



ORANGE AVENUE

CORRIDOR STUDY

CORRIDOR MASTER PLAN SUMMARY | AUGUST 2017

Prepared by:



Prepared for:





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1

Executive Summary

Executive Summary

Introduction

MetroPlan Orlando and the City of Edgewood initiated the Orange Avenue Corridor Study to establish Orange Avenue (SR 527) as a livable and walkable multi-modal urban thoroughfare. This study establishes a corridor vision and identifies implementation actions to address network efficiency, safety, and livability within the context of future transportation needs. The study was completed in collaboration with Florida Department of Transportation (FDOT) District Five and other local and regional agency partners. This study provides a framework for improved mobility as part of a planning effort that engages residents, business owners, and others who use the Orange Avenue corridor.

The corridor study area is 2.4 miles and includes Orange Avenue (SR 527) from Pineloch Avenue in the City of Orlando (northern limit) to Hoffner Avenue in unincorporated Orange County (southern limit). FDOT District Five has responsibility for the roadway for the entire length of the study area. Beyond the roadway itself, the study area falls within three jurisdictions: the City of Orlando (0.3 miles), unincorporated Orange County (0.4 miles) and the City of Edgewood (1.7 miles), with the majority of the corridor frontage within the City of Edgewood.

The study process engaged the project stakeholders, including residents, business owners, elected and appointed officials, and partner agencies. A project visioning team (PVT) was established to facilitate interagency coordination and provide input regarding the corridor analysis, improvement alternatives and recommendations. The PVT members consisted of representatives from Florida Department of Transportation, LYNX, City of Edgewood, City of Orlando and Orange County.

In addition to the PVT meetings, a series of public forums were held at the City of Edgewood Farmer's Market in October of 2015, a series of one-on-one interviews with residents and merchants along the corridor, public meetings with the Edgewood City Council and Planning and Zoning Board, and a series of public meetings with the MetroPlan Orlando Committees and Boards.

Corridor Planning Background

A series of previous studies were reviewed and summarized to help guide previous efforts within and adjacent to the study area. The City of Edgewood completed a master plan in 2001 and the plan focused planning efforts for the City to become "a more livable Edgewood, where pedestrians, cyclists, transit users and motorists peacefully coexist."



Existing Conditions / Two-Way Typical Section

Among the many things identified in the master plan that were still relevant for this project include the formation of a town center adjacent to the Holden Avenue, Orange Avenue, and Gatlin Avenue Intersections, and the beautification of Orange Avenue. In 2014, the City of Edgewood worked with the Urban Land Institute's TAP to update the master plan to include aspects of market viability, enhanced connectivity, and sound funding strategies.

Similar corridor planning studies have been completed for segments of Orange Avenue to the north (within the City of Orlando) and to the south (within Pine Castle, Belle Isle and unincorporated Orange County). Both plans focused on enhancing safety, aesthetics, and multimodal mobility. The purpose of the projects was to provide a safe and efficient multi-modal transportation corridor that serves a wide array of users, including the business community, while providing and enhancing livability consistent with the future vision for the area. They both also included specific improvements that can be advanced near-term through local agency participation and/or by FDOT as 3-R (Resurfacing, Restoration and Rehabilitation) projects, safety enhancements or push-button projects.

Finally, the FDOT conducted an intersection study for the Holden Avenue, Orange Avenue, and Gatlin Road intersections. This implementation plan proposes to widen the pavement for lengthened side-by-side left turn lanes along Orange Ave to service Gatlin Ave and Holden Ave. Other improvements include: the removal of the outside southbound continuous lane on Orange Avenue, pavement widening, milling and resurfacing of the roadway, introducing mast arm signals, upgrading pedestrian features, and drainage improvements.



Existing Conditions / One-Way Typical Section

Existing Conditions Review

The existing land use and transportation conditions in the corridor study area were examined. Between Mandalay Road and Pineloch Avenue, Orange Avenue has a five-lane typical section, with two 11' through lanes in each direction, a 12' two-way left turn lane, and 4.5' bike lanes in both directions. From Hoffner Avenue to Mandalay Road the corridor consists of a one-way pair, with Orange Avenue carrying southbound traffic and Hansel Avenue carrying northbound traffic.

Within this portion of the corridor, the typical section for both streets consists of two 12' through lanes, a 13' left-turn lane, and 5' bike lanes in both directions. Additional traffic analysis is detailed below:

Volumes/Freight Traffic – Orange Avenue serves as a primary north-south arterial connecting downtown Orlando (and Interstate 4 via Michigan Avenue) with industrial areas in Taft. Orange Avenue is also a primary freight corridor. Traffic counts collected in 2015 show an average daily volume of 36,900 vehicles north of the Holden/Gatlin intersections, and 41,500 vehicles south of the Holden/Gatlin intersections. Approximately 7.8 percent of the total traffic along Orange Avenue is from heavy vehicles.

Speed – Orange Avenue has a posted speed limit of 40 miles per hour throughout the study area. The speed data showed that southbound Orange Avenue between Drennen Road and Holden Avenue has a high occurrence of excessive speeding, with almost 13 percent of drivers traveling at 50 miles per hour or greater (i.e., 10+ miles per hour above the speed limit).

Level of Service - The comprehensive plans for Edgewood, Orlando and Orange County have established a Level of Service (LOS) standard of "E" for Orange Avenue.

All signalized intersections with the exception of the Holden/Gatlin intersections operate at LOS D or better for existing conditions. The Holden/Gatlin intersections operate at LOS E and F, with queues from that can extend ½ mile in each direction during the morning and afternoon peak periods.

Safety Analysis – Crash data for the period from January 2012 to October 2015 was analyzed for the corridor. During this period, there were 587 reported crashes. The Holden/Gatlin intersections are the most common location for vehicle crashes, accounting for over 20% of the total.

Pedestrian and Bicycle Analysis – While sidewalks are present along both sides of the corridor for its length, there are several locations with deficiencies that include substandard sidewalk widths, significant cracks in the sidewalk, and obstructions such as signs and utility poles. Orange Avenue has bike lanes along both sides of the street that range in width from 4.5' to 5'. Data regarding cycling trips along the corridor was collected from Strava, a mobile GPS app for recording cycling and running activity, and shows that Orange Avenue has a higher number of bicycle trips when compared to parallel north-south corridors.

Transit Conditions – The Orange Avenue corridor is served by three LYNX bus routes: Route 7 (S. Orange Avenue/Florida Mall), Route 11 (S. Orange Avenue/Orlando International Airport) and Route 18 (S. Orange Avenue/Kissimmee). Together, these three routes provide four buses per hour in each direction. While the SunRail corridor runs parallel to Orange Avenue within the study area, there are no SunRail stops within the study area. Based on LYNX standards, three bus stop locations lack facilities that are warranted: south of Pineloch Avenue, west side of street (shelter), north of Suddath Road, east side of street (shelter), and north of Mary Jess Road, east side of Hansel Avenue (bench).

Access Management – While some cross-access connections exist between parcels, the City of Edgewood currently does not allow commercial driveways to connect to residential streets. Additionally, many parcels maintain multiple curb cuts or a continuous driveway apron along the Orange Avenue frontage which not only contributes to the congestion and some of the rear-end crashes on Orange Avenue, it also makes the walking environment less comfortable and limits the space available for landscaping, either within a median or adjacent to the right of way.

Land Use – The majority of the frontage along the Orange Avenue corridor is for commercial land uses, consisting of a mixture of office, strip retail and industrial. Similar land uses are found along the adjacent segments of Orange Avenue to the north and south of the study area.

Purpose and Need

Based on the existing conditions analysis and stakeholder input, the project’s purpose is defined to address the following problems:

- Traffic congestion at Holden/Gatlin intersections
- Crash frequency at Holden/Gatlin intersection
- Unfriendly environment for pedestrians and bicyclists
- Inconsistent amenities for transit users
- Lack of consistent aesthetics and landscaping
- Inconsistent land use policies

These identified problems have been used as part of the development and evaluation of improvement alternatives along the corridor. The following table summarizes the evaluation measures associated with each need.

Need	Evaluation Measure
1. Reduce vehicle speeds between traffic signals.	<ul style="list-style-type: none"> • Vehicle lanes are not wider than the FDOT minimum standard. • Long-term land use patterns support reducing the posted speed limit below 40 mph.
2. Improve the safety and comfort of pedestrians and bicyclists traveling along and through the corridor.	<ul style="list-style-type: none"> • Number of sidewalk obstructions • Number of signalized and/or marked pedestrian crossings • Average spacing between driveway openings • Number of wide driveway openings (>30') • % of bike lane with buffer from travel lane
3. Reduce vehicle delays through the Holden and Gatlin intersections.	<ul style="list-style-type: none"> • Current corridor travel time • Year 2035 corridor travel time
4. Provide consistent, safe and comfortable facilities for transit users.	<ul style="list-style-type: none"> • Number of transit stops within 100 feet of a marked pedestrian crossing • Number of high-ridership bus stops with a transit shelter • Number of bus stops receiving ADA improvements
5. Use streetscape improvements to establish a corridor identity and promote redevelopment.	<ul style="list-style-type: none"> • Length of corridor able to accommodate street trees • Total median length • Number of gateway opportunities • Number of cross access easements • Number of driveway closures

A Plan for Change – Recommended Improvements

Based on the existing conditions, the issues and concerns, and utilizing the evaluation measures, the following recommended improvements were proposed within a structure of short-, mid-, and long-term implementation timeline.

Short-Term

Orange Avenue – One-Way Pair Segments (Hoffner Avenue to Mandalay Road)

As a part of the FDOT 3R Project, the one-way segments could be restriped to include on-street parking and buffered bike lanes.

Orange Avenue –Two-Way Segment (Mandalay Road to Pineloch Avenue)

As part of the FDOT 3R Project from East Grant Street to approximately Mandalay Road, the two-way segment will be restriped to narrow the existing two-way left turn lane to 11’ and appropriate the 1’ to the bike lanes, widening them to 5’ each.

Holden/Gatlin/Orange Intersections and the LYNX Bus Stop Relocation

The current FDOT improvement project for the intersections of Holden Avenue, Gatlin Avenue, and Orange Avenue will reduce queue lengths and delay through the intersections. In addition to this project, this study recommends a short-term improvement to move the existing LYNX bus stop, just north of the Fort Gatlin Shopping Center Entrance to a location just south of the Entrance.

Streetscape Beautification Gateway

It is recommended that in addition to the FDOT 3R Project, the City of Edgewood work with the FDOT to increase the size of the existing median between Stratemeyer Drive and Mandalay Road.

Orange Avenue Right-of-Way Study

Based on the long term vision for Orange Avenue additional right-of-way will be needed to implement the proposed concept design. The existing right-of-way within the two-way segment varies, therefore a more detailed right-of-way study is recommended to conduct a short-term study to survey and evaluate the feasibility of attaining the required right-of-way for the long term vision.

Mid-Term

Modification of Land Development Regulations

The historic use of the properties as primarily auto-oriented commercial has led to a development pattern that utilizes long, skinny buildings, typically with one-bay of parking in the front addressing Orange Avenue. The style of recent development along Orange Avenue in Orlando was preferred to the existing patterns in Orange County and within the City of Edgewood. Both the City of Edgewood and Orange County have been working on updating their respective land development regulations to include more urban form patterns observed in the study area. Particular focus should be given to land development regulations that encourage cross-access easements that allow users to exit to side streets, and encourage driveway consolidation on fronting properties.

In addition to those access-based measures, each agency should consider implementing parcel standards similar to the City of Orlando, specifically requiring “build-to” limits as opposed to “setback” requirements.

Adoption of Right-of-Way and/or Easement Dedication in the Comprehensive Master Plan

The study recommends that in concert with the right-of-way and easement study, each agency adopt a plan for the required space as part of their Comprehensive Master Plan. This will codify the desire for beautified landscape corridor and assist the various agencies in attaining funding from various State and Federal sources to implement corridor master plan.

Mid-Term and Long-Term

Orange Avenue – (Hoffner Avenue to Pineloch Avenue)

Beginning in the mid-term, it is recommended that the City of Edgewood adopt the previously mentioned urban form standards, the long-term master plan “The Grid,” and the Right-of-Way Dedication Plan. A master plan and the acquisition of right-of-way through the redevelopment / land development process is needed to fully implement the long term solutions proposed in this study, including landscaped medians, wider / safer pedestrian elements, and redevelopment in the City of Edgewater that promotes a more livable and walkable environment with new structures built up to the street and additional easement areas from the back of right-of-way for increased landscape and hardscape treatments. The typical section for one-way pair segment would maintain the buffered bike lane and the travel lanes, but remove some of the striped on-street parking along the left-side of the street in favor of spot curb extensions with street trees and green infrastructure such as rain gardens. The two-way segment features a landscape median, buffered bike lanes, and landscape and hardscape improvements on each side of the right of way. To accommodate these features, the curb-to-curb width would need to increase by 13’ from 65’ to 78’ overall. In the mid-term, a more refined conceptual design should be completed using the short-term Right-of-Way Study to determine the full impact of desired planted median and additional landscape and buffered bike lane elements. Over the long term, this project will be implemented through the acquisition of landscape easements, the purchasing of right-of-way, and the eventual redevelopment of properties throughout the corridor.

Long-Term

Implementation of the Public Portion of the “The Grid” Redevelopment Alternative

Beyond the FDOT improvements to the intersections, the City of Edgewood envisions this location to be a potential space for a town center. This area was discussed numerous times during the stakeholder outreach and the City of Edgewood Council meetings as a location that will see redevelopment on a larger scale and since this is also a fairly congested area, the study recommends the

“The Grid” street network alternative. This alternative examined extending Holden Avenue across Orange Avenue to a new north-south street that will connect to Gatlin Avenue. Gatlin Avenue would extend across Orange Avenue to a new north-south street that will connect to Holden Avenue. This new “grid” would form the primary structure for circulation for local traffic and regional traffic.

Additional new streets would be connected in concert with private redevelopment to further create a system of streets that would process all the traffic in this new town center. The proposed street network will allow for a wider variety of development potential because of a mix of block types that could handle various densities allowed by the City’s Comprehensive Master Plan.

Cost for Next Steps		
	Concept/ Planning Study	Construction
Total Short Term	\$186,000	\$220,000
Total Mid Term	\$744,833*	\$0
Total Long Term	\$2,474,704	\$7,261,481

Conclusions

The study encompasses the initial planning steps in the life-cycle of a project. The recommendations presented are based on the purpose and needs identified as part of the study. Several of the recommendations can be addressed on a case by case basis and will require further concept development as a separate next step in the process. The planning information and recommendations documented in this study will also be a public resource to community members, developers and others interested in transportation plans and how the area is expected to change. It will be used to track progress and follow up on recommendations made to address stated needs. Modest lower cost improvements may be considered and undertaken as funding becomes available. Recommendations that advance through private development will include right-or-way reservation, mitigation of traffic impacts of new development, and site design that incorporates local street and path connections, and other amenities, in support of bicycling, walking, and managing stormwater. Most improvements will be implemented over several years. The recommendations presented will also be reevaluated at the time of funding availability, to ensure that the best transportation solution is developed based on changes to land-use, traffic operations or prevailing best practice.



2 Introduction / Process

Introduction / Process

Introduction





MetroPlan Orlando and the City of Edgewood initiated the Orange Avenue Corridor Study to establish Orange Avenue (SR 527) as livable and walkable multi-modal urban thoroughfare. This study establishes a corridor vision and identifies implementation actions to address network efficiency, safety, and livability within the context of future transportation needs. Similar corridor planning studies have been completed by FDOT for the segments of Orange Avenue to the north (within the City of Orlando) and to the south (within Pine Castle, Belle Isle and unincorporated Orange County).

The Orange Avenue Corridor Study was completed in collaboration with FDOT District Five, and other local and regional agency partners. This study provides a framework for improved mobility as part of a planning effort that engages residents, business owners, and others who use the Orange Avenue corridor.

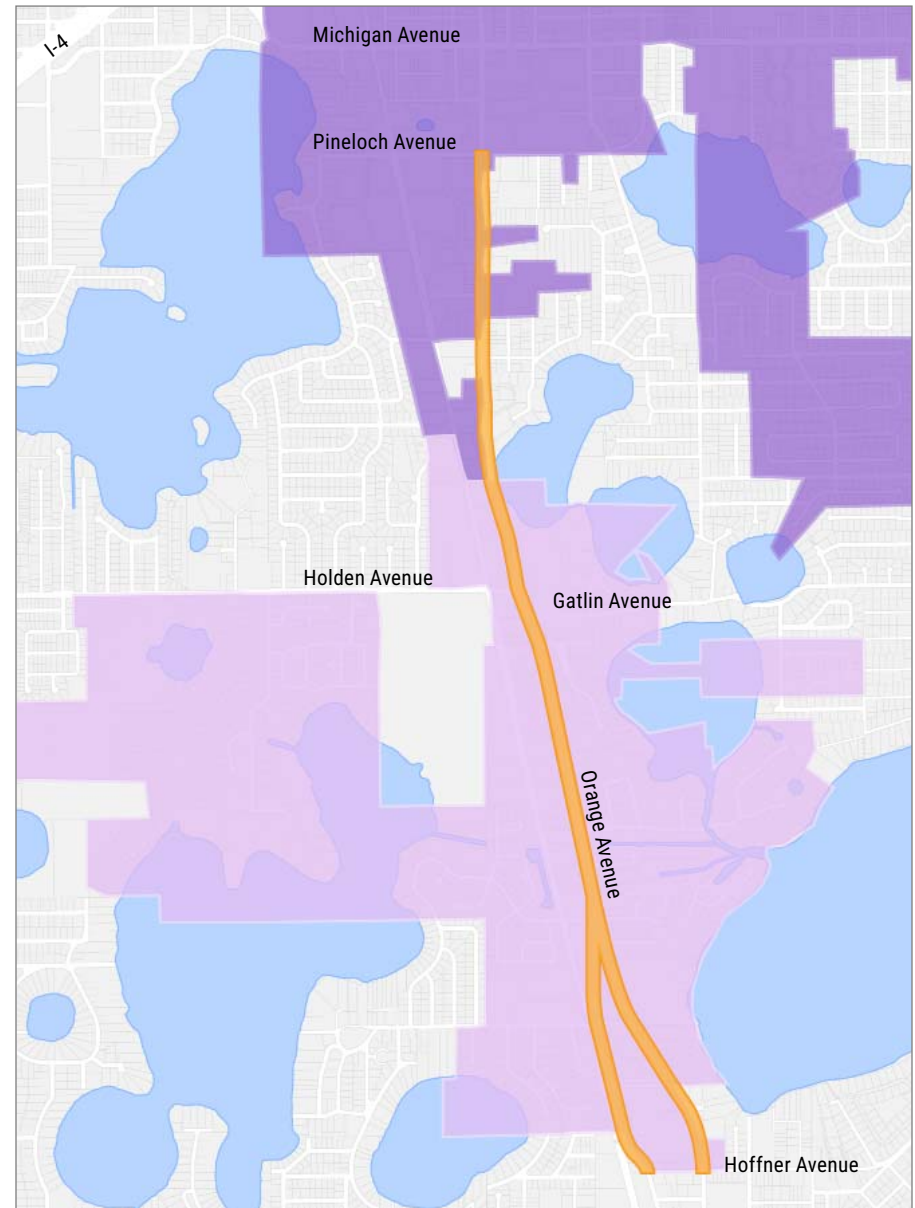
Study Area

The corridor study area is a 2.4 mile section along Orange Avenue (SR 527) from Pineloch Avenue in the City of Orlando (northern limit) to Hoffner Avenue in unincorporated Orange County (southern limit). FDOT District Five has responsibility for the roadway for the entire length of the study area. Beyond the roadway itself, the study area falls within three jurisdictions: the City of Orlando(0.3 miles), unincorporated Orange County (0.4 miles), and the City of Edgewood (1.72 miles) , with the majority of the corridor frontage lying within the City of Edgewood.

Legend

-  Study Corridor
-  City of Edgewood
-  City of Orlando
-  Unincorporated Orange County

Scale in Feet
0 1,400

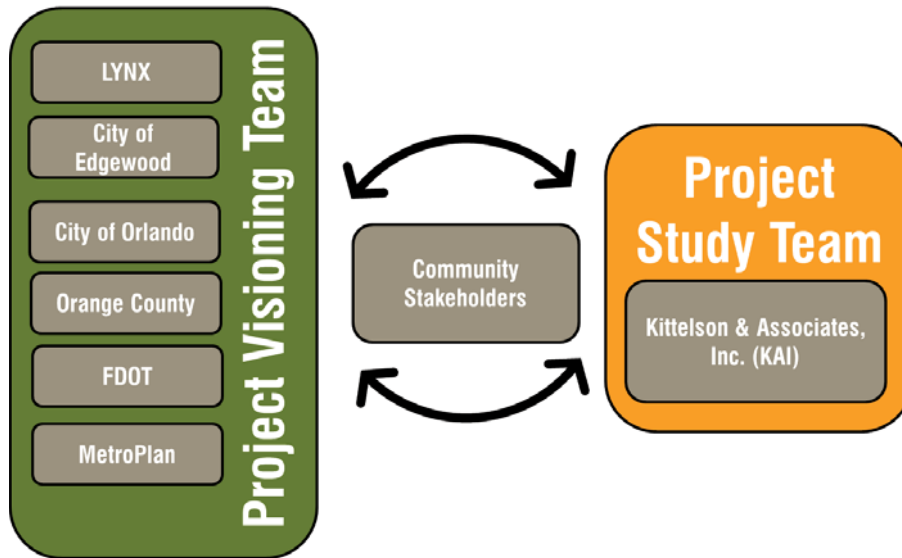


Source: Orange County, City of Edgewood, and City of Orlando

Project Process

The study process incorporated several strategies for engaging project stakeholders, including residents, business owners, elected and appointed officials, and partner agencies. The following is a summary of each strategy:

Project Visioning Team (PVT) – A PVT was established to provide input regarding the corridor analysis, improvement alternatives and recommendations; the PVT also served to facilitate interagency coordination during the study. PVT members consisted of representatives from the Florida Department of Transportation, LYNX, the City of Edgewood, the City of Orlando and Orange County. Four PVT meetings were held over the course of the project, in November 2015, February 2016, May 2016 and March 2017. In addition to the four (PVT meeting minutes are included in Appendix.)



Project Visioning Team Process

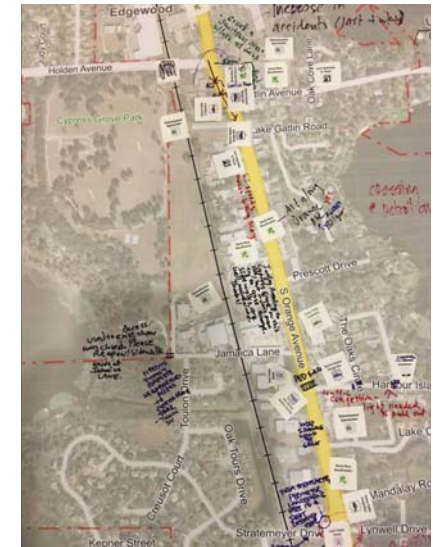
Farmer's Market – At the outset of the project in October of 2015, the project team set up a project booth as part of the Edgewood Farmer's Market. As part of the booth, residents were provided the opportunity to identify corridor issues and needs.

One-on-One Stakeholder Interviews – At the outset of the study in November 2015, the project team held one-on-one interviews with residents and merchants along the corridor. These meetings were used to understand existing conditions and areas for improvement as identified by the stakeholders.

Edgewood City Council and Planning and Zoning Board – Over the course of the study, the project team met with elected and appointed officials from the Edgewood City Council and the Planning and Zoning Board. City Council presentations were given in October 2015, April 2016 and January 2017, and a presentation to the Planning and Zoning Board was given in January 2017. The presentations were used to provide project updates and to solicit input regarding corridor issues, needs, and alternatives under consideration.



Edgewood City Council Meeting



Public Participation at the Edgewood Farmer's Market



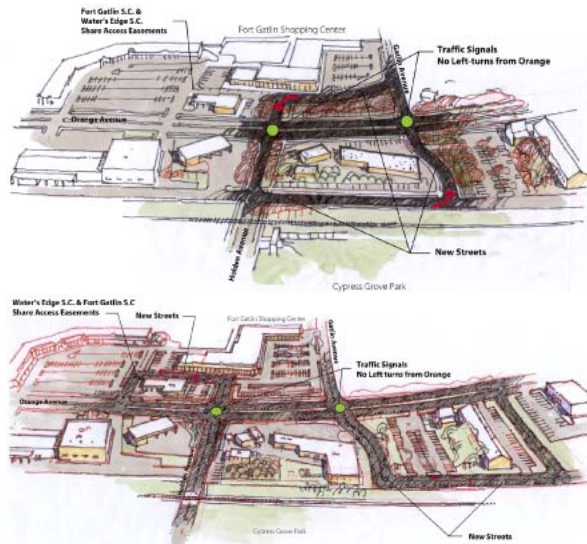
3 Planning Background

Planning Background

Background Studies

Prior to beginning the corridor planning study, a series of background studies were reviewed and summarized to help guide previous efforts within and adjacent to the study area.

City of Edgewood Master Plan – Completed in 2001, the vision of this master plan was “a more livable Edgewood, where pedestrians, cyclists, transit users and motorists peacefully coexist.” This vision was derived from a series of objectives that (1) developed a citizen-defined vision for the City, (2) restructured commercial development and stormwater systems, and (3) identified transportation investments, land use controls, streetscaping improvements and other investments in public spaces. Among the many things identified in the master plan that were still relevant for this project include the formation of a town center adjacent to the Holden Avenue, Orange Avenue, and Gatlin Avenue Intersections, and the beautification of Orange Avenue.



City of Edgewood Master Plan

Orange Avenue “North” Corridor Plan (Pineloch Ave to Anderson St) – This plan, completed in 2013, focused primarily on enhancing safety, aesthetics, and multimodal mobility. The purpose of the project was to provide a safe and efficient multimodal transportation corridor that serves a wide array of users, including the business community, while providing and enhancing livability consistent with the future vision for the area.



Orange Avenue 'North' Corridor Plan

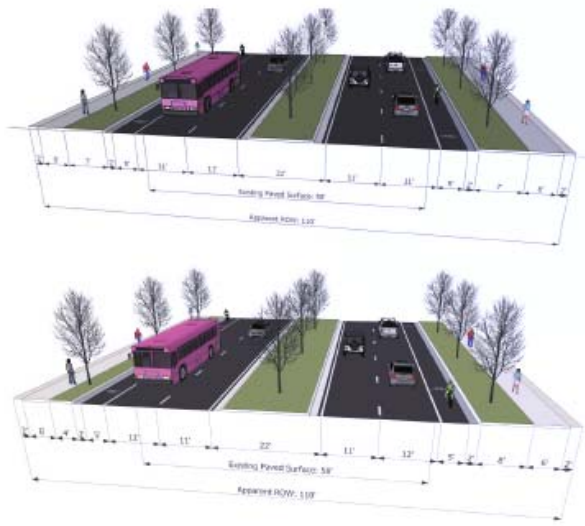
City Of Edgewood Master Plan via ULI Technical Assistance Panel (TAP) – In 2014, the City of Edgewood worked with the Urban Land Institute’s TAP to create a plan for the City built on market viability, enhanced connectivity, and sound funding strategies. The study recommended the City (1) continue to encourage civic engagement, (2) focus on real estate and market opportunities, (3) define a vision and identity for the City, (4) enhance connectivity, (5) update the City’s Comprehensive Plan and Land Development Code, and (6) focus on funding strategies.



City of Edgewood Master Plan

Orange Avenue "South" Corridor Plan

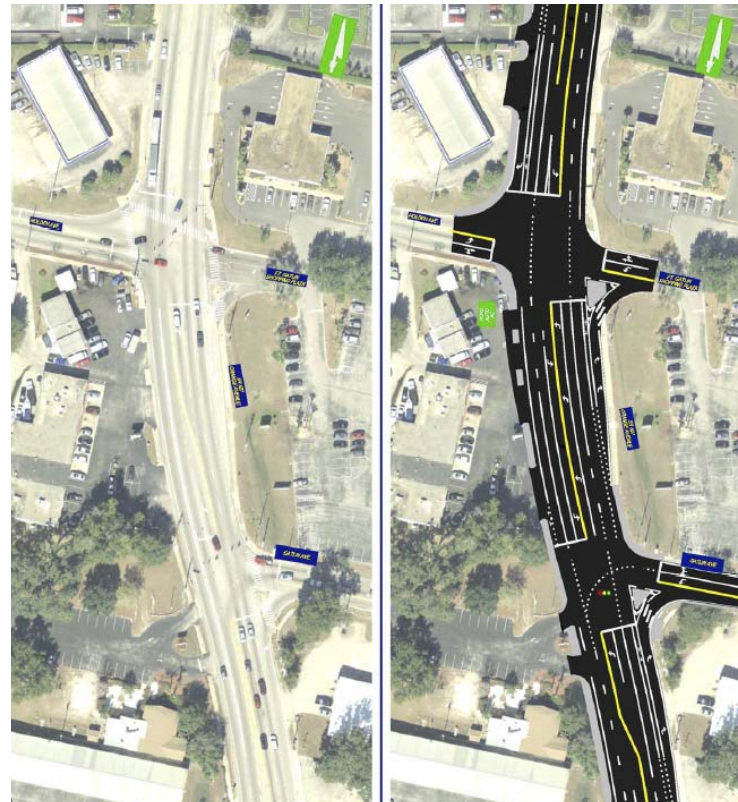
(Sand Lake Rd to Hoffner Ave) – Similar to the North Corridor Plan, in 2014 the Florida Department of Transportation (FDOT) conducted a corridor plan on Orange Avenue in 2014 to the south of this corridor study that focused on safety, aesthetics, multimodal enhancements, and phasing. The purpose of that study was to focus on identifying a range of multimodal solutions to improve mobility and advance the long-term vision for the study corridor. The plan also included specific improvements that can be advanced near-term through local agency participation and/or by FDOT as 3-R (Resurfacing, Restoration and Rehabilitation) projects, safety enhancements or push-button projects.



Orange Avenue 'South' Corridor Plan

FDOT Intersection Study

(Orange Ave, Gatlin Rd, & Holden Ave) – In 2015, the FDOT began an intersection study and implementation plan for intersections of Holden, Orange, and Gatlin Avenues to widen the pavement for lengthened side-by-side left turn lanes along Orange Ave to service Gatlin Ave and Holden Ave. Other improvements include: the removal of the outside southbound continuous lane on Orange Avenue, pavement widening, milling and resurfacing of the roadway, introducing mast arm signals, upgrading pedestrian features, and drainage improvements.



FDOT Intersection Study



4 Understanding the Orange Avenue Corridor

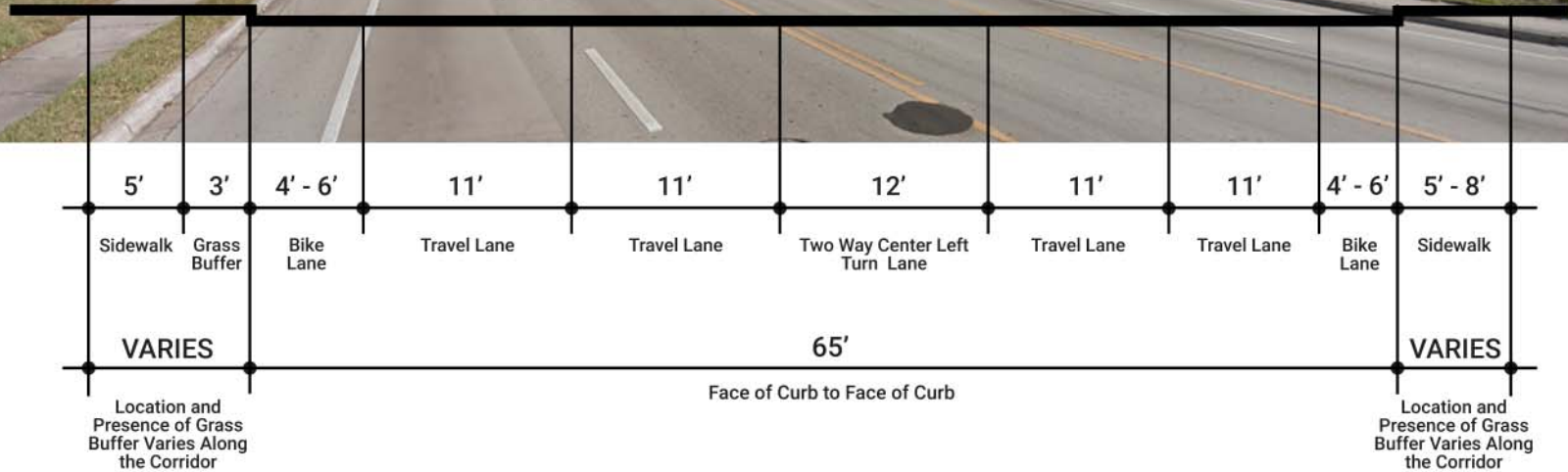
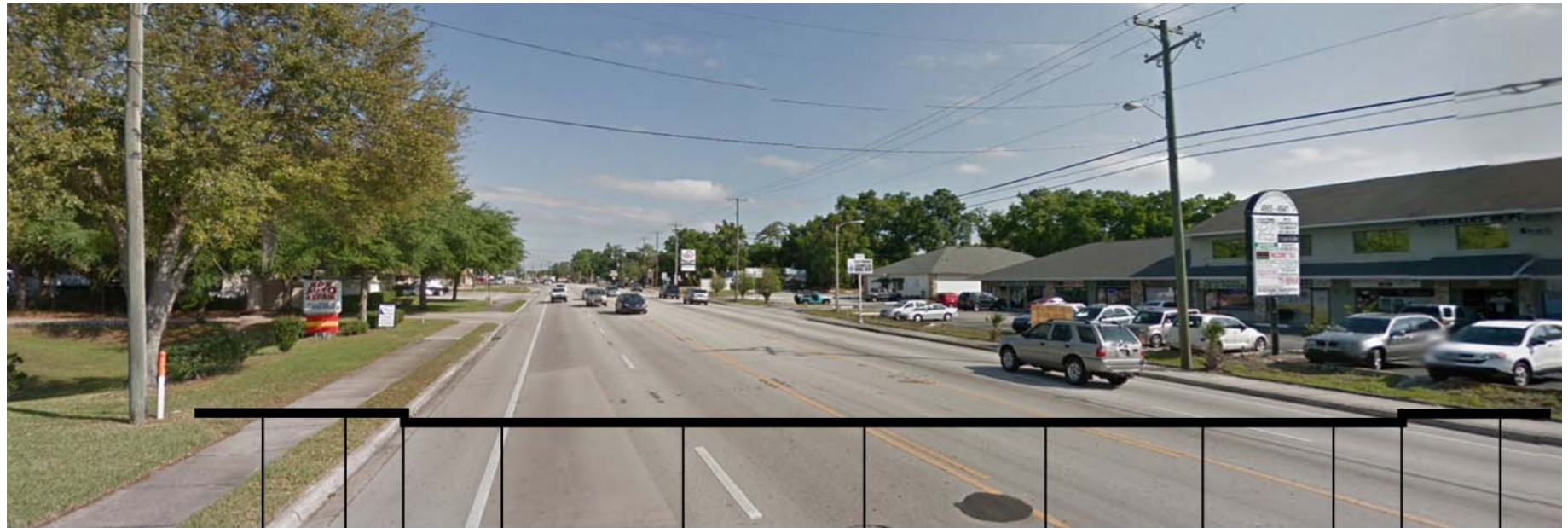
Understanding the Orange Avenue Corridor

Existing Cross Sections

For 1.8 miles of the 2.03 miles of the corridor study area, Orange Avenue has a five-lane typical section, with two 11' through lanes in each direction, a 12' two-way left turn lane, and 4.5' bike lanes in each direction. The overall right-of-way width of this segment varies from 80' - 88' (other than between Gatlin Avenue and Holden Avenue).

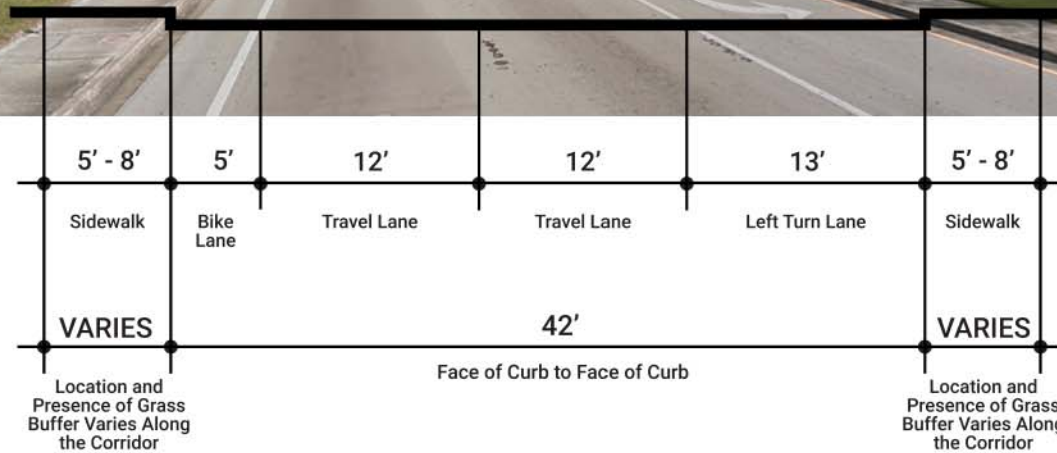
This typical section exists from Mandalay Road to Pineloch Avenue. Sidewalks are mostly present along both sides of the street, but a landscape buffer is not consistently present.

Existing Typical Section - Orange Avenue (Mandalay Road to Pineloch Avenue)

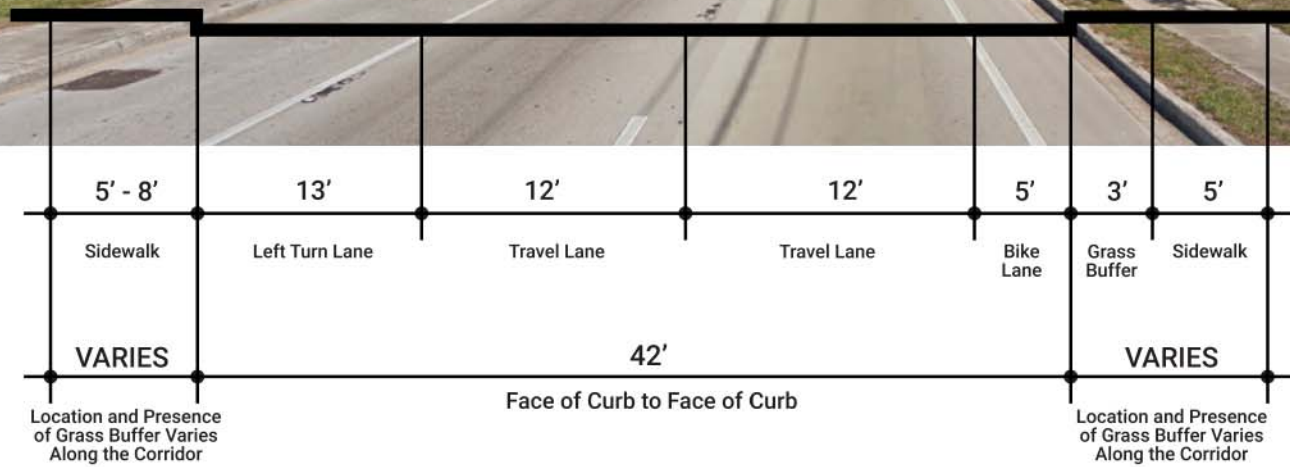


From Hoffner Avenue to Mandalay Road the corridor consists of a one-way pair, with Orange Avenue carrying southbound traffic and Hansel Avenue carrying northbound traffic. Within this portion of the corridor, the typical section for both streets consists of two 12' through lanes, a 13' inside left turn parklet, and 5' bike lanes on each street. Similar to the two-way section of the corridor north of Mandalay Road, sidewalks are mostly present along both sides of the street, but a landscape buffer is not consistently present.

Existing Typical Section - Orange Avenue (Hoffner Avenue to Mandalay Road)



Existing Typical Section - Hansel Avenue (Hoffner Avenue to Mandalay Road)



Volumes/Heavy Vehicles

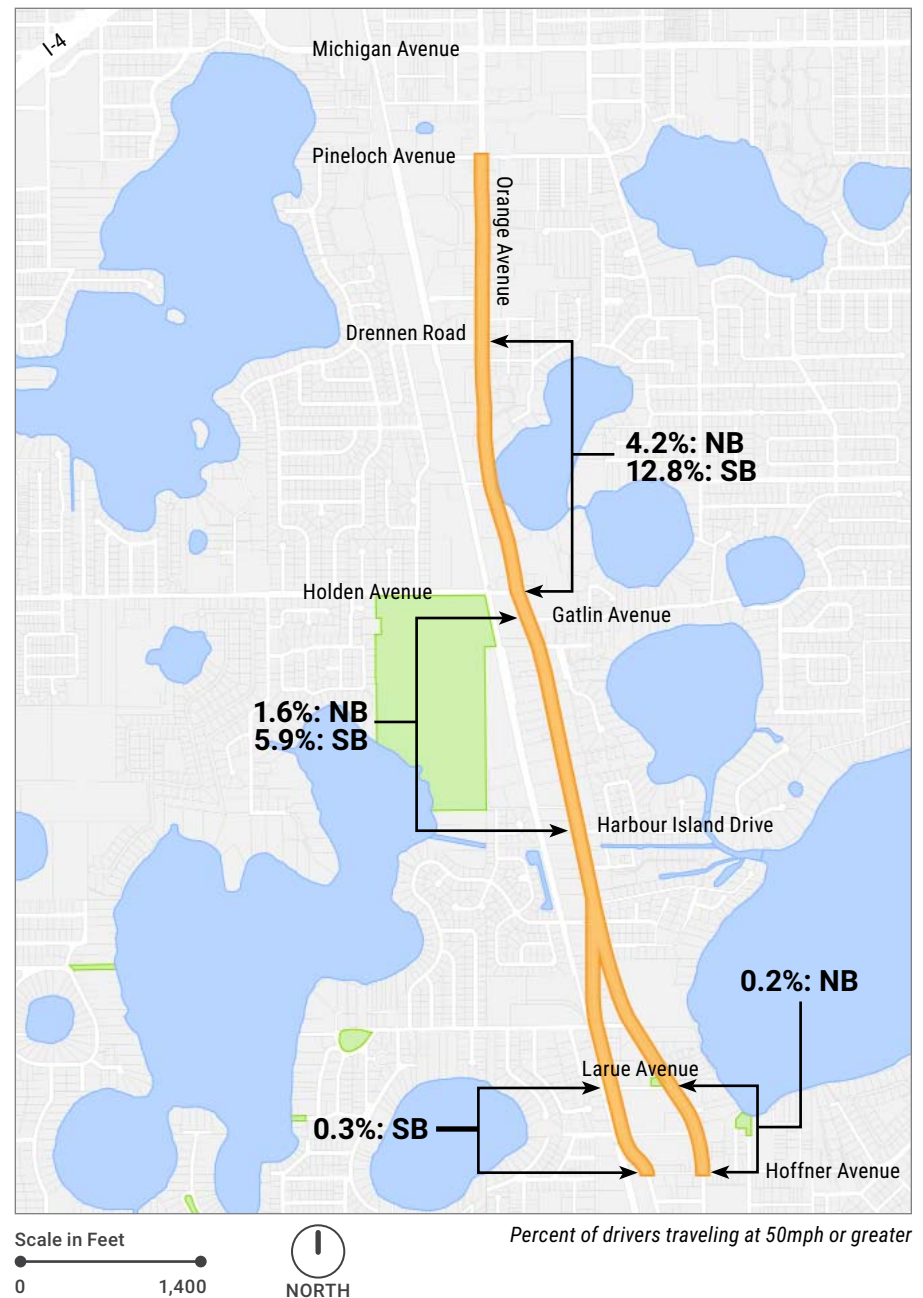
From a regional standpoint, Orange Avenue serves as a primary north-south arterial connecting downtown Orlando (and Interstate 4 via Michigan Avenue) with industrial areas in Taft. As a result, the corridor is used by through traffic and by heavy vehicles.

Midblock traffic counts collected in 2015 show an average daily volume of 36,900 vehicles north of the Holden/Gatlin intersections, and 41,500 vehicles south of the Holden/Gatlin intersections. As part of the data collection, the percentage of heavy vehicles was also measured. Approximately 7.8 percent of the total traffic along Orange Avenue is from heavy vehicles or freight. This percentage is higher than the parallel corridors to the east (Conway Road (SR 15) and Semoran Boulevard (SR 436)), but is comparable to the percentages for Orange Blossom Trail (SR 441) and John Young Parkway (SR 423) to the west. Each of the four corridors to the east and west of Orange Avenue are designated "Primary Freight Corridors" in MetroPlan's 2040 Long Range Transportation Plan, Orange Avenue (SR 527) is not designated as a freight corridor.

Vehicle Speeds

Orange Avenue has a posted speed limit of 40 miles per hour throughout the study area. Speed data was collected over three days to determine how the actual drivers' speeds compare with the existing speed limit.

The data was collected in three segment areas: Segment 1 (Hoffner Avenue to Larue Avenue), Segment 2 (Harbour Island Drive to Gatlin Avenue), and Segment 3 (Holden Avenue to Drennen Road). The data showed that vehicles in Segment One stayed within the speed limit (only 0.5% traveling at speeds of 50 MPH or greater), while vehicles moving through Segment 2 (7.5% exceeding 50 MPH) and Segment 3 (17% exceeding 50 MPH) exceeded the posted speed limit at much higher rate. In Segment 2, the southbound vehicles exceeded 50 MPH by nearly 6% as compared to the 1.6% of northbound vehicles. In Segment 3, 12.8% of southbound vehicles in Segment 3 exceeded 50 MPH as compared to 4.2% of northbound drivers. Overall, roughly 20% of vehicles in the southbound direction within the corridor study area are exceeding the posted speed limit by 10+ miles per hour.

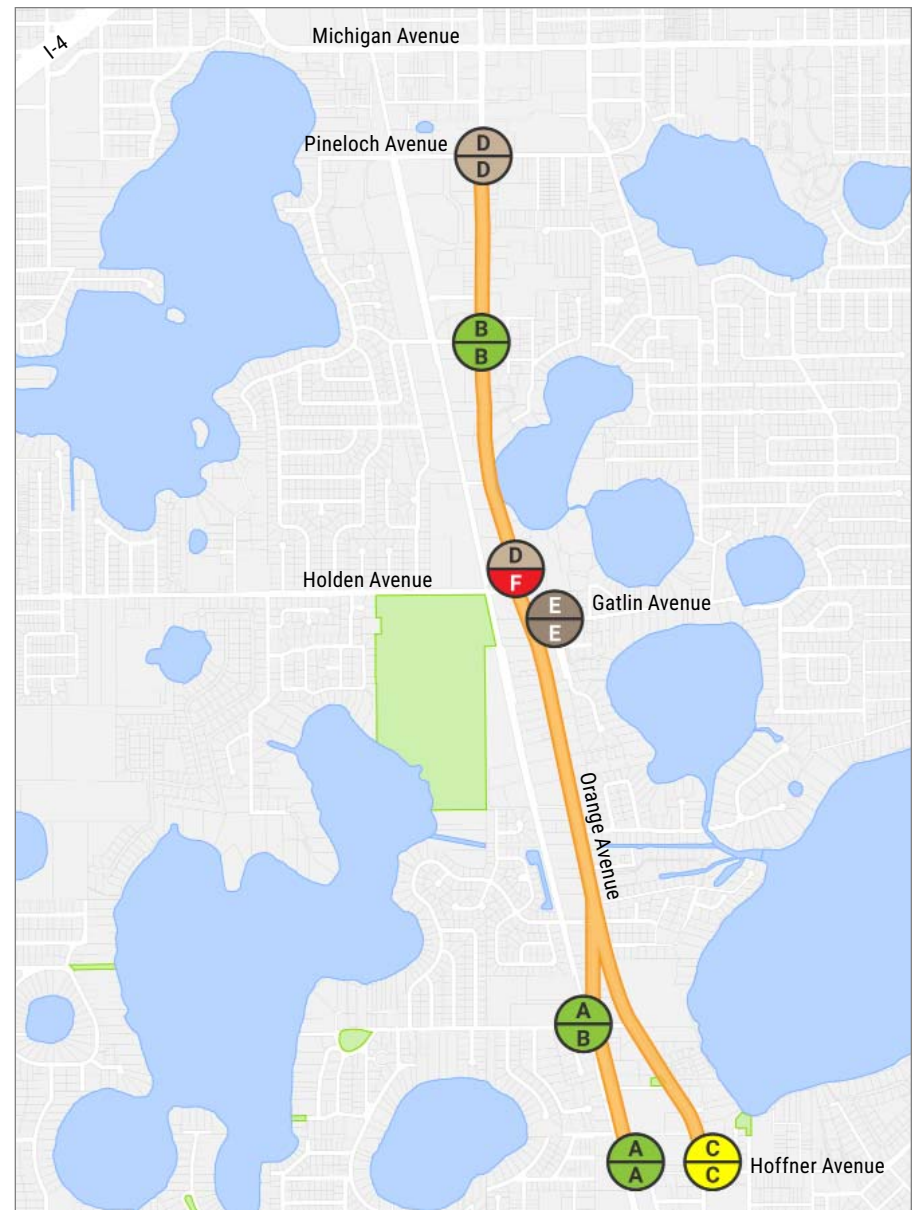
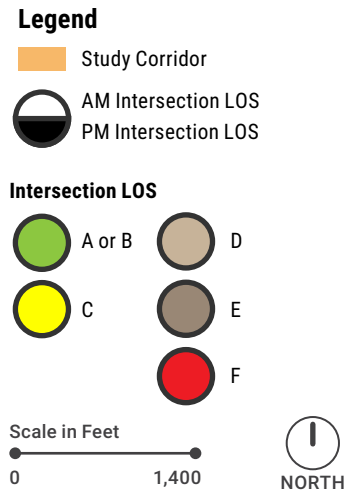


Intersection Volumes and LOS

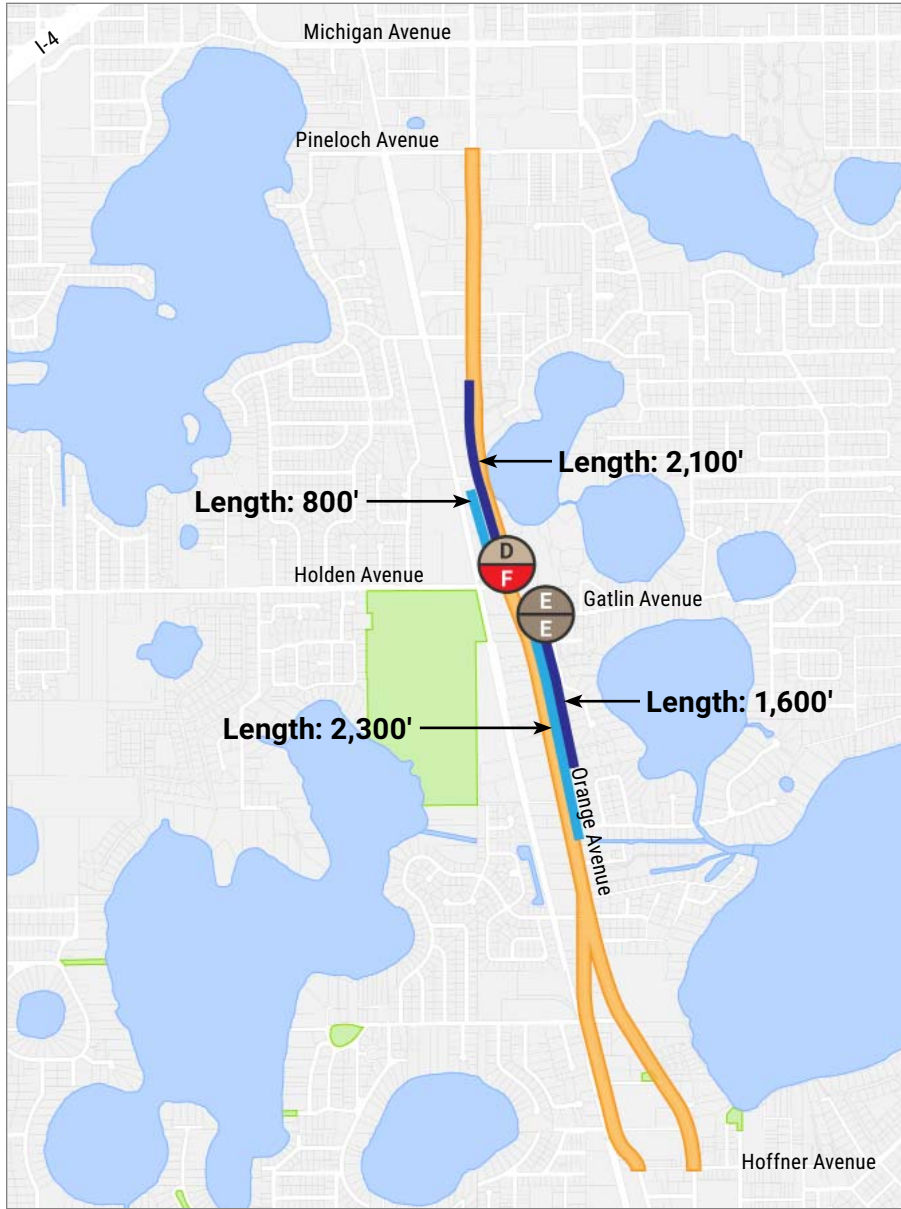
The Orange Avenue has a total of seven signalized intersections, including the endpoints at Pineloch Avenue and Hoffner Avenue. Intersection turning movement counts were collected at these locations for the weekday morning and afternoon peak periods (7-9 AM and 4-6 PM).

The comprehensive plans for Edgewood, Orlando and Orange County have established a Level of Service (LOS) standard of “E” for Orange Avenue. All signalized intersections with the exception of the Holden/Gatlin intersections operate at LOS D or better for existing conditions. The Holden/Gatlin intersections operate at LOS E and F, with queues from that can extend ½ mile in each direction during the morning and afternoon peak periods. These queues are due in part to the back-to-back left turn lanes between Holden Avenue and Gatlin Avenue. This configuration provides limited storage for left-turning vehicles, resulting in queues that spill back into the through lane.

The near-term FDOT intersection improvements for the Holden/Gatlin intersections will widen Orange Avenue between the two intersections to provide side-by-side left turn lanes with more storage length. When the Holden/Gatlin intersections are analyzed with the planned improvements, queues are expected to shorten significantly, and LOS conditions are expected to improve to LOS C or better.



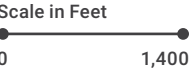
Existing Intersection Level of Service



Queue Lengths at Holden/Orange/Gatlin

Legend

- AM Maximum Queue
- PM Maximum Queue



Crashes

Crash data for the period from January 2012 to October 2015 was analyzed for the corridor. During this period, there were 587 reported crashes. After accounting for the corridor’s length, the resulting crash rate is comparable to that for the adjacent Orange Avenue segments to the north and south.

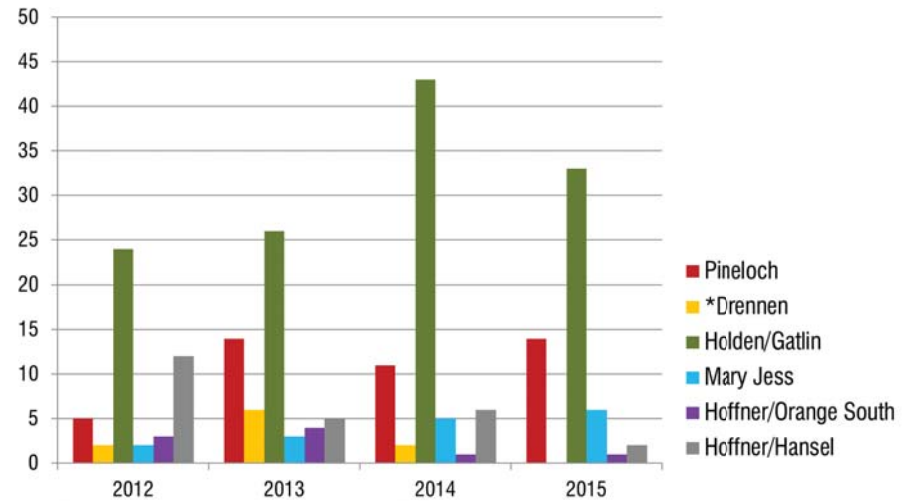
The Holden/Orange/Gatlin intersections are the most common location for vehicle crashes, accounting for over 20% of the total. Rear-end and sideswipe crashes account for the majority of incidents. Rear-end crashes are often associated with extended intersection queues and corridors with multiple driveway access points. Sideswipe crashes are often associated with lane changes. With the current configuration that includes one southbound free-flow lane, drivers often make last-minute lane changes to avoid stopping at the signal at Gatlin Avenue. The FDOT Holden/Gatlin intersection improvement project will remove the free-flow southbound through lane, converting it to a lane that is controlled by the signal (similar to the adjacent through lane). This improvement is expected to benefit corridor safety by removing the incentive for unsafe, last-minute lane changes.

Walking and Bicycling Environment

While sidewalks are present along both sides of the corridor for its length, there are several locations with deficiencies. Examples include substandard sidewalk widths (less than 5’), significant cracks in the sidewalk; and obstructions such as signs and utility poles. These obstructions prevent the minimum width from being achieved.

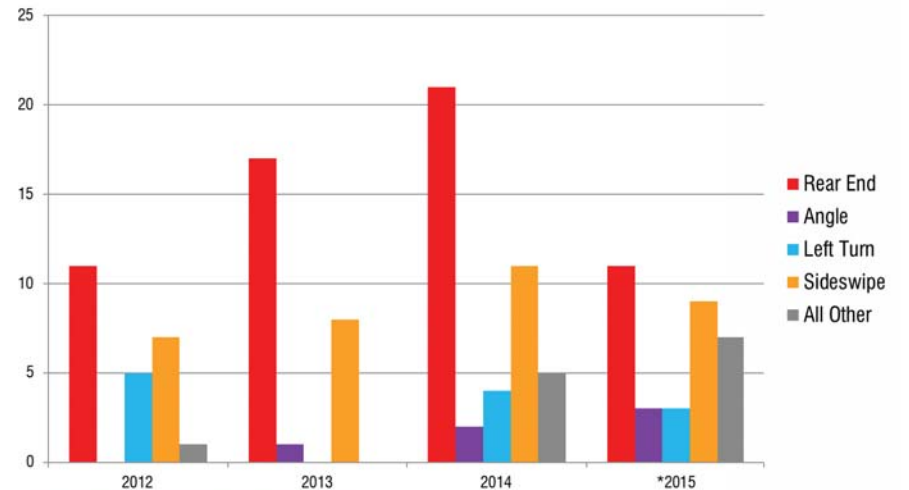
As described earlier, Orange Avenue throughout the study area has bike lanes along both sides of the street. The bike lanes range in width from 4.5’ to 5’. However, this width is less than FDOT’s recommended standard of a 7’ buffered bike lane for State facilities in an urban area.

Data regarding cycling trips along the corridor was collected from Strava, a mobile GPS app for recording cycling and running activity. The data was collected from Strava users for the period from January 2012 to May 2015. The data shows that Orange Avenue has a higher number of bicycle trips when compared to parallel north-south corridors. This is consistent with input received during the stakeholder interview process, where it was mentioned that two bicycle groups regularly use the Orange Avenue corridor for weekend rides.



*2015 data is for January through October only. Year 2015 data was unavailable for the Orange/Drennen intersection.
Source: Kittelson & Associates

Crashes at Signalized Intersections

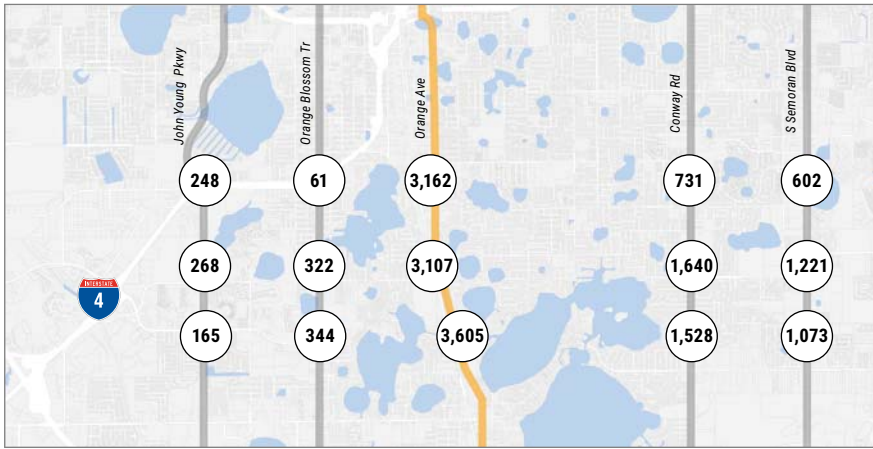


*2015 data is for January through October only.
Source: Kittelson & Associates

Crash Types for Holden/Orange/Gatlin Intersections



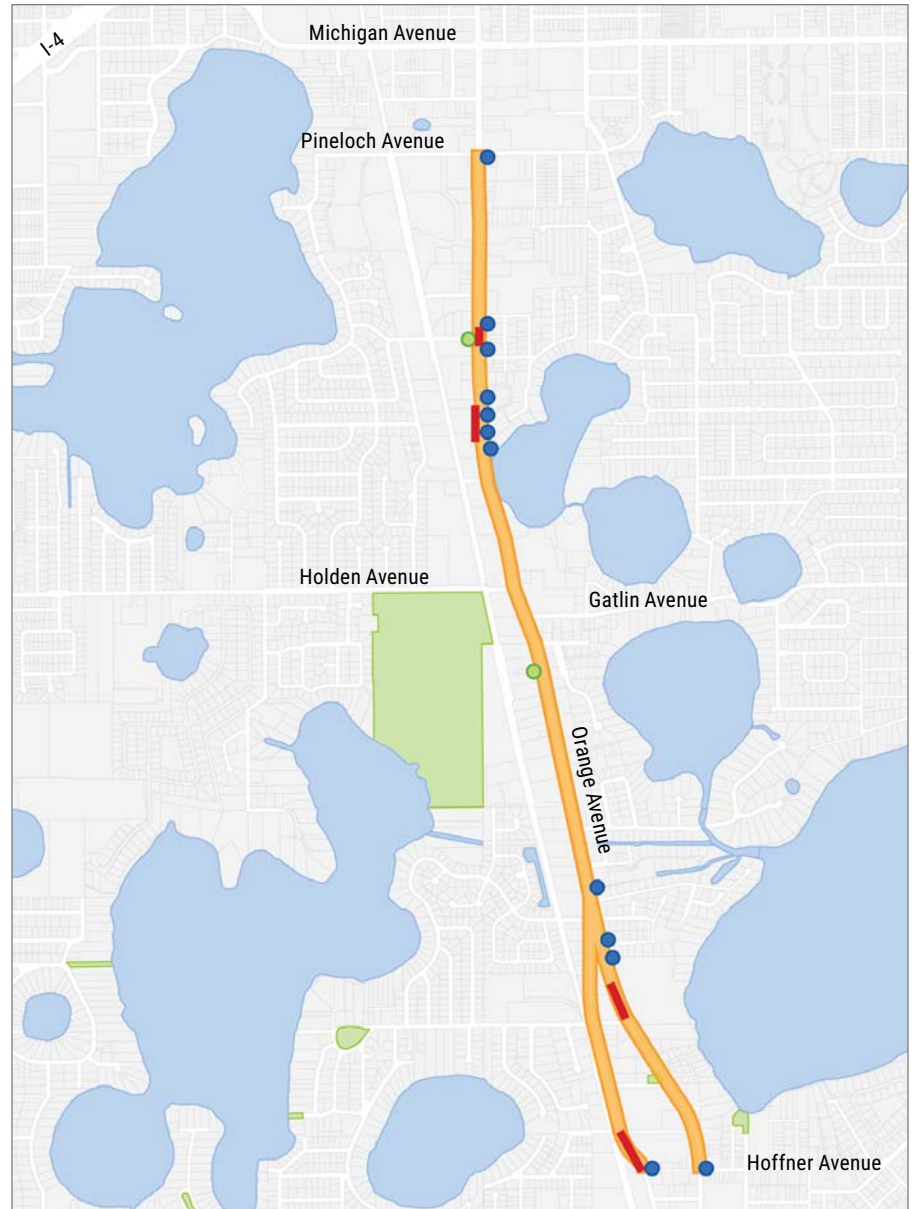
Existing Sidewalk Conditions/Obstruction



Strava Bike Trips for the Primary North-South Corridors

Legend

- Study Corridor
- Substandard Sidewalk Width
- Obstructions (Utility Poles)
- Major Sidewalk Cracks



Existing Sidewalk Conditions

Transit Conditions

The Orange Avenue corridor is served by three LYNX bus routes: Route 7 (S. Orange Avenue/Florida Mall), Route 11 (S. Orange Avenue/Orlando International Airport) and Route 18 (S. Orange Avenue/Kissimmee). Together, these three routes provide four buses per hour in each direction. While the SunRail corridor runs parallel to Orange Avenue within the study area, there are no SunRail stops within the study area.

LYNX considers shelters and benches at bus stops based on the numbers of people boarding a stop. A bench meets LYNX warrants if the daily average for boardings exceeds 15 passengers. A shelter meets LYNX warrants if the daily average exceeds 25 passengers. Based on these standards, three bus stop locations lack facilities that are warranted:

- South of Pineloch Avenue (west side of street): Shelter warranted, neither shelter nor bench are present
- North of Suddath Road (east side of street): Shelter warranted, only a bench is present
- North of Mary Jess Road (east side of Hansel Avenue): Bench warranted, no bench is present

Access Management

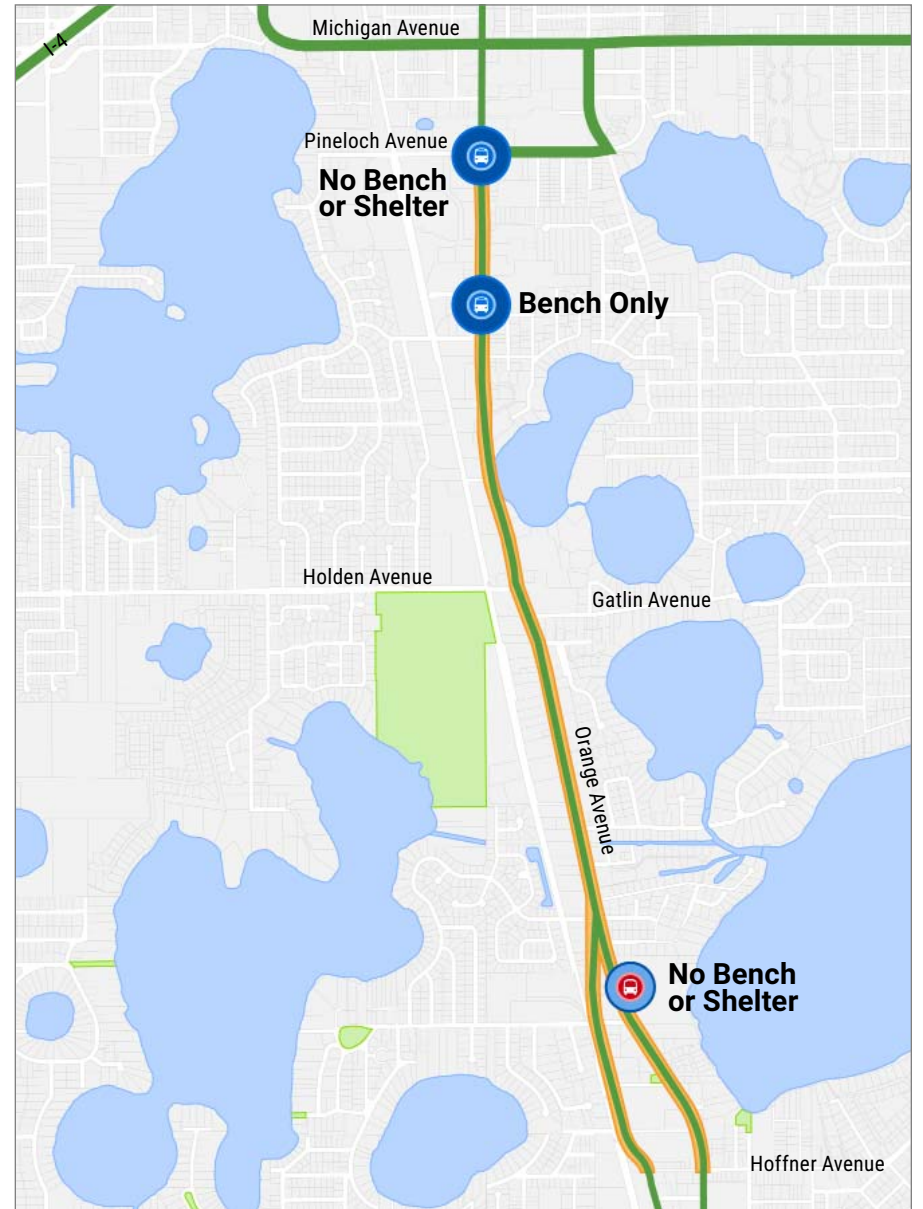
The Orange Avenue corridor has a two-way center left turn lane, with left turns allowed into and out of parcels. While some cross-access connections exist between the parking lots of separate parcels, the City of Edgewood currently does not allow commercial driveways to connect to residential streets. This limits the potential for cross-access connections and "alley" access by forcing traffic to use midblock driveways on Orange Avenue. Additionally, many parcels maintain multiple curb cuts or a continuous driveway apron along the Orange Avenue frontage. This uncontrolled access negatively affects the walking environment by increasing the number of traffic conflict points. The uncontrolled access also limits the space available for landscaping, either within a median or adjacent to the right of way.

Legend

-  Study Corridor
-  Bus Route
-  Bus Stop with Bench Warranted
-  Bus Stop with Shelter Warranted

Average Daily Boardings for Month of June 2014

-  15-24
-  25-58



Scale in Feet
0 1,400



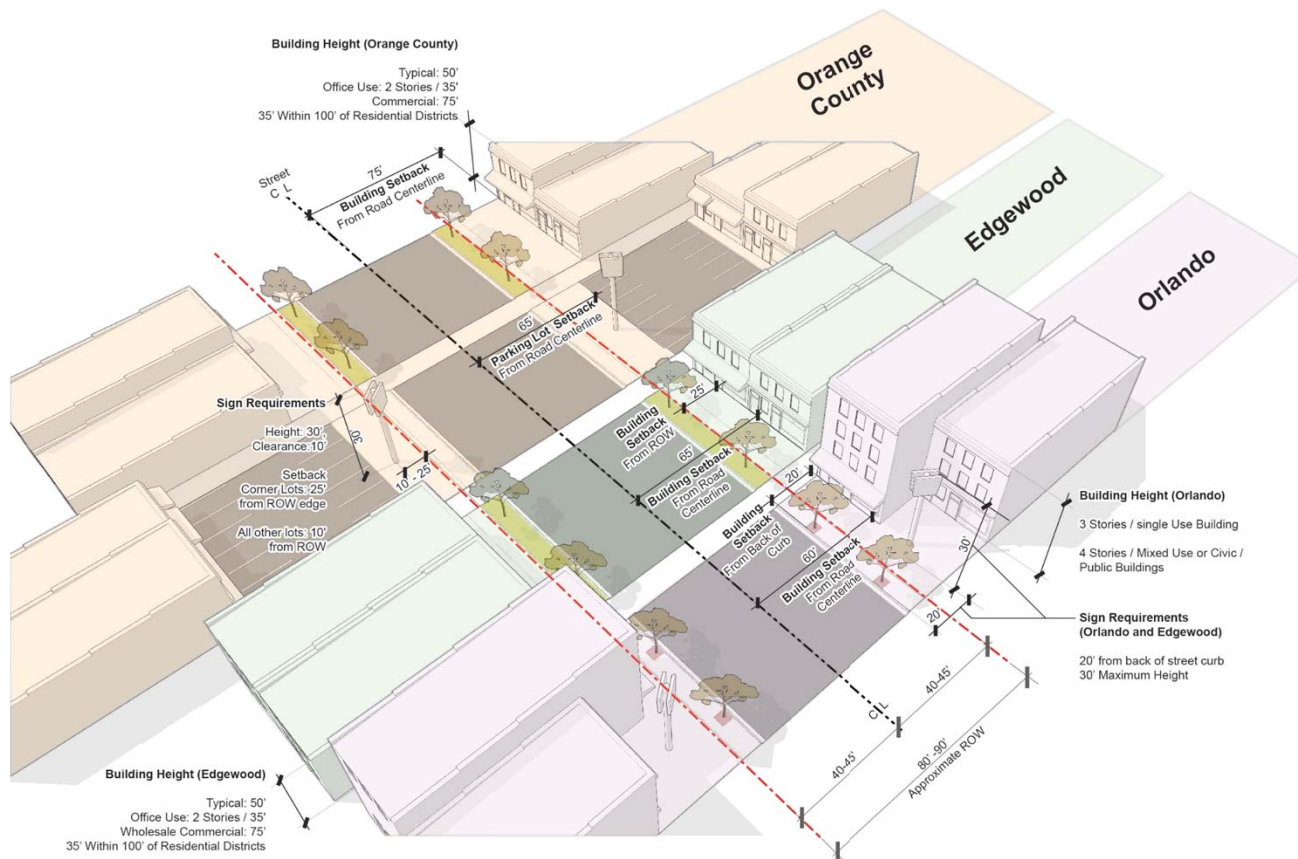
Existing LYNX Routes and Bus Stop Needs

Land Use

The majority of the frontage along the Orange Avenue corridor is for commercial land uses, consisting of a mixture of office, strip retail and industrial. Similar land uses are found along the adjacent segments of Orange Avenue to the north and south of the study area. Along the corridor, the development standards vary between the City of Edgewood, City of Orlando and Orange County. For Edgewood, while the required building setback is 25 feet from the front ROW, many buildings have larger setbacks to accommodate parking in front. This study examined the parcel setback, building height, and sign requirements for each agency within the corridor area. The examination revealed that many of the issues previously described are due to the regulatory parcel standards. Orange County requires that parking lots be set back 65' from the center of the roadway. Because many of the parcels fronting the corridor lack a secondary street at the rear of the property, parcels have been developed with parking lots in the front and the building set back approximately 70'-80' to include the 60' bay of parking and room for a sidewalk in front of the building.

The City of Edgewood requires that buildings be set back from the edge of right-of-way by 25'. However, because most of Orange Avenue is roughly 40' from the centerline to the right-of-way, this set back mimics the Orange County requirement for parking lots. Therefore, much of the development in Edgewood has followed the development patterns set forth in the County.

The City of Orlando, on the other hand, requires buildings in the Orange Avenue Corridor to be "built to" 20' from the back of the curb. Instead of being set back, Orlando's regulations require buildings to be in the front of the parcel and therefore parking, access, and stormwater management are pushed towards the back of the properties. Because multiple parcels have been redeveloped with these ordinances, an alley condition is created and Orlando can limit the amount of access points on Orange Avenue and interior, local circulation can occur off Orange Avenue.



Existing Parcel Standards



5 Purpose and Need

Purpose and Need

Based on the existing conditions analysis and stakeholder input, the project’s Purpose and Need have been defined to address the following problems:

- **Traffic congestion at Holden/Gatlin intersections** – The existing conditions traffic analysis showed that significant traffic queuing occur at the Holden/ Gatlin intersections. These backups occur in both the northbound and southbound directions during the morning and afternoon peak periods. With the growth in traffic forecast for Orange Avenue, the queues are expected to increase.
- **Crash frequency at Holden/Gatlin intersections** – The crash analysis showed a high occurrence of crashes at the Holden/Gatlin intersections, more than the other signalized intersections along the corridor combined. Many of the crashes at this location were rear-end and sideswipe collisions.
- **Unfriendly environment for pedestrians and bicyclists** – For most of the corridor, pedestrians and bicyclists have little or no buffer from moving traffic. Bike lane widths do not meet FDOT’s recommended minimum standard, and sidewalks in several areas are obstructed by signage. Additionally, there are limited opportunities for safe, protected crossings of Orange Avenue.
- **Inconsistent amenities for transit users** – Many bus stops along the corridor lack benches and shelters for waiting passengers. In several locations, these facilities are warranted based on LYNX’s ridership standards, but do not exist.
- **Aesthetics and landscaping** – The Orange Avenue corridor currently contains minimal trees or other landscaping; this is due in part to the lack of a median and limited right-of-way width. There is a need to provide accommodations for additional trees and landscaping within or adjacent to the right-of-way to improve corridor aesthetics.

- **Land use policies** – The City of Edgewood desires a more urban development pattern along the corridor as parcels redevelop, particularly around the Holden/ Gatlin intersections. As part of the integrated land use/transportation vision for the corridor, there is a need to revisit existing standards that are not consistent with this vision.

These key issues have been used as part of the development and evaluation of improvement alternatives along the corridor. The following table summarizes the evaluation measures associated with each need.

Need	Evaluation Measure
1. Reduce vehicle speeds between traffic signals.	<ul style="list-style-type: none"> • Vehicle lanes are not wider than the FDOT minimum standard. • Long-term land use patterns support reducing the posted speed limit below 40 mph.
2. Improve the safety and comfort of pedestrians and bicyclists traveling along and through the corridor.	<ul style="list-style-type: none"> • Number of sidewalk obstructions • Number of signalized and/or marked pedestrian crossings • Average spacing between driveway openings • Number of wide driveway openings (>30') • % of bike lane with buffer from travel lane
3. Reduce vehicle delays through the Holden and Gatlin intersections.	<ul style="list-style-type: none"> • Current corridor travel time • Year 2035 corridor travel time
4. Provide consistent, safe and comfortable facilities for transit users.	<ul style="list-style-type: none"> • Number of transit stops within 100 feet of a marked pedestrian crossing • Number of high-ridership bus stops with a transit shelter • Number of bus stops receiving ADA improvements
5. Use streetscape improvements to establish a corridor identity and promote redevelopment.	<ul style="list-style-type: none"> • Length of corridor able to accommodate street trees • Total median length • Number of gateway opportunities • Number of cross access easements • Number of driveway closures



6 A Plan for Change

A Plan for Change

Recommended Improvements

Based on the existing conditions, the issues and concerns, and utilizing the evaluation measures, the following recommended improvements were proposed within a structure of short-, mid-, and long-term implementation timeline.

Orange Avenue Corridor Master Plan | Cost Estimation Matrix

No.	Recommendation	Concern/Issues Addressed	Prior Action	Next Steps	Target Term
1	Orange Avenue Restriping (Mandalay Rd to Pineloch Ave)	Mobility Safety, Multimodal Alternatives	Input on FDOT 3R Project	None	Now
2	Orange Avenue Intersection Improvements (Gatlin Ave to Holden Ave)	Mobility Safety, Access Management, Multimodal Alternatives, Traffic Congestion	None	None	Now
3	Orange Avenue Restriping (Hoffner Ave to Mandalay Rd)	Mobility Safety, Multimodal Alternatives	Input on FDOT 3R Project	None	Now
4	Expansion/Beautification of Orange Avenue Median (Between Stratemeyer Dr and Mandalay Rd)	Streetscape Beautification Gateway	None	Concept Design; Coordination with FDOT 3R Project (Recommendation #3)	Short
5	Orange Avenue Right-of-Way Study	Mobility Safety, Streetscape Beautification, Access Management, Multimodal Alternatives	None	Survey; Scoping	Short
6	LYNX Bus Stop Relocation	Mobility Safety, Multimodal Alternatives	None	Coordination w/ LYNX	Short
7	Modify City of Edgewood Land Development Regulations (LDR)	Mobility Safety, Streetscape Beautification, Access Management, Redevelopment Opportunities, Multimodal Alternatives, Traffic Congestion	None	Draft LDR Policies as per Final Orange Avenue Corridor Master Plan Report	Mid
8	Adoption of ROW/Easement Dedication Map in Agency Comprehensive Master Plan	Mobility Safety, Streetscape Beautification, Access Management, Multimodal Alternatives	Recommendation #5	Orange Avenue Right-of-Way Study (Recommendation 5)	Mid
9	Orange Avenue Streetscape Concept Design Study (Hoffner Rd to Pineloch Ave)	Mobility Safety, Streetscape Beautification, Access Management, Multimodal Alternatives, Traffic Congestion	Recommendation #5 Recommendation #7	Scope Concept Design Study	Mid
10	Orange Avenue Streetscape & Feasibility Study (Hoffner Ave to Pineloch Ave)	Mobility Safety, Streetscape Beautification, Access Management, Redevelopment Opportunities, Multimodal Alternatives, Traffic Congestion"	Recommendation #7 Recommendation #8 Recommendation #9	Concept Design; Moving Curb, Adding ROW/ Easement for Sidewalk + Landscape Area Curb Extensions + Bulb-Outs	Long
11	Implement Public ROW Aspect of Alternative One "The Grid" - Redevelopment at Holden/Gatlin/Orange	Mobility Safety, Streetscape Beautification, Access Management, Redevelopment Opportunities, Multimodal Alternatives, Traffic Congestion	Recommendation #7 Recommendation #8 Recommendation #9 Property Acquisition Master Developer Partnerships	Concept Design New Primary Streets connecting Holden & Gatlin on Redeveloped Property (Both sides of Orange Avenue)	Long

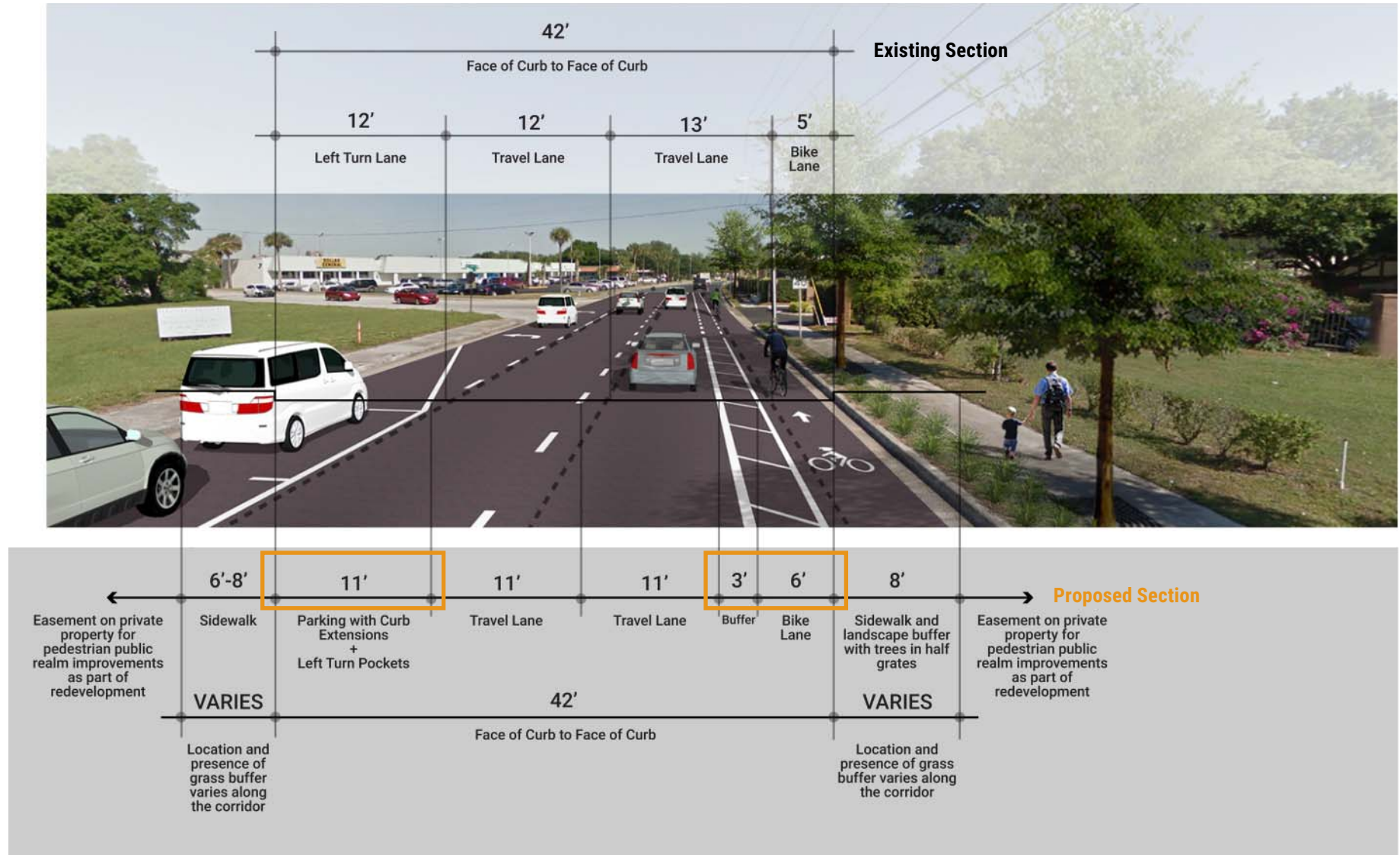
Lead Agency	Cost for Next Steps		Metric	Notes
	Concept/ Planning Study	Construction		
FDOT	\$0	\$0	N/A	Restriping already funding through FDOT
FDOT	\$0	\$0	N/A	Construction funded through FDOT Work Program
FDOT	\$0	\$0	N/A	Restriping in scoping phase through FDOT
FDOT, MetroPlan, City of Edgewood	\$36,000	\$180,000	6,000 SF	Assumes Construction Cost of \$30/SF; 20% Concept Design
FDOT, MetroPlan, City of Edgewood, Orange County, City of Orlando	\$150,000	\$0	N/A	Study to examine ROW dedication for curb-to-curb widening for 16' Median and buffered bike lanes and potential for easements* for landscape beautification (Landscape beautification may be a separate effort by the local agency and studied as part of an easement attained during redevelopment projects)
LYNX, FDOT	\$0	\$40,000	1 EA	\$40,000 cost based on Bus Shelter at Mills 50
City of Edgewood, Orange County	\$50,000	\$0	N/A	Assumed Cost for LDR Re-Write, Public Hearings, Adoption
City of Edgewood, Orange County	\$50,000	\$0	N/A	Assumed Cost for LDR Re-Write, Public Hearings, Adoption
City of Edgewood, MetroPlan, FDOT	\$650,000	\$0	N/A	PD&E Studies (15% of Estimated Construction Cost)
City of Edgewood, MetroPlan, FDOT	\$1,300,000	\$4,300,000	3.04 Miles	Assumes FDOT Construction Cost* of \$1.4 Million per Mile, Two-Way Segment: 1.76 Miles, One-Way Segments: NB: 0.68 Miles; SB: 0.64 Miles, (Uses FDOT LRE for Mill & Resurface 5-Lane Urban Roadway with Center Turn Lane and 4' Bike Lanes and Two (2) Directional, 12' Shared Use Path to accommodate bike lane widening)
City of Edgewood, MetroPlan, FDOT	\$840,000	\$2,100,000	0.30 Miles	Assumes FDOT Construction Cost* of \$6.9 Million per Mile, Holden Ave Extension East: 450 LF, South to Gatlin Ave: 800 LF, Gatlin Ave Reconstruction/Extension West: 350 LF, and North to Holden Ave: 370 LF, Assumes 40% of Construction Cost for Concept Design, Final Design, & CEI, Does NOT include other A or B Streets within Redevelopment or Right-of-Way Purchase for City Streets, *Uses FDOT LRE for New 4-Lane Urban Road with 22' Median and 4' Bike Lanes (additional lane acts as on-street parking area, 22' median acts as landscape and sidewalk area)
Total Short Term	\$186,000	\$220,000		
Total Mid Term	\$750,000	\$0		
Total Long Term	\$2,140,000	\$6,400,000		

Orange Avenue – One-Way Pair Segments (Hoffner Avenue to Mandalay Road)

In the short term, and potential as a part of a FDOT 3R Project, the one-way segments (Recommendations #3) could be restriped to include on-street parking and buffered bike lanes. Within the 42' curb-to-curb space, the roadway would be restriped to remove the 12' pocket left turn lane, and the two (2) thru-lanes would be resized to 11'-0" each.

The remaining 15' would be striped as an 11' on-street parking on the left side of the street adjacent to the active uses, then the two (2) 11' travel lanes, and a buffered bike lane with a 3' buffer and a 6' bike lane.

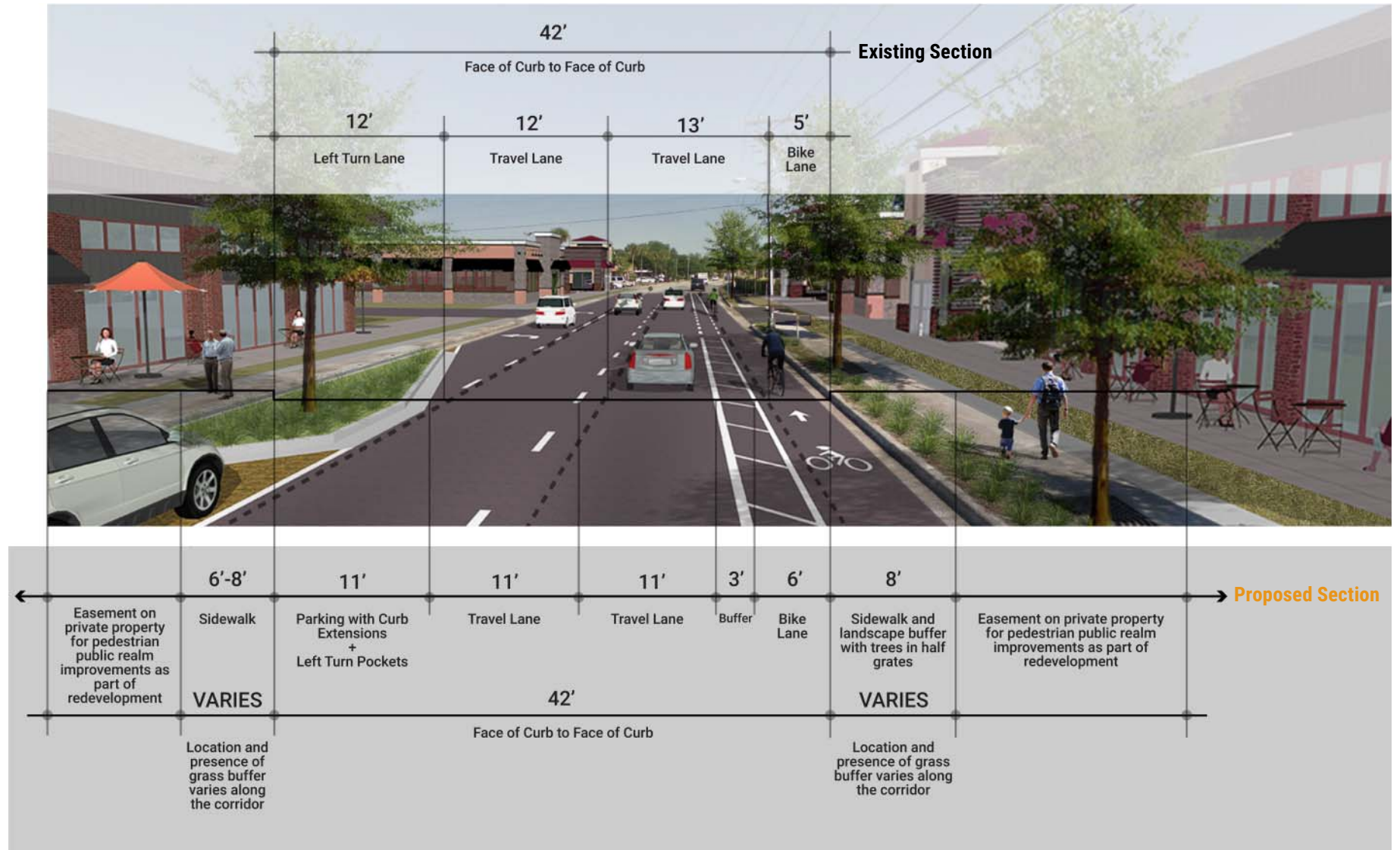
Short Term Typical Section - Orange Avenue and Hansel Avenue (Hoffner Avenue to Mandalay Road)



Over the long-term, redevelopment within the City of Edgewater that promotes a more livable and walkable environment would include new structures built up to the street and additional easement areas from the back of right-of-way for increased landscape and hardscape treatments.

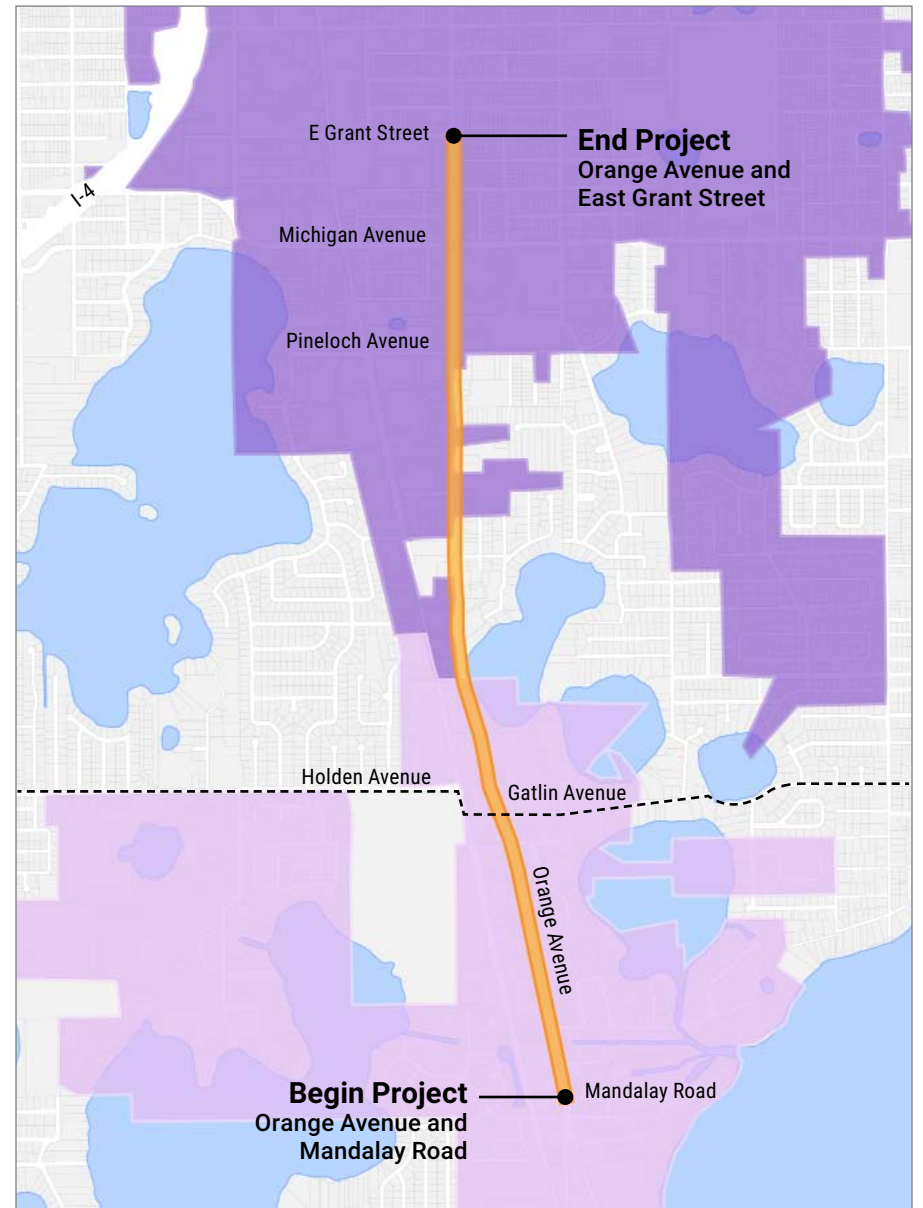
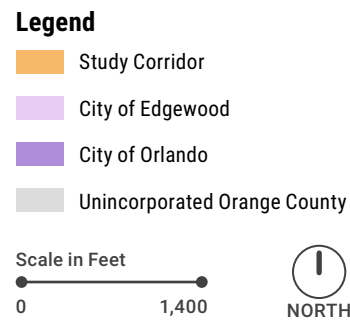
The typical section for the buffered bike lane and the travel lanes would remain. However, the striped on-street parking along the left-side of the street would convert to spot curb extensions with street trees and green infrastructure such as rain gardens, as well as, left turn pockets if required.

Long Term Typical Section - Orange Avenue and Hansel Avenue (Hoffner Avenue to Mandalay Road)

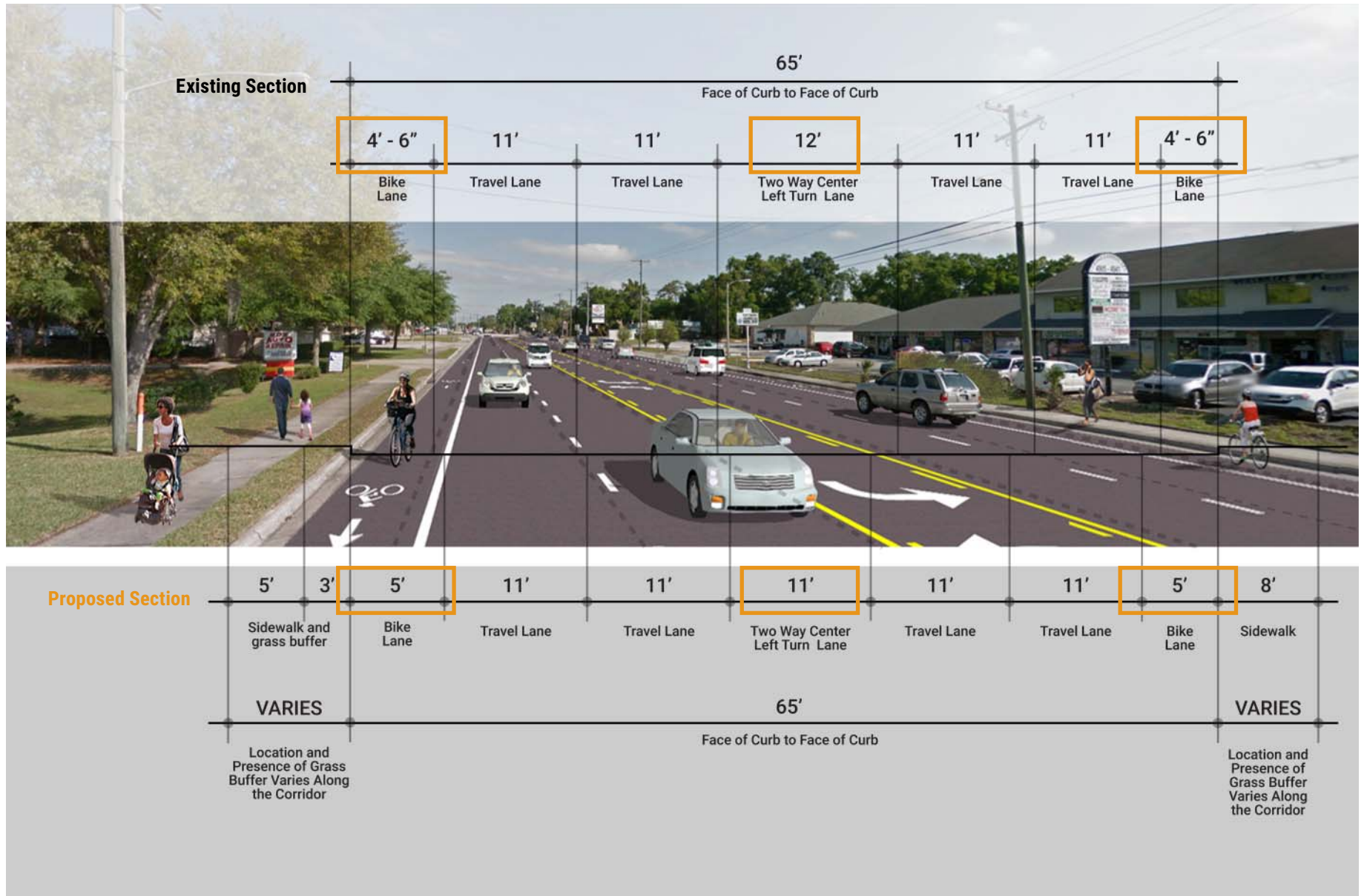


Orange Avenue – Two-Way Segment (Mandalay Road to Pineloch Avenue)

The short term solution is already underway. As part of the FDOT 3R Project (FDOT Project No.: 437330-1) from East Grant Street to approximately Mandalay Road, the two-way segment will be restriped (Recommendation #1) to narrow the existing two-way left turn lane to 11' and appropriate the remaining 1' to the bike lanes, widening them to 5' each. This project began in the Winter of 2016. It is currently in the "Design Phase" and is expected to start construction in November 2018.



Source: Orange County, City of Edgewood, and City of Orlando



It is recommended that in addition to the FDOT 3R Project, the City of Edgewood work with the FDOT to increase the size of the existing median (Recommendation #4) between Stratemeyer Drive and Mandalay Road. This median could be increased in size without limiting turning movements from either roadway.

The increased median would help to calm traffic and serve as a landscaped foreground to the "heritage" Live Oak on the median just south of Stratemeyer Drive. The trees or palms proposed will be limited to a maximum caliper width at maturity of 11" or less, and must be "frangible" or able to breakaway and collapse in a predictable and safe manner if struck by an errant vehicle.



Diagram showing the widened median between Stratemeyer Drive and Mandalay Road

The long term vision for the two-way segment features a landscape median, buffered bike lanes, and landscape and hardscape improvements on each side of the right of way. As shown below, the 11' median is not achievable with the current curb-to-curb width (there is not enough width for a vehicle to make a u-turn without hitting curb and having to stop or reverse in the outside travel lane). To accommodate this extra space, it is proposed to widen the 5' bike lane from the short term alternative, to the FDOT standard buffered bike lane (2' buffer, 5' bike lane). This widening would require an additional 2' on each side of the street (4' overall) which would also make u-turn's feasible. Additionally, the median (at areas where it becomes a left-turn lane) would require an additional 5' concrete traffic separator to prevent premature mid-block left turns. This would increase the overall median width to 16'. The widening of the bike lanes and the median would require the curb-to-curb width to increase by 9' from 65' to 74' overall.

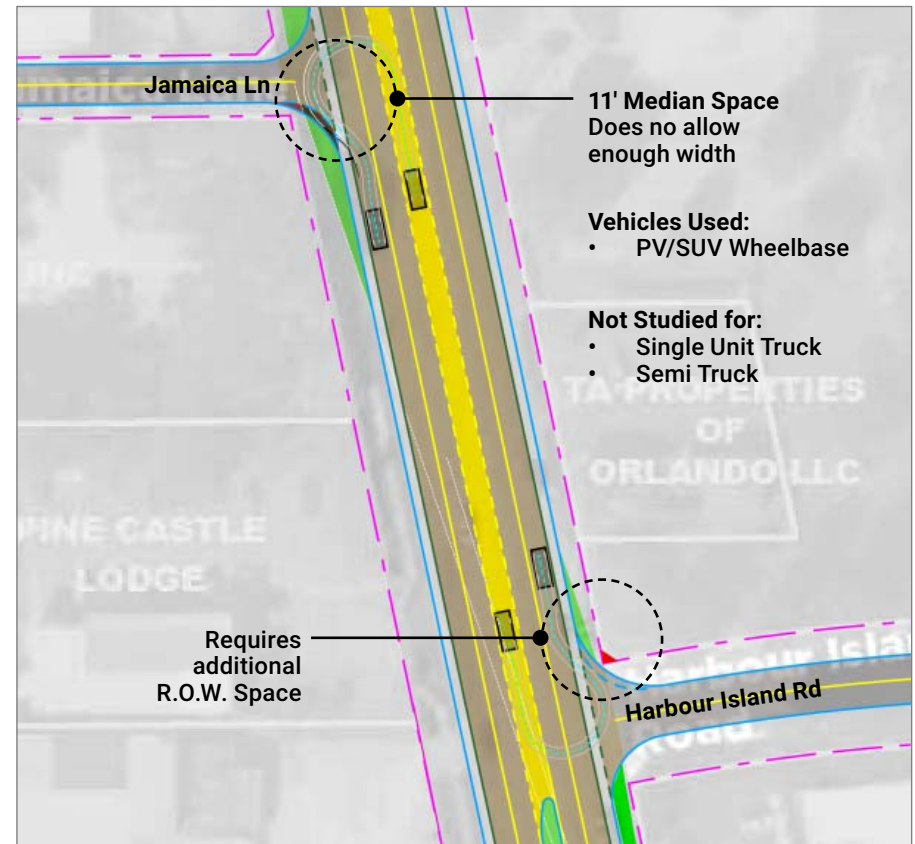
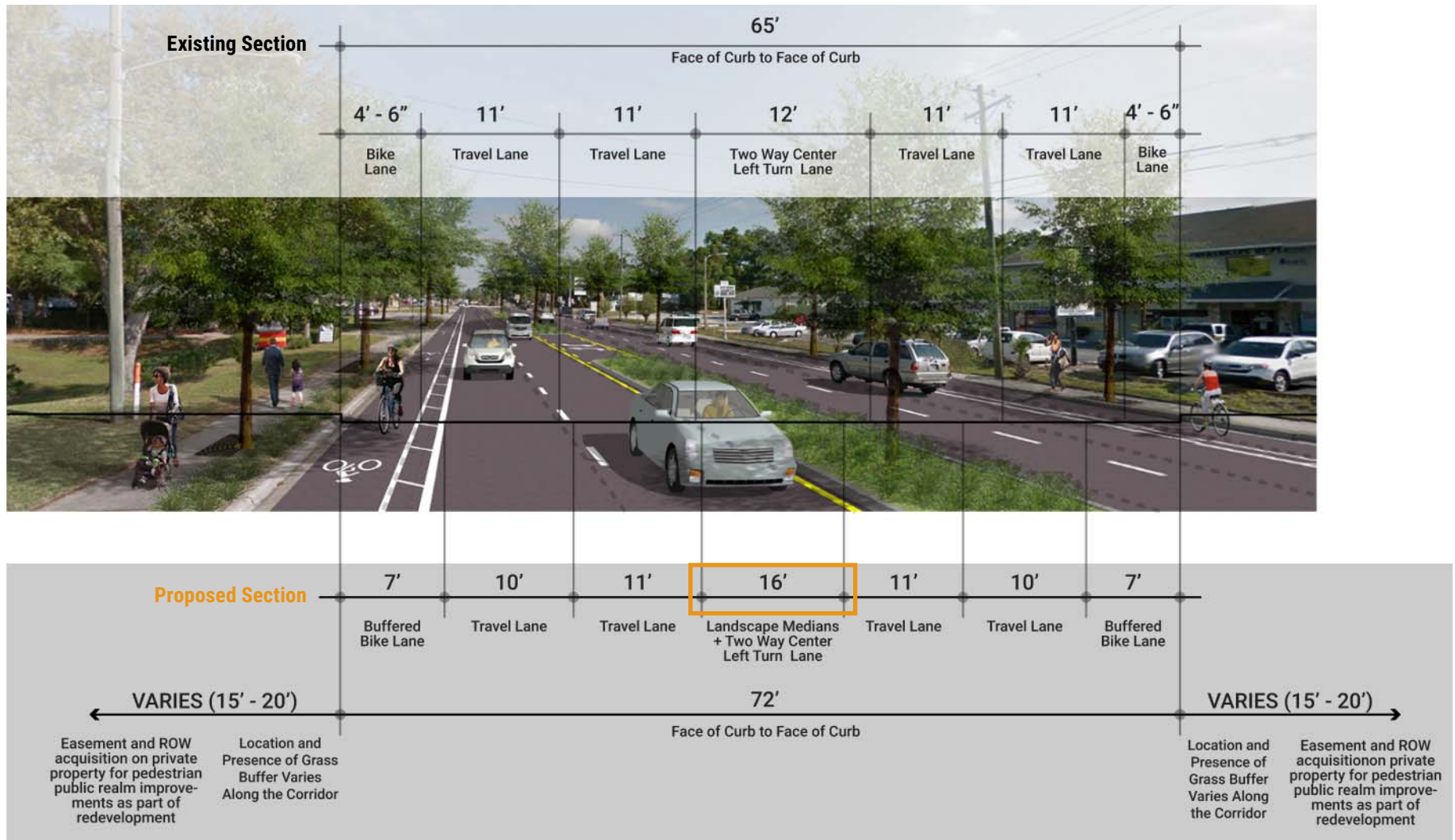


Diagram showing the lack of sufficient width for U-turns on Orange Avenue

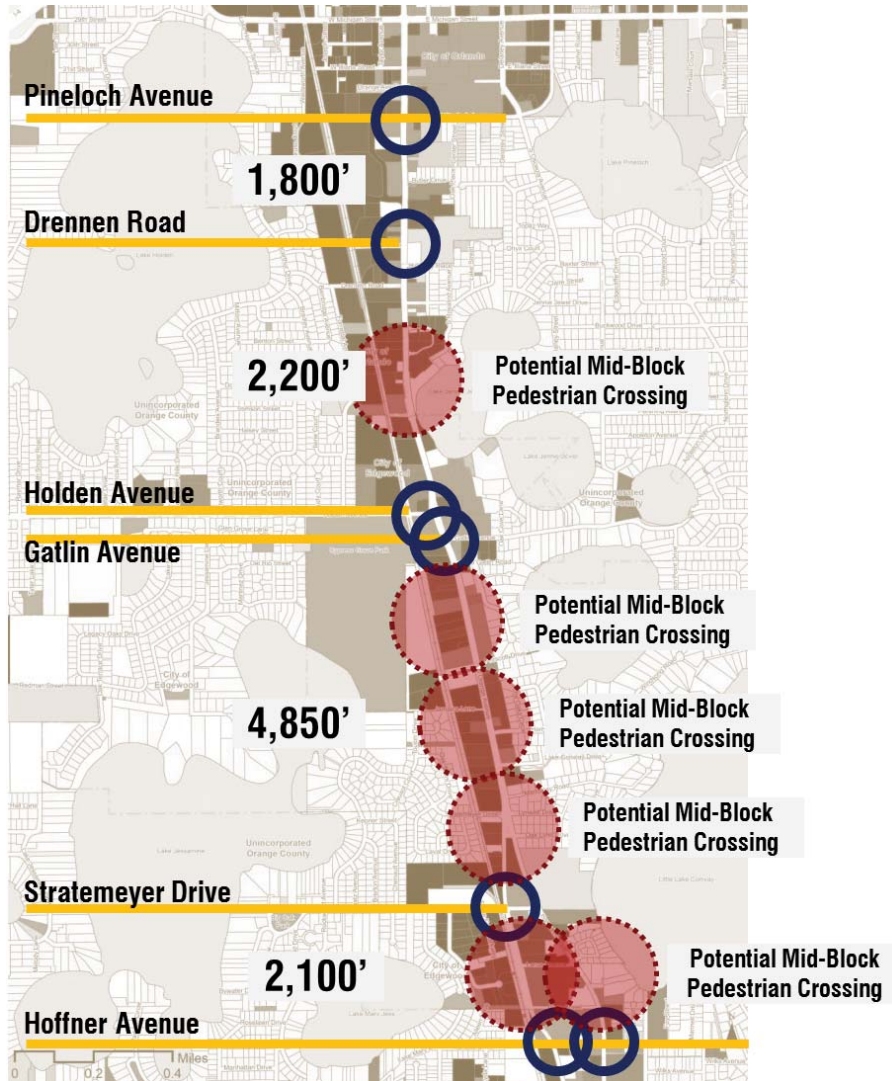
The widening of Orange Avenue to accommodate the buffered bike lane and the concrete median is not feasible in the current curb-to-curb width. The overall right-of-way width of Orange Avenue through this study area varies from 80' at the narrowest to 88' at the widest (not counting the Holden/ Orange/ Gatlin intersections and segments currently under construction). With the minimum right-of-way at 80', the new 74' curb-to-curb typical section would only leave 3' on each side to accommodate curb depth and sidewalk which is unfeasible. Based on this initial analysis, right-of-way will need to be acquired over time to implement the long-term preferred section.

It is recommended (Recommendation #5) that a right-of-way/easement dedication study be conducted to determine the actual amount of area required to implement the preferred section, including the area needed for the curb depth and the FDOT minimum 6' sidewalk. After it is determined where additional right-of-way is needed to implement the long-term preferred section, the City of Edgewood, Orange County, and the City of Orlando should adopt the right-of-way/easement dedication plan into their respective Comprehensive Master Plan (Recommendation #8) to ensure that future development - through redevelopment - accommodates this long-term vision.



Mid-Block Crossings

Currently there are six signalized intersections that provide protected pedestrian crossings. However, only one of the segments between intersections falls with a comfortable walking distance (Considered to be a 1/4 mile or 1,320'). To accommodate a walkable environment, it is recommended that where a segment between intersections exceeds 1,800' in length, a mid-block pedestrian crossing be located at intervals of at least 1,600' apart.



Existing mid-block crossing, Orange Avenue

After the right-of-way/easement dedication plan is completed and adopted, the long-term vision for a landscaped median will be feasible. It is recommended that a full, corridor-wide concept plan (Recommendation #9, Recommendation #10) be moved forward that would include the application of the preferred alternative section and opportunities for pedestrian mid-block crossings at locations between the current signalized intersections. It is recommended that study examines specific locations for one (1) crossing between Holden Avenue and Drennen Road; three (3) crossings between Stratemeyer Drive and Gatlin Avenue; and one (1) crossing on both Orange Avenue and Hansel Avenue between Hoffner Avenue and Stratemeyer Drive.

Other considerations for implementing the long term vision include maintaining adequate site distances for vehicles turning on and off the corridor. In some cases, the required site distance will only allow sod or groundcover plants that do not exceed 2' in height at maturity – this will affect the amount of tree planted within the overall streetscape without a landscape easement.

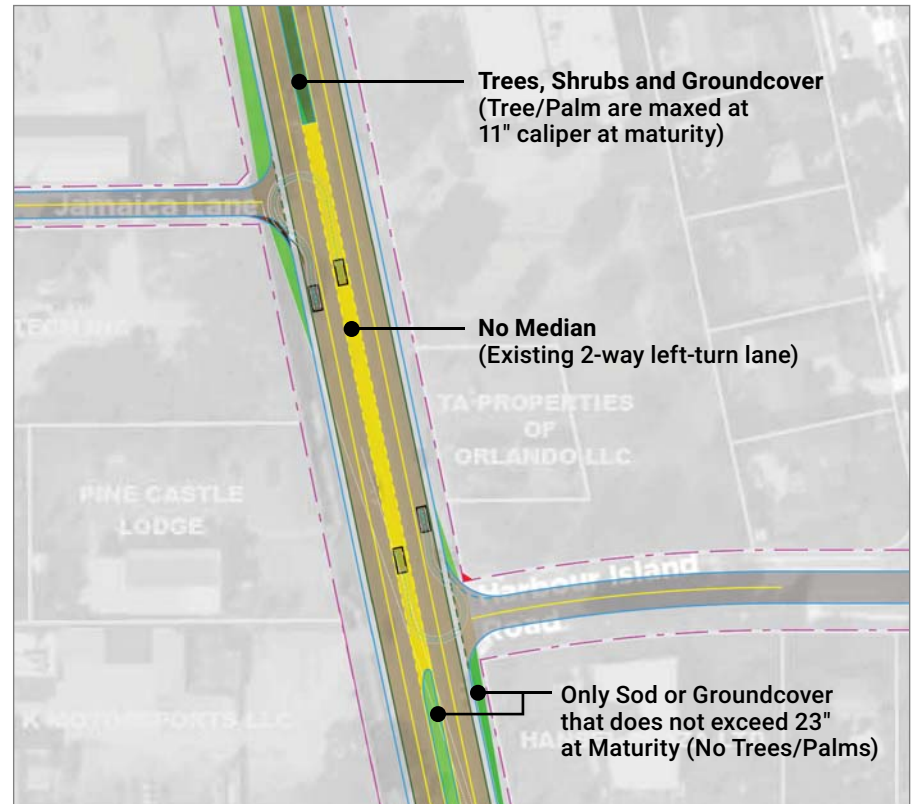
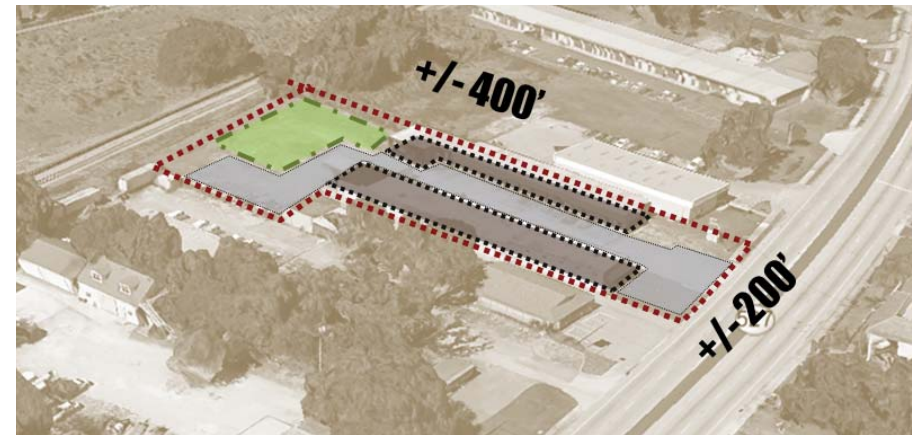


Diagram showing adequate site distance setbacks

Urban Form and Redevelopment

There are two typical parcel types within the study area corridor: deep parcels with narrow frontages on Orange Avenue (mainly on the west side of the corridor) and shallow parcels with long frontages on Orange Avenue (primarily on the east side of the corridor). The deep parcels are characterized by historic industrial land uses where the narrow frontages create long, skinny buildings aligned east-to-west. While the parcels fit the current land use, redevelopment will be problematic. Without assembling adjacent parcels, certain setbacks and parking requirements under the current land development regulations will limit the feasibility of redevelopment. A similar problem exists with shallow parcels on the east side of the corridor. The historic use of the properties as primarily auto-oriented commercial has led to a development pattern that utilizes long, skinny buildings, aligned north-to-south with one-bay of parking in the front and an access alley and some parking behind the building. Without assembling adjacent parcels, certain setbacks and parking requirements under the current land development regulations will limit the feasibility of redevelopment.

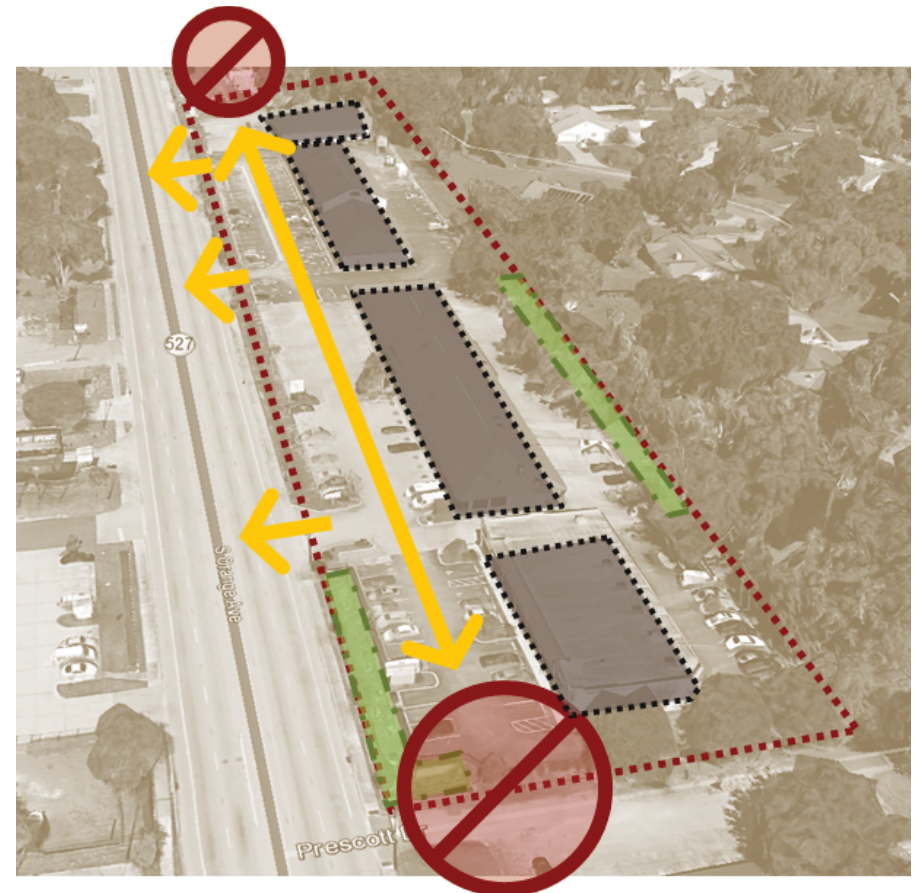
Additionally, the current ordinance for the City of Edgewood prohibits vehicles exiting commercial properties to exit on a street that connects to residential land use. Therefore, all commercial traffic must enter and exit from Orange Avenue. This ordinance forces additional access points for those properties and potentially adds more trips for users of the commercial properties coming from and going to residential areas.



Typical deep parcel on Orange Avenue



Typical shallow parcels on Orange Avenue



Current ordinances in the City of Edgewood prohibit vehicles from accessing residential streets

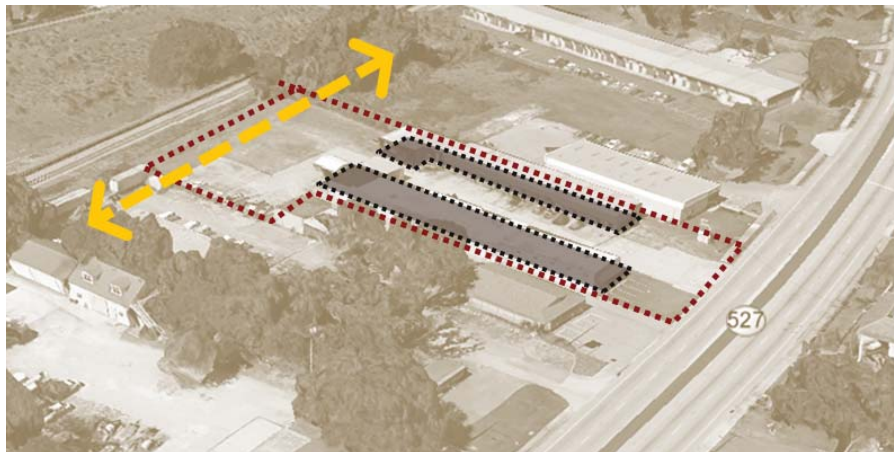
Urban Form and Redevelopment Alternatives

During the public process for this project, the style of recent development along Orange Avenue in Orlando was preferred to the existing patterns in Orange County and within the City of Edgewood.

As a mid-term alternative, the City of Edgewood and Orange County should revisit their respective land development regulations (Recommendation #7) to encourage that cross-access easements be allowed to exist to side streets, even if they lead to residential streets and based off those new access points, encourage driveway consolidation among the many properties fronting Orange Avenue. In addition to those access based measures, each agency should consider implementing parcel standards similar to the City of Orlando, specifically requiring “build-to” limits as opposed to “setback” requirements.

Based off a series of quick tests on existing parcels on the east side of Orange Avenue, shifting the development of buildings to the front of the parcel and requiring the parking and stormwater needs to the back of the property are feasible. Additionally, the aforementioned 5' of right-of-way on each side of the street needed and the potential for a 15'-20' easement for landscape and hardscape will create the walkable and livable environment desired by the community.

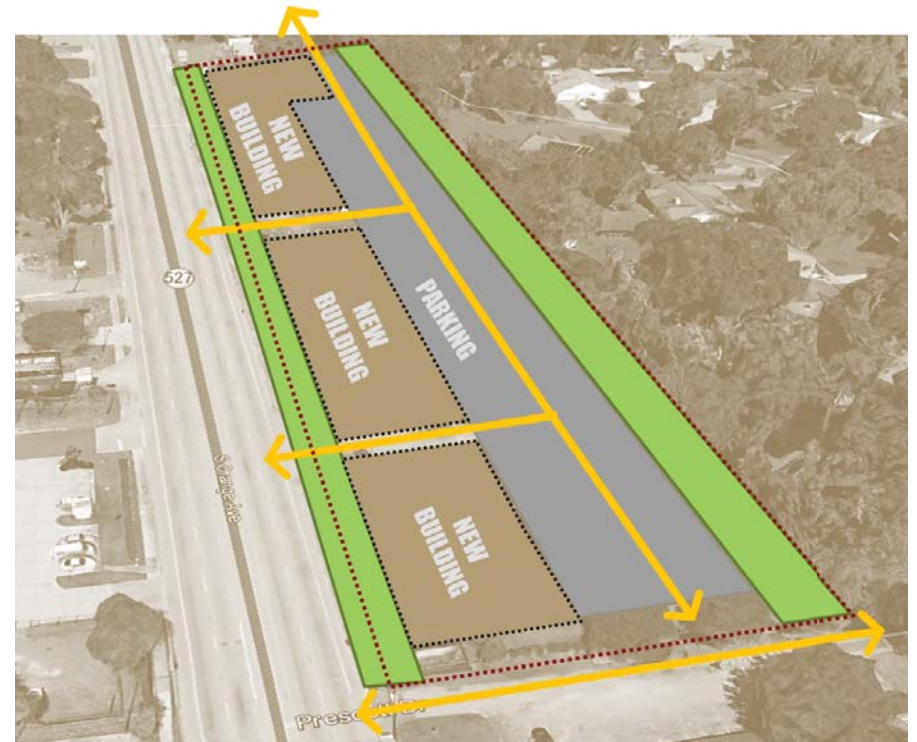
On the west side, the narrower frontages will make redevelopment harder without the accumulation of multiple properties for a single redevelopment. However, because of the east-west length of the west side parcels, there is adequate space (besides a limited number of parcels) for a secondary street to be added from Holden Avenue to Stratemeyer Drive, which would relieve many local trips on Orange Avenue and provide better access to those properties.



Example alley access standards for deep parcels



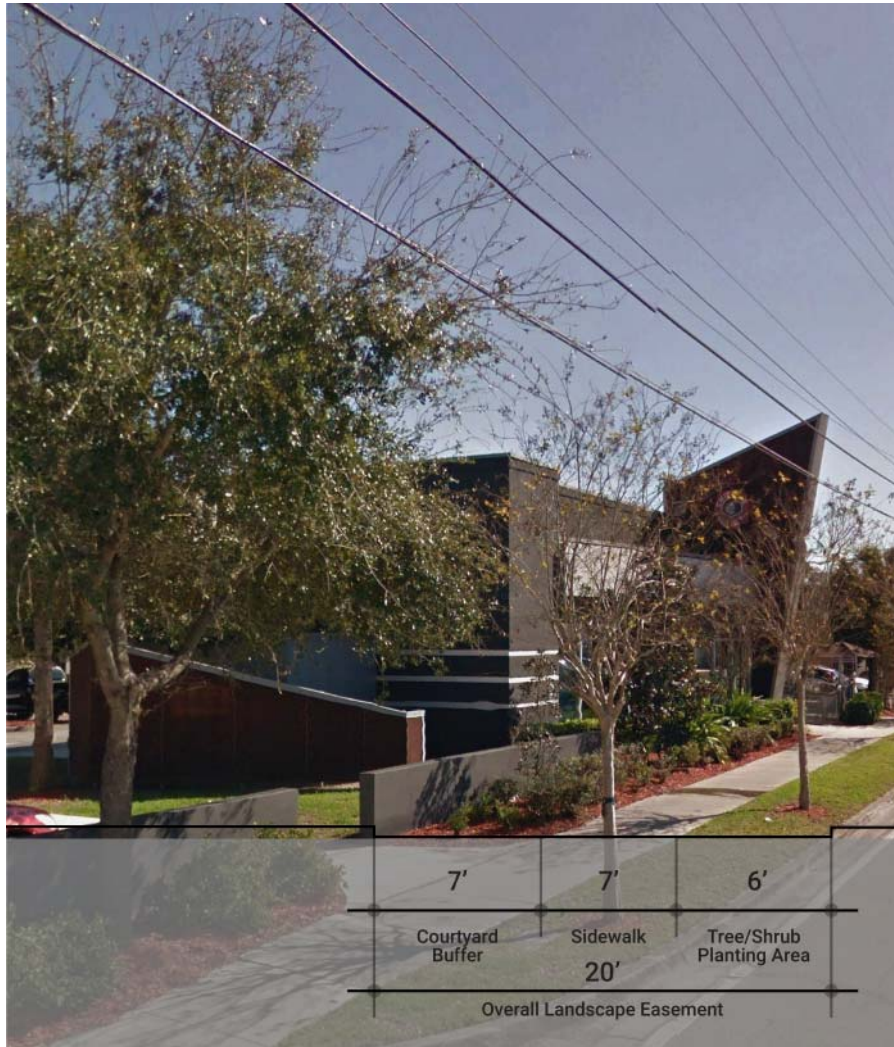
Recent redevelopment on Orange Avenue in the City of Orlando



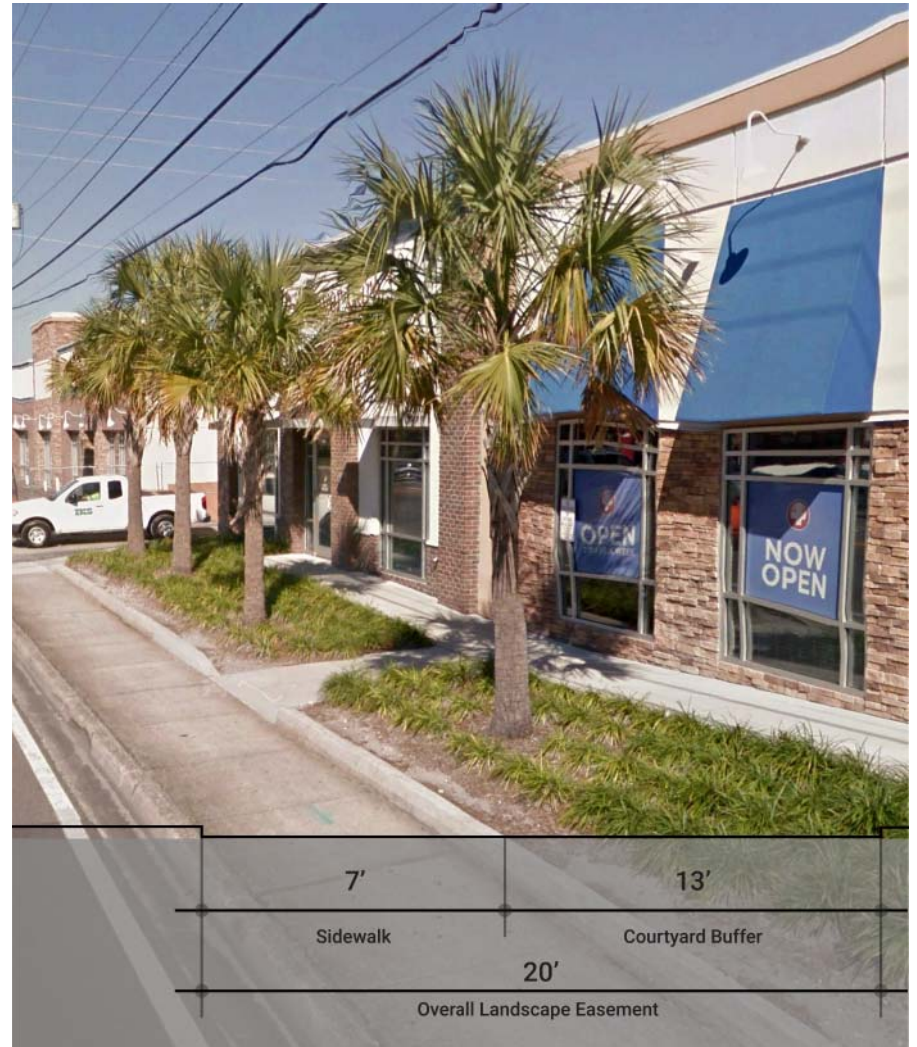
Example proposed standards for shallow parcels

Pedestrian Standards

The proposed mid-term revisions to the land development regulations of each agency include creating and codifying easement dedications for landscape and hardscape improvements. These easements are intended to mimic the easements set forth by the City of Orlando which includes a minimum 7' sidewalk, and 13' for landscape. The sidewalk is not required to be against the back of curb, and in fact, could shift away from the curb when the landscape does not interfere with the site line requirements at various intersections.



Proposed Pedestrian Standards (with Easement) Option 1

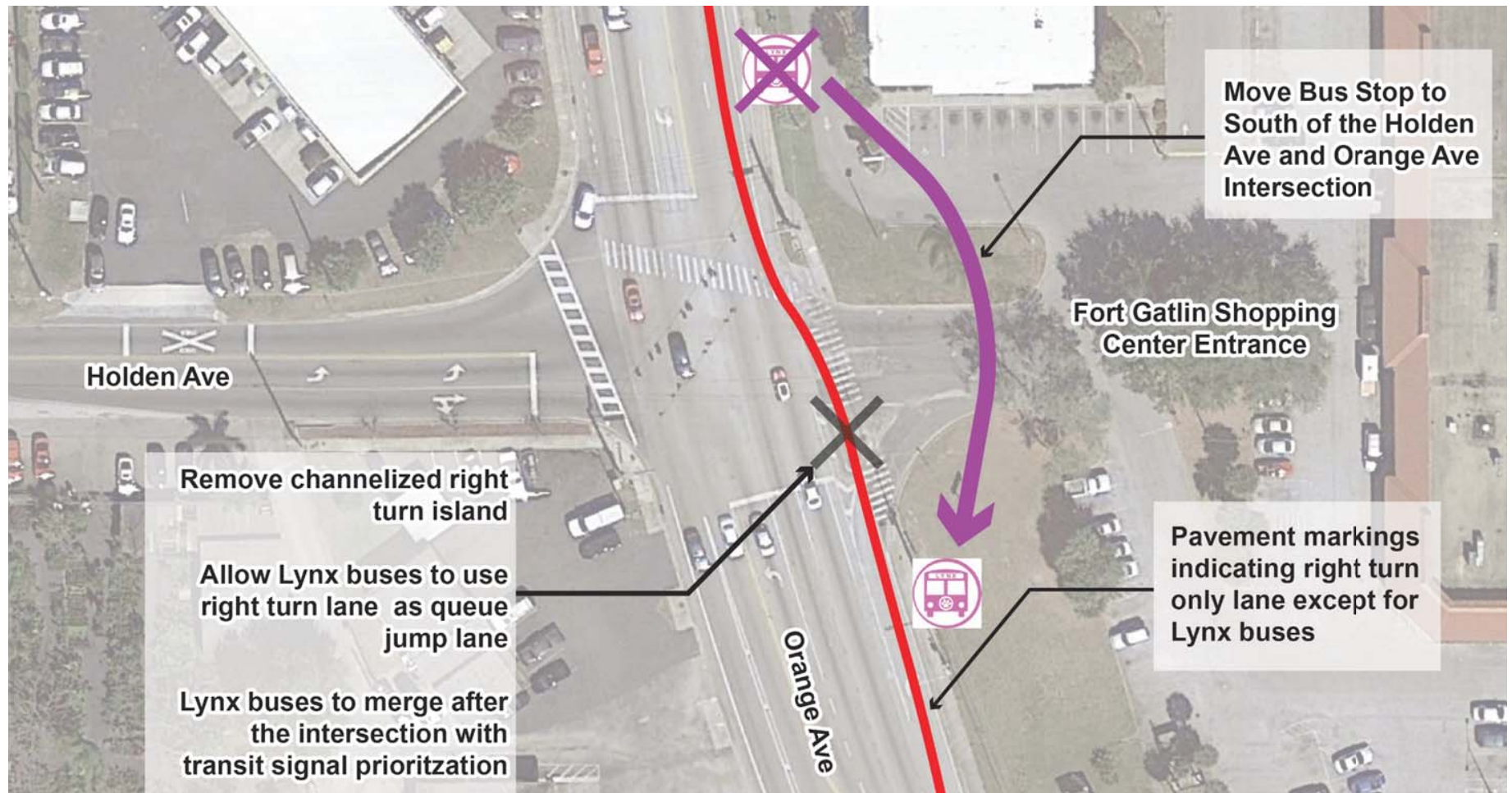


Proposed Pedestrian Standards (with Easement) Option 2

Relocation of LYNX Bus Stop

The current FDOT improvement project for the intersections of Holden Avenue, Gatlin Avenue, and Orange Avenue will reduce queue lengths and delay through the intersections. In addition to this project, this study recommends a short-term improvement (Recommendation #6) to move the existing LYNX bus stop, just north of the Fort Gatlin Shopping Center Entrance to a location just south of the Entrance. The existing right-turn only lane would be restriped to indicate right-turns only and LYNX buses.

The existing channelized right turn island would be removed and a transit signal priority phase would be added to the existing traffic signal to allow LYNX buses to queue jump into the northbound lane.



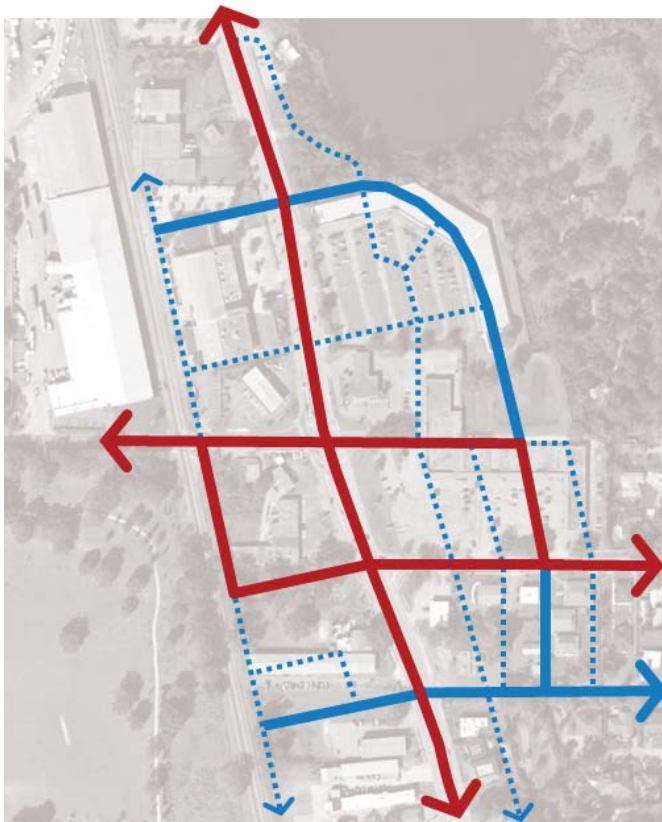
Relocation of LYNX Bus Stop at Orange Avenue and Holden Avenue

Holden/Gatlin/Orange Intersections

Beyond the FDOT improvements to the intersections (Recommendation #2), the City of Edgewood envisions this location to be a potential space for a town center. Three of the four quadrants of the intersection are owned by three owners and overall size of each parcel allow for assembly and redevelopment to occur faster than most other properties within the study area. Since this area may see redevelopment on a larger scale and since this is also a fairly congested area, the study examined three street network alternatives based on discussion with stakeholders, the public, and the City.

“The Grid”

The Grid alternative examined extending Holden Avenue across Orange Avenue to a new north-south street that will connect to Gatlin Avenue. Gatlin Avenue would extend across Orange Avenue to a new north-south street that will connect to Holden Avenue.



“The Grid” alternative

This new “grid” would form the primary structure for circulation for local traffic and regional traffic. Additional new streets would be connected in concert with private redevelopment to further create a system of streets that would process all the traffic in this new town center.

“Connect Holden”

The Connect Holden alternative extended Holden across Orange Avenue to a roundabout that would connect additional roadways built as part of the private redevelopment, and then move southward and connect with the existing Gatlin Avenue prior to reaching the residential areas. Additional network would be required within the private redevelopment as well as a finer network of alleys and secondary streets to ensure connectivity.



“Connect Holden” alternative

Preferred Alternative

Based on a number of factors including phasing feasibility and overall travel time impacts, “The Grid” was selected as the preferred redevelopment alternative for the Holden Avenue, Orange Avenue, and Gatlin Avenue Intersections (Recommendation #11). The street network will allow for a wider variety of development potential because of a mix of block types that could handle various densities allowed by the City’s Comprehensive Master Plan. The potential redevelopment would be easier to phase because proposed new streets align along existing property lines. The preferred alternative also focuses both on Orange Avenue and the waterfront of Lake Jennie Jewel making it a desired location for a “downtown” Edgewood.

The proposed redevelopment master plan was created using the existing allowable densities and height restrictions in the City of Edgewood’s Comprehensive Master Plan. However, the plan also used the proposed regulations with regards to setbacks, access management, and cross-access easement connecting to the residential streets. The plan also incorporates conceptual stormwater management for all of the developable area.

From a travel time comparison, a traffic model was created using the densities and heights in the proposed plan to model the impacts of the baseline 2035 scenario and the “The Grid” alternative. For the northbound traffic, “The Grid” alternative saw an overall 19 second improvement in the AM/PM peak times and for the southbound traffic, the same alternative saw a net 27 second improvement.



Preferred Alternative conceptual rendering

Funding Sources

The following sources can provide financial support for the implementation of the proposed projects in this study. Their use and application is function of specific project initiatives.

Agency General Funds – The City of Orlando, Orange County, and the City of Edgewood are sources of funds through their general funds or specifically funds for planning support through staff and consultants.

State Agency Funding - As Orange Avenue is a state roadway, FDOT can participate in funding portions of the proposed improvements. Additionally, MetroPlan can help set prioritization transportation investment goals related to the proposed improvements. Other state agencies like the FL Department of Economic Opportunity, FL Department of Environmental Protection, and others can help through Community Development Block Grants, urban forestry grants for street tree planting, and other such specific project aspects.

Federal Agency Funding – there are other numerous funding sources at the Federal level including the Transportation Investment Generating Economic Recovery (TIGER) grant program, the Surface Transportation Program (STP), and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program



7 Conclusion

Conclusion

MetroPlan Orlando and the City of Edgewood initiated the Orange Avenue Corridor Study to establish Orange Avenue (SR 527) as livable and walkable multi-modal urban thoroughfare. The Orange Avenue Corridor Study was completed in collaboration with Florida Department of Transportation (FDOT) District Five, the responsible agency for the roadway, and other local and regional agency partners. This study provides a framework for improved mobility as part of a planning effort that engages residents, business owners, and others who use the Orange Avenue corridor.

The Orange Avenue Corridor Planning Study considered the impacts and benefits of each recommendation. The recommendations were generated from the purpose and needs established through the public process of the project. Those needs included:

- Relieving traffic congestion at Holden/Orange/Gatlin intersections
- Reducing the crash frequency at Holden/Orange/Gatlin intersections
- Building a more friendly environment for pedestrians and bicyclists
- Standardizing amenities throughout the corridor
- Beautifying the aesthetics of the corridor through landscape and hardscape enhancements
- Revisiting the regulatory land use policies to bring them in line with the long-term vision of the corridor.

The study encompasses the initial planning steps in the life-cycle of a project. Recommendations identified in the study will require further concept development as a separate next step in the process. Several of the recommendations can be addressed on a case by case basis and will require further concept development as a separate next step in the process. Because of the substantial scale and amount of improvements proposed in some of the recommendations, they were organized into short-, mid-, and long-term timeframes. The recommendations are summarized as follows:

Short-Term

- Orange Avenue Restriping from Mandalay Road to Pineloch Avenue (already underway as part of an FDOT 3R project)
- Orange Avenue Intersection Improvements at Holden Avenue and Gatlin Road (already underway as part of an FDOT intersection project)
- Orange Avenue Restriping from Hoffner Ave to Mandalay Rd (already underway as part of an FDOT 3R project)
- Expansion/Beautification of the Orange Avenue Median between Stratemeyer Drive and Mandalay Road
- Orange Avenue Right-of-Way Study from Mandalay Road to Pineloch Avenue
- LYNX Bus Stop Relocation at Orange Avenue and the Fort Gatlin Shopping Center Entrance

Mid-Term

- Modify City of Edgewood Land Development Regulations (LDR)
- Adoption of ROW/Easement Dedication Map in each Agency's Comprehensive Master Plan
- Orange Avenue Streetscape Concept Design Study (Hoffner Rd to Pineloch Ave)

Long-Term

- Orange Avenue Streetscape & Feasibility Study (Hoffner Ave to Pineloch Ave)
- Implement Public ROW Aspect of Alternative One "The Grid" - Redevelopment at Holden/Gatlin/Orange Intersection and Adjacent Properties

The planning information and recommendations documented in this study will also be a public resource to community members, developers and others interested in transportation plans and how the area is expected to change. It will be used to track progress and follow up on recommendations made to address stated needs.

The recommendations presented in this report may be implemented through various public funding programs and private investment. Modest lower cost improvements may be considered and undertaken as funding becomes available. Recommendations that advance through private development will include right-of-way reservation, mitigation of traffic impacts of new development, and site design that incorporates local street and path connections, and other amenities, in support of bicycling, walking, and managing stormwater.

The strategic location of Orange Avenue as a conduit between the City of Orlando and the Orlando International Airport has served as both a resource and a hindrance for the abutting communities. While residents benefit from access to major economic centers, the regional function of the roadway network to move traffic has overshadowed the local role of this street as a vital public space. As it stands today, Orange Avenue does not reflect the character or quality of the rich heritage of the surrounding communities. Orange Avenue at its “heart” is the Main Street of the City of Edgewood, as well as an important link to the City of Orlando and portions of Orange County. Orlando, Edgewood, and Orange County recognize the importance of developing this vision for the future of Orange Avenue. This study establishes a vision for Orange Avenue as a multi-modal street that focuses on the improving the quality of public spaces, as well as, identifies implementation actions to address network efficiency, safety, and livability within the context of future transportation needs.

