed in an area with a high presence of car dealerships and industrial land uses surrounded by underutilized development. The area benefits from a relatively well- connected street network which includes sidewalks and bicycle lanes. Underutilized parcels suggest opportunities for redevelopment.

Transit Operations

The recommended EB-R station is proposed far-side and will benefit transit travel time by reducing traffic delays. The WB-R station is proposed near-side to minimize vehicle and pedestrian conflicts due to the presence of multiple driveways downstream of the intersection while also facilitating transfers to/from routes traveling from Downtown north on Mercy Drive. The recommended stations, proposed at existing stops, provide opportunities for stop colocation and facilitate transfers to the existing LYNX routes serving communities along Mercy Drive and SR 50 (Links 20, 48, 49, 105, and 302). If alternate station locations are implemented consideration should be given to potential mid-block crossings while proposed stations would be better served by the signalized crossing at the Mercy Drive intersection with SR 50.

Ease of Implementation & Potential Impacts

The existing ROW is limited for the recommended stations; additional space may be required to accommodate station improvements. In addition, the EB-R station requires modifications to the wall adjacent to the sidewalk, potentially impacting the existing business. Considerations to modify the width of the existing driveway, adjacent to the WB-R station are recommended to minimize conflicts with right-turning vehicles.

EB RECOMMENDED

WB RECOMMENDED

EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	◓	◓	◓	◓
Supports TOD potential	◓	◓	●	◓
TRANSIT OPERATIONS				
Supports transit travel time	●	●	◓	◓
Facilitates transfers	●	◓	●	◓
Facilitates pedestrian & bicycle access	●	◓	●	◓
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	◓	◓	◓	◓
Minimizes conflicts with businesses / signs	○	◓	◓	●
Minimizes driveway conflicts	◓	◓	○	◓
Minimizes impacts to traffic operations	●	●	◓	●
Minimizes impacts to utilities	◓	◓	●	●
Minimizes impacts to drainage structures	●	●	●	○

▲ Recommended Alternative

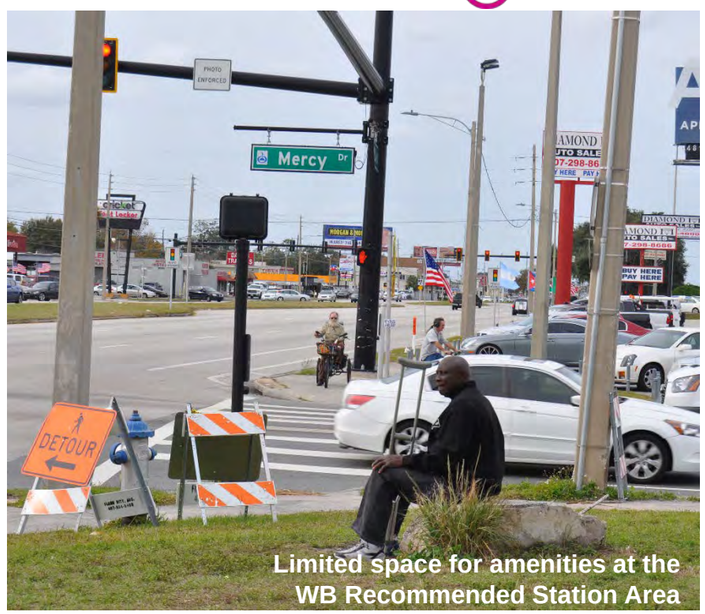
03 MERCY DRIVE

Station Area Type: **COMMUNITY CENTER**

Existing Stop

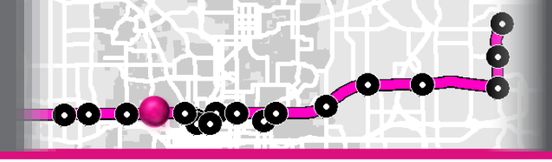
Looking west from EB Recommended Station Area

Auto dealerships are a dominate use



Limited space for amenities at the WB Recommended Station Area

04 JOHN YOUNG PARKWAY



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The John Young Parkway EB-R and WB-R stations are proposed in an area with a high opportunity for redevelopment based on underutilized properties. The EB-R station provides transit access to a Goodwill training center. The WB-R station provides access to the commercial development north of SR 50 which is a large potential redevelopment site.

Transit Operations

The recommended far-side WB-R station benefits transit travel time by reducing traffic delays and conflicts with pedestrians and bicyclists. The near-side location for the EB-R station provides better access to transit dependent populations located west of John Young Parkway. The recommended stations provide opportunities for colocation with existing stops and facilitate transfers to the existing LYNX routes serving communities along John Young Parkway and SR 50 (Links 25, 48, 49, 105, and 303). Opportunities for regional connectivity are provided at the Greyhound station, located south of SR 50. Sidewalks and existing bike lanes provide ample facilitation for pedestrian and bicycle access; however, the long crossing distances for the John Young Parkway intersection create a barrier for the east-west pedestrian/bicycle connectivity.

Ease of Implementation & Potential Impacts

The existing shelter area for the recommended locations provide adequate space to accommodate station improvements. Utility poles, adjacent to the EB-R station, could require relocation to provide ample space for the bus stopping area. Closing the eastern driveway providing access to the Maxwell Terrace development is also recommended. Although the recommended stations show more impacts related to the ease of implementation criteria, the recommended locations generally better support transit operations and economic development.

EB RECOMMENDED

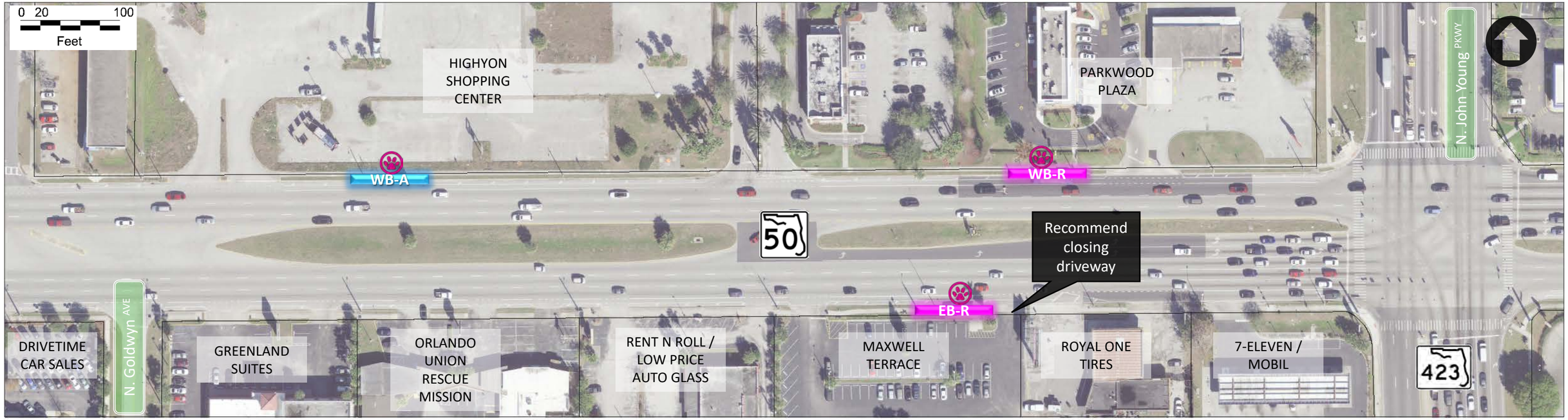
WB RECOMMENDED

EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	●
Supports TOD potential	●	◒	●	●
TRANSIT OPERATIONS				
Supports transit travel time	◒	●	●	●
Facilitates transfers	●	◒	●	●
Facilitates pedestrian & bicycle access	●	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	●	●	●
Minimizes conflicts with businesses / signs	◒	●	◒	●
Minimizes driveway conflicts	◒	●	◒	●
Minimizes impacts to traffic operations	◒	●	●	●
Minimizes impacts to utilities	○	●	●	●
Minimizes impacts to drainage structures	●	◒	●	●

▲ Recommended Alternative

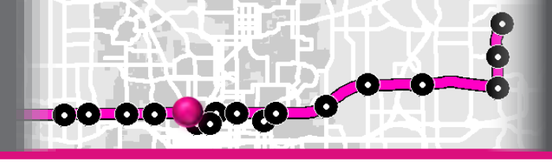
04 JOHN YOUNG PARKWAY

Station Area Type: **COMMUNITY CENTER**



Existing Stop

05 ORANGE BLOSSOM TRAIL



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The surrounding land use of the Orange Blossom Trail (OBT) EB-R and WB-R stations is transit supportive, with primarily retail and office along SR 50, with single family residential adjacent to these uses. TOD redevelopment of this area is being targeted by the City of Orlando. Recent investments in bicycle and pedestrian infrastructure along Westmoreland Drive support the vision to enhance a sense of community throughout the existing development. The recommended stations are proposed east of OBT near the Westmoreland Drive intersection to coincide with areas of greatest existing population and employment densities, and connect to the recent bicycle and pedestrian investments. Station locations were located away from the OBT to be 450 feet away from the adjacent rail line consistent with the recommendations in the FDOT's Accessing Transit.

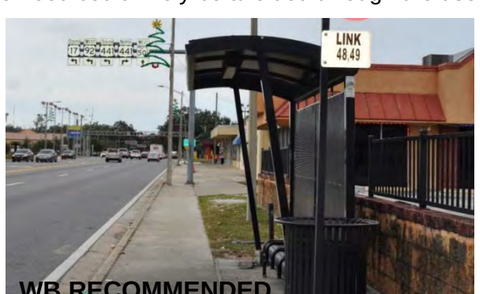
Transit Operations

The WB-R station, proposed far-side of the Westmoreland Drive intersection, results in fewer traffic delays, provides better vehicle and pedestrian sight distances, and causes fewer conflicts among buses, cars, pedestrians, and bicyclists. The EB-R station is proposed near-side of the Westmoreland Drive intersection to minimize vehicle and pedestrian conflicts due to the presence of multiple driveways downstream of the intersection, and facilitate bicycle and pedestrian connections along Westmoreland Drive and SR 50. The recommended stations facilitate transfers to the existing LYNX service along OBT (Links 106 and 107), and potential colocation of stops along SR 50 (Links 48 and 49).

Ease of Implementation & Potential Impacts

The existing ROW is limited for the recommended stations; additional space is preferred to accommodate station improvements. However, the need could likely be avoided through the use of curb extensions at both preferred locations.

EB RECOMMENDED

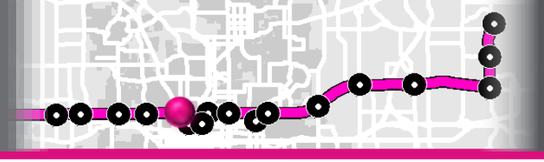


WB RECOMMENDED

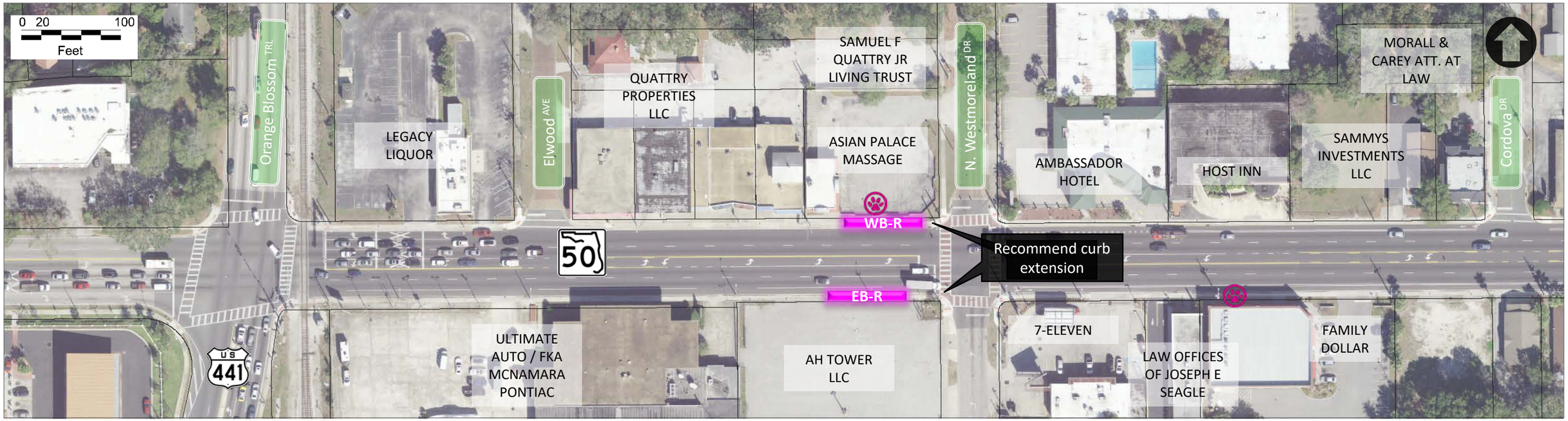
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	◒
Supports TOD potential	●	◒	●	◒
TRANSIT OPERATIONS				
Supports transit travel time	●	◒	◒	◒
Facilitates transfers	◓	●	◓	●
Facilitates pedestrian & bicycle access	●	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	◓	◓	◓	◓
Minimizes conflicts with businesses / signs	●	●	◒	○
Minimizes driveway conflicts	●	◒	●	◒
Minimizes impacts to traffic operations	●	◒	◒	◒
Minimizes impacts to utilities	◓	◒	●	◒
Minimizes impacts to drainage structures	●	●	●	◒

▲ Recommended Alternative

05 ORANGE BLOSSOM TRAIL

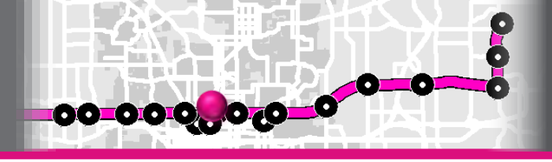


Station Area Type: **COMMUNITY CENTER**



Existing Stop

06 NORTH QUARTER



Station Area Type: REGIONAL CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

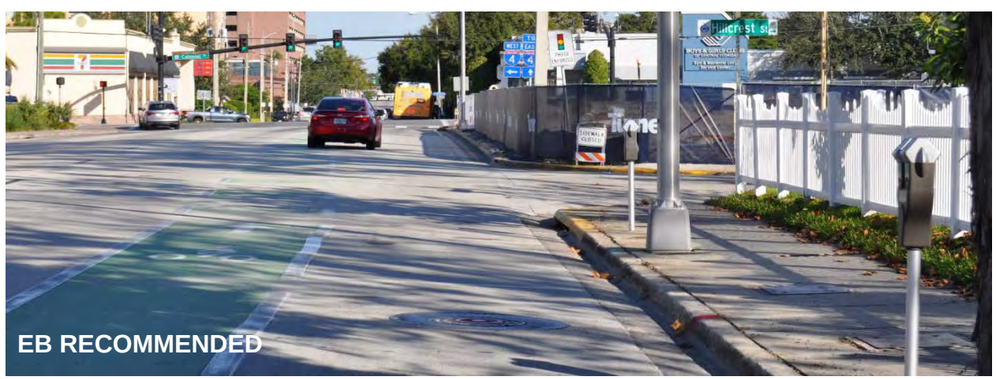
The North Quarter EB-R and WB-R stations are proposed within an existing high-density, mixed-use area, and features the strongest TOD along the corridor today. The stations are within the City's Downtown Community Redevelopment Area, which has a strong vision for transit-supportive development and a mix of uses. The Orlando Sentinel site represents a key development opportunity along the route. The recommended station locations are adjacent to underutilized parcels, providing a strong potential for additional growth in TOD and ridership. The specific locations and BRT routing should be considered and updated during the study or design of 2-way operations for Magnolia and Orange Avenues.

Transit Operations

The station enables transfers to many Links that operate along Magnolia Avenue, LYMMO and the routes along SR 50. The recommended stations provide opportunities for stop collocation. Existing designated bicycle lanes along Magnolia Avenue enhance bicycle connectivity for the EB-R station area.

Ease of Implementation & Potential Impacts

The existing ROW is limited for the recommended stations; additional easements for stations would be beneficial. However, it is likely that additional ROW is not required if bulbouts are used. While the recommended locations minimize driveway conflicts, the WB-R station near-side location may potentially impact traffic operations. Although the recommended stations show more impacts with respect to some criteria regarding ease of implementation, the recommended locations generally better support transit operations and economic development.

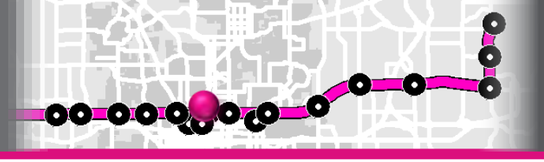


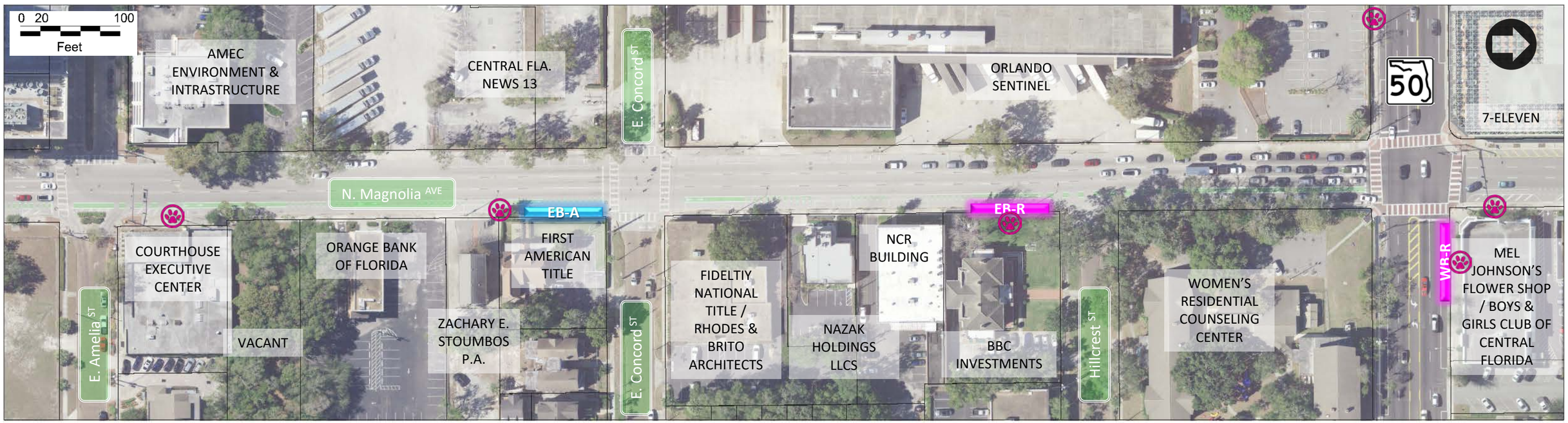
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	●	●	●
Supports TOD potential	●	◒	●	●
TRANSIT OPERATIONS				
Supports transit travel time	◒	●	◒	●
Facilitates transfers	●	●	●	●
Facilitates pedestrian & bicycle access	◒	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	◒	◒	◒	◒
Minimizes conflicts with businesses / signs	●	◒	◒	◒
Minimizes driveway conflicts	●	◒	●	●
Minimizes impacts to traffic operations	◒	●	◒	●
Minimizes impacts to utilities	◒	●	●	●
Minimizes impacts to drainage structures	●	●	●	●

▲ Recommended Alternative

06 NORTH QUARTER

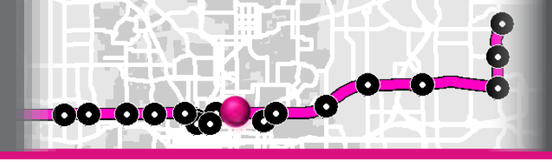
Station Area Type: **REGIONAL CENTER**





Existing Stop

07 MILLS 50



Station Area Type: NEIGHBORHOOD CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

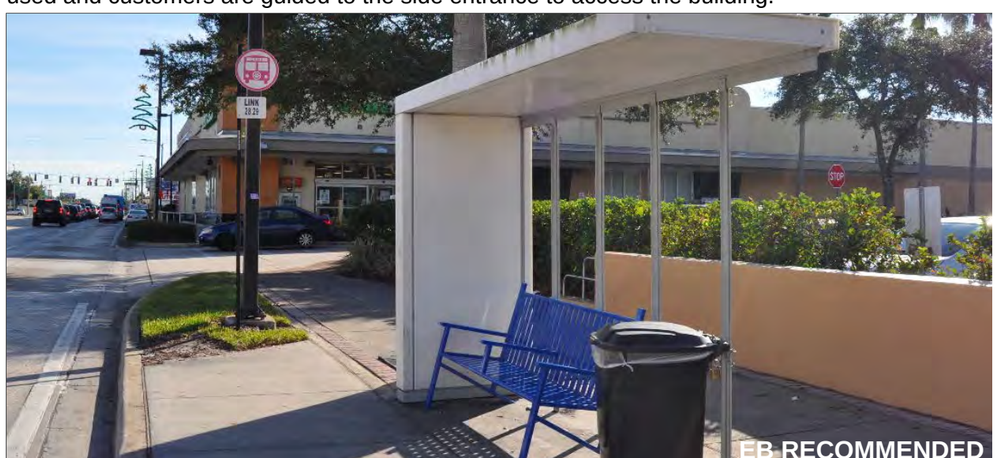
The Mills 50 EB-R and WB-R stations are situated within the Mills-50 Main Street district, providing a strong community identity and a real estate market with high TOD potential. The recommended stations are proposed near existing land uses and stations that are key destinations for riders.

Transit Operations

The EB-R station, located far-side of the intersection with Shine Avenue, results in fewer traffic delays, provides better vehicle and pedestrian sight distances, and causes fewer conflicts among buses, cars, pedestrians, and bicyclists. The EB-R station is proposed at an existing station serving the Publix Supermarket which is a main destination within this station area. The WB-R station is proposed mid-block to minimize conflicts with existing businesses and driveways, while facilitating transfers to Link 28 and 29 along SR 50, and Link 125 along Mills Ave. A potential mid-block crosswalk would help accommodate pedestrian and bicycle movements that are going to occur across SR 50.

Ease of Implementation & Potential Impacts

The existing ROW is limited for the WB-R station; additional space may be required to accommodate station improvements. Although, the WB-R station is proposed to be located in front of the main entrance to the United Safety Council, the entrance there is currently not being used and customers are guided to the side entrance to access the building.

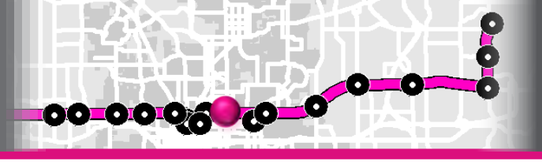


EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	◒
Supports TOD potential	●	●	●	●
TRANSIT OPERATIONS				
Supports transit travel time	●	●	◒	●
Facilitates transfers	●	◒	●	◒
Facilitates pedestrian & bicycle access	●	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	◒	◒	◒
Minimizes conflicts with businesses / signs	●	●	○	◒
Minimizes driveway conflicts	●	●	◒	○
Minimizes impacts to traffic operations	●	●	◒	◒
Minimizes impacts to utilities	●	●	●	●
Minimizes impacts to drainage structures	●	●	◒	●

▲ Recommended Alternative

07 MILLS 50

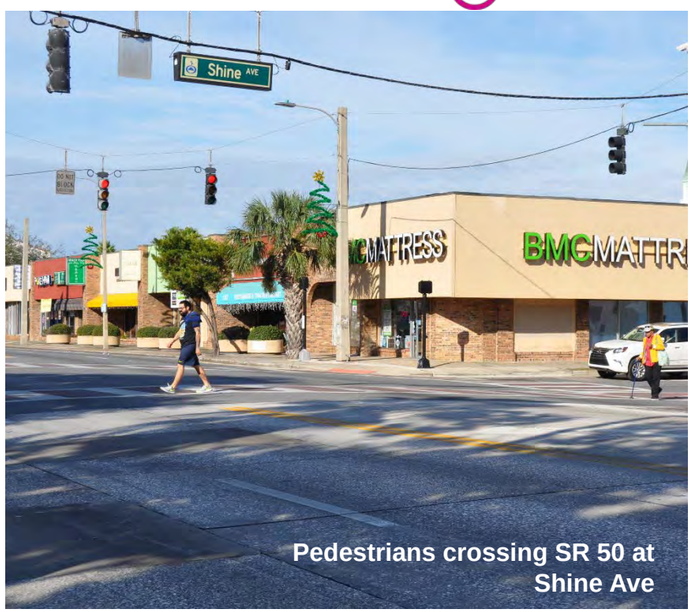
Station Area Type: **NEIGHBORHOOD CENTER**



Existing Stop

Looking east along Publix overhang

Existing meter and transformer for existing shelter adjacent to Publix



Pedestrians crossing SR 50 at Shine Ave

09 FASHION SQUARE

Station Area Type: REGIONAL CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

An existing regional hub, the area surrounding the Fashion Square EB-R and WB-R stations is undergoing partial redevelopment, including the addition of new apartments and updated retail concepts.

Transit Operations

The recommended stations are collocated with existing stops with the greatest ridership intensity, and facilitate transfers to Links 28, 29 and FastLink 104 along SR 50. The stations are served by sidewalks, proposed and existing shared use paths, and in close proximity to a signalized intersection to facilitate crossings. The WB-R station is proposed far-side to benefit transit travel time by reducing traffic delays and causing fewer conflicts with cars, pedestrians, and bicyclists; while the EB-R station is proposed near-side to minimize driveway conflicts while facilitating transfers and pedestrian and bicycle access to the Fashion Square Mall.

Ease of Implementation & Potential Impacts

The existing shelter areas at the recommended locations provide space to accommodate BRT station improvements. Additional space may be needed for some BRT station features; however, existing agreements for transit easements with business owners could potentially preclude the need for right-of-way acquisition. The western driveway for the WB-R station is proposed to be modified to “entrance only” to minimize conflicts with right-turning vehicles and sight distance problems resulting in better overall traffic operations. Additionally the right turn lane adjacent to the WB-R location could removed along with shifting the station platform in order to possibly avoid the need for ROW.

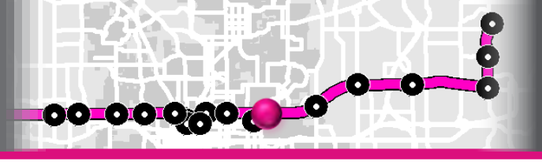
WB RECOMMENDED

EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	◒
Supports TOD potential	●	●	●	●
TRANSIT OPERATIONS				
Supports transit travel time	◒	●	●	◒
Facilitates transfers	●	◒	●	◒
Facilitates pedestrian & bicycle access	●	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	◒	●	◒
Minimizes conflicts with businesses / signs	●	◒	◒	●
Minimizes driveway conflicts	●	◒	○	◒
Minimizes impacts to traffic operations	◒	●	●	○
Minimizes impacts to utilities	●	◒	●	◒
Minimizes impacts to drainage structures	●	◒	●	●

▲ Recommended Alternative

09 FASHION SQUARE

Station Area Type: REGIONAL CENTER

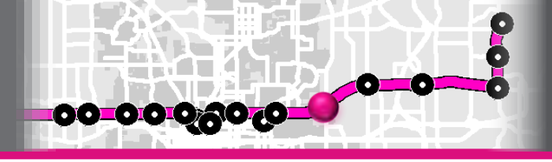


Existing Stop

Existing shelter at Fashion Square

Looking east along SR 50 from Fashion Square Shelter

10 SEMORAN BOULEVARD



Station Area Type: REGIONAL CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The Semoran Boulevard EB-R and WB-R stations are in the Azalea Park area, to the east of the major mixed-used development of Baldwin Park. Additionally, the adjacent underutilized and vacant parcels have strong redevelopment and TOD potential. However, the area north of SR 50 has greater potential for redevelopment and provides better access to key destinations within the station area, mainly due to connectivity constrains with the Semoran/Colonial overpass.

Transit Operations

The recommended far-side stations benefit transit travel time by reducing traffic delays and causing fewer conflicts with cars, pedestrians, and bicyclists, as well as being collocated with existing stops serving Links 28, 29, and 104. However, the long crossing distances for the Semoran Boulevard intersection create a significant barrier to pedestrian/bicycle connectivity. To mitigate for this barrier, the alternative station locations are proposed along Semoran Boulevard and could potentially be collocated with stops for Links 29, 436S, and the planned SR 436 BRT; however, modifications to the BRT alignment could impact transit travel time. A mid-block crossing that would operate in conjunction with an emergency/pedestrian signal could potentially be used for the alternate station locations to facilitate crossings across Semoran Boulevard.

Ease of Implementation & Potential Impacts

The existing shelter areas at the recommended locations provide space to accommodate BRT station improvements.. The far-side locations minimize conflicts with right-turning vehicles and sight distance problems, resulting in better overall traffic operations.

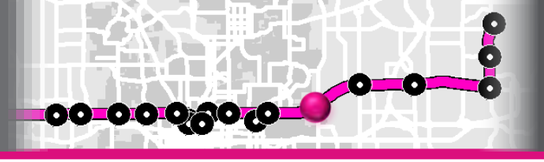
WB RECOMMENDED

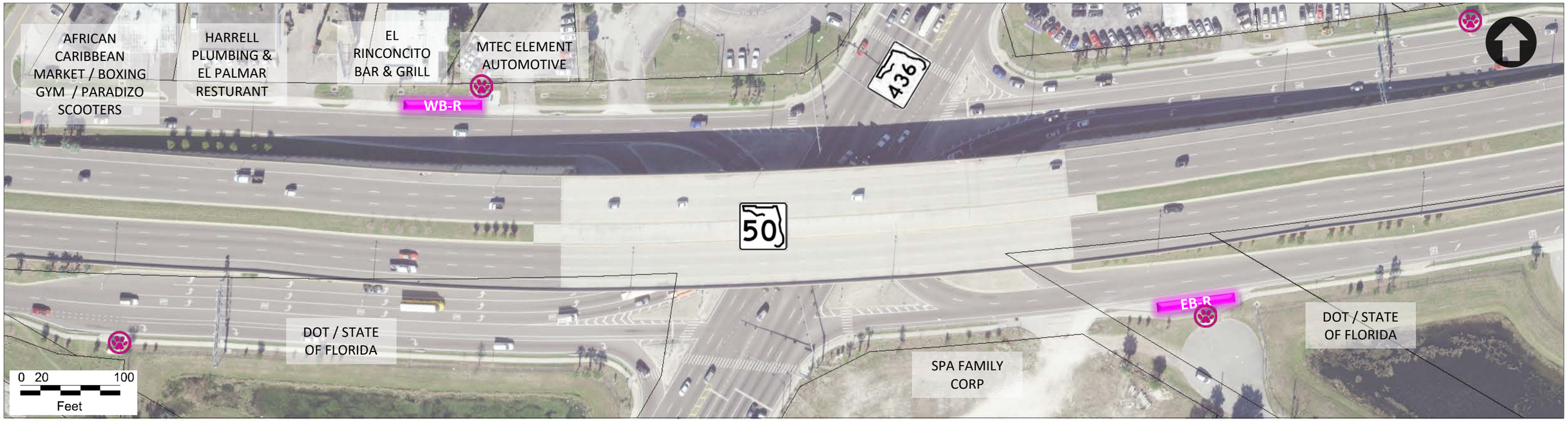
EVALUATION CRITERIA	EASTBOUND	NORTHBOUND	WESTBOUND	SOUTHBOUND
	EB-R	NB-A	WB-R	SB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	◔	●	◔	●
Supports TOD potential	◔	●	◔	●
TRANSIT OPERATIONS				
Supports transit travel time	●	◔	●	◔
Facilitates transfers	◔	●	◔	●
Facilitates pedestrian & bicycle access	○	◔	◔	◔
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	○	●	●
Minimizes conflicts with businesses / signs	●	◔	◔	◔
Minimizes driveway conflicts	●	◔	◔	●
Minimizes impacts to traffic operations	●	◔	●	◔
Minimizes impacts to utilities	●	○	●	◔
Minimizes impacts to drainage structures	●	◔	●	●

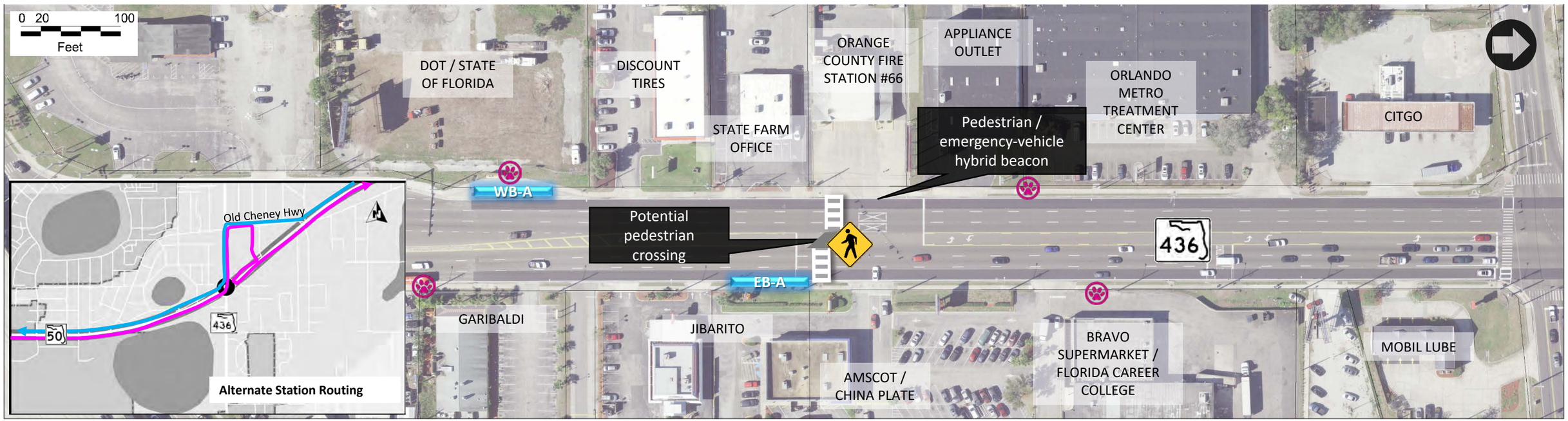
▲ Recommended Alternative

10 SEMORAN BOULEVARD

Station Area Type: **REGIONAL CENTER**

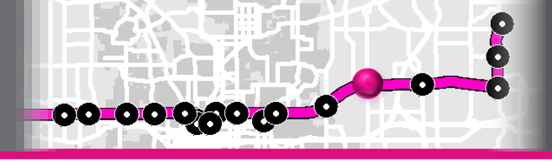






Existing Stop

11 GOLDENROD ROAD



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The Goldenrod Road EB-R and WB-R stations are proposed within an area of recent development activity, and has opportunity for additional redevelopment of vacant and underutilized parcels. However, the surrounding area's current land use regulations and environmental constraints limit overall TOD potential.

Transit Operations

The recommended locations provide connectivity to the existing Little Econ Greenway Trail to the north of SR 50, and to the planned trail connection to the south. Pullouts are recommended for both, the EB-R and WB-R stations in order to provide better vehicle and pedestrian sight distances. Locating the EB-R station at the beginning of the turn-lane result in fewer impacts to business access and traffic operations. The recommended stations are situated west of the intersection with Goldenrod Road, where the block size, street network, and existing sidewalks make it the most conducive to pedestrian and bicycle access and connectivity.

Ease of Implementation & Potential Impacts

The existing ROW provides space to accommodate station improvements. The recommended station locations may potentially impact overhead utilities and drainage inlets. Although the recommended stations show more impacts with respect to some criteria regarding ease of implementation, the recommended locations generally better provide opportunities for community enhancement and economic development.

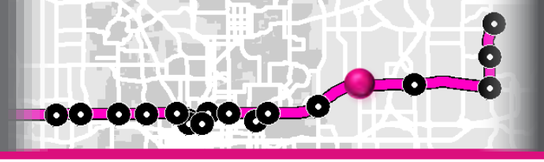
Bicyclist using sidewalk along SR 50 near Goldenrod Road intersection

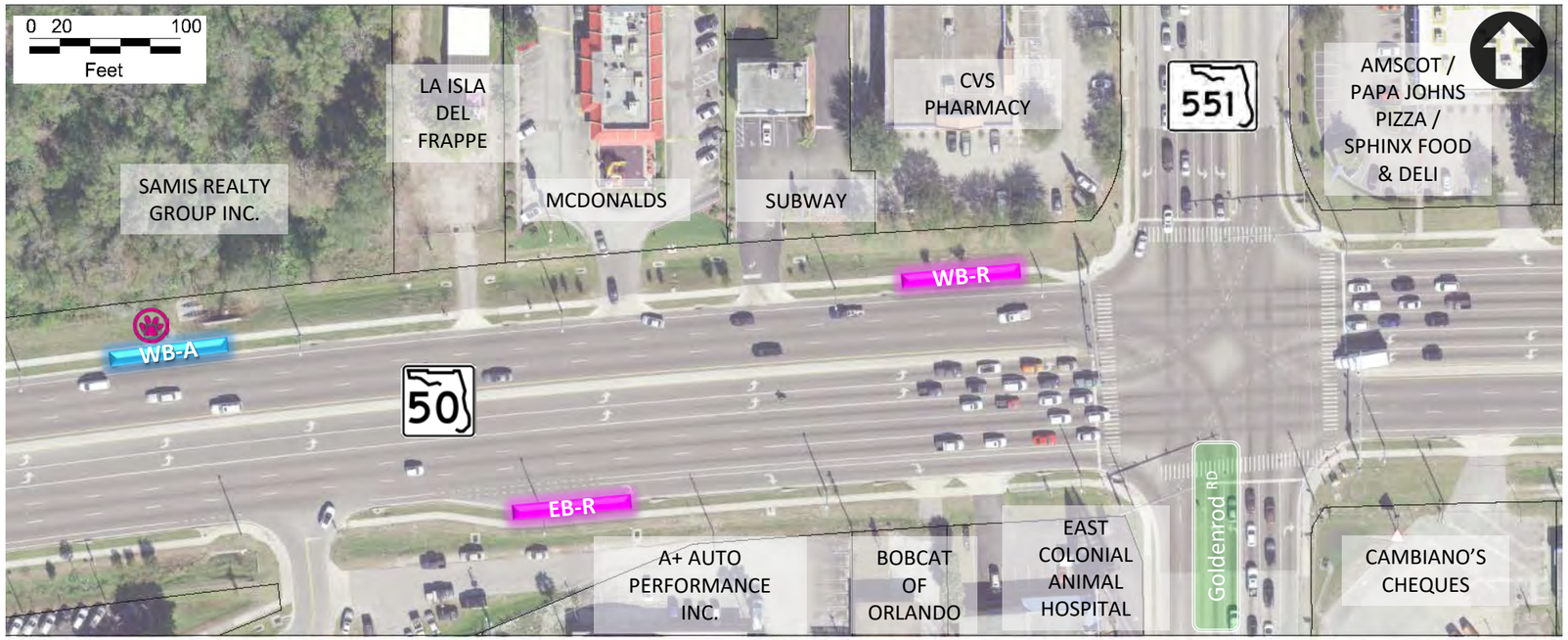
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	●	●	◒
Supports TOD potential	●	◒	●	◒
TRANSIT OPERATIONS				
Supports transit travel time	◒	●	●	●
Facilitates transfers	●	◒	●	●
Facilitates pedestrian & bicycle access	◒	◒	●	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	●	●	●
Minimizes conflicts with businesses / signs	●	◒	◒	●
Minimizes driveway conflicts	●	◒	◒	●
Minimizes impacts to traffic operations	◒	●	○	●
Minimizes impacts to utilities	◒	◒	◒	◒
Minimizes impacts to drainage structures	◒	◒	◒	◒

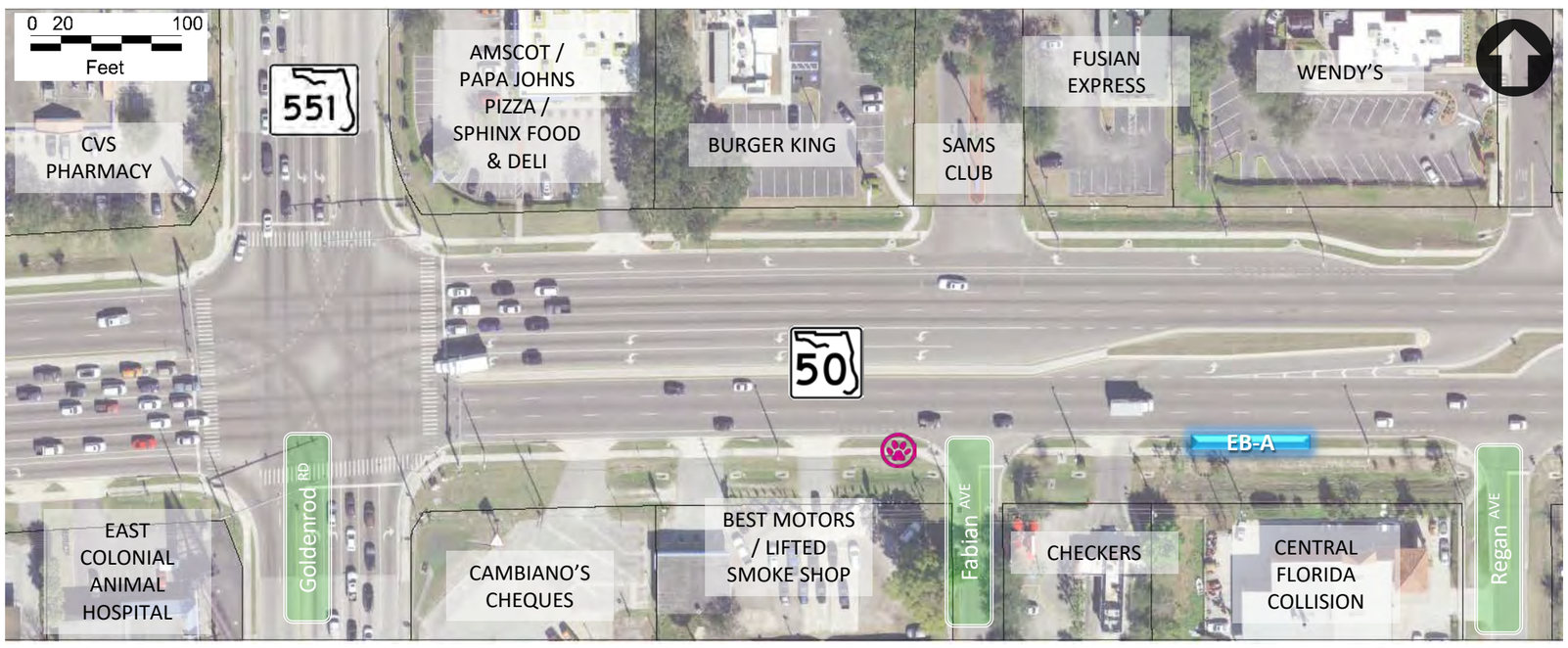
▲ Recommended Alternative

11 GOLDENROD ROAD

Station Area Type: COMMUNITY CENTER

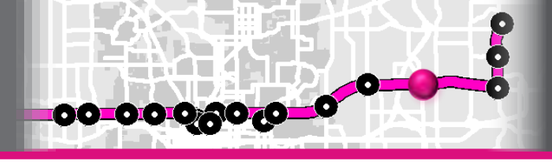






Existing Stop

12 ECONLOCKHATCHEE TRAIL



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

While the Econlockhatchee Trail station area will enhance community access to recreational opportunities along the Little Econ Greenway bicycle and jogging trail, there is limited potential for future growth or TOD, as the majority of the surrounding land use is publicly-owned/environmental lands. The EB-R station is proposed along one of the few vacant lots with development potential, and the WB-R station provides access to a little used Park-and-Ride Lot.

Transit Operations

Although the overall sidewalk network in the surrounding station area is limited, the recommended stations are proposed in the south and northwest quadrants where the street network is most well-connected to best facilitate pedestrian and bicycle access and connectivity. The EB-R station is proposed near-side to provide better access to land uses surrounding the station area and due to constraints east of the intersection because of the existing overpass. The WB-R station location would require relocating access for the FDOT Park-and-Ride facility to Goldenrod Road. Pullouts are recommended for both, the EB-R and WB-R stations to provide better vehicle and pedestrian sight distances. The recommended stations also provide opportunities for transfers to routes that will continue to serve the Valencia Campus located one mile to the south.

Ease of Implementation & Potential Impacts

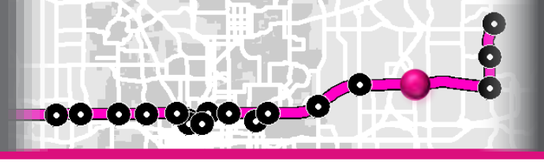
Station improvements can be accommodated within the existing ROW, but may impact drainage inlets. Locating the EB-R station at the beginning of the turning lane result in fewer traffic operations impacts and minimize conflicts with right-turning vehicles.

LYNX customers boarding bus at existing WB stop

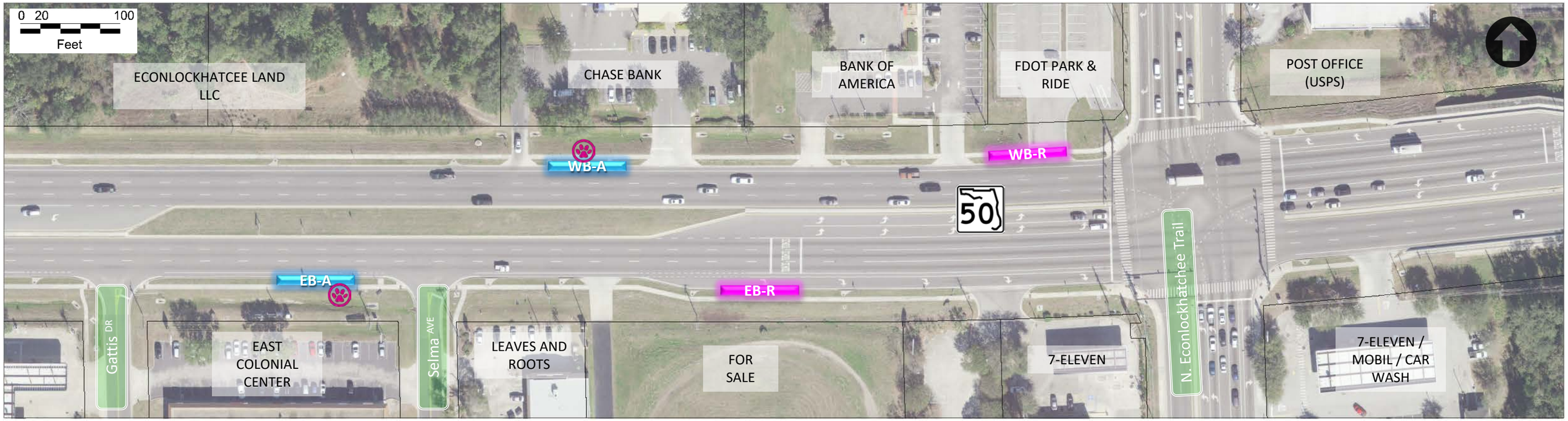
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	◑	●	●	◑
Supports TOD potential	●	◒	◒	◒
TRANSIT OPERATIONS				
Supports transit travel time	◑	◑	●	●
Facilitates transfers	◑	●	●	◑
Facilitates pedestrian & bicycle access	◑	◑	●	◑
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	●	●	●	●
Minimizes conflicts with businesses / signs	●	●	●	●
Minimizes driveway conflicts	●	◒	◒	◒
Minimizes impacts to traffic operations	○	◒	◒	●
Minimizes impacts to utilities	◑	◑	●	●
Minimizes impacts to drainage structures	◑	○	◒	◑

▲ Recommended Alternative

12 ECONLOCKHATCHEE TRAIL

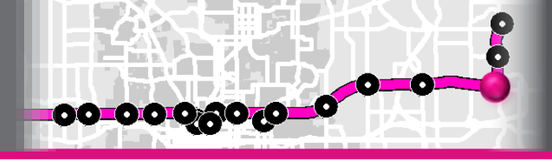


Station Area Type: **COMMUNITY CENTER**



Existing Stop

13 ALAFAYA TRAIL



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

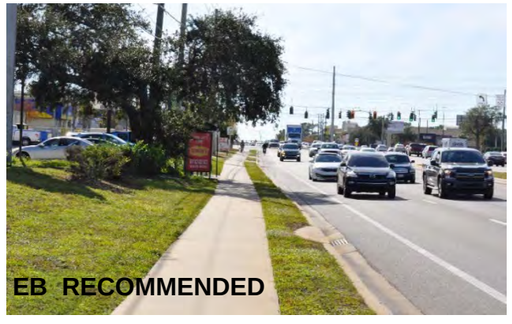
The Alafaya Trail EB-R and WB-R stations are primarily surrounded by commercial development and some residential land uses. This area has experienced recent development activity and more redevelopment opportunity exists on underutilized parcels. A significant suburban activity center located 1 mile south of the station area at the Waterford Lakes Town Center

Transit Operations

The EB-R and WB-R stations are proposed on Alafaya Trail north of SR 50 to facilitate connections to UCF and Valencia College through KnightLYNX (Link 210, 211, and 212) and Downtown (Link 104). The EB-R is proposed at the existing station providing connections to the NeighborLink 621 serving the Waterford Lakes area. Existing sidewalks and bike lanes, as well as a planned shared use path, facilitate pedestrian and bicycle access and connectivity. A mid-block crossing is proposed for the recommended stations to facilitate bicycle and pedestrian access across Alafaya Trail.

Ease of Implementation & Potential Impacts

The existing ROW is limited for the recommended stations; additional space may be required to accommodate station improvements. Additional space for the stations could also be created by narrowing a portion of the median along Alafaya Trail and changing the taper locations for the turn lanes for some of the left and right turns. Although more ROW is available at the EB-A and WB-A station locations, these locations have greater conflicts with driveways and drainage structures. The near-side WB-R station may impact traffic operations and travel time through the intersection during peak periods.



EB RECOMMENDED

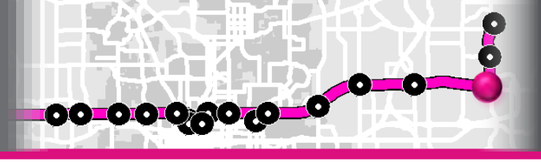
WB RECOMMENDED

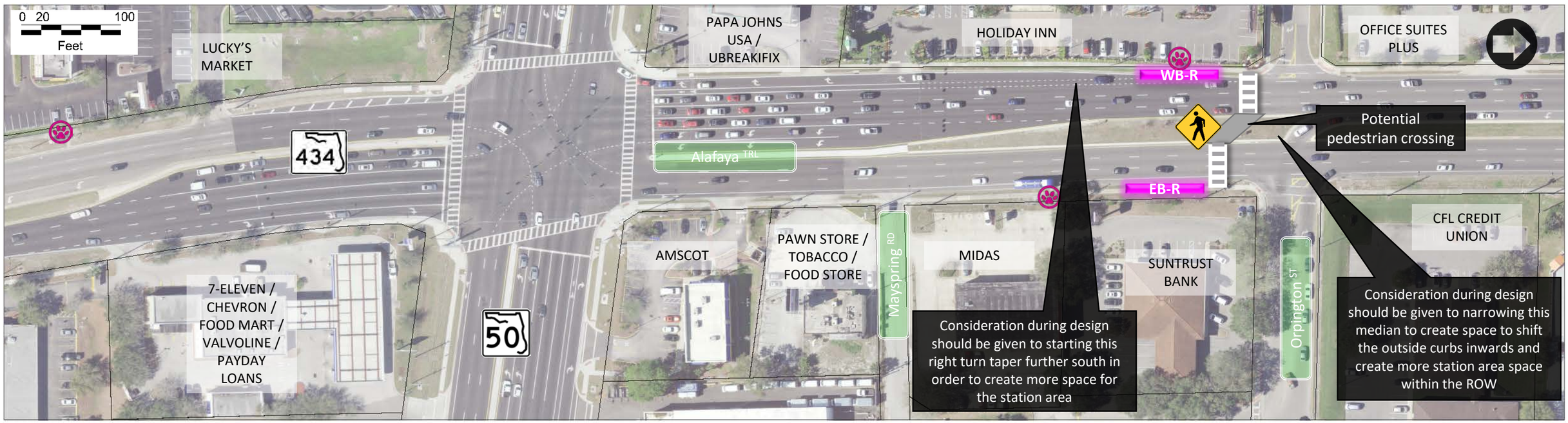
EVALUATION CRITERIA	EASTBOUND		WESTBOUND	
	EB-R▲	EB-A	WB-R▲	WB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	◒	●	●
Supports TOD potential	●	◒	●	◒
TRANSIT OPERATIONS				
Supports transit travel time	●	◒	◒	●
Facilitates transfers	●	◒	●	◒
Facilitates pedestrian & bicycle access	◒	◒	◒	◒
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	◒	●	◒	●
Minimizes conflicts with businesses / signs	◒	◒	●	◒
Minimizes driveway conflicts	●	◒	●	◒
Minimizes impacts to traffic operations	●	◒	◒	●
Minimizes impacts to utilities	◒	●	●	●
Minimizes impacts to drainage structures	●	○	◒	◒

▲ Recommended Alternative

13 ALAFAYA TRAIL

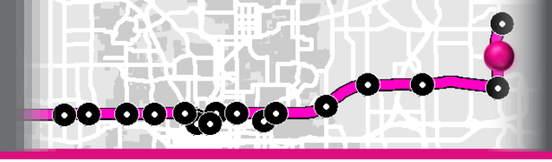
Station Area Type: **COMMUNITY CENTER**





Existing Stop

14 RESEARCH PARK



Station Area Type: COMMUNITY CENTER

Considerations for Recommended Station

Community Enhancement & Economic Development

The Research Park NB-R and SB-R stations are recommended near the intersection of Science Drive which serves as an access point to Central Florida Research Park, a significant regional employment center. Medium-high density residential development and student housing is also in close proximity to this intersection. Despite the density and intensity of employment and population, a disconnected street network hinders the area's TOD potential. As this area is already densely developed, potential for significant redevelopment is low.

Transit Operations

The recommended station locations facilitate transfers to UCF, Valencia College, Downtown, and Avalon Park via Links 104, 210, and 320. The NB-R station is proposed near-side to facilitate access to the residential development located on the southeast corner of the intersection. The SB-R far-side location provides opportunities for colocation with the existing stop and minimizes impacts to traffic operations. Bicycle and pedestrian access and connectivity to the recommended stations is facilitated by sidewalks and bike lanes on Alafaya Trail, the Little Econ Greenway adjacent to Lokanotosa Trail, and sidewalks along Science Drive.

Ease of Implementation & Potential Impacts

Existing ROW is limited for the recommended stations; additional space may be required to accommodate station improvements. The NB-R station near-side location minimizes impacts to drainage structures, but may negatively impact transit travel time and traffic operations. Although the NB-R station shows more impacts with respect to some criteria regarding ease of implementation, this location generally provides better connectivity and access to existing development in the area. The proposed station locations also allow for the potential for more station area to be created by removing the striped out left turn lane along Alafaya Trail and shifting the outside curb lines.

NB RECOMMENDED

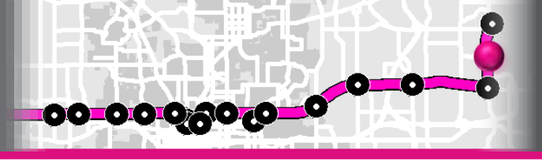
SB RECOMMENDED

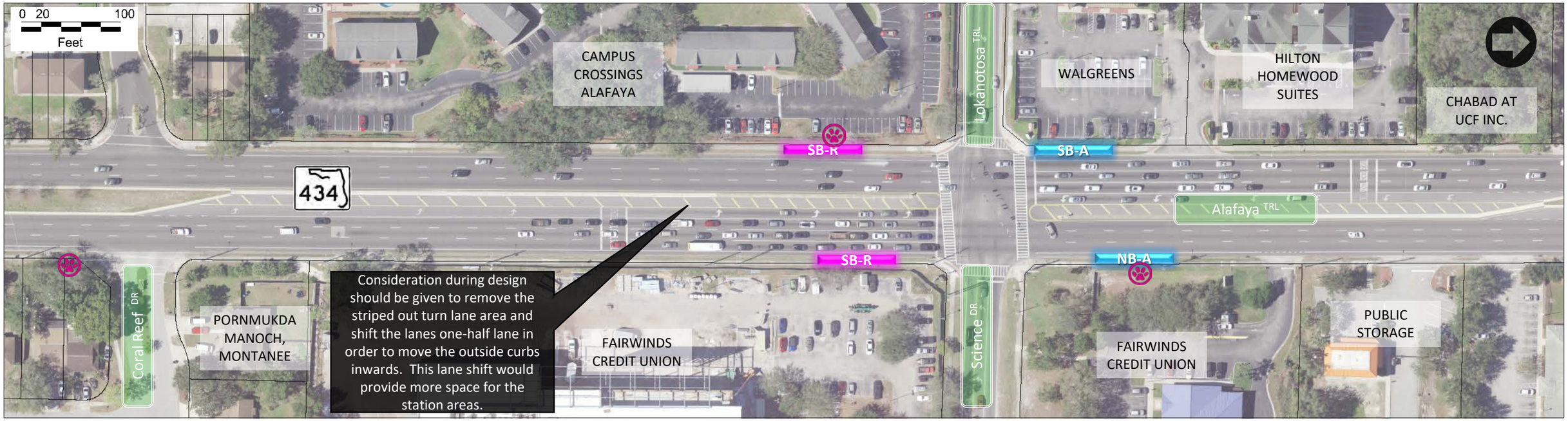
EVALUATION CRITERIA	NORTHBOUND		SOUTHBOUND	
	NB-R▲	NB-A	SB-R▲	SB-A
COMMUNITY ENHANCEMENT & ECONOMIC DEVELOPMENT				
Supports existing development	●	●	●	●
Supports TOD potential	◒	◒	◒	◒
TRANSIT OPERATIONS				
Supports transit travel time	◒	●	●	◒
Facilitates transfers	●	●	●	●
Facilitates pedestrian & bicycle access	●	●	●	●
EASE OF IMPLEMENTATION & POTENTIAL IMPACTS				
Minimizes additional right-of-way	◒	◒	◒	◒
Minimizes conflicts with businesses / signs	●	●	●	◒
Minimizes driveway conflicts	●	●	●	◒
Minimizes impacts to traffic operations	◒	●	●	◒
Minimizes impacts to utilities	◒	◒	◒	◒
Minimizes impacts to drainage structures	●	○	●	●

▲ Recommended Alternative

14 RESEARCH PARK

Station Area Type: COMMUNITY CENTER





Bus stopping at SB Recommended location

Striped out area in median

Central Florida Educator's Credit Union Headquarters


104E COLONIAL DRIVE
1-800-111-PAIN
WEST
ONLY
WEST
ONLY

5 Station Design

5.0 Station Design

5.1 Design Criteria

Maintainability and Life Cycle

Choice of appropriate materiality and detailing are crucial. Materials shall be robust, self finished, resistant to vandalism and environmental conditions in order to minimize operational costs and optimize life cycle of parts.

Security

Shelters, information products, totems, and other street equipment should be selected with an eye towards limiting the potential for criminal activity. The presence of CCTV cameras, the avoidance of dark areas during day and night and the avoidance of visual obstructions that limit sightlines are recommended. Crime Prevention Through Environmental Design (CPTED) should be adopted in the design process.

Weather Protection

The protection against, rain, sun, wind should be optimized and the design should evolve as a specific response to the physical context of Central Florida.

Modularity

To achieve economies of scale in design, fabrication and installation of public equipment it is fundamental that these components are designed within a “kit of parts” concept. Elements have to be interchangeable, adaptable, expandable, and easy to replace through “hot swap” operations (minimizing site work and avoiding closures that are disruptive to passengers and pedestrians).

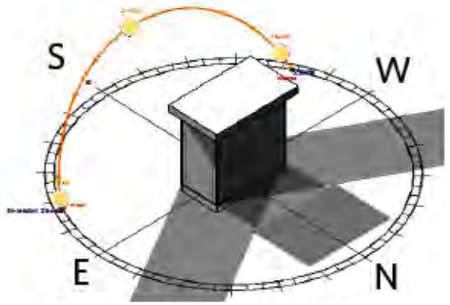
Aesthetics

It is important that the BRT stations provide a positive presence in the urban realm. The design should emerge as a functional, simple and pleasant expression of the thoughtful consideration of the requirements, elevating the sense of civic pride, incentivizing citizen’s ownership of the public transportation infrastructure.

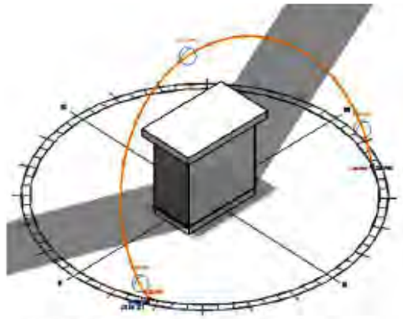
Visibility

Public transportation stations and stops need to be visible, predictable and balance the need of visual permeability with the necessity of a cohesive line and system identity. BRT stops should be discernible from other elements in the urban realm providing intuitive wayfinding to its users.

5.2 Weather Protection Orlando



Winter: Sunrise, Noon, Sunset



Summer: Sunrise, Noon, Sunset

For effective heat gain protection, in addition to roof, vertical (porous) barriers are recommended

Bus stops, Catherine Widgery's Leaves of Wind

City of Phoenix Streets Transportation
Design by Darren Petrucci and TranSystems

CEBU Bus Rapid Transit (BRT) Cebu, Philippines
Design by Carlos Amaiz Architects

1 Iconic Totem & Steel Structure

Bus stop, City of Bath – Design PearsonLloyd

Ishikawa Prefecture Building

Bus Shelter, near Vitra Museum, Switzerland – Design Jasper Morrison Studio

2 Iconic Structure & Stand-Alone Amenities

Shawnessy LRT Station Canopy – Architect Stantec

Bus Station Canopies by Maxwan architects and urbanists

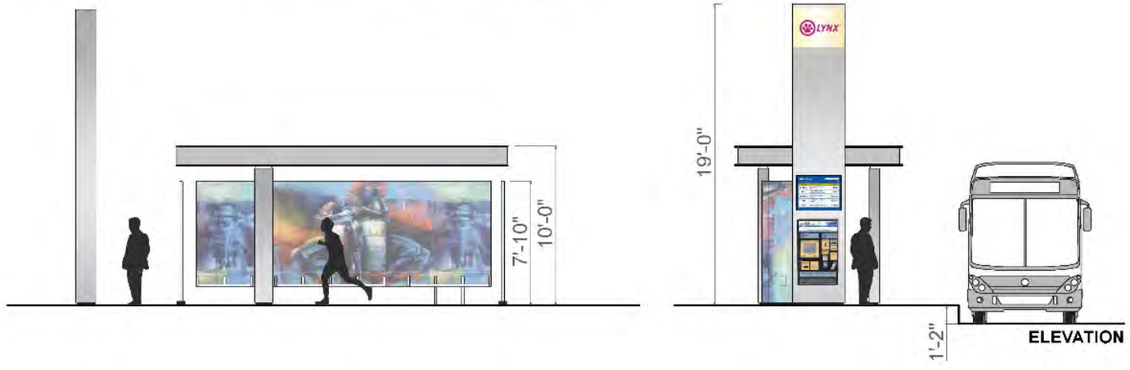
Canopy Porte des Lilas, Paris-Design Matthieu Gelin & David Lafon

5.4 Comparative Analysis

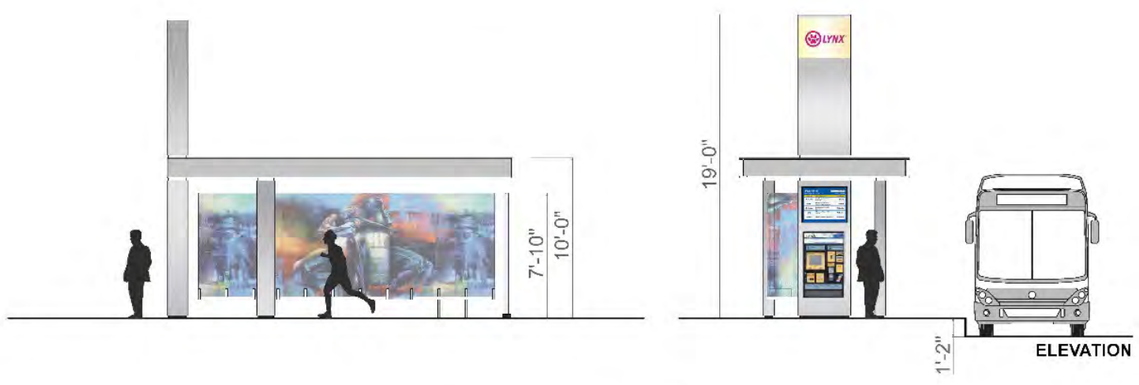
	1 	2 
Maintainability and Life Cycle	Good – Stainless steel and perforated metal are standard transit materials that provide the required robustness. Raising furniture from ground plane facilitates cleaning and minimize corrosion points.	Good – Textured UHPC with pre-applied anti-graffiti coating provides an even more robust solution. Free standing equipment requires consistent detailing and poses more challenges to cleaning.
Weather Protection	Good – As visibility (see below), is provided by totem, canopy can be lower than option 2, improving rain and sun protection.	Average – Higher canopy creates challenges to wind driven rain and solar protection. Additional free standing screens will be required to provide additional passenger comfort.
Aesthetics	Good – Simple and detail focused design development can provide an elegant and appropriate expression.	Excellent – Opportunity to design something unique and expressive that can become an iconic element in Central Florida's streetscape.
Security	Average – Due to amount of equipment required to be relying on totem footprint, its mass might create sightline obstructions.	Good – Freestanding equipment and shading screens to be designed to allow 360 degrees visibility.
Modularity	Excellent – Rectilinear and orthonal componentry lends itself for a high degree of standardization.	Good – UHPC shelter cladding might require additional precast panels and alternate structural solutions in case of scale changes. Freestanding equipment can be the same at all stations.
Visibility	Excellent – Illuminated totem that includes VMS/countdown clock provides visibility and required predictability.	Excellent – Iconic canopy provides a differentiator in the urban realm that can be easily spotted by the user.
Cost	$	$ $

5.5 Option 1 - Iconic Totem & Steel Structure Station

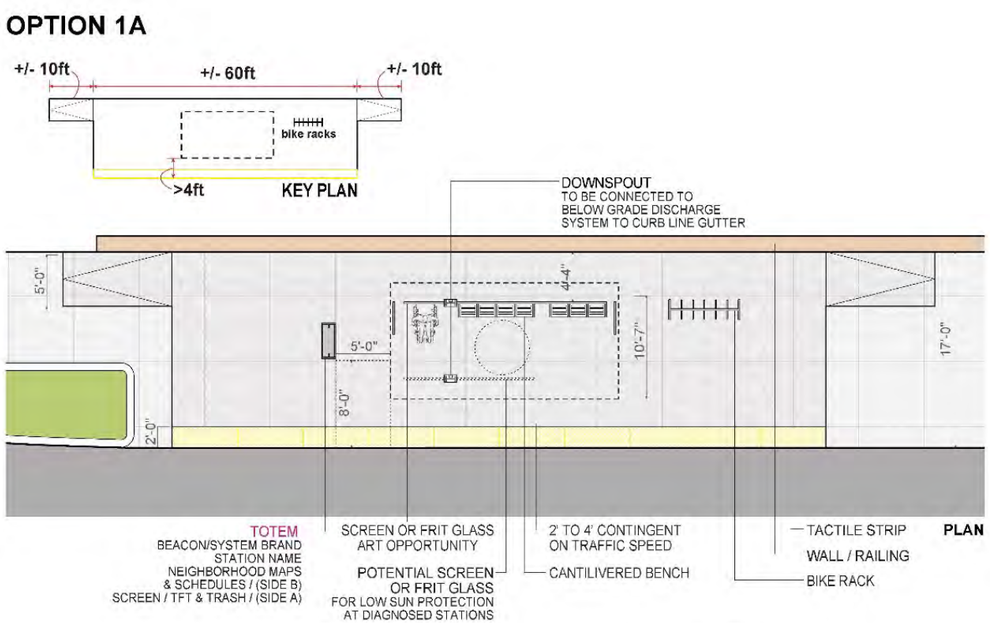
Option 1A – Stand-Alone Totem



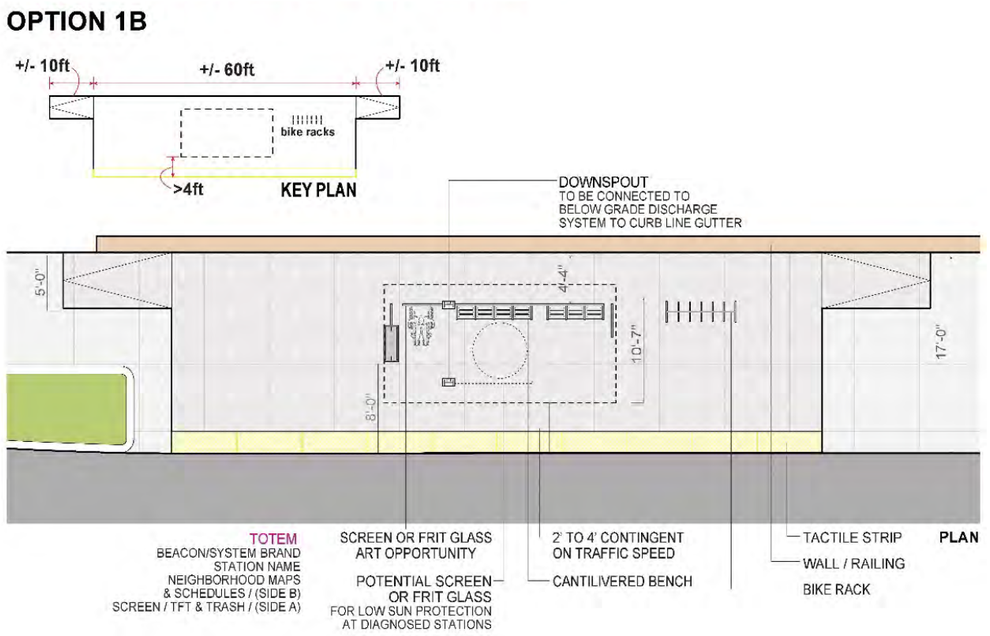
Option 1B – Flag System



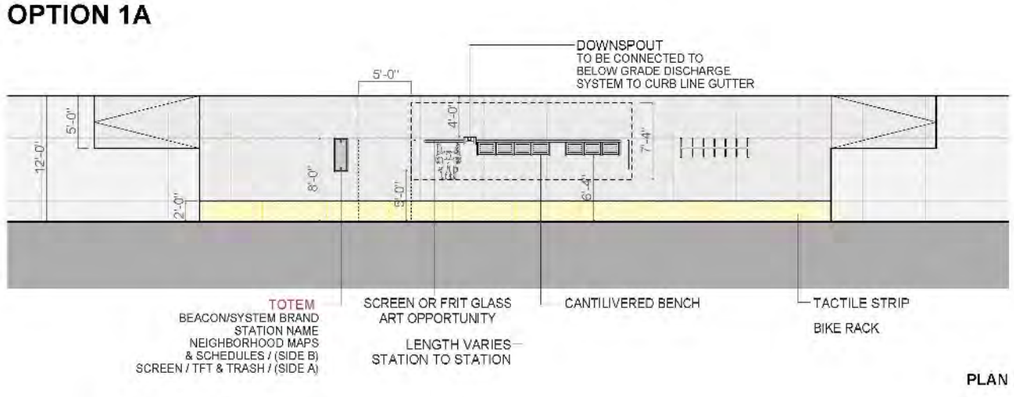
Typical Station 17’ Wide – Large



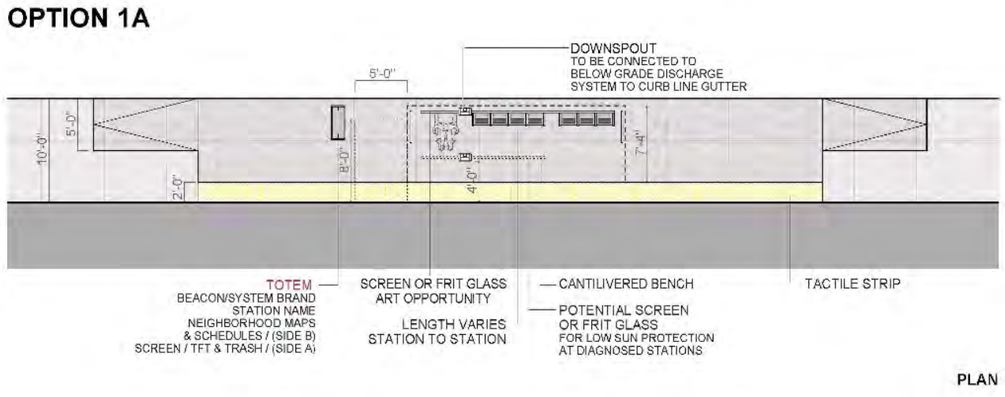
Typical Station 17’ Wide – Large



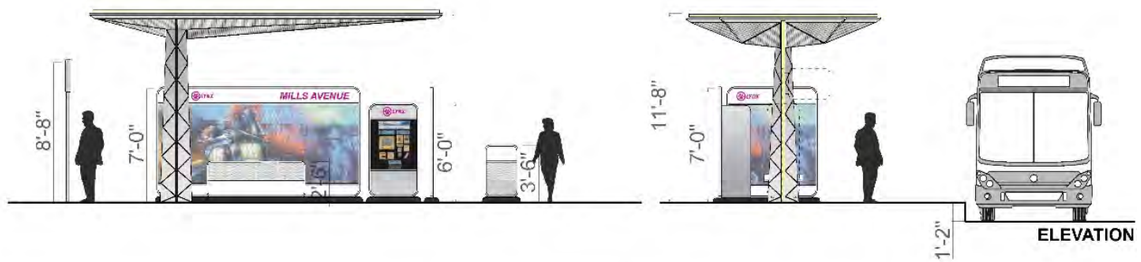
Typical Station 12’ Wide – Medium



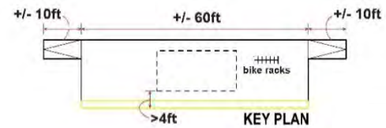
Typical Station 10’ Wide – Small

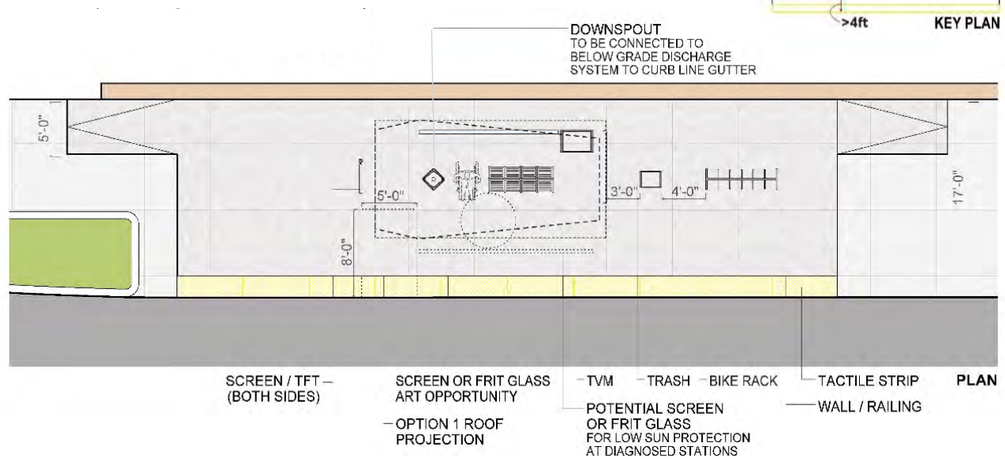


5.6 Option 2 - Icon Structure & Stand Alone Station



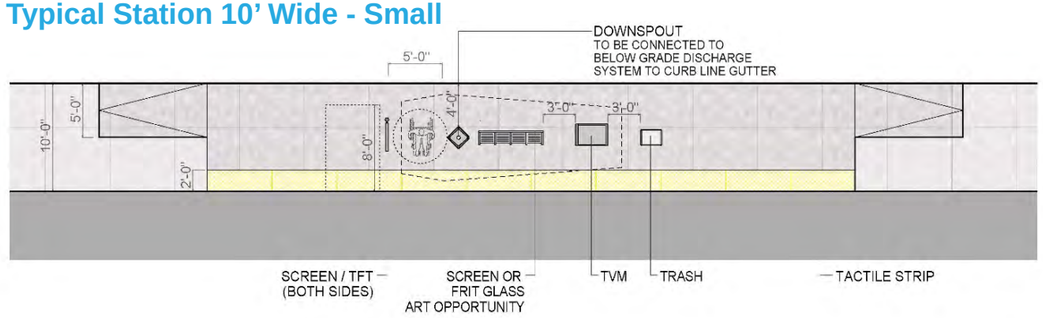
Typical Station 17’ Wide - Large





Typical Station 12’ Wide - Medium

Typical Station 10’ Wide - Small



5.7 Potential Station Types and Sizes

BRT stations should be convenient, comfortable, safe, and accessible to passengers with disabilities. One of the most important roles of the station is to support an appealing, cohesive visual identity for the transit system while at the same time reflecting the varying character of the neighborhoods and communities in the station area.

Three station types were identified for the SR 50 corridor based on a number of parameters, including area land use zoning, and available right-of-way.

Neighborhood Center include primarily residential areas where housing is usually mixed with local-serving retail. Commercial uses are limited to small businesses or some small-scale industry.

Community Center contain a mix of residential, employment, and retail uses. Community centers can serve as both origins and destinations for commuters.

Regional Center contain a mix of residential, employment, retail and entertainment uses. Destinations draw residents from surrounding neighborhoods. These centers serve as commuter hubs for the larger region.

The proposed stations would include near-level boarding platform, sheltered waiting area, seating, ticket vending machines, route maps, real-time information, and public art. The station footprint varies in terms of width depending mainly on right-of-way constraints. The length of the station is consistent with the required bus stopping area for articulated buses and the provision of ramps. Three station footprints were identified for the SR 50 corridor: large (80'x17'), medium (80'x12'), and small (80'x10').

STATION AREA	STATION TYPE	STATION FOOTPRINT	
		Recommended WB/EB	Alternate WB/EB
1 **Powers Drive**	Community Center	Large / Large	Large / Large
2 **Pine Hills Road**	Regional Center	Large / Large	Large / Medium
3 **Mercy Drive***	Community Center	Small / Small	Small / Small
4 **John Young Parkway**	Community Center	Medium / Medium	Small / Medium
5 **Orange Blossom Trail**	Community Center	Large / Large	Small / Medium
6 **North Quarter*****	Regional Center	Small / Large	Large / Large
7 **Mills 50**	Neighborhood Center	Small / Small	Small / Medium
8 **Primerose Super Stop**	Regional Center	Existing infrastructure supports BRT operations	
9 **Fashion Square**	Regional Center	Small / Small	Small / Small
10 **Semoran Boulevard**	Regional Center	Large / Large	Medium / Small
11 **Goldenrod Road**	Community Center	Large / Large	Large / Large
12 **Econlockhatchee Trail**	Community Center	Large / Large	Large / Large
13 **Alafaya Trail**	Community Center	Small / Small	Large / Large
14 **Research Park****	Community Center	Small / Small	Small / Small

* Using gore stripped area adjacent to curb
** Assuming curb extension/median modifications
***Using on-street parking area


259-416
LYNX CENTRAL STATION
cricket wireless
TED DATA
KNEELING
RAMP

6 Bicycle/Pedestrian Connectivity


Orange AVE
ONE WAY
28 E COLONIAL DRIVE
enterprise

6.0 Pedestrian/Bicycle Connectivity

Transit relies on people being able to get to and from stations safely and easily. Improving walking and bicycling access to transit are key parts of a successful transit system. Improving safe access to transit for pedestrians and bicyclists can increase transit ridership, increase individuals' health and wellness related to physical activity, and provide access to a greater number of opportunities for jobs, education and other essential services. Increasing the connectivity of multimodal networks by improving infrastructure can create both safer and more accessible transportation systems for all users.

Walking and bicycling are important tools for making it easier and more convenient for riders to use public transportation. Most people are pedestrians at one end or the other of a transit trip. Although smaller shares of transit users ride a bicycle to access stations, bicycles are a useful mode of transportation for short trips, beyond a walkable distance but accessible without an automobile. Municipalities across Central Florida are developing strategies to facilitate biking as a mode of transportation with a place-based mix of on-street facilities and bike-friendly policies.

The bicycle/pedestrian connectivity plans for the SR 50 BRT stations were developed by analyzing the existing pedestrian and bicycle facilities network to help identify locations for targeted, strategic improvements to expand the bike or walk shed by connecting disconnected street grids, bridging barriers, adding crossings, or improving sidewalks or bicycle routes. Improvements to fill in network gaps and address barriers can decrease the actual distance someone would have to walk or bicycle to get to a station. Improvements that address the quality of the walk or bicycle trip can promote an environment where people are actually willing to walk or bicycle farther.

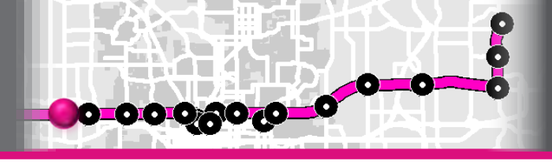
The recommended improvements were identified based on existing street configurations and where each station is located in relation to pedestrian, bicycle, feeder transit, and automobile access. Further analysis is recommended as redevelopment scenarios are defined. The objectives of the recommended improvements include:

- Provide convenient, safe, and secure access for all station users
- Make transfers easy, attractive, and seamless
- Reflect the needs of all users, including elderly and persons with disabilities
- Optimize each mode's access to the station
- Develop access designs that encourage and reinforce transit ridership
- Design access that is acceptable to surrounding communities

The journey between home and a transit station is a major factor in people's decision to take public transit. Frequent service and affordable fares, on their own, won't entice people to make that trip. The route to the station also has to appeal to pedestrians and bicyclists.

Resident crossing SR 50 near Pine Hills

01 POWERS DRIVE



Station Area Type: **COMMUNITY CENTER**

Recommended Improvements

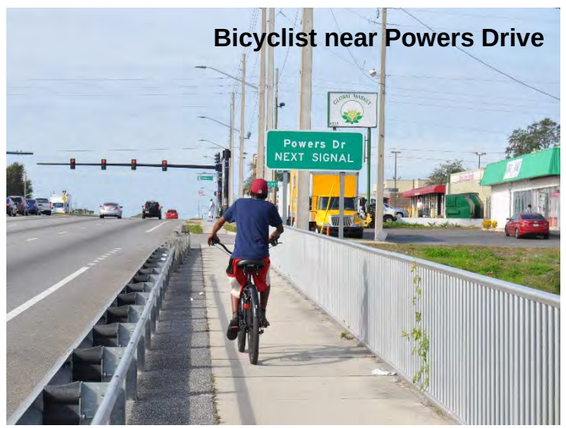
Short Term

- Consider **designating existing bike lanes** along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- Add **leading pedestrian intervals** to intersection signal timing in order to help mitigate vehicle-pedestrian conflicts.
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Powers Drive, Charles Street, Paul Street, Berry Street, and John Street.
- Considerations should be given for the implementation of **internal pedestrian / bike infrastructure** such as pathways and crosswalks for shopping centers immediately adjacent to the proposed BRT station area.

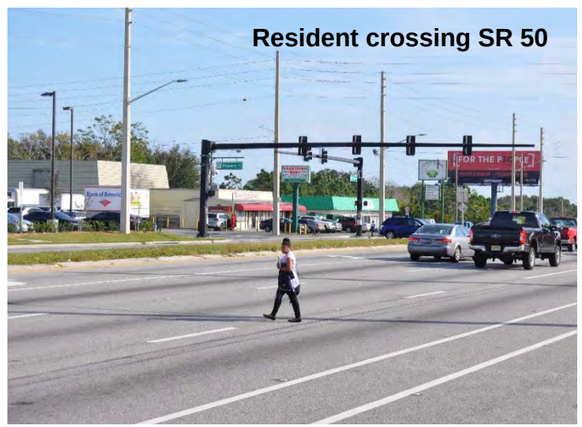
Long Term

- Implementing **community amenities and a public space network** to encourage walking.
- **Improving existing narrow sidewalks** on Colonial Drive would increase the comfort level for pedestrians.

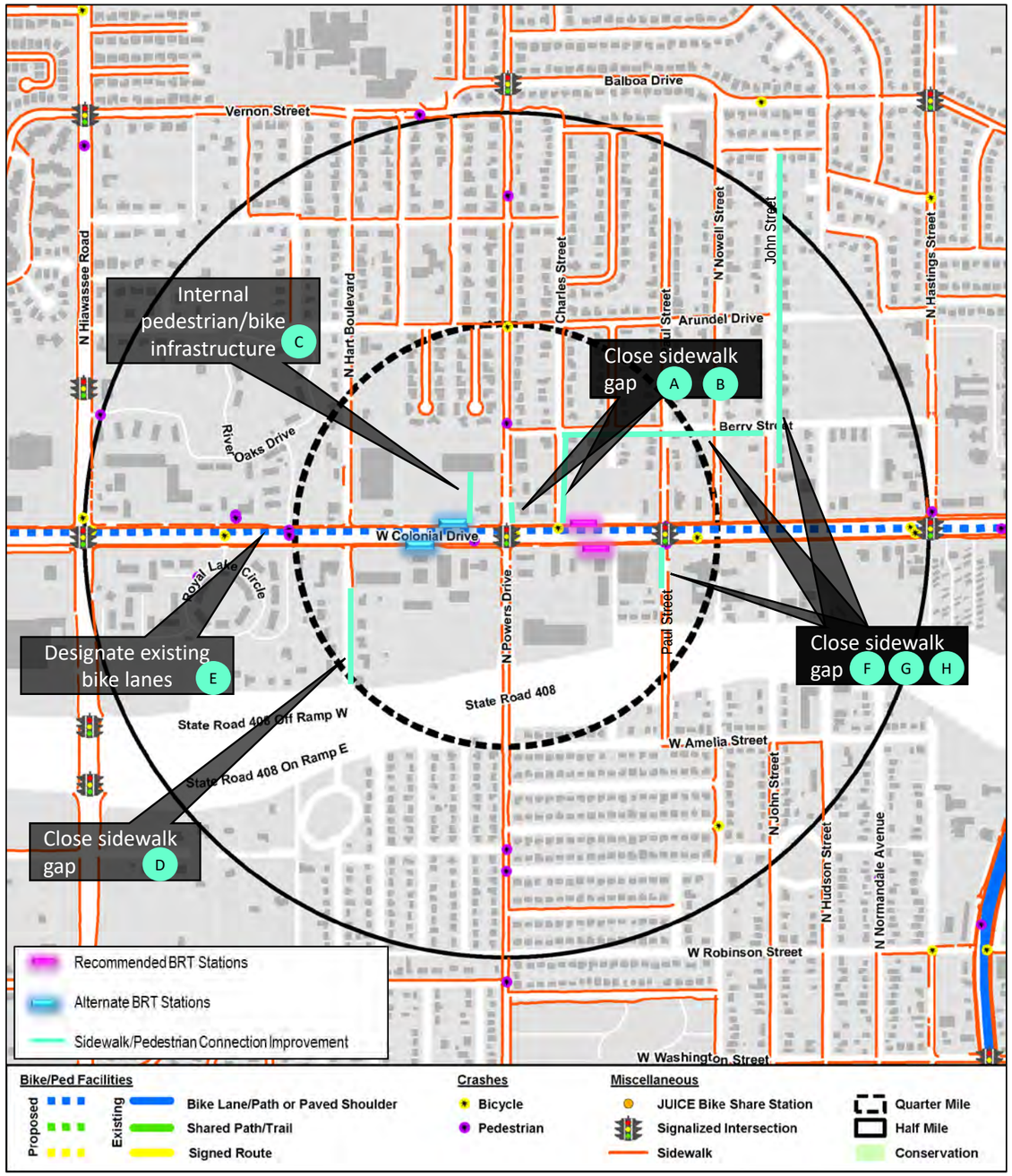
Station Metrics	
Walk Score *(walkscore.com)*	Very Walkable *(most errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 800 Multifamily: ~ 40
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 3,500
Key Destinations	YMCA of Pine Hills, Career Source Central Florida, Florida Department of Children & Families Application Center



Bicyclist near Powers Drive

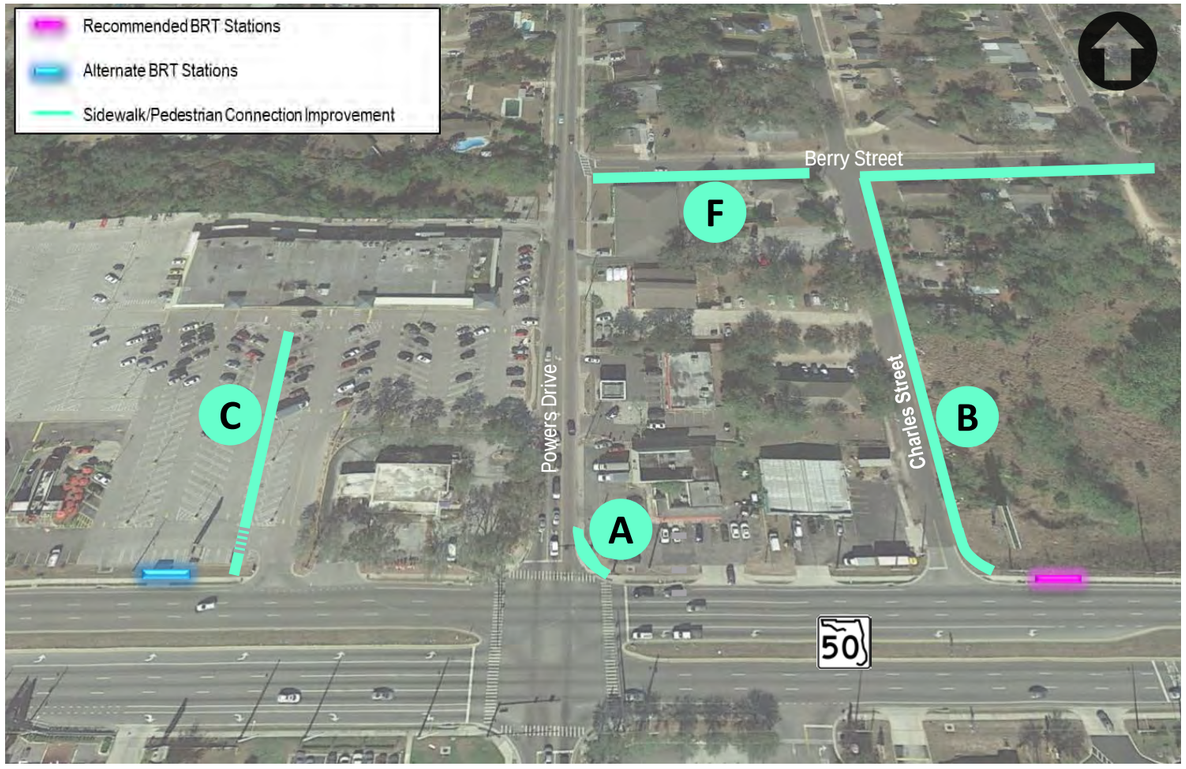


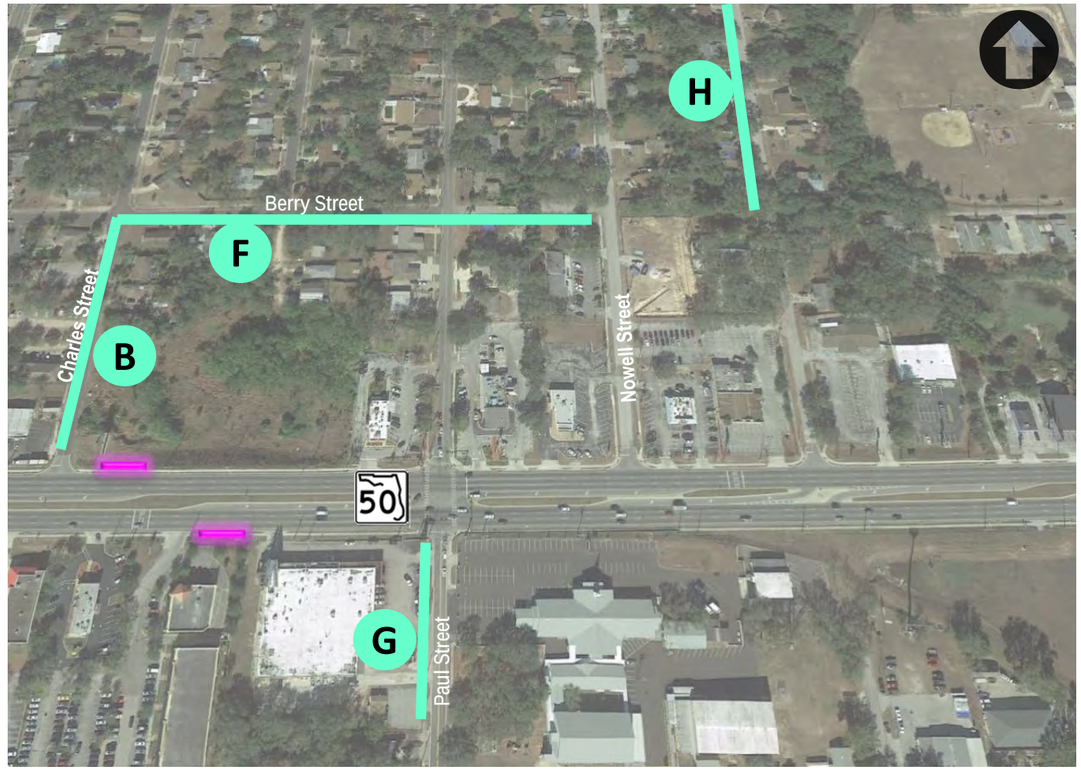
Resident crossing SR 50

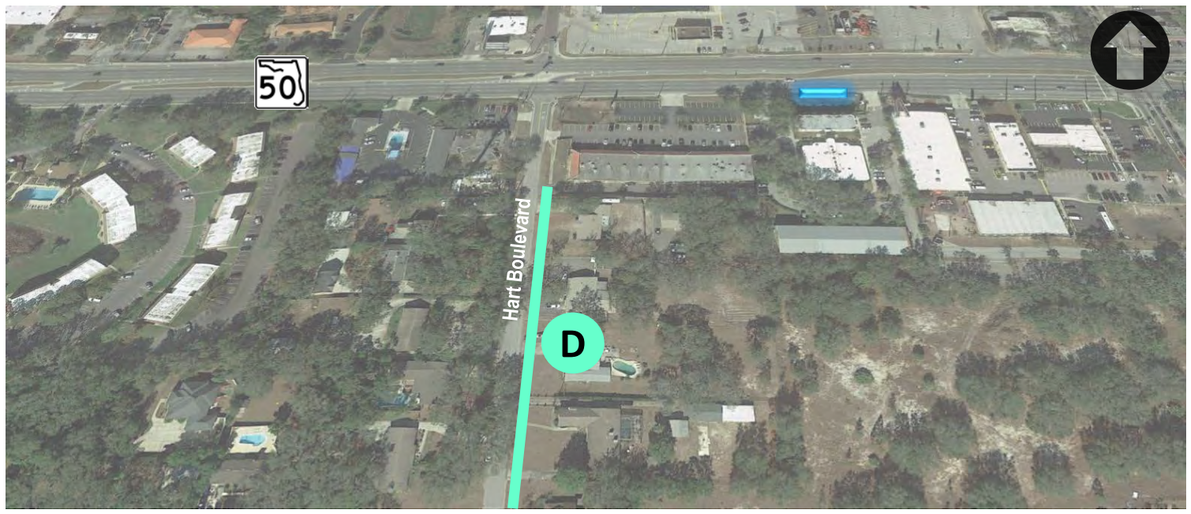


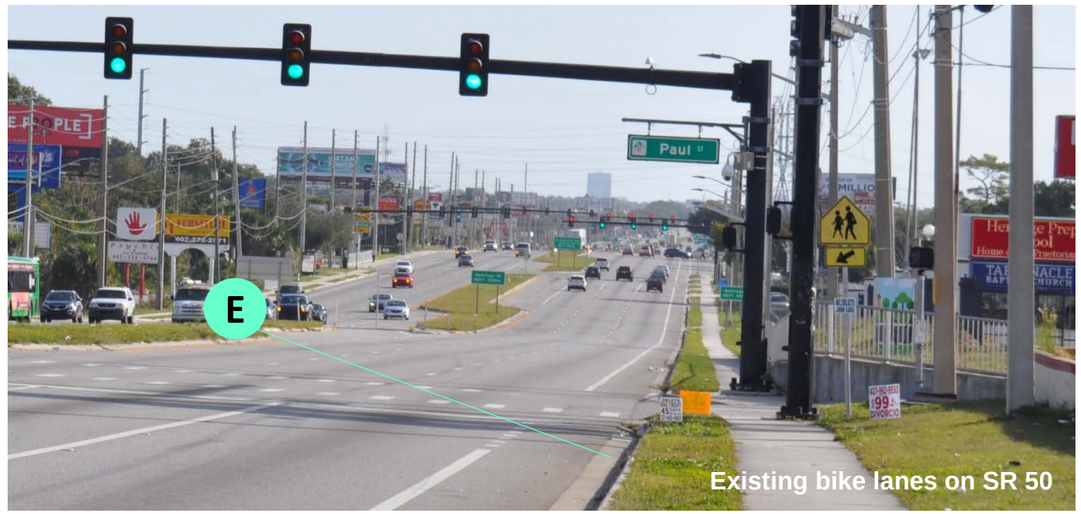
01 POWERS DRIVE

Station Area Type: COMMUNITY CENTER



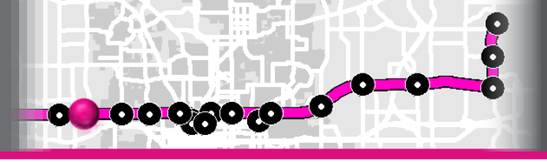






Existing bike lanes on SR 50

02 PINE HILLS ROAD



Station Area Type: **REGIONAL CENTER**

Recommended Improvements

Short Term

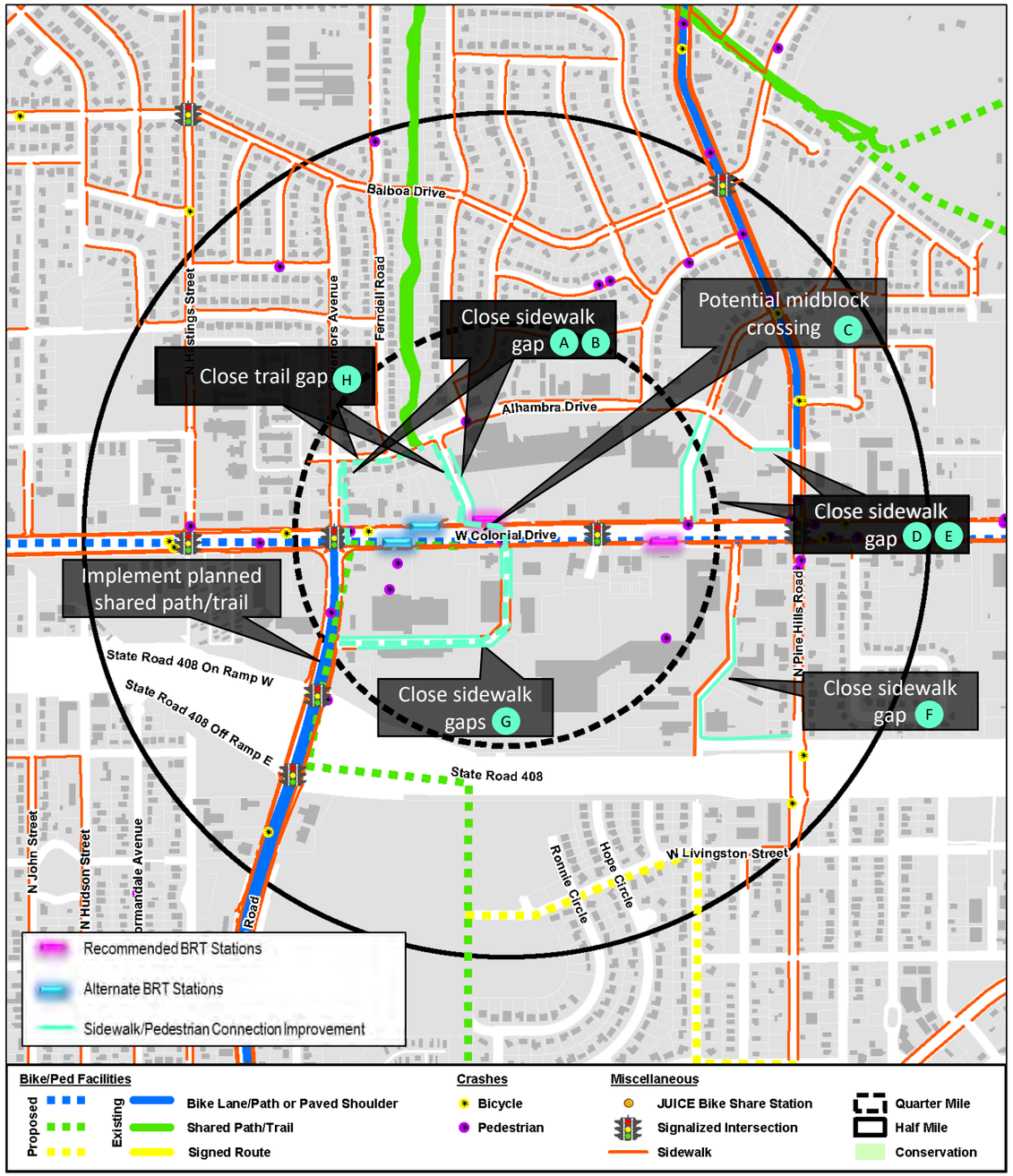
- Consider **designating existing bike lanes** along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- Improve connectivity between residential units and the proposed stations by **addressing sidewalk gaps** at the following locations: Deauville Drive, Wilmer Avenue, Emeralda Road and W. Concord Avenue.
- **Implement planned shared path/trail** south of W Colonial Drive. Consider alternative alignment based on proposed midblock crossing.

Station Metrics	
Walk Score (walkscore.com)	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort (based on TOD analysis)	Minimal bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s) with one or no connectivity
Residential Units (within 0.5 mile radius)	Single family: ~ 600 Multifamily: ~ 80
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 5,900
Key Destinations	YMCA of Pine Hills, Chinatown Gate, U.S Army Recruiting Station

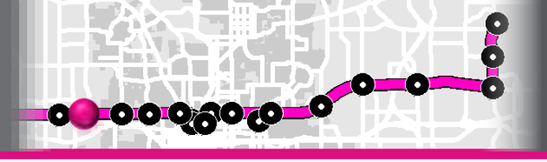
Long Term

- **Close the trail gap between** the existing Pine Hills Trail (north of Alhambra Drive) and the proposed trail on Kirkman Road south of Colonial Drive to enhance connectivity to the N. Pine Hills Road neighborhoods. This trail connection will link the Pine Hills Trail to the northern limit of the Shingle Creek Trail. Consider alternative alignment based on proposed midblock crossing.
- **Install a midblock pedestrian crossing** on Colonial Drive near to recommended stations.
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity
- **Implement community amenities and a public space network** to encourage walking
- **Improving existing narrow sidewalks** on Colonial Drive would increase the comfort level for pedestrians.

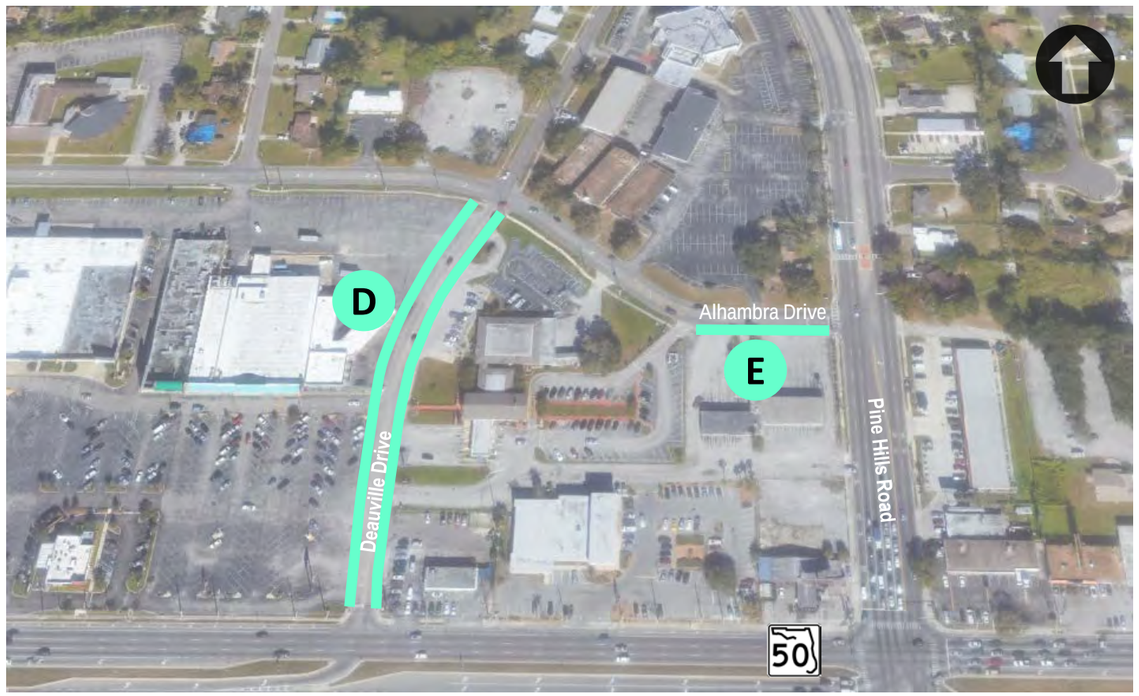
Pine Hills Trail

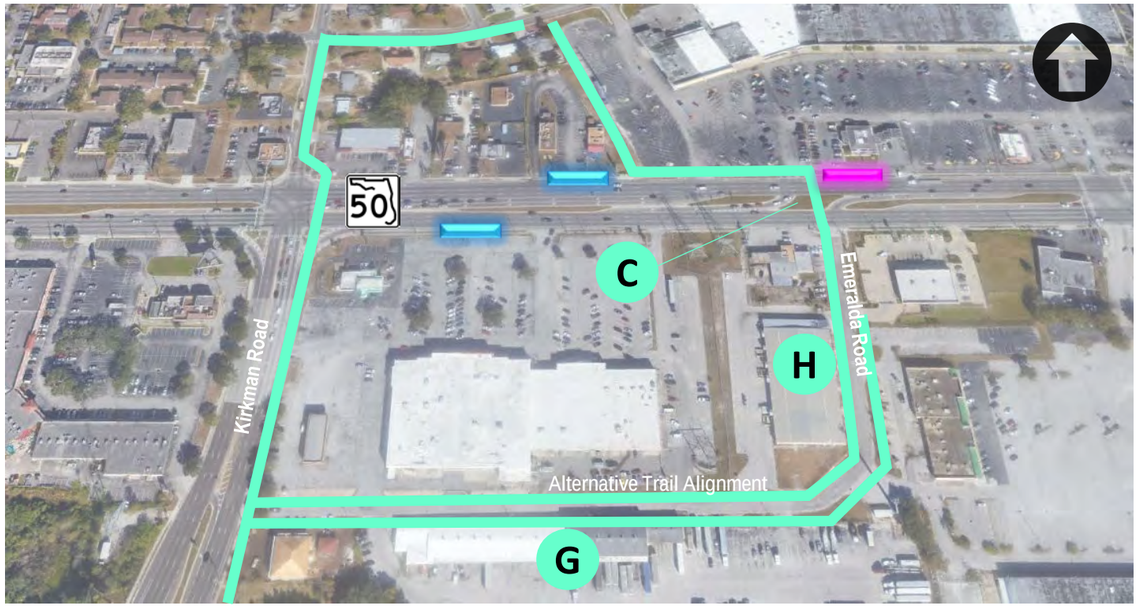


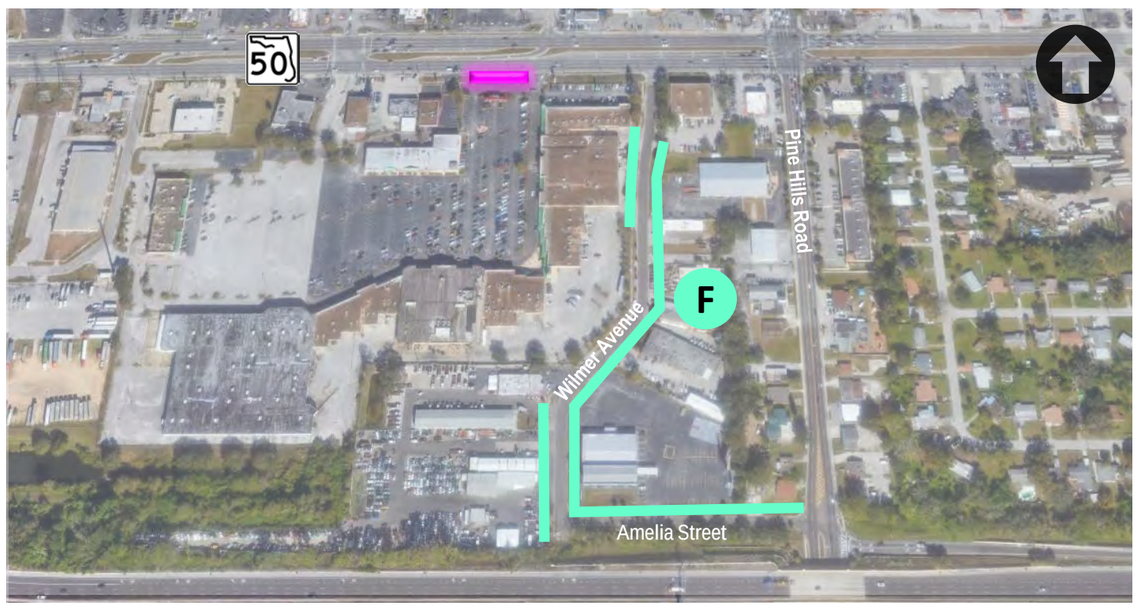
02 PINE HILLS ROAD



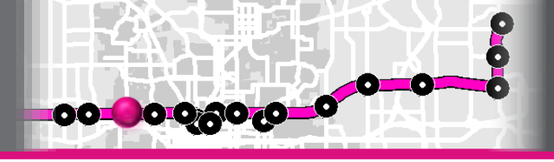
Station Area Type: REGIONAL CENTER







03 MERCY DRIVE



Station Area Type: COMMUNITY CENTER

Recommended Improvements

Short Term

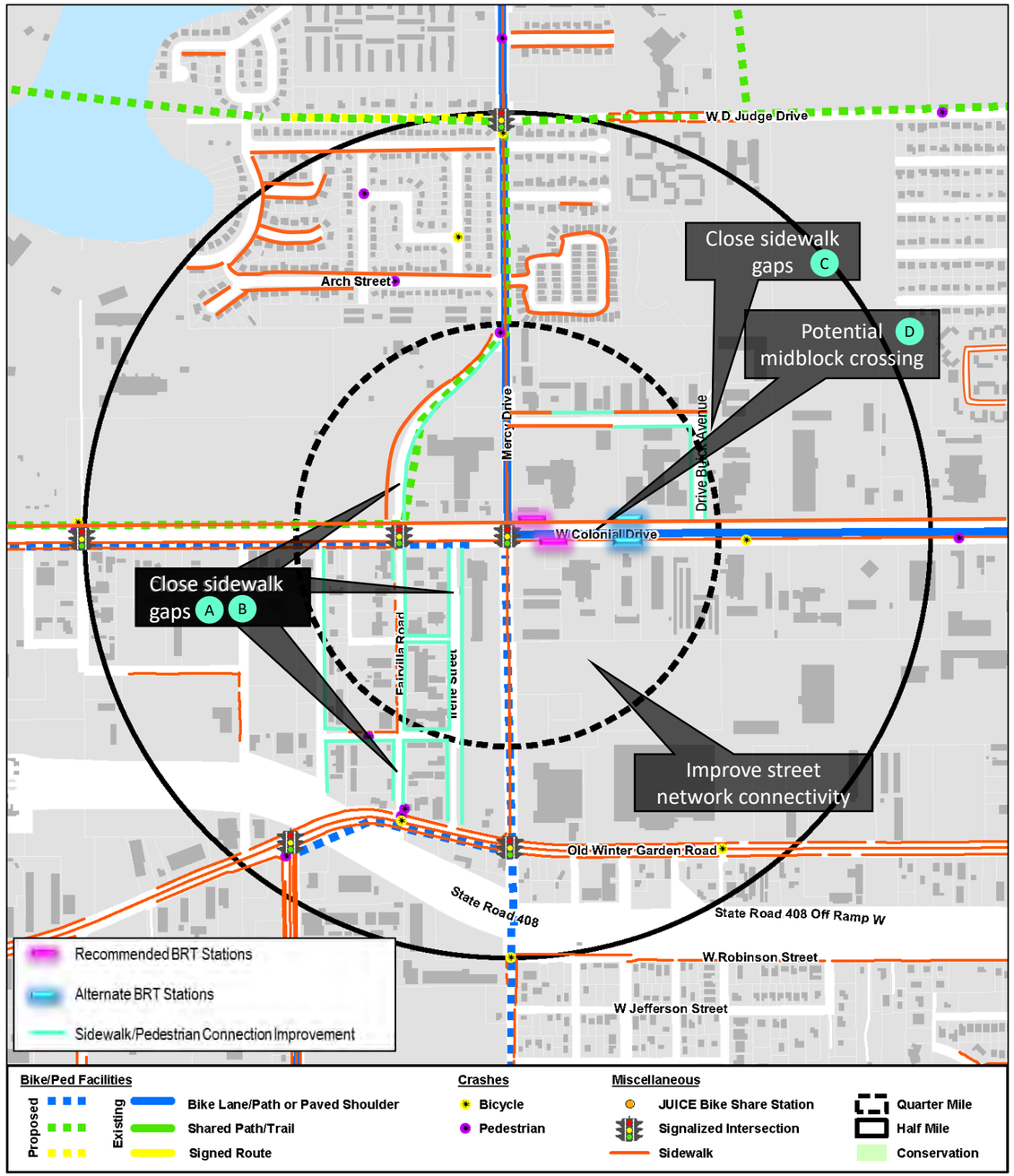
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Drive Buick Avenue, El Rey Road, Irene Street.
- **Implement planned shared path/trail** along and north of W. Colonial Drive and the planned bike lanes on W. Colonial Drive and Mercy Drive in order to enhance connectivity to the Mercy Drive neighborhoods.
- Implement transportation improvement recommendations of the **City of Orlando's Mercy Drive Vision Plan**.
- Consider **designating existing bike lanes** along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).

Long Term

- **Improve of the road network connectivi**ty by connecting Irene Street to Mercy Drive.
- Implement a **pedestrian midblock crossing** to enhance user experience and provide crossing opportunities for the proposed BRT stations.
- **Provide new street connections** through redevelopment.
- **Implement community amenities and a public space network** to encourage walkability.
- **Improve existing narrow sidewalks** to increase the comfort level for pedestrians and bicyclists.

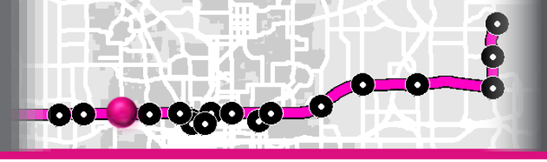
Station Metrics	
Walk Score (walkscore.com)	Car-Dependent *(most errands require a car)*
Bicycle Comfort (based on TOD analysis)	Minimal bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s) with several connections
Residential Units (within 0.5 mile radius)	Single family: ~ 330 Multifamily: ~ 6
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 5,800
Key Destinations	Central Florida Fairgrounds, Barnett Park. Emery Hamilton Sports Complex Field, Second Harvest Food Bank, Children's Safety Village

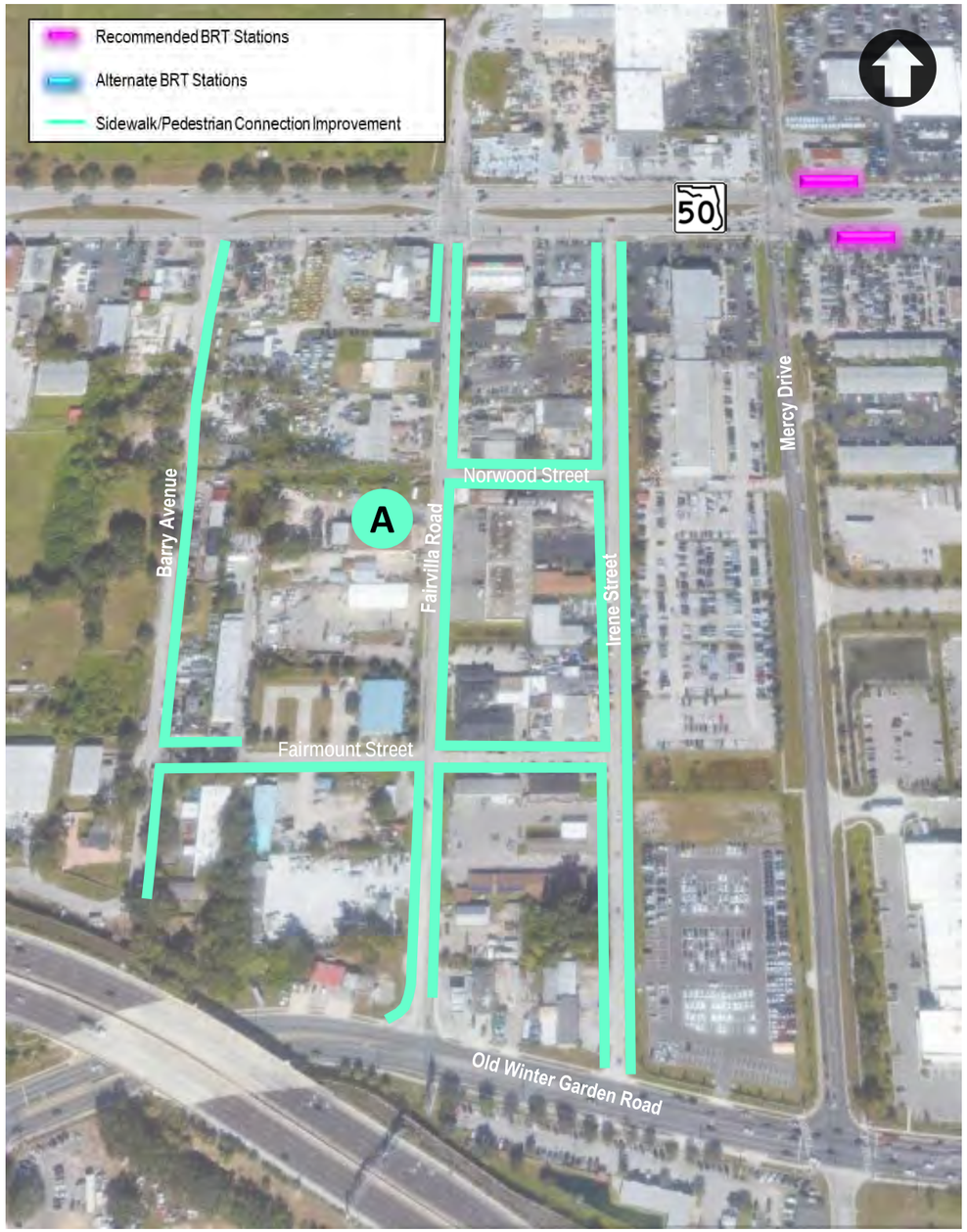
Bicyclists near Mercy Drive

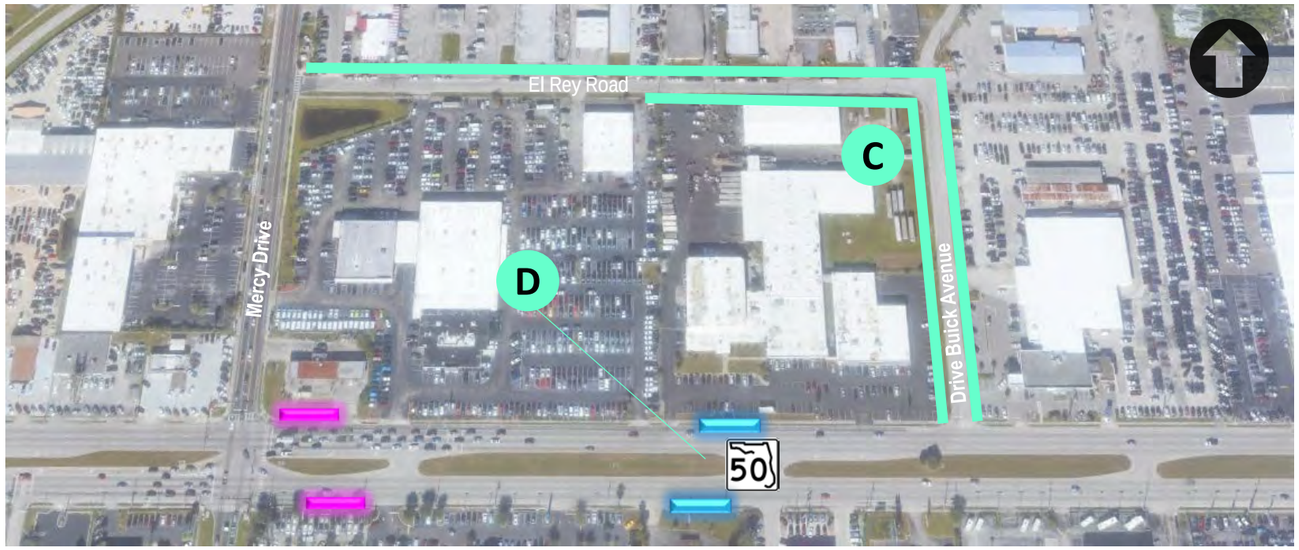


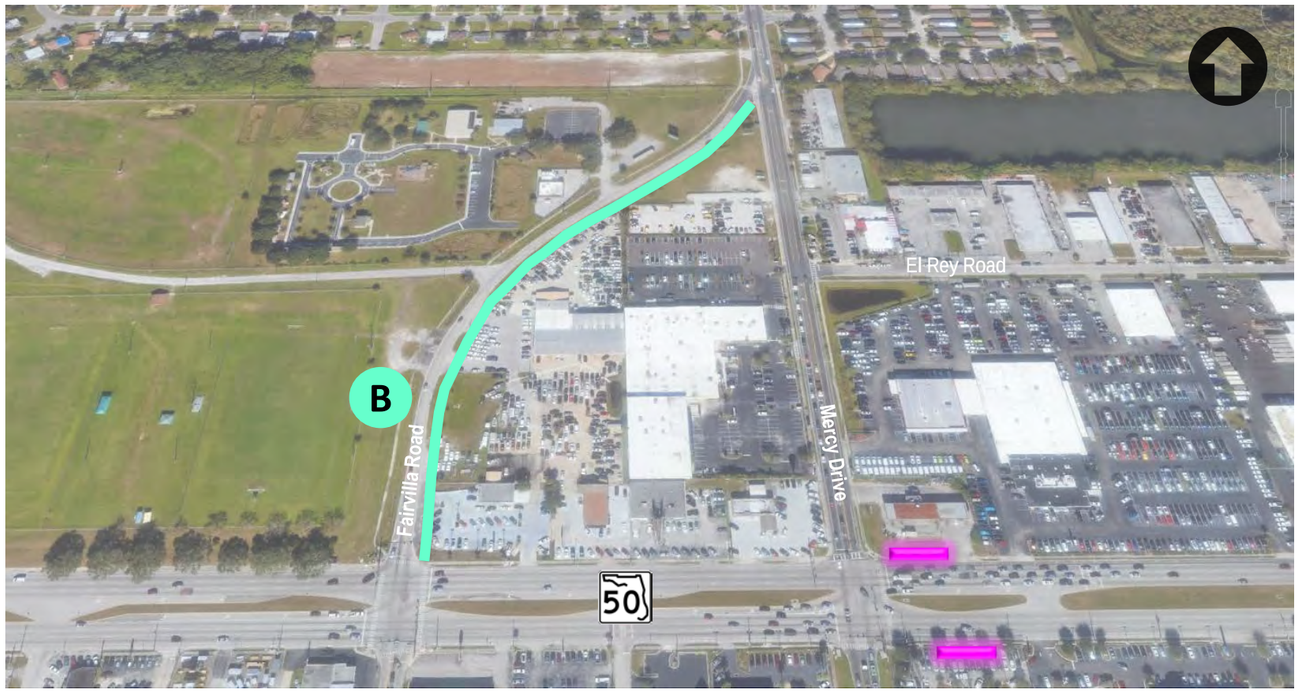
03 MERCY DRIVE

Station Area Type: COMMUNITY CENTER

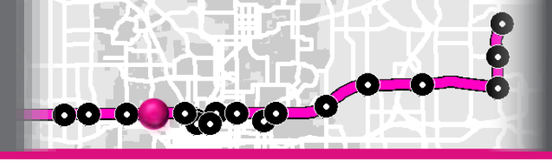








04 JOHN YOUNG PARKWAY



Station Area Type: COMMUNITY CENTER

Recommended Improvements

Short Term

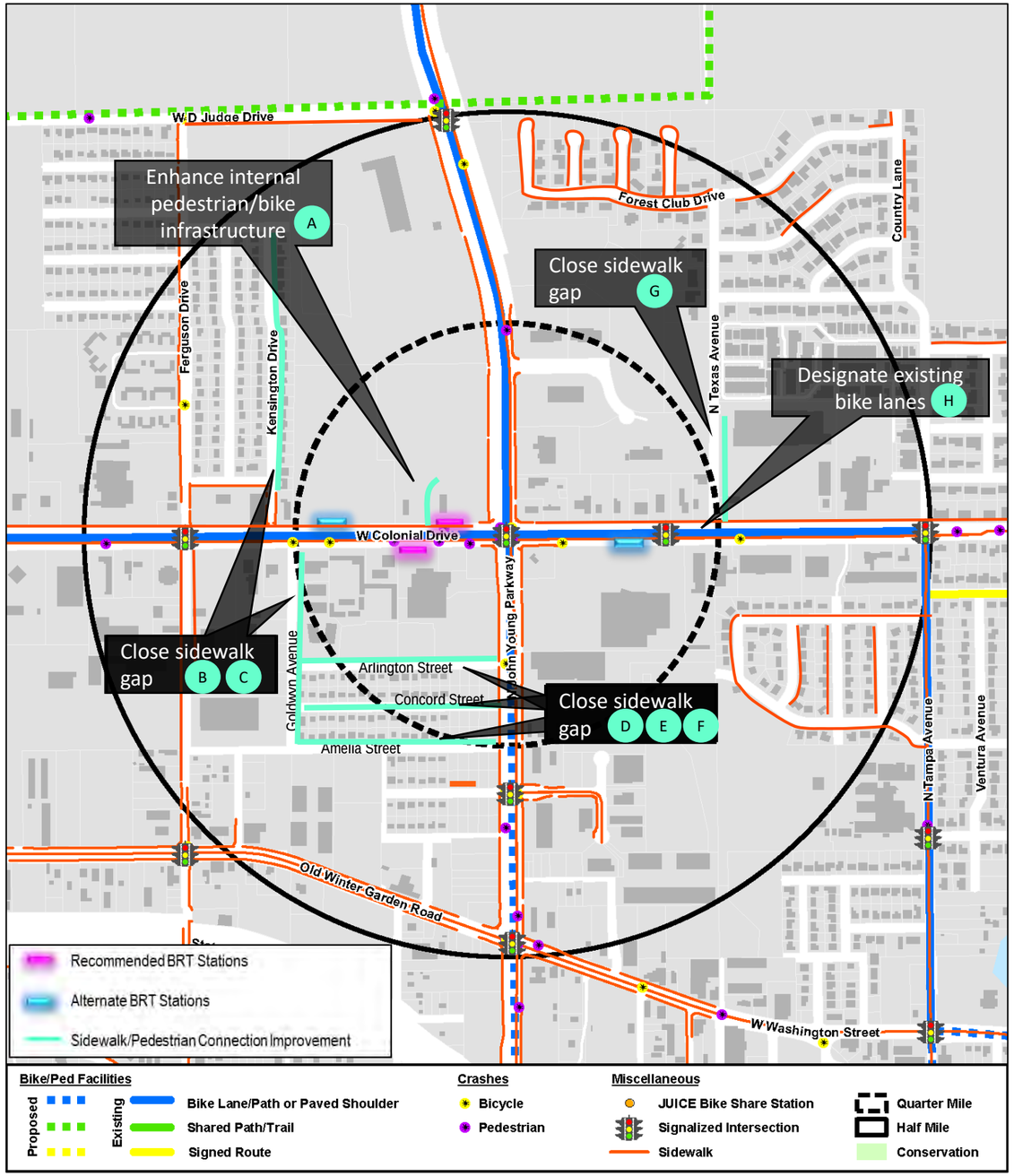
- Consider **designating existing bike** lanes along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- **Implement planned bike lanes** along John Young Parkway to enhance connectivity to the residential and commercial development south of SR 50.
- **Enhance internal pedestrian / bike infrastructure** for shopping centers immediately adjacent to the proposed BRT station area.
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Kensington Drive, Goldwyn Avenue, Arlington Street, Concord Street, Amelia Street, and Texas Avenue. It is noted that some of these segments are uncurbed and drainage issues may need to be addressed in order to implement some segments.

Long Term

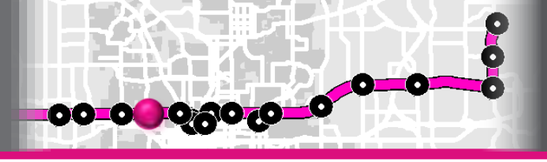
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.
- Implementing **community amenities and a public space network** to encourage walking.
- **Improving existing narrow sidewalks** on Colonial Drive would increase the comfort level for pedestrians.

Station Metrics	
Walk Score *(walkscore.com)*	Car-Dependent *(most errands require a car)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 470 Multifamily: ~ 90
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 5,000
Key Destinations	Magic Mall, Orlando Science Elementary, Consulate of Mexico, Orange County Sheriff's Central Operations, Goodwill Job Connection Center

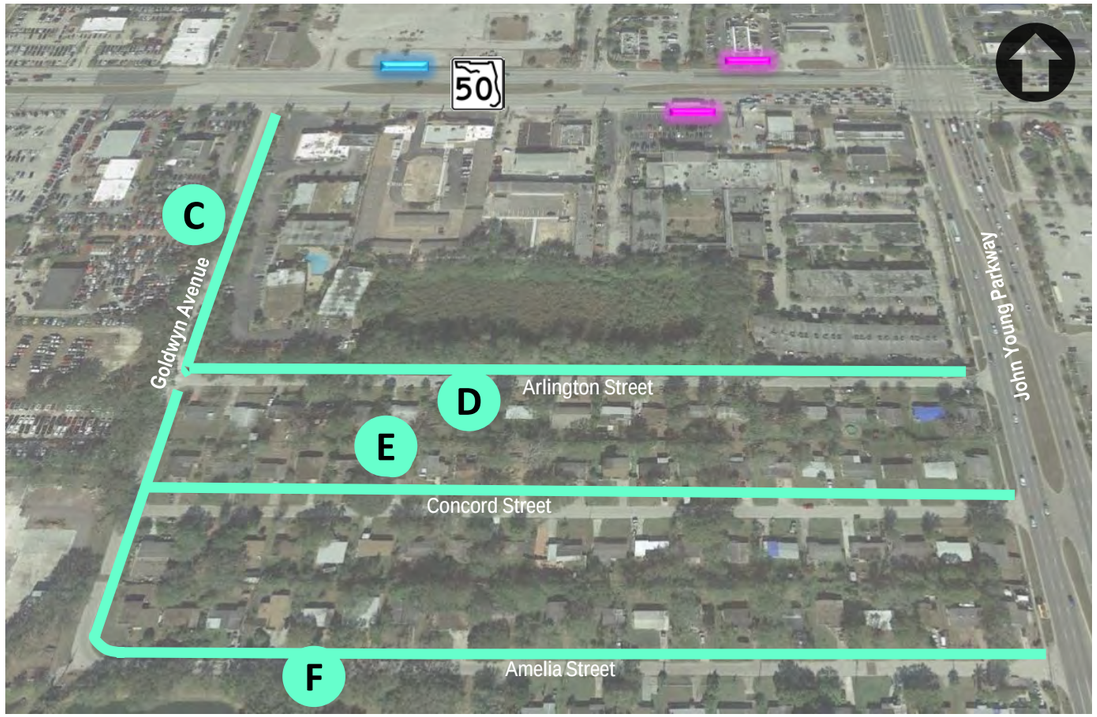
Resident crossing SR 50

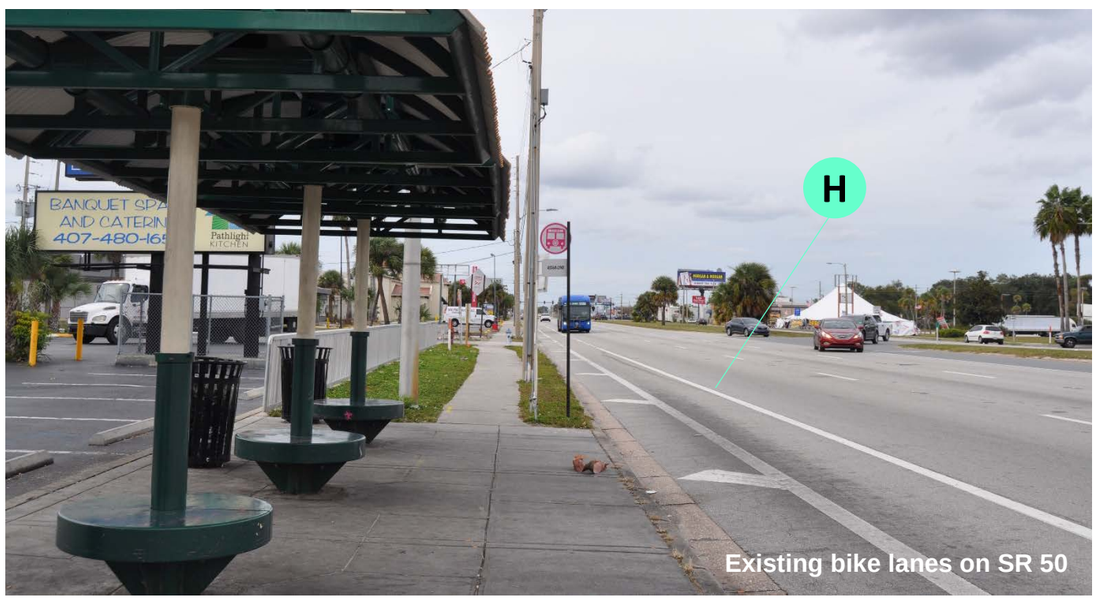


04 JOHN YOUNG PARKWAY

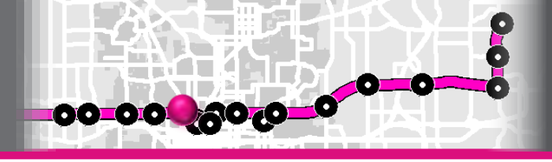


Station Area Type: **COMMUNITY CENTER**





05 ORANGE BLOSSOM TRAIL



Station Area Type: COMMUNITY CENTER

Recommended Improvements

Short Term

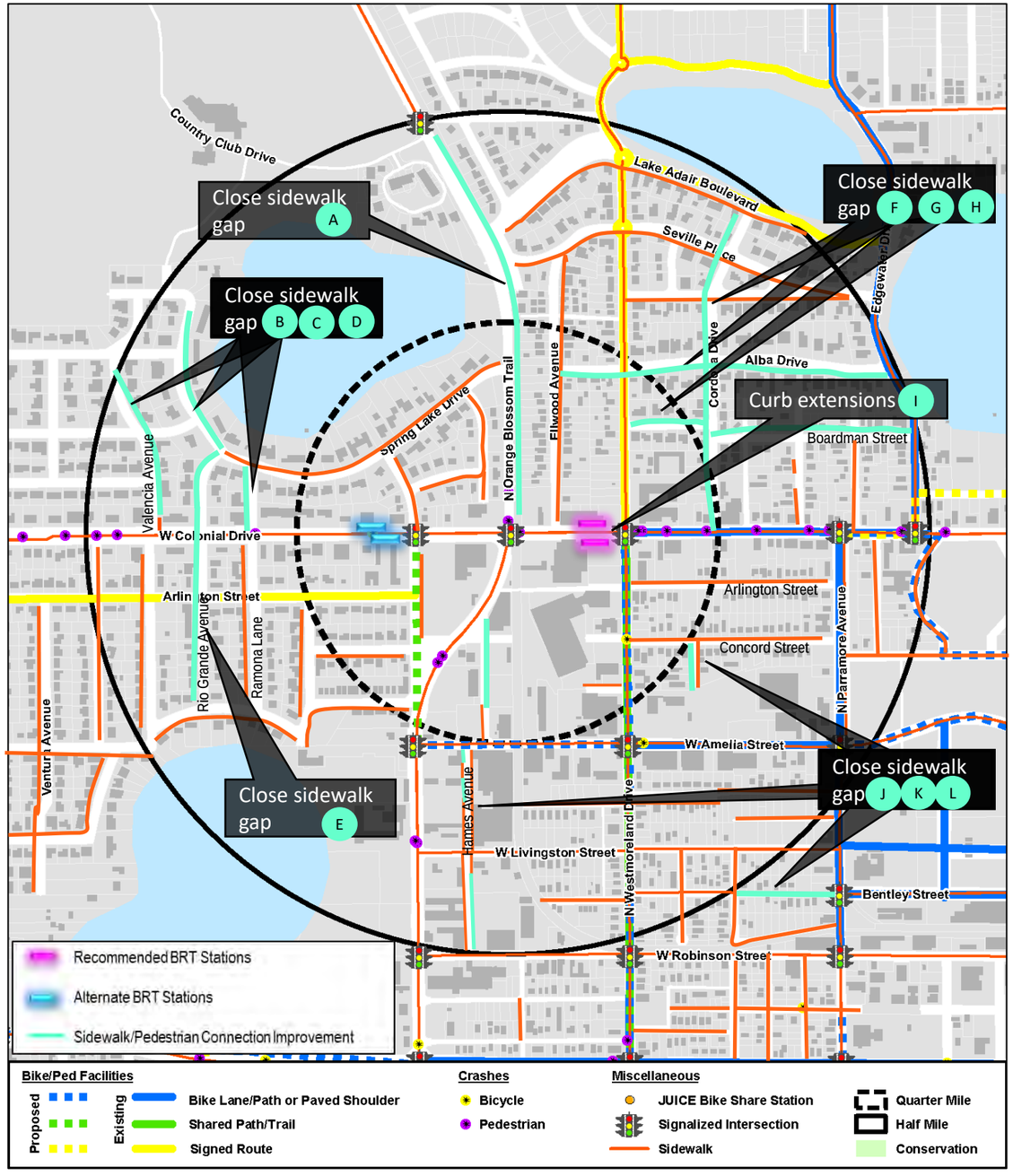
- **Implement planned bike lanes, shared-path trails, and signed bicycle routes** to enhance connectivity to the residential development north and south of SR 50.
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Springdale Drive, Valencia Avenue, Rio Grande Avenue, Boardman Street, Ramona Lane, Orange Blossom Trail, Cordova Drive, Alba Drive, Arlington Street, Charles Street, Hames Avenue, and Bentley Street.

Long Term

- Providing **curb extensions** for the recommended BRT stations would facilitate pedestrian crossings.
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.
- **Improving existing narrow sidewalks** on Colonial Drive would increase the comfort level for pedestrians.
- Upon area redevelopment, considerations should be given for the implementation **of internal pedestrian / bike infrastructure** such as pathways and crosswalks for retail/commercial uses immediately adjacent to the proposed BRT station area.

Station Metrics	
Walk Score *(walkscore.com)*	Car-Dependent *(most errands require a car)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 1,040 Multifamily: ~ 320
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 2,000
Key Destinations	OCPS Academic Center for Excellence (ACE), Country Club of Orlando

Pedestrian crossing SR 50



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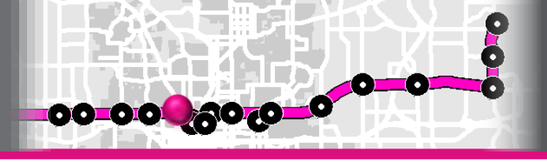
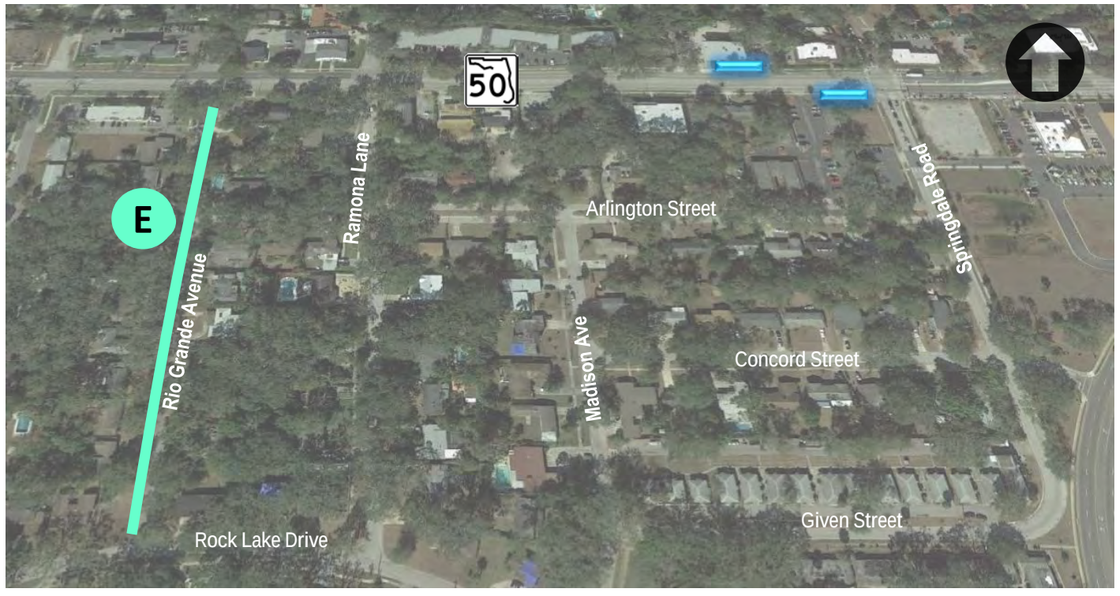
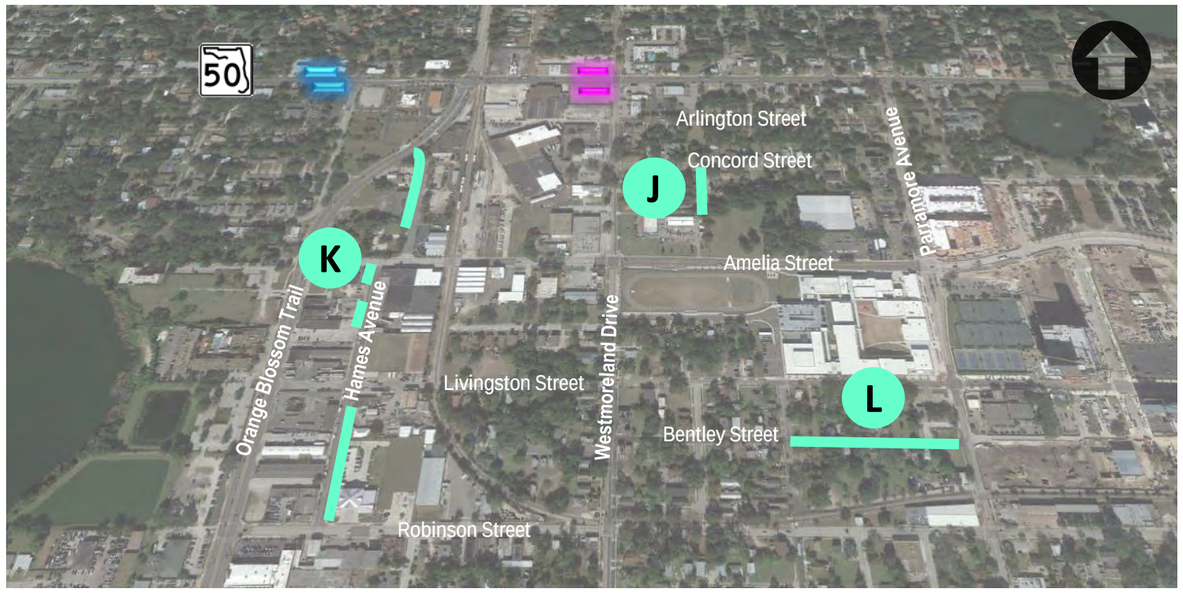


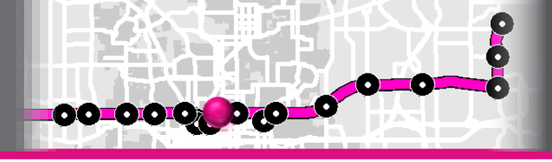
Station Area Type: COMMUNITY CENTER





06 NORTH QUARTER

Station Area Type: REGIONAL CENTER



Recommended Improvements

Short Term

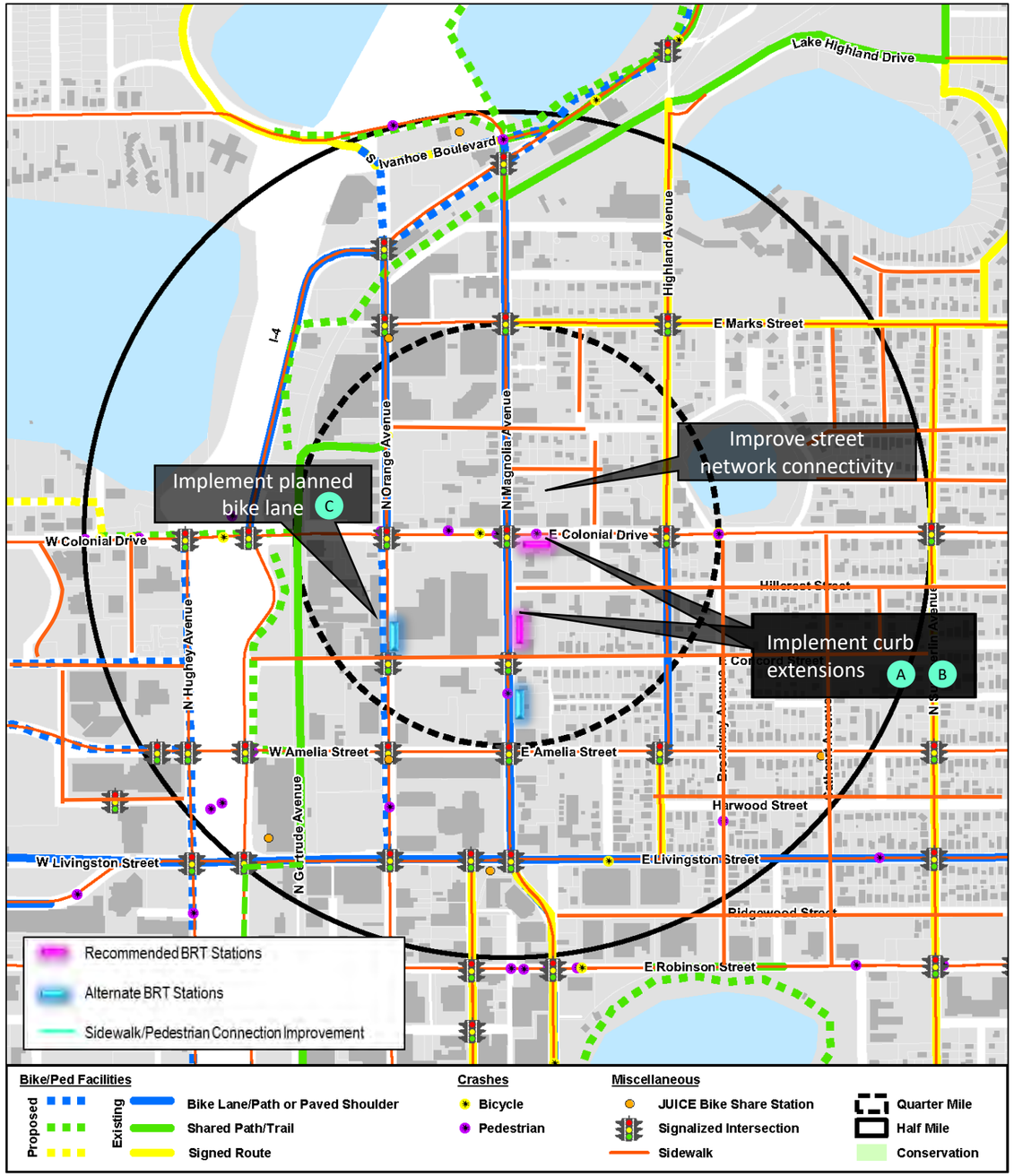
- Implement the **planned two-way shared path** on N. Orange Avenue in order to enhance connectivity to the Orlando Urban Trail

Long Term

- Provide **wider** sidewalks and additional pedestrian connectivity within oversized blocks when redevelopment occurs to improve walkability.
- Providing **curb extensions** for the recommended BRT stations would facilitate pedestrian crossings.
- Implement bicycle and pedestrian recommendations from the **City of Orlando's North Quarter Transportation Vision** including
  - a two-way cycle track on Magnolia Avenue,
  - signalized intersections at Park Lake Street,
  - shared-use paths between Weber Street and Lake Ivanhoe providing access to College Park,
  - and new midblock crossings with median refuge islands enabled by restoration of two-way vehicle traffic.

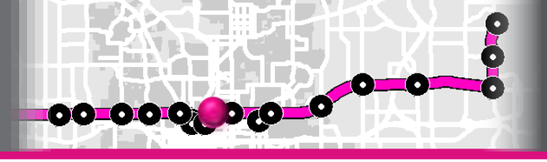
Station Metrics	
Walk Score (walkscore.com)	Very Walkable *(Most errands can be accomplished on foot)*
Bicycle Comfort (based on TOD analysis)	Some bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s), but well integrated and connected
Residential Units (within 0.5 mile radius)	Single family: ~ 520 Multifamily: ~ 1,530
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 5,500
Key Destinations	Downtown Orlando CRA, Boys and Girls Clubs of Central Florida, Marks Street Senior Center, Lynx Central Station, Orange County Courthouse

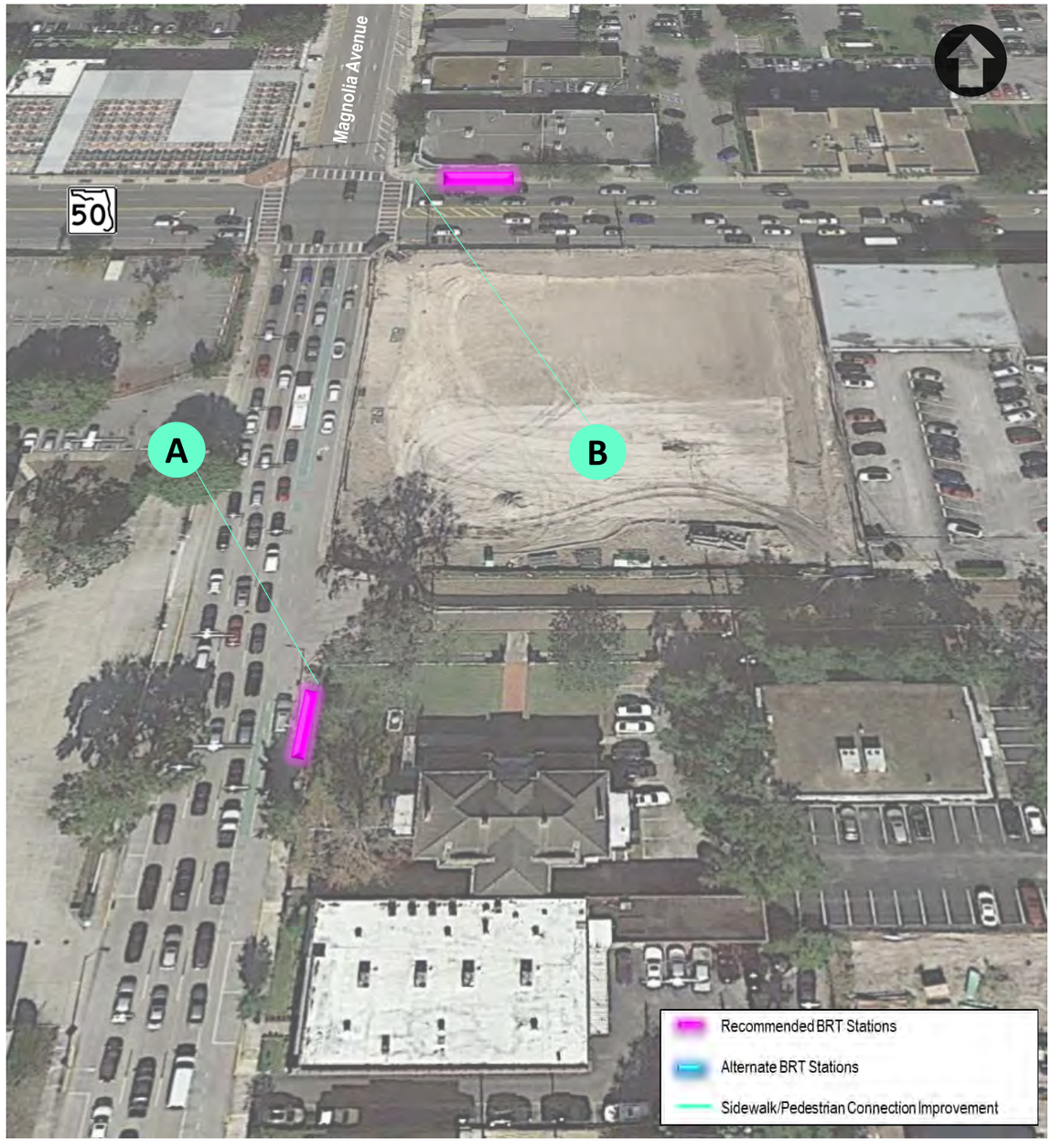
Pedestrians crossing at Amelia Street



06 NORTH QUARTER

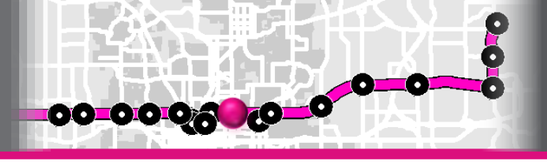
Station Area Type: REGIONAL CENTER





SR 50 Bus Rapid Transit (BRT) 6-13 Pedestrian/Bicycle Connectivity Plans

07 MILLS 50



Station Area Type: NEIGHBORHOOD CENTER

Recommended Improvements

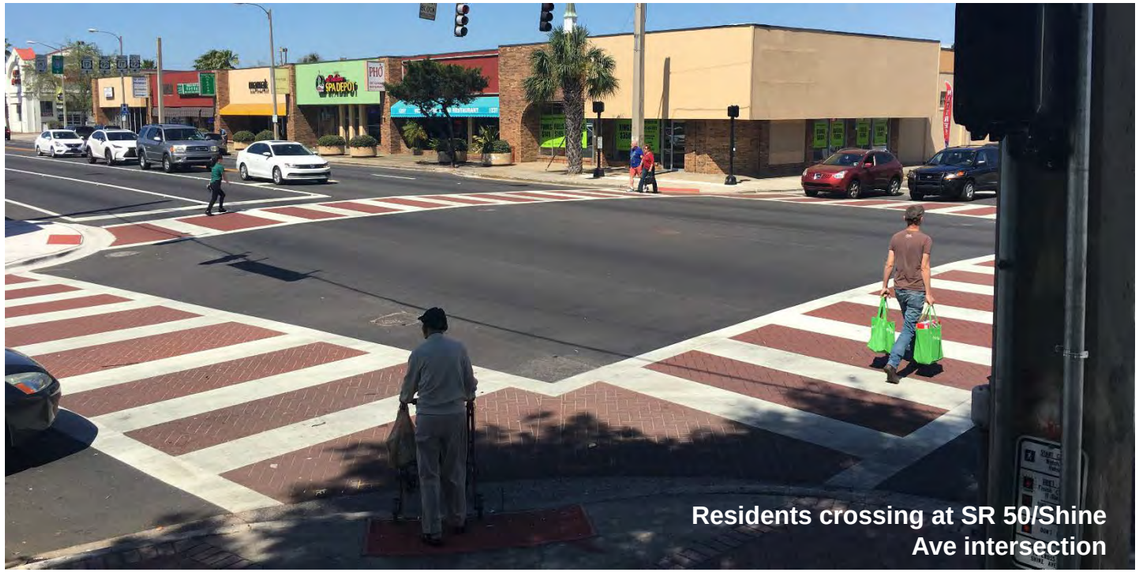
Short Term

- **Improving existing narrow sidewalks** on Colonial Drive would increase the comfort level for pedestrians. An interim solution to maximize clear space by removing obstacles on existing sidewalks could be pursued.
- Implement recommendations of the **Orlando Main Streets Mills 50 and Milk Districts Bicycle and Pedestrian Study** including crosswalks and medians at Hyer Avenue, Thornton Avenue and Altaloma Avenue.
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gap** along Marks Street, east of Thornton Avenue, is recommended.

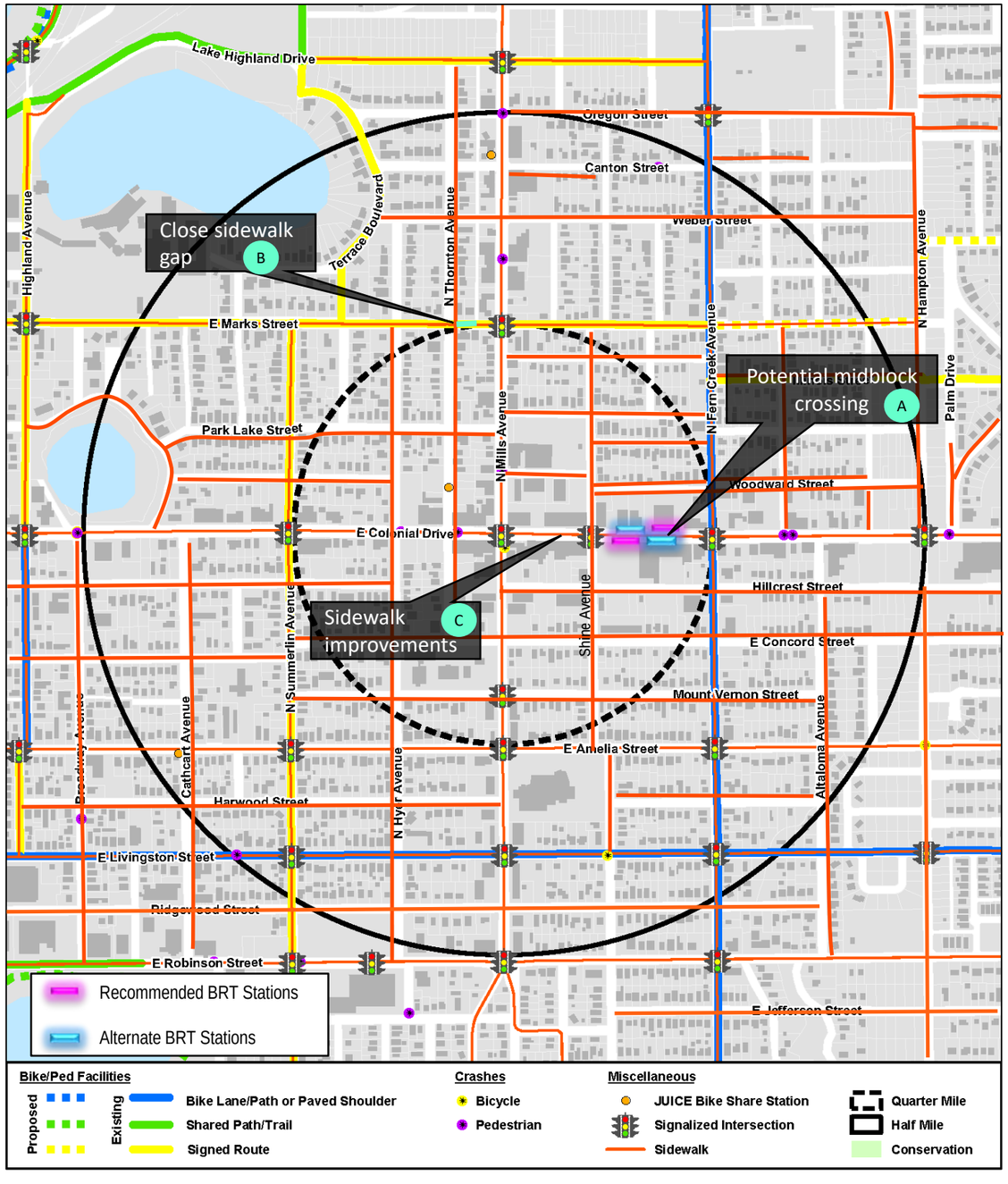
Long Term

- Implementation of a **pedestrian midblock crossing and median** would enhance user experience and provide crossing opportunities for the recommended stations.
- Implementing **community amenities and a public space network** to encourage walking.

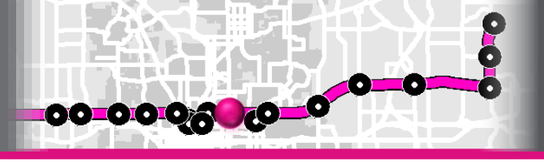
Station Metrics	
Walk Score *(walkscore.com)*	Very Walkable *(most errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s), but well integrated and connected.
Residential Units *(within 0.5 mile radius)*	Single family: ~ 1,250 Multifamily: ~ 750
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 4,200
Key Destinations	YMCA of Downtown Orlando, Publix Supermarket, Hillcrest Elementary, Lake Highland Preparatory School Middle School



Residents crossing at SR 50/Shine Ave intersection



07 MILLS 50



Station Area Type: NEIGHBORHOOD CENTER

Narrow sidewalks on SR 50

08 PRIMROSE DRIVE

Station Area Type: **REGIONAL CENTER**

Recommended Improvements

Short Term

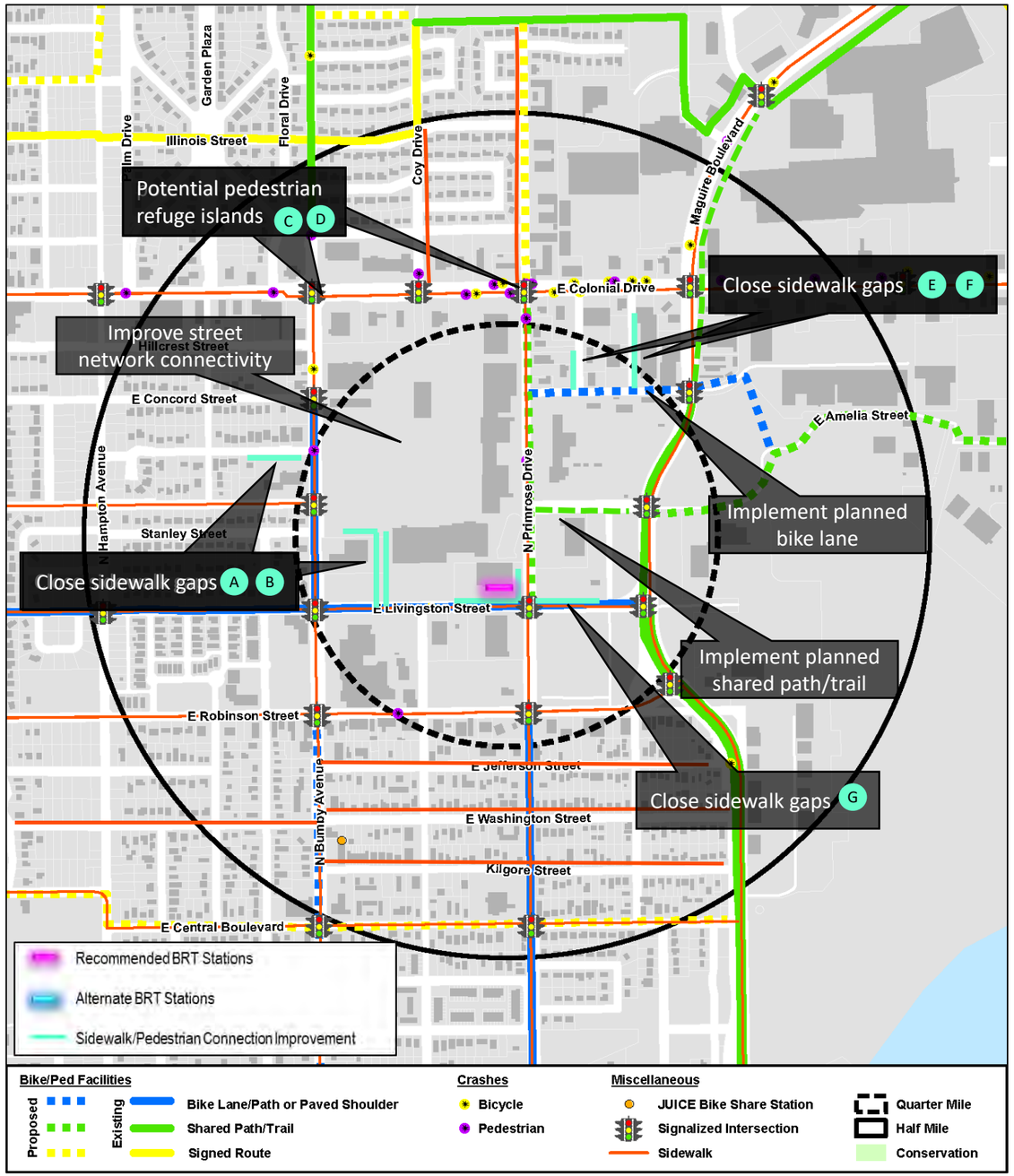
- **Markings and route signage** for bicycle lanes along E. Livingston Street would increase awareness of the presence of the bicycle facility.
- To improve pedestrian safety, consideration should be given **to implementing pedestrian refuge islands** on E. Colonial Drive.
- **Implement the planned shared path/trail** along N. Primrose Drive and the cycle track on Amelia Street in order to enhance connectivity to Downtown, the Milk District, and Baldwin Park.
- **Install a crosswalk** at the Central Florida Leadership Academy to improve access between the school and the SuperStop

Long Term

- Implement additional recommendations of the Orlando Main Streets Bicycle and Pedestrian Study within the station area. including a **bicycle friendly design** improvements to Graham Avenue and Primrose Drive south of Robinson Street and implementation of access management on Bumby Avenue with **additional pedestrian crossings**.
- Improve **sidewalk connectivity** to the Plaza Live entertainment venue.
- Restore **historic roadway connections** if Colonial Plaza Mall is redeveloped.
- Implementation of **community amenities and a public space network** to encourage walkability.
- **Improve narrow sidewalks** to increase the comfort level for pedestrians and bicyclists.

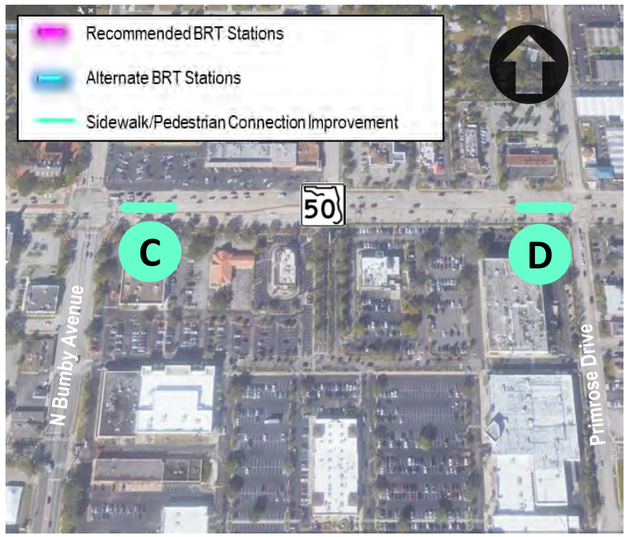
Station Metrics	
Walk Score (walkscore.com)	Very Walkable *(Most errands can be accomplished on foot)*
Bicycle Comfort (based on TOD analysis)	Minimal bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s) with several connections
Residential Units (within 0.5 mile radius)	Single family: ~ 560 Multifamily: ~ 240
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 10,200
Key Destinations	The Milk District, Festival Park, Orlando Skate Park, Central Florida Leadership Academy, Colonial Plaza Mall, The Plaza Live

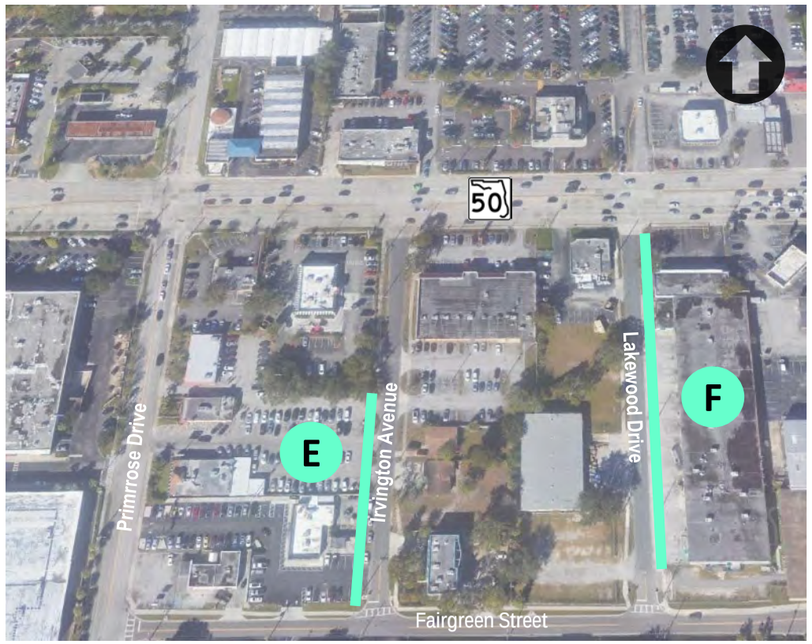
Pedestrian waiting to cross at Primrose Drive

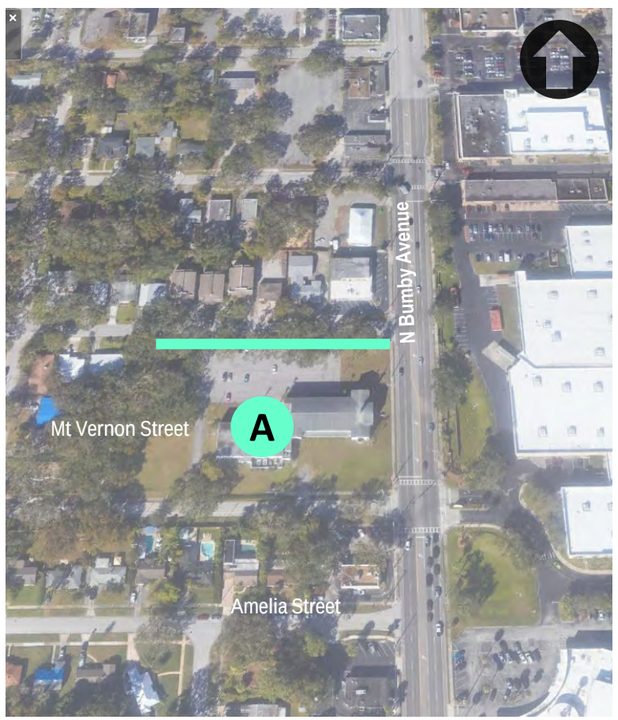


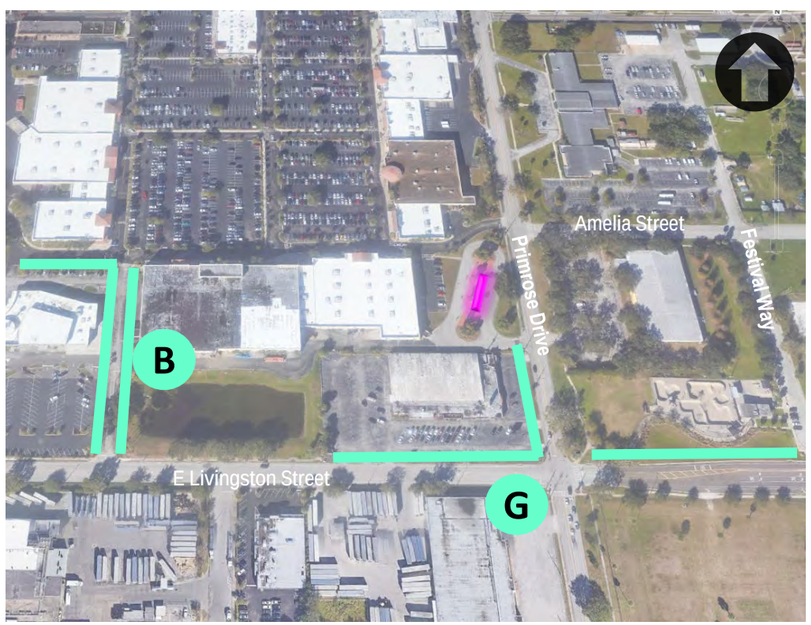
08 PRIMROSE DRIVE

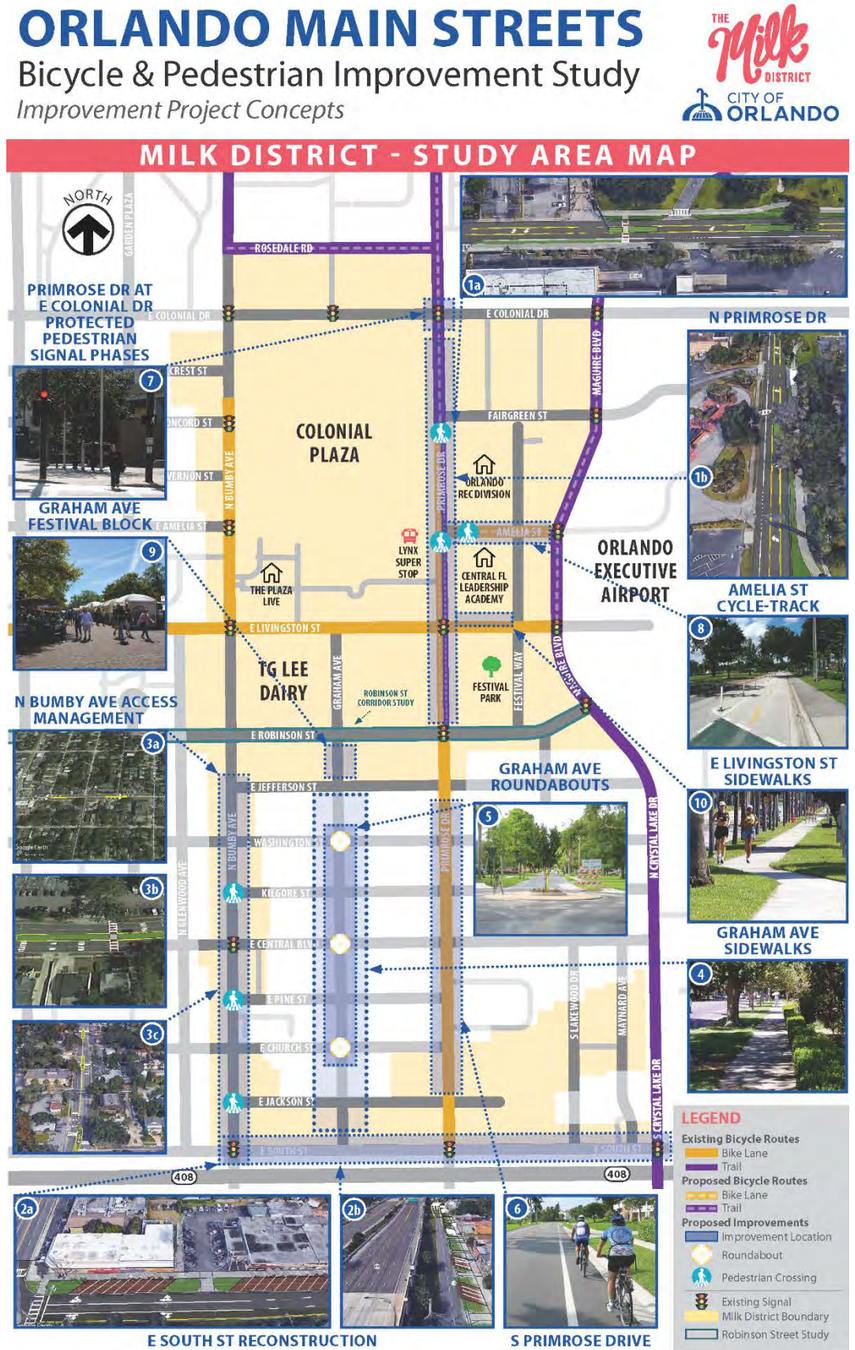
Station Area Type: REGIONAL CENTER











09 FASHION SQUARE

Station Area Type: REGIONAL CENTER

Recommended Improvements

Short Term

- As station area redevelops, **implement internal pedestrian / bike infrastructure** such as pathways and crosswalks for shopping centers immediately adjacent to the proposed BRT station area.
- Provide **wider sidewalks and additional pedestrian connectivity** within oversized blocks when redevelopment occurs to improve walkability.
- Implement **planned bike lanes and shared path/trails** to enhance walking and bicycling connectivity.

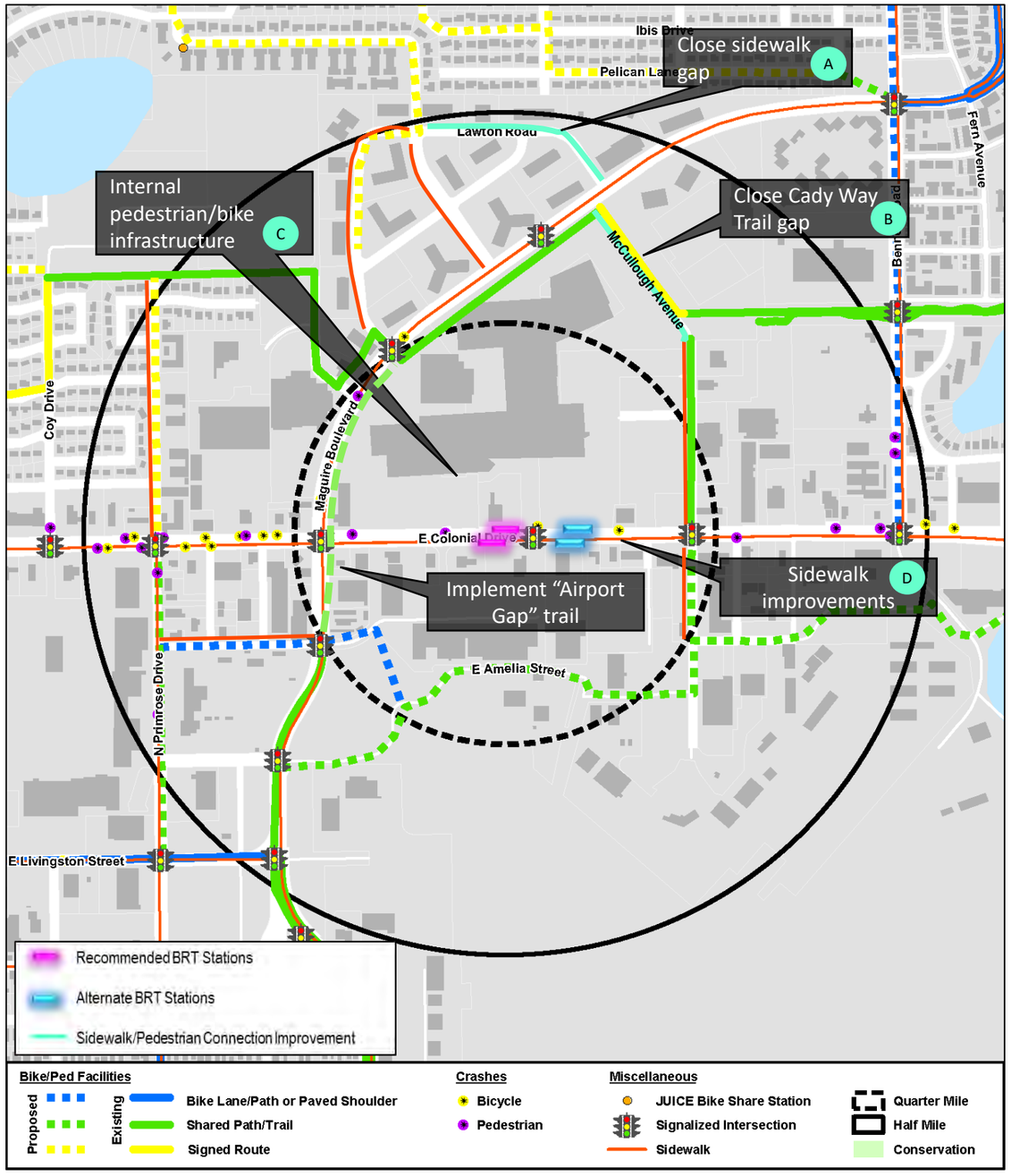
Station Metrics	
Walk Score *(walkscore.com)*	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Some bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with one or no connections.
Residential Units *(within 0.5 mile radius)*	Single family: ~ 80 Multifamily: ~ 30
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 10,200
Key Destinations	Fashion Square Mall, Orlando Executive Airport, Colonial Landing, Colonial Marketplace, Orlando Skate Park

- To provide better connectivity between the residential/office development, north of Maguire Boulevard, and the proposed stations, **addressing sidewalk gaps** at Lawton Road is recommended. Completion of the Cady Way Trail gap along McCullough Avenue will also improve connectivity.

Long Term

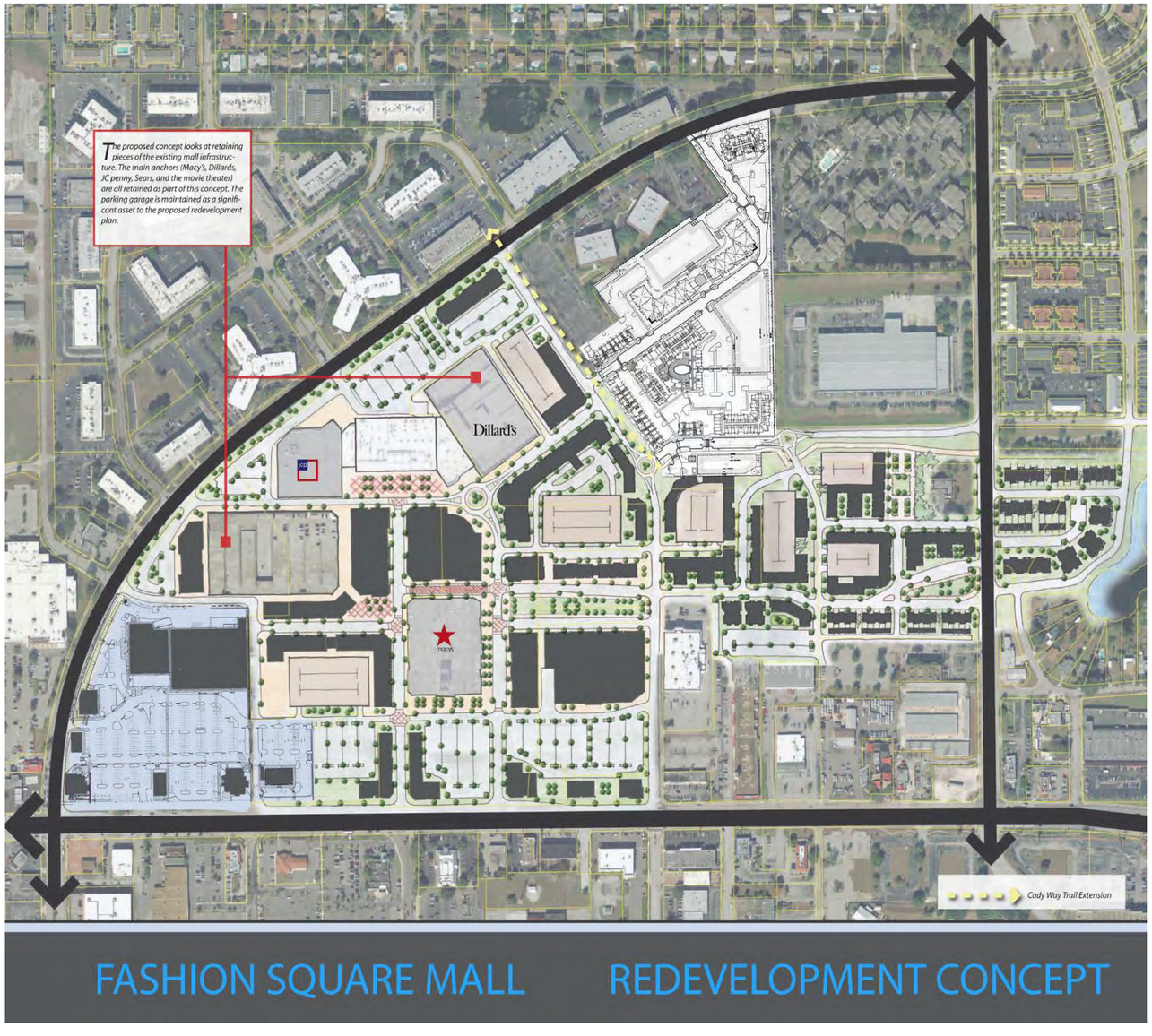
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.
- Implement of **community amenities and a public space** network to encourage walking.
- Implement the **proposed Airport Gap off street trail** on Maguire Boulevard to connect the Cady Way Trail with the Lake Underhill shared path. Also implement the proposed trail along the Fairgreen Street/Amelia Street extension project.

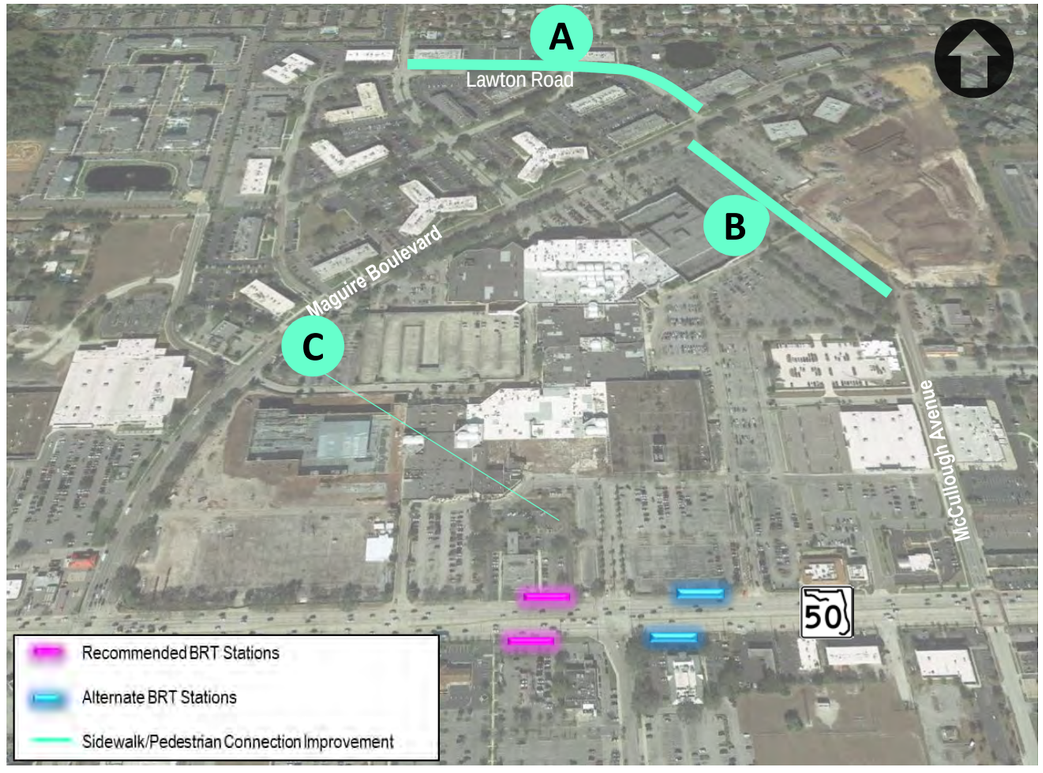
Narrow sidewalk along SR 50

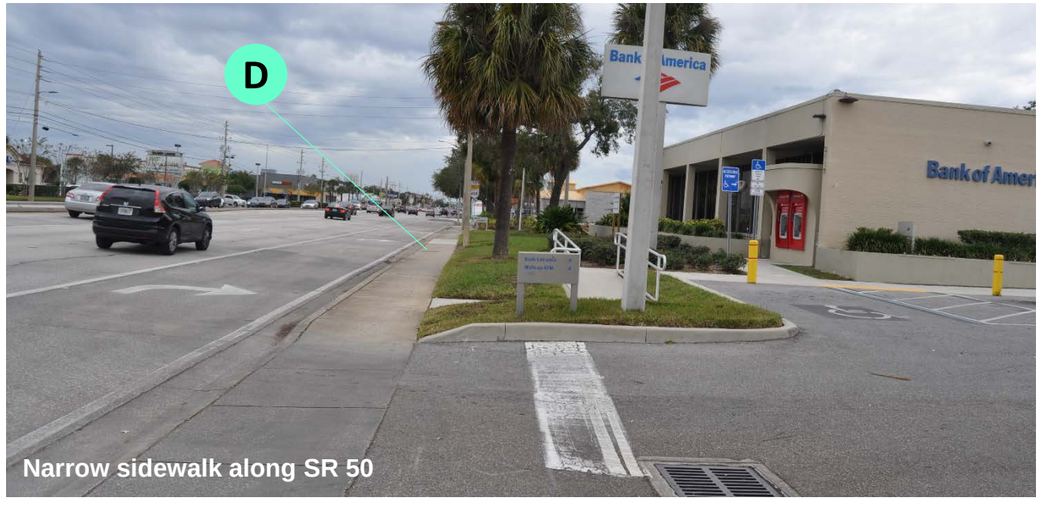


09 FASHION SQUARE

Station Area Type: REGIONAL CENTER

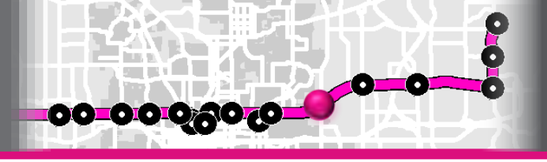






SR 50 Bus Rapid Transit (BRT) 6-19 **Pedestrian/Bicycle Connectivity Plans**

10 SEMORAN BOULEVARD



Station Area Type: REGIONAL CENTER

Recommended Improvements

Short Term

- Consider **designating existing bike lanes** along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Barton Drive, Truman Road, and Delta Street.

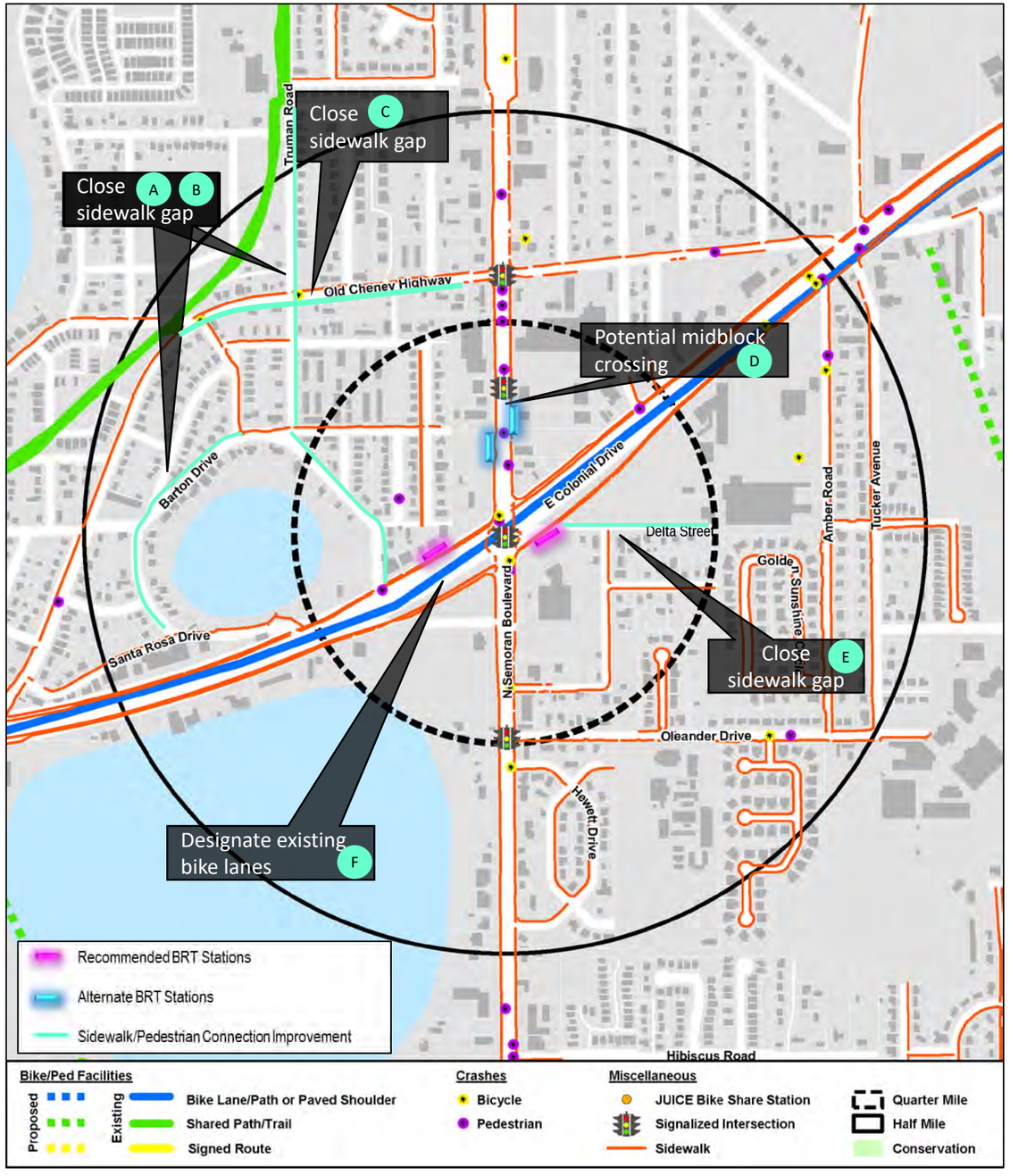
Long Term

- Implementation of a **pedestrian midblock crossing and median,** that coincides with the emergency-vehicle hybrid beacon on Semoran Boulevard, would enhance user experience and provide crossing opportunities for the alternate stations.
- Consider the implementation of a **shared path/ trail along Old Cheney High**way that provides connectivity from the Cady Way Trail to Semoran Boulevard.
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.

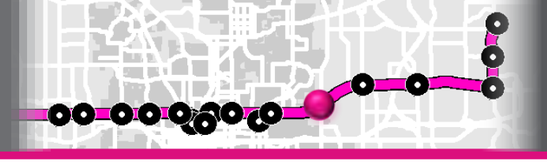
Station Metrics	
Walk Score (walkscore.com)	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort (based on TOD analysis)	Minimal bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s) with several connections
Residential Units (within 0.5 mile radius)	Single family: ~ 390 Multifamily: ~ 260
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 2,400
Key Destinations	Cady Way Bike Trail, Colonial High School, Good Shepherd Catholic School, Eastland Shopping Center

Bicyclist waiting to cross SR 50

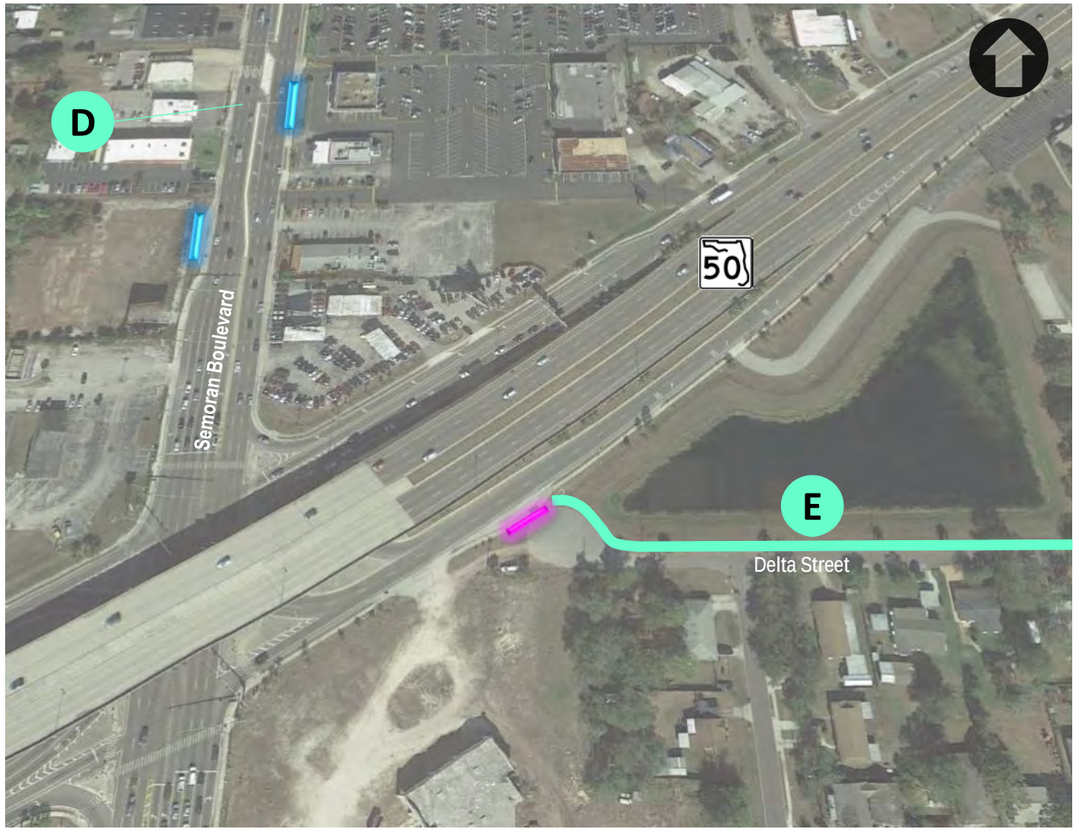
Pedestrian crossing SR 50

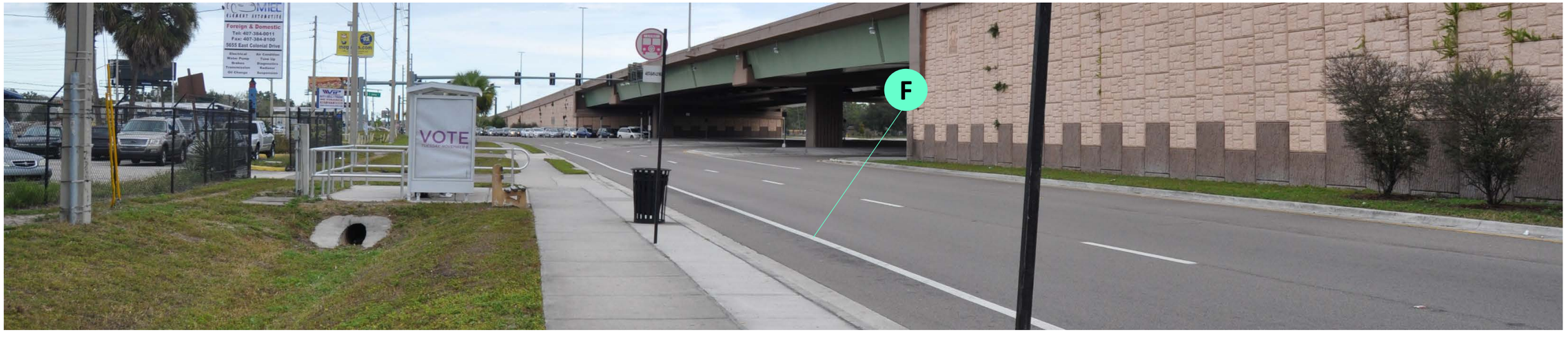


10 SEMORAN BOULEVARD

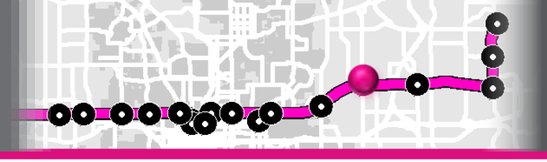


Station Area Type: REGIONAL CENTER





11 GOLDENROD



Station Area Type: COMMUNITY CENTER

Recommended Improvements

Short Term

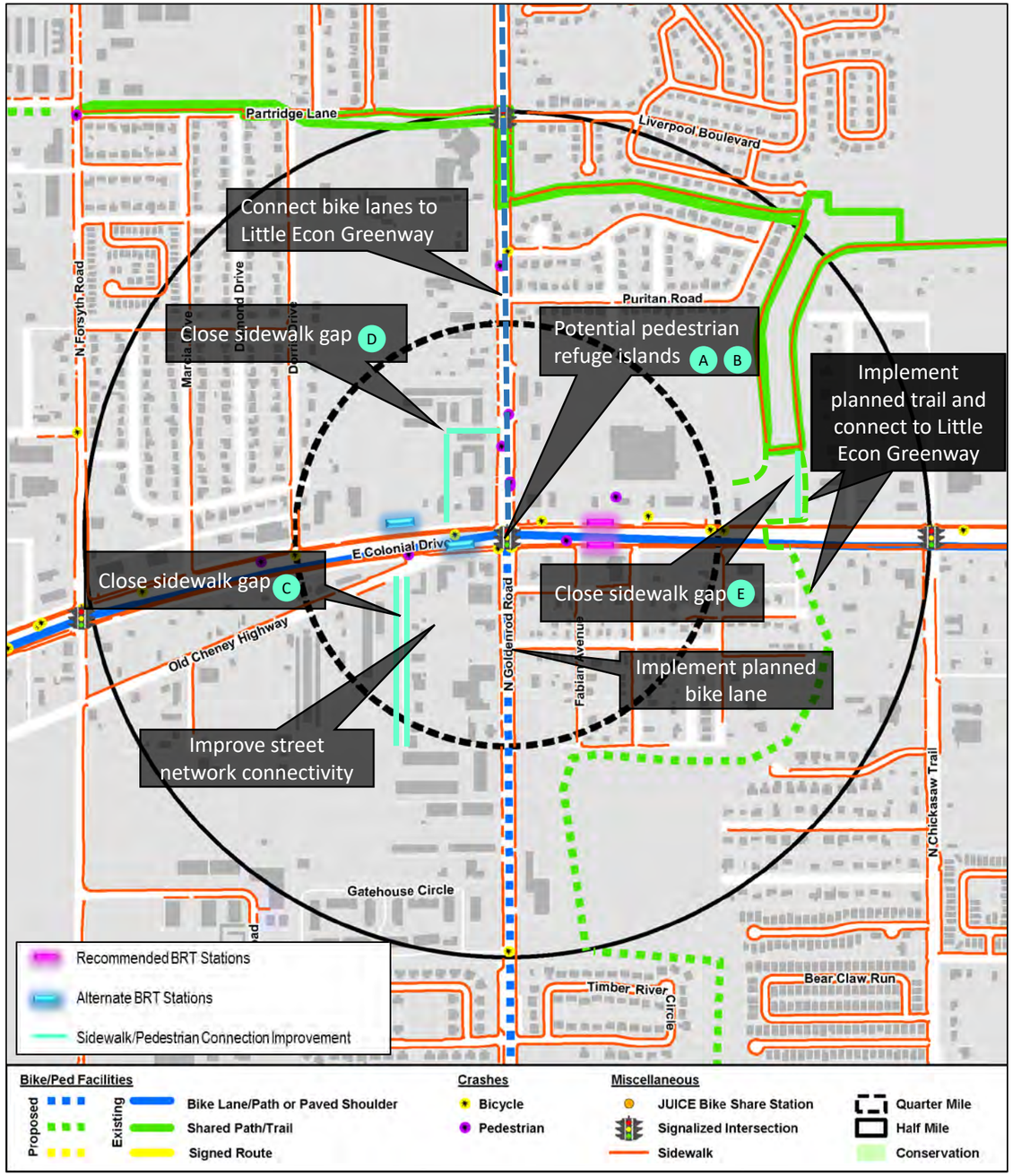
- **Markings and route signage** for bicycle lanes along SR 50 would increase awareness of the presence of the bicycle facility.
- **Implement the planned bike lane** on N. Goldenrod Road and the **planned off-street shared path** parallel to N. Goldenrod Road to enhance connectivity to neighborhoods for users of different skill levels.
- To improve pedestrian safety, consideration should be given to **implementing pedestrian refuge islands** on N. Goldenrod Road and E. Colonial Drive.

Station Metrics	
Walk Score *(walkscore.com)*	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 420 Multifamily: ~ 50
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 4,600
Key Destinations	Little Econ Greenway, Sam's Club, VCA East Colonial Animal Hospital, Islamic Society of Central Florida (Main Office)

Long Term

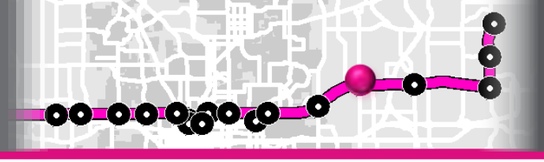
- Provide additional **connections from the Little Econ Greenway** to the bike lane network, the proposed trail south of Colonial Drive, and local/neighborhood streets.
- Provide **new street connections** as redevelopment occurs to improve walking and bicycling connectivity.
- **Improvements to the existing narrow sidewalks** would increase the comfort level for pedestrians and bicyclists.
- Implementation of **community amenities and a public space network** to encourage walkability.
- Considerations should be given for the implementation of **internal pedestrian / bike infrastructure such as pathways and crosswalks** for shopping centers in the vicinity of the proposed BRT station area including improved **pedestrian connectivity** between older buildings and the public sidewalk.

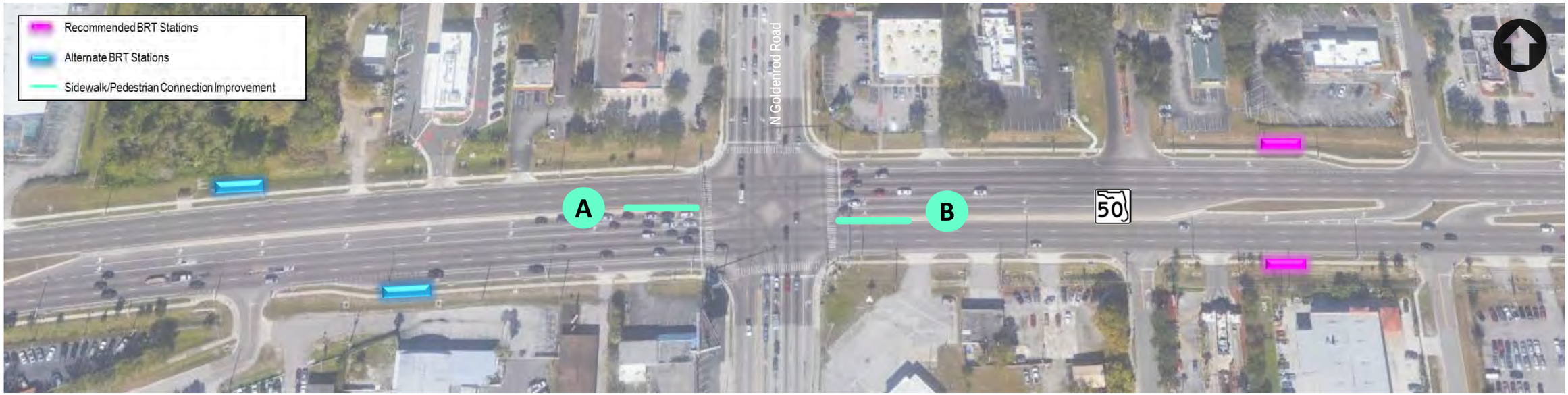
Pedestrian and bicyclist near Goldenrod

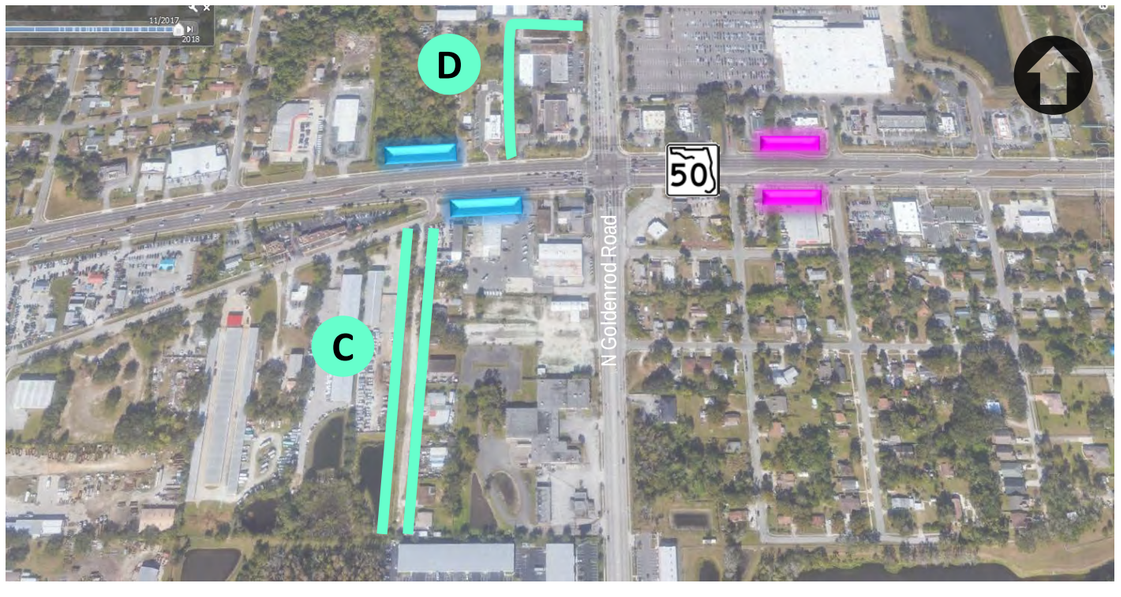


11 GOLDENROD

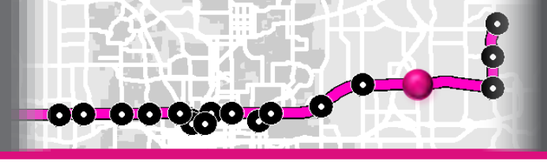
Station Area Type: COMMUNITY CENTER







12 ECONLOCKHATCHEE TRAIL



Station Area Type: **COMMUNITY CENTER**

Recommended Improvements

Short Term

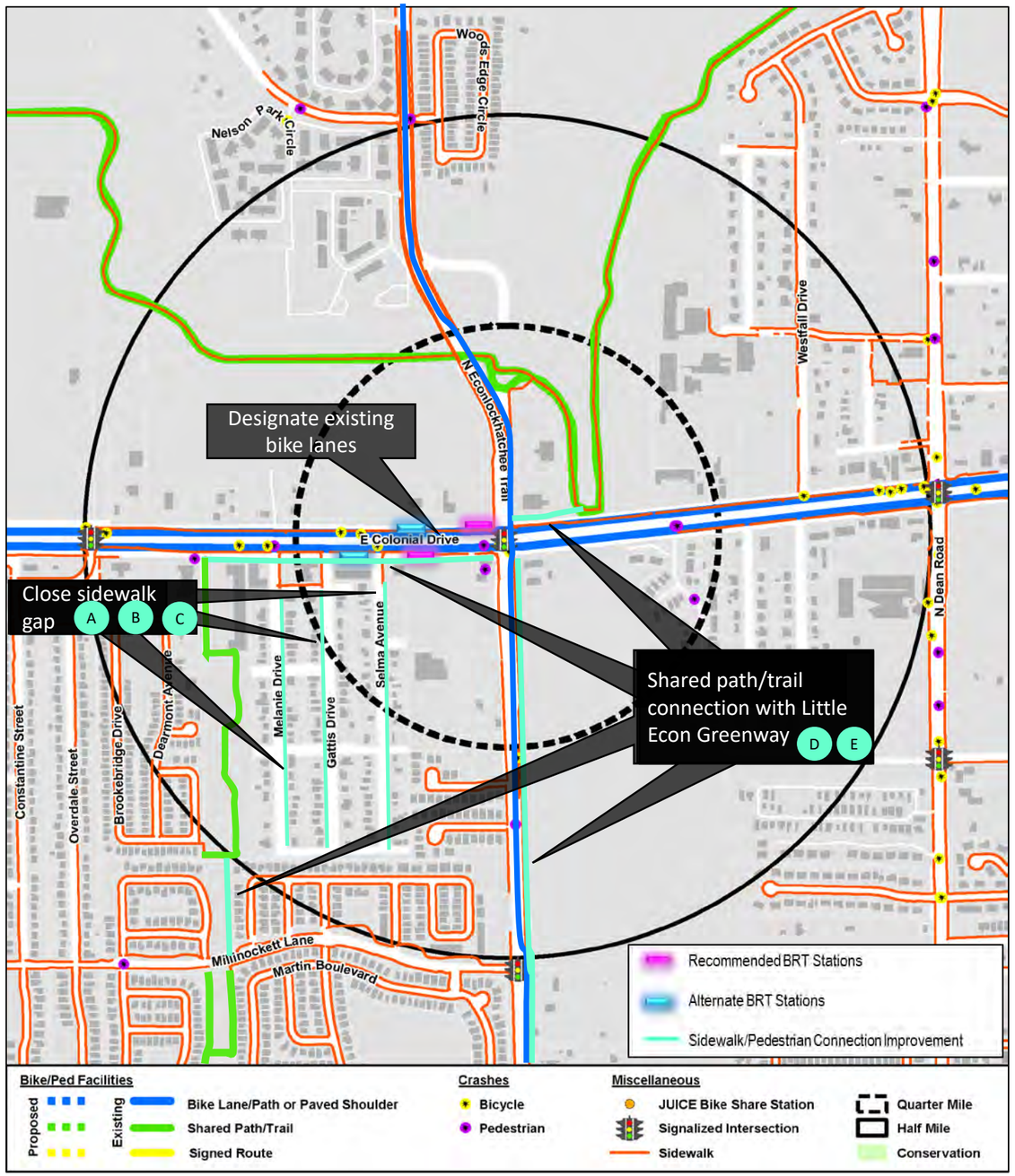
- Consider **designating existing bike lanes** along SR 50. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Selma Avenue, Gattis Drive, and Melanie Drive.

Station Metrics	
Walk Score *(walkscore.com)*	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 470 Multifamily: ~ 240
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 1,800
Key Destinations	Little Econlockhatchee River, Union Park Middle School, Union Park Elementary School, Valencia Community College

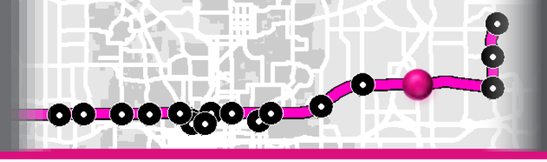
Long Term

- To improve walking and bicycle connectivity, **addressing the shared path / trail gaps along the existing north/south trail, west of Melanie Drive**, is recommended. Connections to the Little Econ Greenway could be provided through improved sidewalks along SR 50 allowing for crossing opportunities at the intersection with Econlockhatchee Trail. Adequate lighting along the share path / trail is recommended due to its potential after hours commuting used by Valencia Students.
- Implementing a **shared path / trail along the east side of Econlockhatchee Trail** would improve walking and bicycle connectivity between the Valencia Community College (VCC) Campus and the station area. A continuous shared path/trail connection with the Little Econ Greenway provides opportunities for the implementation of bikeshare / scooter service, offering additional choices for first/last mile mobility.
- As station area redevelops, **implement internal pedestrian / bike infrastructure** such as pathways and crosswalks for shopping centers immediately adjacent to the proposed BRT station area.
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.
- Implement of **community amenities and a public space** network to encourage walking.

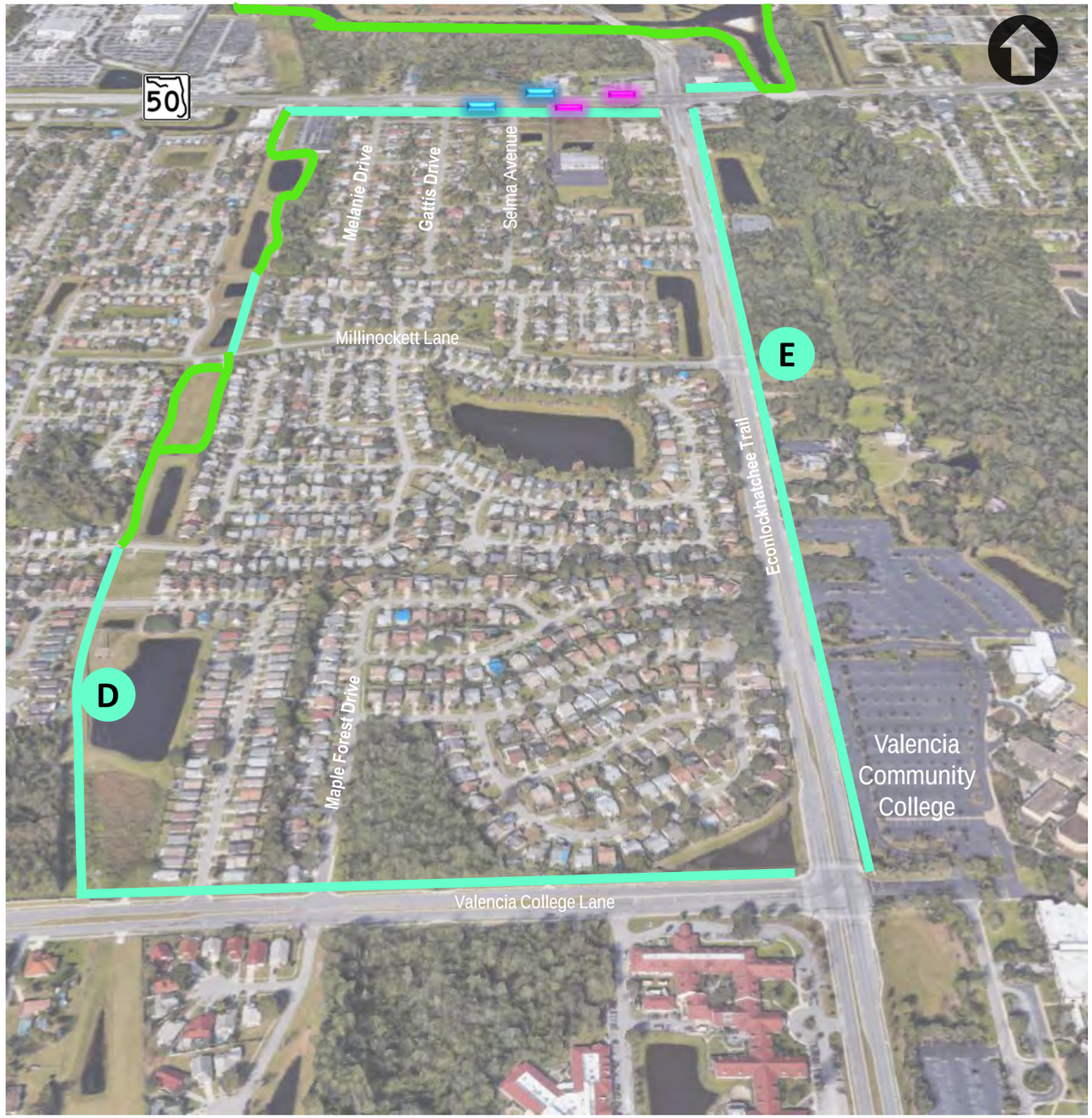
LYNX customers waiting at existing WB stop



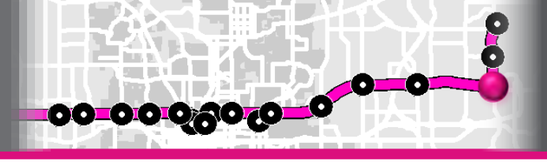
12 ECONLOCKHATCHEE TRAIL



Station Area Type: **COMMUNITY CENTER**



13 ALAFAYA TRAIL



Station Area Type: COMMUNITY CENTER

Recommended Improvements

Short Term

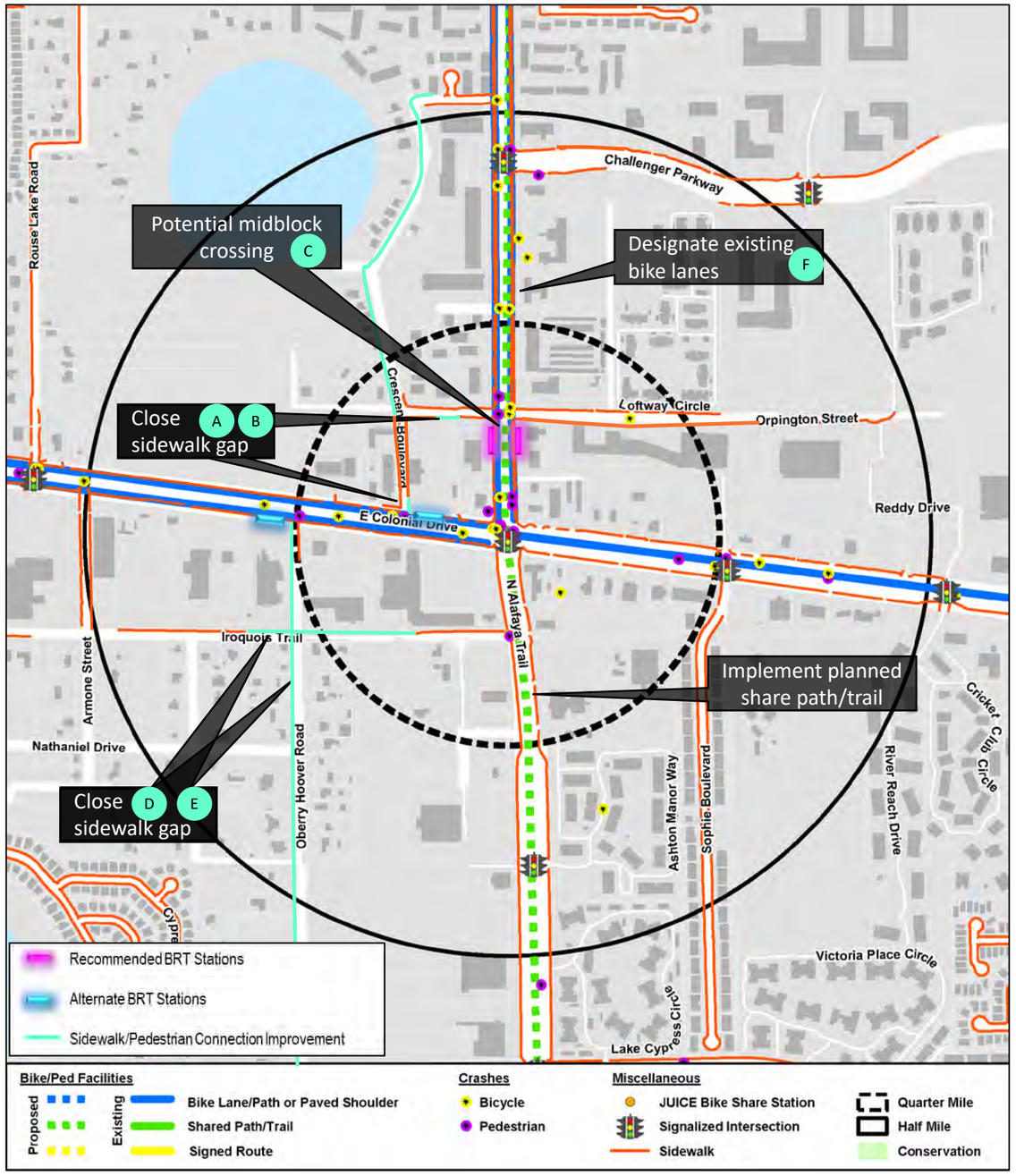
- Consider **designating existing bike lanes** along Alafaya Trail. Upon resurfacing, lanes could possibly be further narrowed to widen the bike lanes to include buffering per the FDOT Design Manual (FDM).
- To provide better connectivity between residential units and the proposed stations, **addressing the sidewalk gaps** at the following locations is recommended: Oberry Hoover Road, Iroquois Trail, Orpington Street and Crescent Boulevard.
- To enhance bicycle and pedestrian circulation, implementing the planned **share path/trail along Alafaya Trail, south or SR 50**, is recommended.

Long Term

- Implementation of a **pedestrian midblock crossing** would enhance user experience and provide crossing opportunities for the recommended stations.
- As station area redevelops, **implement internal pedestrian / bike infrastructure** such as pathways and crosswalks for shopping centers immediately adjacent to the proposed BRT station area.
- **Subdivide large blocks** as part of redevelopment to improve walking and bicycle connectivity.

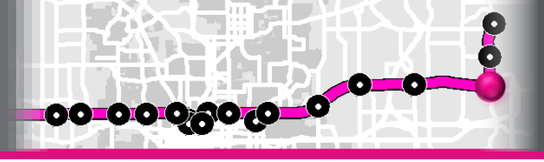
Station Metrics	
Walk Score *(walkscore.com)*	Somewhat Walkable *(some errands can be accomplished on foot)*
Bicycle Comfort *(based on TOD analysis)*	Minimal bike infrastructure
Overall Connectivity *(based on TOD analysis)*	Major barrier(s) with several connections
Residential Units *(within 0.5 mile radius)*	Single family: ~ 60 Multifamily: ~ 140
Employment *(within 0.5 mile radius)*	Retail / Office / Industrial: ~ 10,800
Key Destinations	East Orange Neighborhood Park, Public Storage, WMFE Channel 24, Alafaya Corporate Center, Hilton Garden Inn UCF

Pedestrians crossing Alafaya Trail transferring between routes

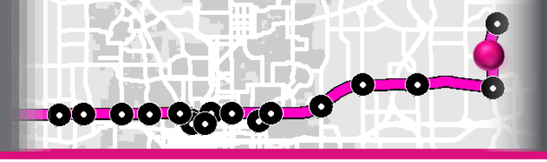


13 ALAFAYA TRAIL

Station Area Type: COMMUNITY CENTER



14 RESEARCH PARK



Station Area Type: COMMUNITY CENTER

Recommended Improvements

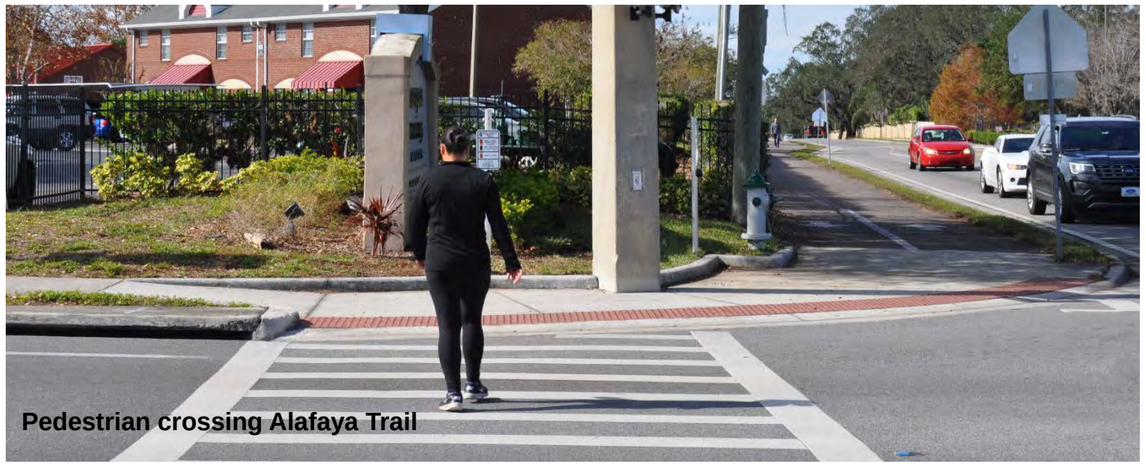
Short Term

- **Markings and route signage** for bicycle lanes along N. Alafaya Trail would increase awareness of the presence of the bicycle facility.
- To improve pedestrian safety, consideration should be given to implementing **hard pedestrian refuge islands** on N. Alafaya Trail

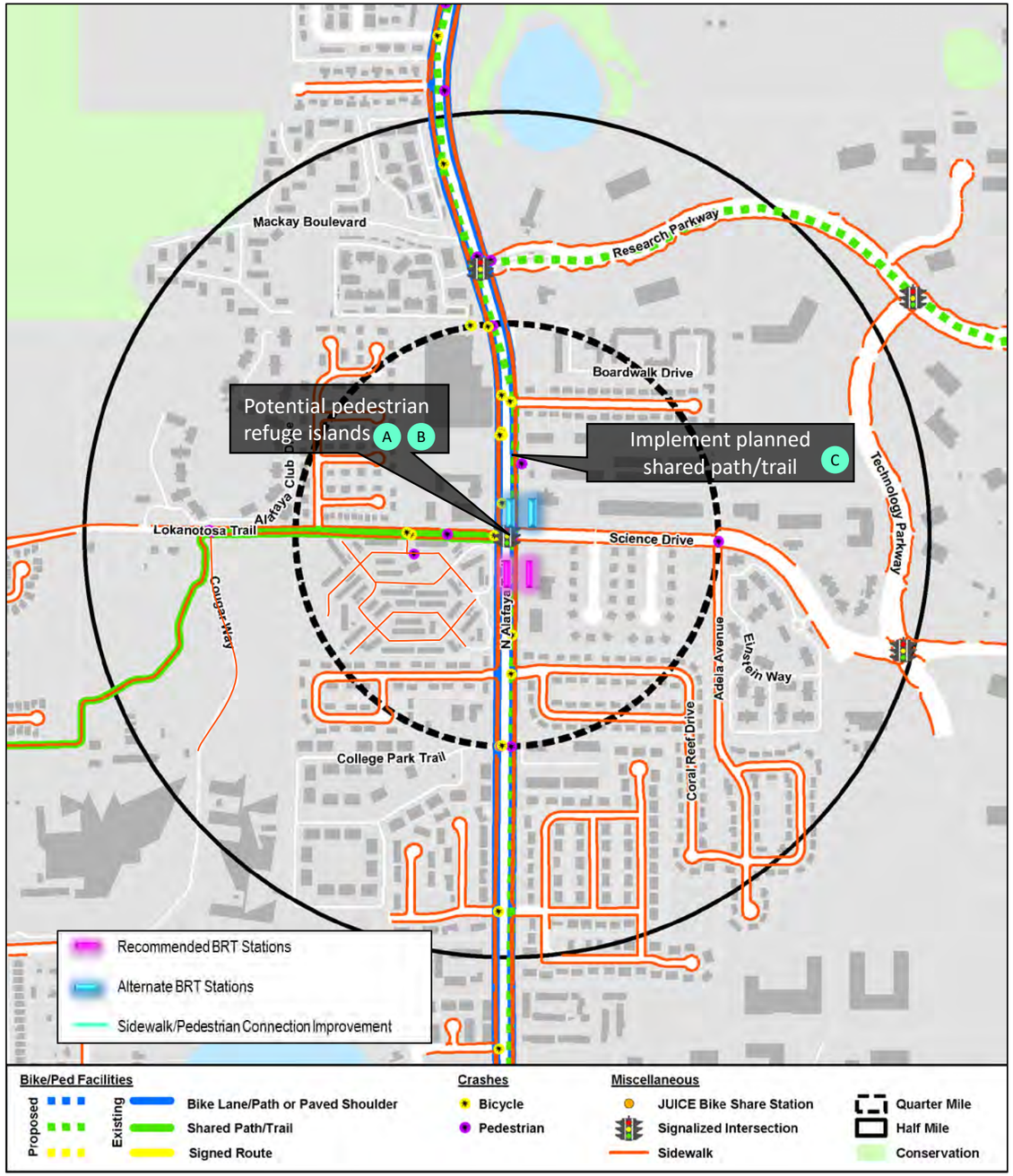
Long Term

- Implement **Orange County UCF/Alafaya Trail Pedestrian Safety Study** recommendations.
- Consider **bicycle facilities on or parallel to Science Drive** to provide access to workplaces within Central Florida Research Park.
- Consider **separated bicycle facilities on Alafaya Trail** to increase bicycle comfort and expand ridership.
- Provide or encourage **pedestrian connections** between Alafaya Trail sidewalks and building entrances.
- Improve **pedestrian and bicycle connectivity** between adjacent development sites.
- Consider the **removal of the striped out turn lane area** and shift the lanes one-half lane in order to move the outside curbs inwards. This lane shift would provide more space for recommended stations.

Station Metrics	
Walk Score (walkscore.com)	Car-Dependent *(most errands require a car)*
Bicycle Comfort (based on TOD analysis)	Minimal bike infrastructure
Overall Connectivity (based on TOD analysis)	Major barrier(s) with several connections
Residential Units (within 0.5 mile radius)	Single family: ~ 350 Multifamily: ~ 440
Employment (within 0.5 mile radius)	Retail / Office / Industrial: ~ 5,100
Key Destinations	Central Florida Research Park, La Quinta Inn & Suites Orlando UCF, Homewood Suites by Hilton

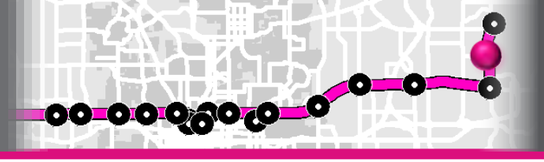


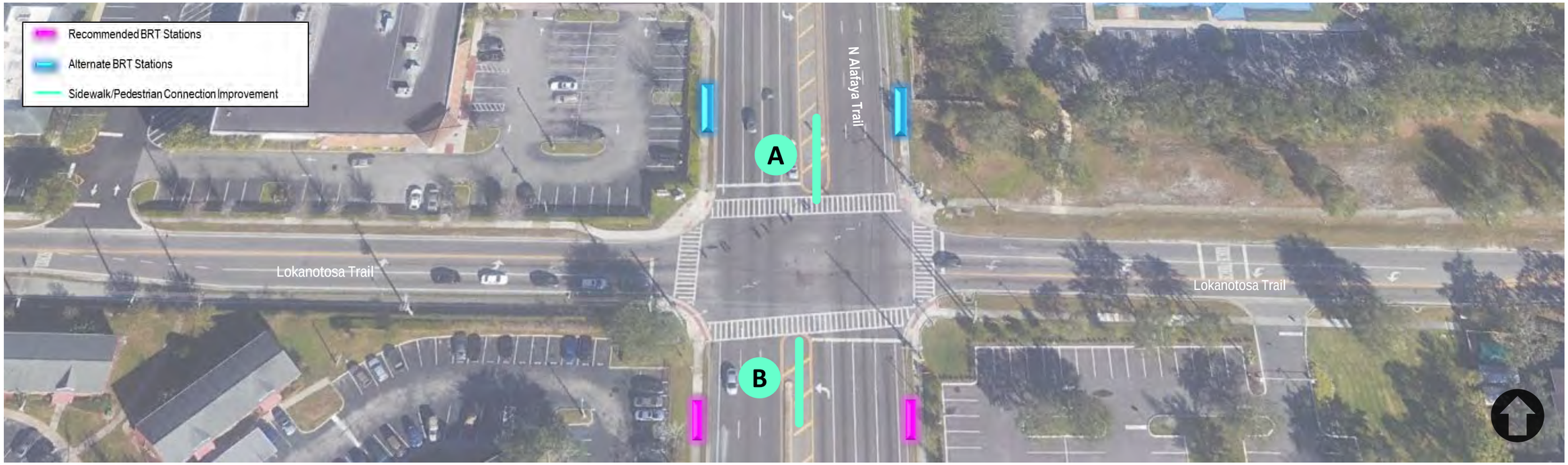
Pedestrian crossing Alafaya Trail



14 RESEARCH PARK

Station Area Type: COMMUNITY CENTER





Example of buildings lacking pedestrian connections to the public sidewalk


Amelia ST
102 ORANGE AVENUE WINTER PARK VILLAGE
731

7 NEPA/Environmental Assessment

7.0 NEPA / Environmental Assessment

7.1 Federal Transit Administration (FTA) Environmental Review Process

Recognizing that capital transit projects that receive federal support can have adverse consequences on the environment, Congress has enacted numerous environmental laws over the years to protect the human and natural environment. The National Environmental Policy Act of 1969 (NEPA) establishes the foundation for the environmental review process. In general, for projects that will likely be funded using FTA funds, an evaluation to ensure that any potential impacts to the environment are disclosed for public review is required.

Projects intending to apply for Federal transit funding should notify FTA at the time a project concept is identified. Once the applicant has furnished sufficient information and documentation, FTA will advise the applicant of the probable class of action and the related level of documentation required in the NEPA process.

There are three classes of action:

1. Categorical Exclusions: Granted for actions that do not individually or cumulatively involve significant social, economic or environmental impacts
2. Environmental Assessments: An Environmental Assessment (EA) may be required when the significance of the environmental impact is not clearly established. An EA can result in the identification of no significant impacts, requiring no further environmental evaluation, or identification of potentially significant impacts requiring the applicant to conduct an Environmental Impact Statement.
3. Environmental Impact Statements: Depending on the nature of the proposed project, FTA may immediately require applicants to develop an Environmental Impact Statement (EIS), or request an EIS based on the outcome of an EA. In either case, an EIS requires that a substantial technical analysis and public review process be conducted to evaluate project alternatives, identify potential social, economic and environmental impacts of the project, and designate methods to avoid or mitigate these impacts.

This chapter includes the information required to determine potential impacts under NEPA rulings for the SR 50 BRT Stations and to develop the FTA Region IV *Information Required to Initiate NEPA for Linear Projects* and the *Grantee Historic Preservation/Section 106 Consultation Worksheet for FTA Projects.*

The *Information Required to Initiate NEPA for Linear Projects Form* provides FTA with the information to determine the extent of environmental analysis required for the project, including potential impacts to the natural environment and human environment.

The *Grantee Historic Preservation/Section 106 Consultation Worksheet for FTA Projects* is required under Section 106 of the National Historic Preservation Act and 36 CFR Part 800. The information provided on this form is used by FTA to comply with the regulatory requirement to consider impacts on historic properties.

LYNX bus near Mercy Drive

7.2 Information Required to Initiate NEPA for Linear Projects

For FTA to determine the extent of environmental analysis required for the LYNX SR 50 BRT Station Areas, the questions in the *Information Required to Initiate NEPA for Linear Projects* form provides details on potential impacts to the environment. The assessment includes potential impacts to 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).
Once this form is reviewed, FTA will advise LYNX of the probable class of action and the related level of documentation required in the NEPA process.

INFORMATION REQUIRED TO INITIATE NEPA for LINEAR PROJECTS

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).

Note: We only need the information below for the Locally Preferred Alternative. If there are other alternatives being considered, we only need a map and a brief description of the other alternatives.

INFORMATION REQUIRED	QUESTIONS ADDRESSED
☐ Sources of federal, state, and local funds and transit nexus	*Is the project a Federal Action eligible for FTA funding?*
☐ Description of route with a clear map showing existing stations and proposed stations	*What is the route and where would new stations be placed? KML/KMZ map files work well.*
☐ Photos of proposed station locations and that show what is to the north, east, south, and west of the station locations	*Are there possible environmental areas of concern at the site or in its surroundings?*
☐ A beginning address for the route so that FTA staff can "electronically drive" the route via an online map app (or KML/KMZ files)	*What are the characteristics of the built/ natural environment along the route?*
☐ Photos of any parks or public land along the route	*Any non-historic 4(f) concerns (parks, refuges)?*
☐ Drawings/renderings of proposed stations and station locations	*Will the proposed stations cause viewshed issues?*
☐ Description of any project construction. Be specific for each action of the project	*Will all work be within the existing ROW? Will there be any road widening? Any parking removed? Acquisitions?*
☐ Total length of project	*Number of miles.*
☐ List of any public involvement done for the project, to date, if any	*Has the community affected by the project been 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.

Information required in the *Information Required to Initiate NEPA for Linear Projects* is detailed in Appendix B. A summary of the findings related to potential impacts to the environment is provided below.

1. Sources of Federal, State, and Local Funds and Transit Nexus
The SR 50 Bus Rapid Transit (BRT) is included in the MetroPlan Orlando 2040 Long Range Transportation Plan. However, funding sources have not been identified for design and construction. During future phases of the project development, capital cost estimates will be developed and reported in year-of-expenditure dollars (per FTA guidance), a detailed operating plan and O&M cost estimate will also be prepared, and a detailed funding and financing plan will be developed.

2. Description of Project
The proposed SR 50 BRT is to operate along SR 50/Colonial Drive traveling in mixed-traffic between Powers Drive and the University of Central Florida (UCF) main campus. The locally preferred alternative, identified in the 2013 SR 50/UCF Connector Alternatives Analysis (AA), includes 18 proposed station areas improving access to jobs, activity centers, and educational institutions along the corridor. Project development activities include the current SR 50 Station Area Analysis which further prepares the region to incorporate high capacity transit by analyzing 14 proposed station areas identified in the SR 50 AA. **Figure 1** in Chapter 1 of this report illustrates the extent of the SR 50 BRT corridor and highlights the stations included in the SR 50 Station Area Analysis assessment.

3. Description of Existing Property
The SR 50 corridor is mainly lined with commercial/office uses, with some mixed-use and industrial development. Beyond the commercial parcels, the majority of land use is residential. The proposed SR 50 BRT alignment comprises approximately 20 miles and 18 proposed station areas. Project development activities include the assessment of 14 of the proposed station areas to determine recommended station locations and Transit Oriented Development (TOD) opportunities. It is anticipated that station improvements can be accommodated within existing right-of-way or existing transit station easements.

4. List of Actions Required Upon Existing Property to Achieve Complete project
It is anticipated that station improvements for the SR 50 BRT can be accommodated within existing right-of-way or existing transit station easements.

The extent of actions upon existing property will be defined during the design phase of the project. Potential actions upon existing property include:

- Powers Drive: The westbound recommended station does not likely require right-of-way, but does have an increased cost impact due to the removal of the existing guard rail and the addition of a retaining wall due to the vertical slope of the adjacent parcel, located north of the proposed station.
- Mercy Drive: The eastbound recommended station requires modifications to the wall adjacent to the sidewalk, potentially impacting the existing business located south of the proposed station.
- Orange Blossom Trail (OBT): Additional right-of-way would be beneficial for the station improvements. However, the need can likely be avoided through the use of curb extensions at both preferred locations.
- Magnolia Ave (North Quarter): Additional easements for stations would be beneficial. However, it is likely that additional right-of-way is not required if bulbouts are used. Removing existing on-street parking will be required.
- Mills 50: Additional right-of-way would be beneficial to accommodate station improvements for the westbound recommended station. However it can be accomplished by moving the curbline and removing existing on-street parking.
- Fashion Square: The existing shelter areas at the recommended locations provide space to accommodate BRT station improvements. Additional space may be beneficial for some BRT station features; however, existing agreements for transit easements with business owners can help avoid the need for right-of-way acquisition.
- Alafaya: Additional space may be required to accommodate station improvements. However, additional space could be created by narrowing a portion of the median along Alafaya Trail and changing the taper locations for the turn lanes for some of the left and right turns.
- Research Park: The proposed station locations allow for the potential for more station area to be created by removing the striped out left turn lane along Alafaya Trail and shifting the outside curb lines.

7.3 Grantee Historic Preservation / Section 106 Consultation Worksheet for FTA Projects

Section 106 of the National Historic Preservation Act and 36 CFR Part 800 require that federal agencies consider the impact of federal undertakings on historic properties. Undertakings include federal grant funding, and the information provided on this form is used by FTA to comply with the regulatory requirement to consider impacts on historic properties.

GRANTEE HISTORIC PRESERVATION/SECTION 106 CONSULTATION WORKSHEET FOR FTA PROJECTS

Project Name _____ Date Worksheet Completed _____

Grantee Name _____

Physical Address of Proposed Project Site or Length & Reference Points of Proposed Project Corridor

_____

_____

PROJECT DETAILS (*Check All That Apply*. Base this information on a site visit and your knowledge of the project area.)

- ☐ Ground Disturbing Activities (includes grading, scraping, tree removal, clear cutting, removal of concrete/paving, demolition)
- ☐ Buildings 45 Years or Older within ½ mile of Project
- ☐ Demolition Planned for the Proposed Project
- ☐ Urban Environment
- ☐ Rural Environment
- ☐ Construction Planned for the Project
- ☐ Project Limited to Equipment Purchase
- ☐ Known Historic Districts within ½ mile of Project*
- ☐ Property Contains Existing Buildings/Structures
- ☐ Land Previously Undisturbed or Agricultural
- ☐ Project Has a Rail Component

BRIEF PROJECT DESCRIPTION (i.e., rehabilitation of building constructed in 1959 for BRT station)

Provide photos and a USGS map of the area that shows the boundaries of the proposed project.

ADDITIONAL INFORMATION:

IF PROJECT PLANS CHANGE AFTER COMPLETION OF THE ENVIRONMENTAL/SECTION 106 REVIEW, YOU MUST NOTIFY FTA WHO WILL THEN NOTIFY THE CONSULTING PARTIES AND REEVALUATE YOUR FINDINGS (SEE 24 CFR § 50.36 OR § 58.47).

Worksheet Completed by _____

Position Title _____

Phone Number _____ Email _____

Address _____

Section 106 of the National Historic Preservation Act and 36 CFR Part 800 require that Federal agencies consider the impact of Federal undertakings on historic properties. Undertakings include Federal grant funding, and the information you provide on this form will be used by FTA to comply with the regulatory requirement to consider impacts on historic properties.

FTA Region IV appreciates your assistance in maintaining compliance with the regulatory requirements.

Information required in the *Grantee Historic Preservation/ Section 106 Consultation Worksheet for FTA Projects* is detailed in Appendix B. A summary of the findings related to potential impacts to historic properties is provided below.

1. Ground Disturbing Activities
The proposed SR 50 BRT stations are generally located within existing right-of-way or transit easements. Implementing station improvements will require ground disturbing activities including grading, scraping, tree removal, removal of concrete/paving, and demolition.

2. Buildings 45 Years or Older within ½ mile of Project
Location and inventory of historic structures within ½ mile of the project is provided in Appendix A.

3. Demolition Planned for the Proposed Project
Demolition will be required for the implementation of BRT stations along SR 50. Demolition activities are needed in order to modify the existing curb to provide near-level boarding. The implementation of new shelters and station amenities will also require demolition activities. Some stations will potentially require shifting existing roadway lanes or narrowing existing medians in order to move the outside curbs inwards to provide more space for the station area.

4. Urban Environment / Rural Environment
The SR 50 corridor is mainly lined with an urban environment comprising commercial/office uses, with some mixed-use and industrial development. Beyond the commercial parcels, the majority of land use is residential.

5. Construction Planned for the Project
The SR 50 BRT is proposed to operate in mixed-traffic within existing right-of-way. Proposed station locations are generally located where LYNX stops/stations existing right-of-way or transit easements. However, implementing station improvements will require construction activities.

6. Project Limited to Equipment Purchase
The SR 50 BRT project is not limited to equipment purchase.

7. Known Historic Districts within ½ mile of Project
Location of historic districts within ½ mile of the project is provided in Appendix A

8. Property Contains Existing Buildings/Structures
Some station locations may require additional right-of-way within parcels that contain existing buildings/structures. However, existing agreements for transit easements with business owners could potentially preclude the need for right-of-way acquisition.

8. Land Previously Undisturbed or Agricultural
The analysis performed for the proposed station locations, show no impacts to land previously undisturbed or agricultural. The SR 50 BRT would operate on roadways with existing fixed-route transit service.

7. Project Has a Rail Component
The SR 50 BRT project does not have a rail component.

Redeveloped and original buildings along Mills Ave

8 Public Involvement

8.0 Public Involvement

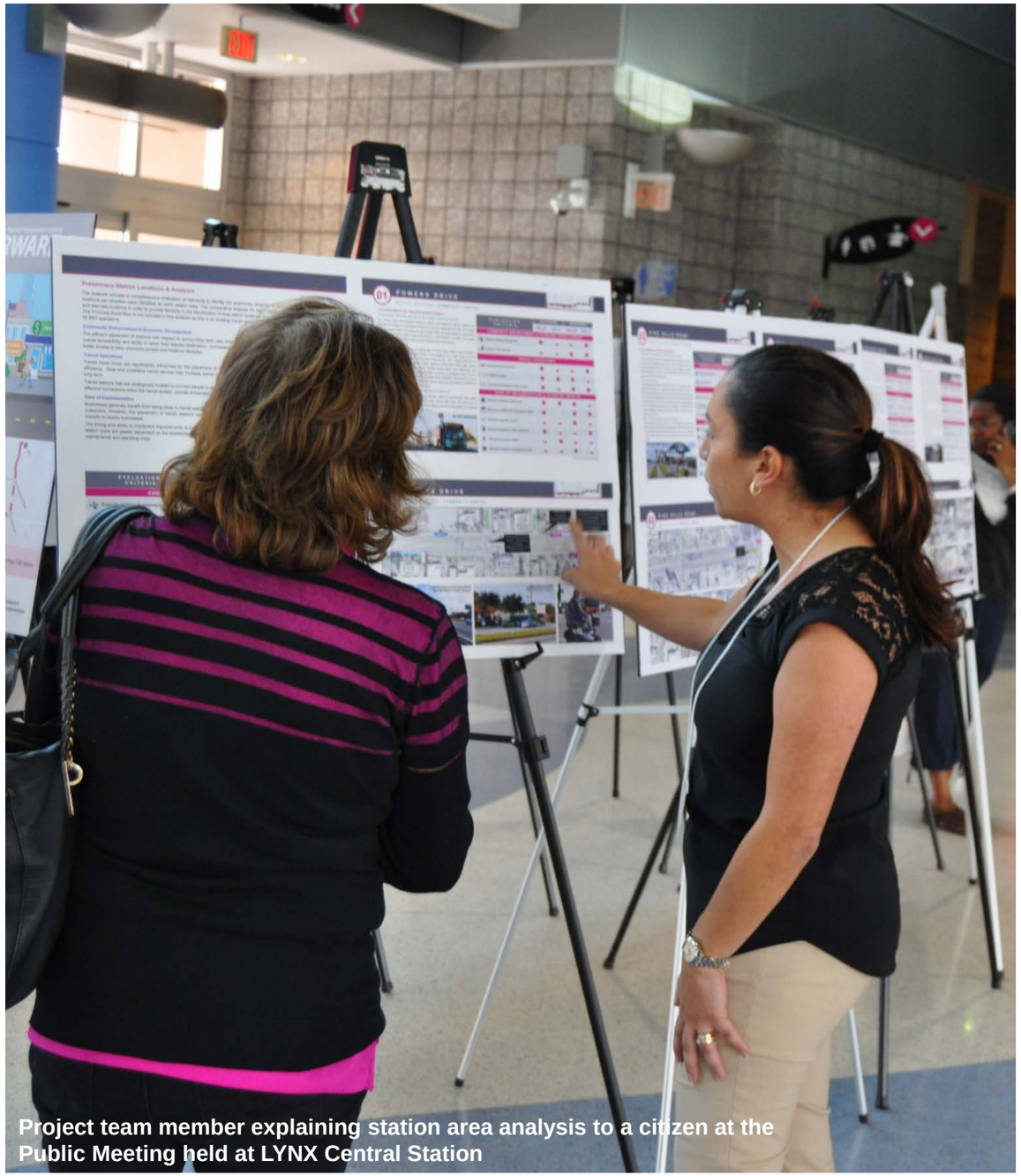
It is LYNX's goal to ensure that its customers, local government partners, and residents throughout the LYNX service area have multiple opportunities to learn about the SR 50 BRT project, ask questions, and provide feedback. A range of community outreach and conversations with stakeholders as completed and integrated into the technical work elements of this Station Area Analysis part of the project. The intent of public involvement for this project was to share project information while creating a comfortable environment for the exchange of ideas and public input.

8.1 Public Involvement Plan

A Public Involvement Plan (PIP) was developed at the beginning of the study, in October of 2018, to ensure that the SR 50 Station Area Analysis provides numerous opportunities for public participation. It serves as a strategic guide for the project's approach, in compliance with federal regulation and describes the public involvement process used and the public involvement activities conducted throughout the development of this study. The goals of the PIP include:

- Promote greater awareness and understanding of LYNX and the SR 50 Station Area Analysis process;
- Encourage inclusive and comprehensive public input throughout the analysis process;
- Develop the LYNX SR 50 Station Area Analysis around public feedback received throughout the process; and
- Enhance the LYNX public participation process through continued observation and incorporation of new approaches.

These goals are accompanied by specific objectives and strategies which intended to provide an inclusive and interactive participation process. The plan was guided by the PIP framework provided by MetroPlan Orlando as well as FDOT public involvement guidelines. The final PIP is provided in Appendix C.



Project team member explaining station area analysis to a citizen at the Public Meeting held at LYNX Central Station

8.2 Engagement Tools

Public outreach for the SR 50 Station Area Analysis involved a variety of engagement tools encompassing in public meetings and digital outlets. The materials and platforms discussed in this section were used during the outreach process. All engagement materials used for the public involvement process are located in Appendix B.

Notice Flyer

A notice flyer/postcard for the public meeting was sent to property owners within 500 feet around the proposed station areas via mail. The flyer detailed the time and location of the public meeting and highlighted the project background and study area. In total there were 260 notice flyers distributed.

Fact Sheet

A fact sheet was created that provided key highlights from the project to inform the public at the outreach events. This handout was created as a single sided 8.5 x 11 sheet displaying the project goals, study area, and description of the project background, on-going study progress, and next steps. This fact sheet was developed in English and Spanish.

Comment Form

A comment form was created and provided at the public meeting to allow attendees to leave their feedback with the study team. The comment form allows any comments or questions that the attendee may have about the proposed stations. Attendees had the opportunity to leave their contact information if they would like to receive further notices.

Engagement Boards

Several engagement boards were provided at the public meeting which offered information about each proposed station. Each station analysis board provided an overview of the considerations for the recommended station such as community enhancement and economic development, transit operations, and ease of implementation and potential impacts. A matrix was provided to compare the eastbound and westbound recommended station locations to their alternatives. Maps were provided to illustrate the location comparative to its surrounding on SR 50.

Public Meeting at LYNX Central Station

8.3 Outreach Activities

In an effort to educate the riders and the public about the SR 50 Station Area Analysis, LYNX contributed to community outreach through a large public meeting and smaller meetings with stakeholders and key participants, discussed more in Section 8.4.

Public Meeting

The purpose of the public meeting was to identify and assess general community perceptions of transit to help identify issues and opportunities for LYNX. Property owners within 500 feet around all of the proposed station sites were notified of the public meeting. A total of 260 notices were developed and distributed via mail, and about 45 people approached the exhibits to ask questions about the project.

The SR 50 Station Area Analysis public meeting was held at LYNX Central Station on March 12, 2019. The public meeting was an open-house style format and included a check-in table, a handout, and a opportunity for comments. After checking-in and receiving their materials, participants interacted with the project team and observed the engagement boards on display. The study team presented the draft locations of the stations and TOD concepts. Lastly, there were 16 comment forms submitted to the study team by the end of the meeting. The comment forms allowed attendees an opportunity to share their thoughts and leave contact information to receive further notices of future meetings. Meeting materials from the public meeting are provided in Appendix B.

> *I am happy to see another option to help people commute.*

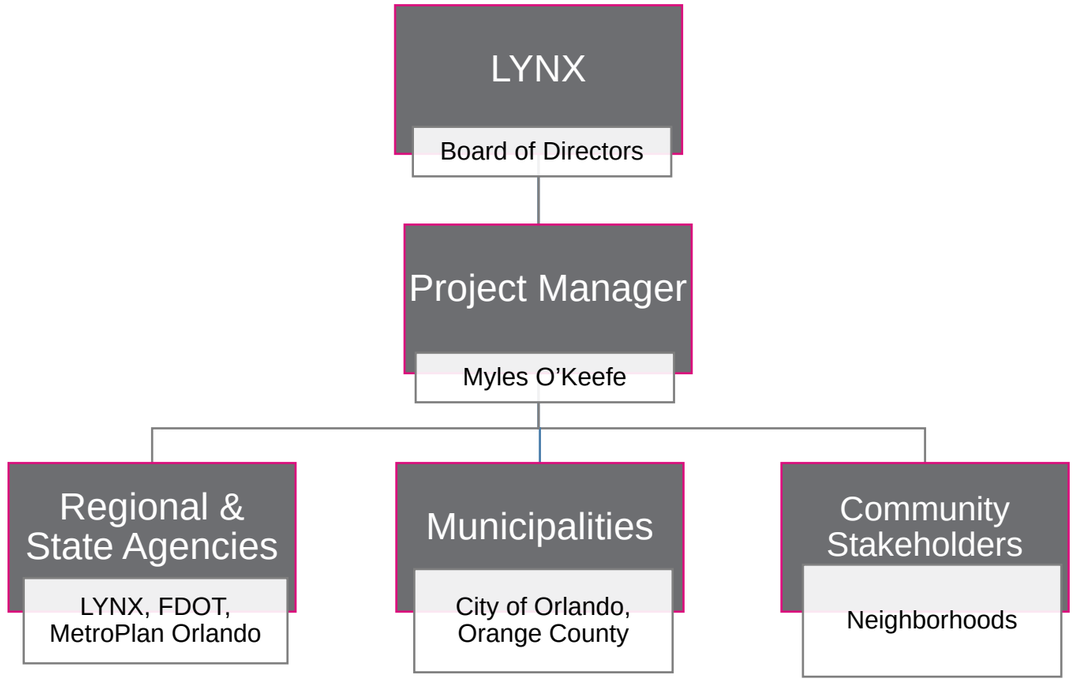
> *I think the future bus "Express" is much needed. Great idea!*

> *More bus stops and more frequently.*

Public Meeting at LYNX Central Station

8.4 Stakeholder Engagement

LYNX recognizes the importance of involving community leaders throughout the planning process of this study. LYNX leadership is committed to engaging key regional stakeholders and keeping them updated on progress and ensuring they have a voice. The study team and LYNX coordinated with inter-government agencies in an effort to ensure outreach efforts were communicated clearly. The study team relies on the input from a group of technical advisors. The study team worked with a group of representatives that make up the Project Advisory Group (PAG) and worked with other stakeholders in the Orlando community including neighborhood associations.



Project Advisory Group

The PAG consisted of representatives from LYNX, FDOT, the City of Orlando, Orange County, and MetroPlan Orlando. The PAG was assembled to provide input into the study and assist with guiding it to a successful completion. The PAG's purpose was to provide strategic guidance and support to the project team to ensure that the Study met the project's objectives.

A total of three meetings were held with the PAG. The purpose of Meeting #1 in November 9, 2018 was to provide an overview of the project and conduct a walking/riding tour to assess station areas looking at engineering site details, along with Transit Oriented Development (TOD) context and opportunities. This allowed an opportunity for the study team and PAG representatives to develop ideas and provide feedback in an immersive and interactive environment. The PAG analyzed each of the station stops and provided feedback based on certain criteria including but not limited to existing development, driveway conflicts, right-of-way needs, impacts to traffic operations, and more.

Two other meetings were held on February 7, 2019 and May 13, 2019 with the purpose of reviewing findings and recommendations in regards to station locations, TOD concepts, station design, and pedestrian/bicycle connectivity plans. A summary of the findings and notes from the walking/riding tour and the minutes from PAG Meetings #2 and #3 are provided in Appendix B.

Project Advisory Group meeting at LYNX Central Station

Project Advisory Group walking/riding tour

Neighborhood Associations

Neighborhood and community associations serve as a great forum for the exchange of information on a project. Collaborative planning and focused engagement with affected neighborhoods allow discussions for TOD opportunities and minimization for impacts to the sites. These groups include the Pine Hills Community Council and Mills 50 Main Street.

PINE HILLS COMMUNITY COUNCIL
A Non-Profit Organization

MILLS 50

Central Florida Regional Transportation Authority

FORWARD

IMAGINE INNOVATE CONNECT® ARRIVE