El Prado Blvd.

MOBILITY OPPORTUNITIES AND DEFICIENCIES AUDIT
2020

DECEMBER 2020

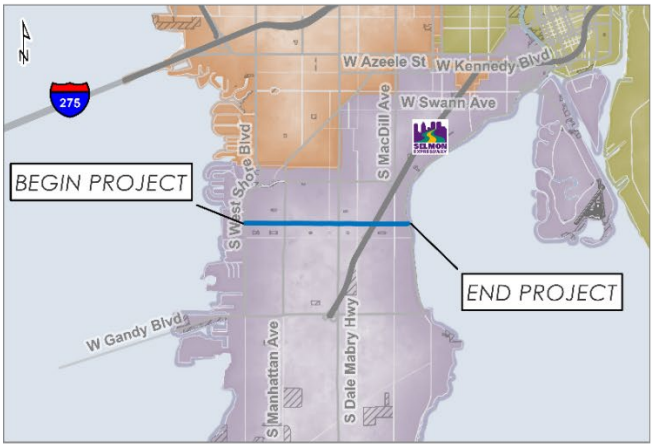
CITY OF TAMPA
MOBILITY DEPARTMENT

Introduction

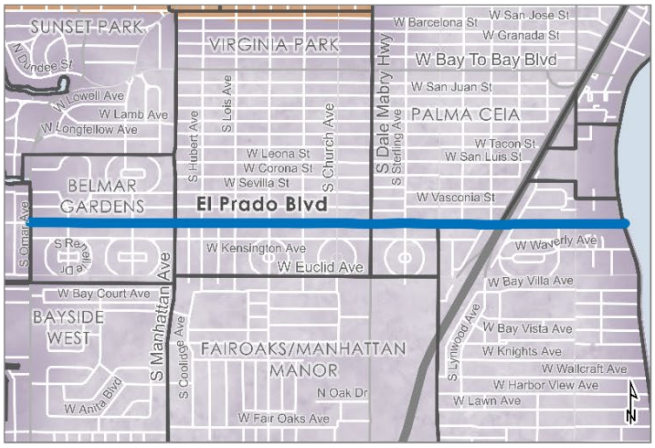
Purpose

This report was compiled in anticipation of the planned capital improvement project along El Prado Blvd. from Omar Ave. to Bayshore Blvd. The City of Tampa Mobility Department team along with several local resident volunteers performed a walking audit to examine safety and operational opportunities and deficiencies of the corridor. The following will briefly discuss the background and desired outcome of the project. Any design considerations discussed in the report are not meant to be final recommendations, but rather are listed to discuss some of the known issues of the corridor. All items will be evaluated for inclusion within the design scope of services once a consultant has been selected.

Project Location



Overview Map



Detail Map

Existing Conditions

The 2-mile segment of W. El Prado Blvd. from S. Omar Ave. to S. MacDill Ave. is a four-lane divided local collector road with a posted speed of 30 MPH and a 10-foot landscaped median. Its current Average Annual Daily Traffic (AADT) ranges from 4,200 to 8,900 vehicles per day. The quarter- mile segment of W. El Prado Blvd. from S. MacDill Ave. to Bayshore Blvd is a two-lane undivided local collector road with a posted speed of 30 MPH and an AADT of 1,650 vehicles per day.

Project Background

This project was identified and prioritized in the Walk-Bike Plan Phase II – Final Report (2012) prepared by the Hillsborough Metropolitan Planning Organization and the City of Tampa.

https://www.tampa.gov/document/walk-bike-plan-phase-ii-report-26356

The existing traffic volumes shown in the Walk-Bike Plan are shown below:

On	From - To	Existing Road Type	Date of Count	Existing Daily Volume	AADT	Existing LOS D Capacity	Existing v/c	Existing LOS	Link Status
El Prado Blvd	Westshore Blvd to Manhattan Ave	5LU	03/26/08	4009	4176	23855	0.18	A	NON-CRITICAL
El Prado Blvd	Manhattan Ave to Dale Mabry Hwy	5LU	03/26/08	8573	8930	23855	0.37	A	NON-CRITICAL
El Prado Blvd	Dale Mabry Hwy to MacDill Ave	5LU	03/26/08	5345	5568	23855	0.23	A	NON-CRITICAL

Table 13B: El Prado Boulevard Lane Diet Segment Traffic Data

Figure 1: Existing Traffic Volumes El Prado Blvd.

The City prepared a traffic study to examine opportunities for the corridor. Below are two typical sections presented in the report by DKS Associates, Inc., January 2018.

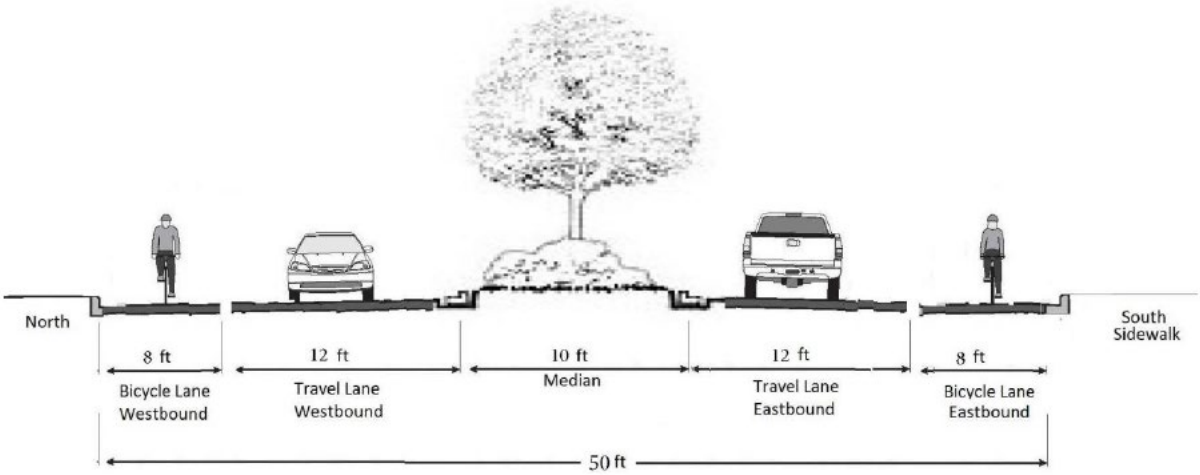


Figure 2: Traffic Study Typical from West Shore Blvd. to MacDill Ave.

Subsequent to the traffic study, the City received federal funding through the FDOT's Transportation Alternatives (TA) Program to construct sidewalk on the north side of the road for the entirety of the project limits.

Project Summary

Transportation System: NON-INTRASTATE OFF STATE HIGHW — District 07 - Hillsborough County
Description: EL PRADO SIDEWALK FROM S OMAR AVE TO S LOIS AVE
Type of Work: SIDEWALK — View Scheduled Activities
Item Number: 443516-1
Length: 0.817 — View Map of Item

Project Detail

Fiscal Year:	2021	2022	2023	2024	2025
Highways/Construction					
Amount:			$497,176		

Project Summary

Transportation System: NON-INTRASTATE OFF STATE HIGHW — District 07 - Hillsborough County
Description: EL PRADO SIDEWALK FROM S LOIS AVE TO BAYSHORE BLVD
Type of Work: SIDEWALK — View Scheduled Activities
Item Number: 443516-2
Length: 1.433 — View Map of Item

Project Detail

Fiscal Year:	2021	2022	2023	2024	2025
Highways/Construction					
Amount:				$595,866	

Figure 3: FDOT Work Program Schedules

Proposed Typical Section

The project recommendation that the City has developed comprises repurposing one vehicular travel lane in each direction into a 6-foot wide bike lane with a 3-foot physical buffer where possible. One 10-foot wide vehicular travel lane will remain in each direction.

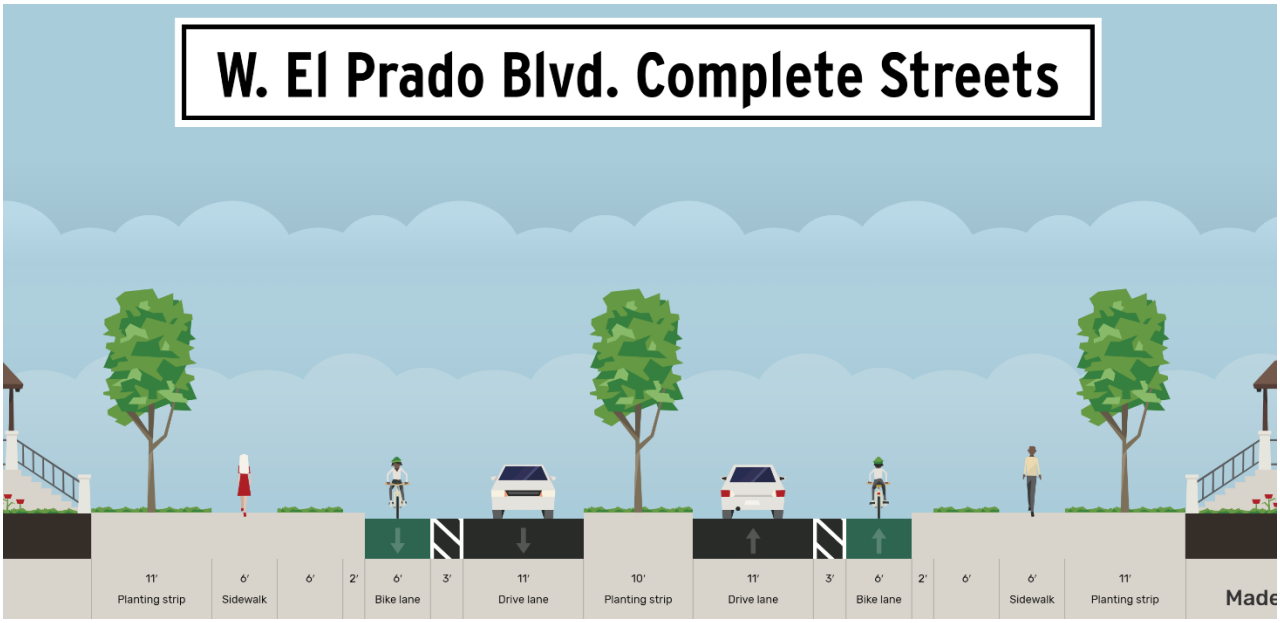


Figure 4: City Recommended Alternative

Opportunities and Deficiencies

Designing to the Surrounding Context

Corridor Characteristics

The majority of the corridor consists of single-family residences. The segment from Omar Ave. to Manhattan Ave. has relatively narrow pavement widths. The traffic volumes are nearly half of that east of the Manhattan Ave intersection. The entire corridor is currently posted at 30 mph.

There is a small business district between Hesperides St. and Lois Ave. near the Manhattan Ave. intersection. The pavement widths widen considerably in this section. Several of the businesses have wide curb cuts and parking encroachments within the right-of-way. Considering the wider pavement widths present in this area, on-street parking and/or curbside pick-up/drop-off spaces may be options.

Figure 5: Business District near Manhattan Ave. with wide pavement widths that may accommodate parking and long curb cuts that may be consolidated.

The section between MacDill Ave. and Bayshore Blvd. is a two lane, undivided section with on-street parking. There are several historic elements such as clay bricks and granite curb that should be incorporated into the design. The on-street parking had been installed previously by request of the surrounding complexes. However, due to the MacDill Ave. intersection configuration, a shared use path or “widewalk” may be the most appropriate multimodal treatment for this section. Coordination with the surrounding developments and alternative parking locations may be considered during the design process. Canterbury Towers, a senior living facility, is also in this region.

Consider a "senior slow zone." If traffic is calmed, bikes and cars may be able to mix safely between MacDill and Bayshore at 10-15 mph.

Coordination with Other Planned Projects

Design consideration should be given to recent and planned City of Tampa and other agency capital projects. West Shore Blvd. and Bayshore Blvd. are Hillsborough County owned facilities. Dale Mabry Highway is owned by the Florida Dept of Transportation (FDOT). The LeeRoy Selmon Expressway is owned by the Tampa Hillsborough Expressway Authority (THEA). CSX owns the railroad tracks that run through the project. Additional considerations should be given to public and private utility owners. Below is a list of several projects and studies that the City is aware of at this time:

Project	Status
Truck Route Signage Study	**Complete**
Train Horn Quiet Zone Study	**Complete**
El Prado Drainage Improvemen	**Complete**
MacDill Avenue Corridor Improvements	**Planned (Surtax)**
Complete Neighborhood Infrastructure Project for Virginia Park Neighborhood D/B	**Preliminary Design Phase**

Low Stress and Attractive Multimodal Facilities

Emphasis should be paid to making the corridor safe, accessible, and efficient for all users.

Separated Bicycle Facilities

All proposed bike lanes should be designed as premium, attractive, and low-stress assets that will accommodate bicyclists and other micromobility vehicles (e-bikes, scooters, etc.). The City would like to provide separated facilities that minimize conflict areas to the greatest extent possible. Physically separated facilities should be evaluated for the entire corridor. There are 13 side street intersections, 6 signalized intersections, and approximately 255 driveway curb cuts along the corridor within the project limits. Designs should incorporate analysis and proposed improvements to minimize conflicts at all intersections. The City proposed typical includes separated bike lanes, but in areas such as the business district shared use facilities may be evaluated to reduce conflicts. Garbage collection and mail delivery should be considered with design. Coordination with City of Tampa Solid Waste will help to determine maximum reach of the trash collection vehicles.

Figure 6: Examples of Separated Bike Lanes, including crossing markings and LID Measures

Sidewalks and ADA Accessibility

This project will include construction of a 5’ minimum concrete sidewalk on the north side of the corridor as part of the federally funded Transportation Alternatives Project. The approximate right-of way width is 100’ for the majority of the corridor, narrowing down to approximately 40’ from MacDill Ave. to Bayshore Blvd. The north side sidewalk should be designed to be linear, with variations to avoid existing conflicts. There may be several encroachments encountered including utilities, mailboxes, and parking. These encroachments should be evaluated during design. Several driveways are paver driveways that may remain providing that an ADA accessible route can be accommodated. Where parking encroachments are encountered a consistent, clearly delineated concrete walkway should be provided.

Figure 7: Sidewalk gaps, drop-offs, and lack of delineation through wide driveways are some of the hazards and accessibility obstacles observed.

The south side sidewalk should be evaluated for ADA concerns and existing sidewalk condition. All curb ramps shall be upgraded to current ADA standards. There is a portion of the southside sidewalk immediately east of the West Shore Blvd. intersection that acts as a swale to convey stormwater runoff to a grate inlet. Design alternatives and alternate drainage inlet tops should be evaluated during design. Finally, it was noted that there are several sanitary manholes in the south side sidewalk that may not meet ADA standards. Push buttons at the signalized intersections were often inaccessible. These should be considered during design.

Figure 8: Drainage inlet within sidewalk in area of sidewalk swale (left); sanitary sewer manhole cover within southside sidewalks (right)

Figure 9: Inaccessible push buttons at West Shore Blvd. and Dale Mabry Hwy, left and right, respectively

Connections to Adjacent Networks

Providing reasonable and frequent safe crossing locations provide regional access to other multimodal facilities. With that in mind, the surrounding area should be evaluated to determine where enhanced crosswalks may be needed. Schools, parks, shopping centers and regional connectors should be considered. Crossings should be evaluated at regular intervals. During the audit the team listed the following as potential crosswalk locations:

Side Street	Notes
Hesperides St.	**Connection to right-of way park and low stress crossing west of Manhattan Blvd.**
Lois Ave.	**Neighborhood Collector with connections to parks, schools, libraries, and planned crosswalk at Bay to Bay Blvd.**
Grady Ave.	**Currently, nothing is planned, but a Neighborhood Greenway/ Bike Boulevard has been considered. Preparing landings for future crossing considerations may be considered.**
Church Ave.	**Neighborhood Collector with bike lanes**
Sterling Ave.	**Connection to Corona Park, Britton Plaza, and daycare.**
Concordia Ave.	**Roosevelt Elementary School walking route; currently signalized**
Drexel Ave.	**Low stress crossing between the LeeRoy Selmon Expressway and MacDill Ave.**
Bayshore Blvd.	**Major unsignalized intersection; trail connection**

Although El Prado is not currently a transit route for HART, considerations for school bus pick-up and drop-off spaces should be considered and prioritized during design. Safe pedestrian accommodations near these locations should be prioritized.

Figure 10: CSX Rail crossing with no sidewalk on north side

Bridging Barriers

Currently, the two largest barriers are Dale Mabry Blvd. and the CSX Railroad crossing. The Dale Mabry Hwy. intersection should be considered for improvements to the pedestrian facilities. Sidewalks and bike facilities across the CSX rail line should be included within the project.

Shade and Lighting

Shade and lighting are both valuable components to a successful multimodal facility. Opportunities for landscaping should be considered, and upgrades to the existing TECO lighting facilities and pedestrian scale lighting at business districts and crossing locations should be evaluated and coordinated as part of the design.

Landscaping and Amenities

Landscaping can improve traffic calming and provide a sense of place making the corridor more accessible and inviting to pedestrians and cyclists. Also, amenities, such as bike racks near attractors, can lead to a more successful multimodal network. These components should be considered during design. The City should explore access to the El Prado Stormwater pond.

Wayfinding to other connectors and community assets such as parks and schools should be explored by the City, either within this project or city-wide. Other opportunities can be explored with maintaining agencies, such as the Dale Mabry intersection (FDOT) and the LeeRoy Selmon Expressway underpass (THEA). As a portion of this project is federally-funded, a Cultural Resource Assessment will need to be done. Historic features such as granite curb, vitrified clay brick, and any sidewalk cartouches should be preserved.

Figure 11: Existing El Prado Stormwater Pond

Vehicular Operations and Design Speeds

Design Speeds

The City should evaluate design speeds of the corridor based upon the surrounding context and the proposed improvements. A reduction in design speed to 25 mph should be considered for the portions between West Shore Blvd. and Manhattan Ave. and between MacDill Ave. and Bayshore Blvd.

Intersection Geometry and Operations

All signalized intersections should be analyzed to determine needed operational and safety improvements, especially considering the proposed lane diet. Unwarranted space may be used to better serve multimodal users. Crossing distances should be reduced and opportunities for pedestrian refuge islands should be evaluated. Signal timings, bike specific striping (bike boxes), cyclist detection, right turn restrictions, and leading pedestrian intervals (LPI) should be considered.

Figure 12: Long crossing distances for pedestrians and lack of ramps and landings make intersections dangerous and inaccessible.

The intersection of Concordia is currently signalized and full access. This intersection should be analyzed for possible access management and possible removal of the traffic signal in favor of an enhanced pedestrian crossing such as an RRFB.

The intersection of Drexel Ave. is skewed with large curb radii, creating long crossing distances. Reconstruction of a portion of the curb returns and the median islands should be evaluated, along with any proposed pedestrian crossings. Along the corridor, there are several midblock median openings that may no longer function after the lane diet. Considerations should be given to either closing or properly signing for restricted movements (no U-turns) all median openings. However, the designer should work to understand how the public may use these openings.

Figure 13: Mid-block median openings may not allow U-turns under proposed conditions (left); Drexel Ave. is a skewed intersection with a wide throat (right)

Traffic calming

Traffic calming along the corridor should be considered. In addition to narrow lanes and enhanced signage and striping, horizontal and vertical deflection should be evaluated as part of the project. The City has incorporated horizontal and vertical deflection as a means to calm traffic on other recent projects. The Hampton Terrace and Ridgewood Park Neighborhood Traffic Calming Projects employed raised medians, raised intersections, chokers, chicanes, and mini roundabouts. The Harbour Island Complete Streets project is currently installing raised crosswalks on the collector roads of Knights Run Blvd. and Beneficial Dr. These crosswalks act to slow traffic speeds while providing more visibility to the pedestrian crossings.

Figure 14: El Prado residents have already attempted to slow traffic on their own by placing these placards in the median

Drainage

Ponding

There were several areas of ponding encountered during the on-site audit. Removing ponding through low maintenance methods should be included within the design. Special notice should be placed on ponding within curb ramps and proposed bicycle facilities.

Figure 15: Ponding and sediment in walkways and bikeways create obstacles that reduce the viability of alternate modes

Resilient Design

The City would like to explore resilient design opportunities along the corridor through low impact development practices, such as bioswales, rain gutters, and porous pavements. All recommendations developed should be coordinated with the City's Stormwater Operations group.

Maintenance & Vulnerability

Condition of Good Repair

The asphaltic concrete pavement shows signs of several failures. Instances of block cracking were observed during the on-site audit. Recommendations for pavement rehabilitation should be developed during design. Areas of damaged sidewalks were noted on both sides of the road and should be considered for replacement. Several sections of damaged curb were also encountered.

Trees: For Better or Worse

Trees provide shade for multimodal users, act to better air quality and filter groundwater, create a traffic calming effect, and improve overall corridor aesthetics. As such, the City of Tampa consider trees as essential transportation assets. However, for all the good, trees can be detrimental to the long-term maintenance of other public assets within the corridor. Roots buckle adjacent sidewalks, curbs, and pavements and can cause damage to underground utilities. Trunks and canopy can diminish lighting and reduce sight visibility. All in all, mitigating measures such as root barriers should be considered within the landscaping portion of the project. Alternative paving materials, such as flexipave, should be considered adjacent to trees.

Currently, El Prado Blvd. has a series of relatively young live oak trees that have been planted within a narrow median. Evidence of damage to the existing adjacent pavement was observed. Considering that the roadway is a normal crown section, the damage and uplifting has not caused any drainage issues. However, as the City is proposing a lane diet where vehicular traffic will be forced to utilize the inside lanes, drivability should be considered when evaluating the corridor. Canopy should be evaluated for appropriate clearance. Possible inclusion of a median side shoulder may be considered to reduce future driving surface concerns due to tree roots. Finally, the City's Natural Resources Group should be engaged early in project design development to determine existing tree conditions and evaluate existing trees for pruning or removal.

Figure 16: The City will look to rehabilitate the corridor assets; broken curb, pavement failures, and upheaved sidewalks should be evaluated for correction.