



DREW STREET

CORRIDOR STUDY



EXISTING CONDITIONS
TECHNICAL MEMORANDUM

2021

Table of Contents

Introduction.....	4
Overview and Study Area.....	4
Purpose of the Existing Conditions Report.....	5
Planning Context.....	5
Complete Drew Street Concept Plan.....	5
Segment 1: North Osceola Avenue to North Myrtle Avenue.....	5
Segment 2: North Myrtle Avenue to North Keene Road.....	5
Segment 3: North Keene Road to US 19.....	6
Recommended Intersection Improvements.....	9
Imagine Clearwater Master Plan.....	12
Clearwater Downtown Redevelopment Plan.....	13
City of Clearwater Complete Streets Implementation Plan.....	15
SR 60 Multimodal Implementation Plan.....	20
Short-term Strategies.....	21
Long-term Strategies.....	21
Redevelopment.....	23
Critical Intersections.....	23
Safe Streets Pinellas.....	24
Clearwater East Gateway District Vision Plan.....	28
SR 60 Corridor Study.....	29
Advantage Pinellas Countywide Plan.....	30
Pinellas Countywide Plan.....	31
Community Characteristics.....	32
Demographics Review.....	32
Land Use.....	37
Existing Land Use.....	37
Segment 1: North Osceola Avenue to North Myrtle Avenue.....	37
Segment 2: North Myrtle Avenue to North Keene Road.....	37
Segment 3: North Keene Road to US 19.....	37
Roadway Characteristics.....	41
Context Classification.....	42
Intelligent Transportation Systems.....	48
Existing Traffic.....	49
Annual Average Daily Traffic.....	49
Traffic Volume and Level of Service.....	50
Multimodal Accommodations.....	51

Transit	51
Bicycle and Pedestrian Infrastructure	54
Freight Considerations	55
Safety	57
Crash Summary.....	57
Crash Types	57
High Crash Locations	58
Bicycle and Pedestrian Crashes.....	63
Fatal Crashes	64
Speed Analysis.....	65

List of Figures

Figure 1: Drew Street Corridor Study Area.....	4
Figure 2: Project Schedule and Milestones	Error! Bookmark not defined.
Figure 3: Drew Street Corridor Segments	6
Figure 4: Drew Street from North Osceola Avenue to North Myrtle Avenue (Segment 1).....	7
Figure 5: Drew Street from North Myrtle Avenue to North Keene Road (Segment 2)	8
Figure 6: Drew Street from North Keene Road to US 19 (Segment 3)	9
Figure 7: Imagine Clearwater Master Plan	12
Figure 8: Imagine Clearwater Plan Site Access	13
Figure 9: Clearwater Downtown Redevelopment Character Districts	14
Figure 10: City of Clearwater Complete Streets Implementation Plan Context Design Matrix	18
Figure 11: Drew Street from Hampton Road to Saturn Avenue Concept	21
Figure 12: Drew Street from Saturn Avenue to Myrtle Avenue Concept Road Diet Option	22
Figure 13: Drew Street from Saturn to Myrtle – Complete Street Option.....	23
Figure 14: Drew Street from Myrtle Avenue to North Osceola Avenue	24
Figure 15: Safe Street Pinellas High Injury Network and Hot Spots.....	26
Figure 16: Safe Streets Pinellas High Injury Network around Communities of Concern	27
Figure 17: High Injury Network with Ridership at Transit Stops on the Network	28
Figure 18: East Gateway District and Extended Study Area	29
Figure 19: Forward Pinellas 20- Minute Concept Vision Map, Advantage Pinellas Plan.....	31
Figure 20: Study Area Population.....	33
Figure 21: Study Area Employment.....	34
Figure 22: Study Area Demographics.....	35
Figure 23: Study Area Housing	36
Figure 24: Forward Pinellas Land Use Strategy Map	38
Figure 25: Study Area Existing Land Use.....	39

Figure 26: Study Area Schools	40
Figure 27: Pinellas County Comprehensive Plan Functional Classification	41
Figure 28: Segment 1 Existing Conditions Typical Section	43
Figure 29: Drew Street Segment 1 Pavement Conditions	44
Figure 30: Drew Street Segment 2 Existing Conditions Typical Section.....	45
Figure 31: Drew Street Segment 2 Structural Elements within ROW	46
Figure 32: Drew Street Segment 2 Pavement Conditions	47
Figure 33: Segment 3 Existing Conditions Typical Section	47
Figure 34: Drew Street AADT	49
Figure 35: City of Clearwater AADT	50
Figure 36: Existing Transit Service.....	52
Figure 37: North Pinellas Jolley Trolley Route.....	54
Figure 38: Trails and Bike Paths	56
Figure 39: Crash Types at High Crash Locations	62

List of Tables

Table 1: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Core	16
Table 2: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Edge.....	17
Table 3: Complete Streets Implementation Plan Flexible Street Design Elements: Urban General	17
Table 4: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Residential	17
Table 5: East-West Corridor Network Gaps	20
Table 5: SR 60 Corridor Study Short-Term Project Improvement Recommendations	30
Table 6: SR 60 Corridor Study Long-Term Project Improvement Recommendations	30
Table 7: Drew Street Context Classification Design Control.....	42
Table 8: Drew Street Intersection Delay	51
Table 9: Bus Stop Attributes	53
Table 11: Overall Crash Summary, 2015 to 2019.....	57
Table 11: Crash Type Summary, 2015-2019	57
Table 13: Number of Crashes at Intersections.....	59
Table 14: Crash Types at High Crash Locations	61
Table 15: Bicycle Crashes, 2015-2019	63
Table 16: Pedestrian Crashes, 2015-2019	63
Table 17: Fatal Crashes, 2015-2019.....	64
Table 18: Crash Types for Serious Injury and Fatal Crashes, 2015-2019	64

and ongoing studies and stakeholder engagement throughout the process. Existing preferred scenarios will undergo an engineering evaluation and be refined as needed to meet FDOT design requirements and standards.

PURPOSE OF THE EXISTING CONDITIONS REPORT

The Existing Conditions Report is intended to provide an overview of the existing plans in place, roadway characteristics, traffic, surrounding infrastructure and uses. This report will support the understanding of corridor needs and feasibility for the evaluation of design considerations.

Planning Context

The Drew Street Corridor Study and Concept Evaluation must maintain consistency with planning efforts within the corridor and throughout the County, including goals, visions, priorities and projects already planned. The following section provides a summary of the most significant planning efforts that set the stage for examining the needs within the corridor. These plans were developed at the time of this study kickoff and will serve as a basis for informing the study.

COMPLETE DREW STREET CONCEPT PLAN

The City of Clearwater completed the Drew Street Complete Street Concept Plan in 2018 to identify complete street concepts between North Osceola Avenue and US 19. The goals from the plan included:

- » Transform Drew Street /SR 590 into a vibrant, sustainable and multi-modal spine;
- » Improve safety and reduce crashes;
- » Increase accessibility and connectivity with surrounding land uses;
- » Support existing businesses and future growth; and
- » Promote active living with access to trails.

The planning process included significant stakeholder and public engagement as part of the corridor visioning effort. The engagement identified several challenges throughout the corridor including but not limited to safety, narrow sidewalks and sidewalk gaps, narrow travel lanes, lack of trail connectivity, left-turn conflicts, lack of mid-block crossings and landscaping, lack of lighting and dangerous intersections. A Complete Streets Advisory Committee was formed for this study to provide input on design elements as the study was conducted. The committee prioritized wider sidewalks/path, speed reduction, and bike lanes as critical elements.

The Drew Street Complete Street Concept Plan resulted in preferred concepts for three different segments (illustrated in Figure 2), each with unique characteristics and different jurisdictions that own and operate portions of the road. The preferred concepts for each segment include:

Segment 1: North Osceola Avenue to North Myrtle Avenue

Segment 1 is located on the western end of the corridor in Downtown Clearwater from North Osceola Avenue to North Myrtle Avenue. The preferred concept from the previous study at this location calls for reducing the number of lanes from four lanes to two lanes, to provide wider travel lanes, a bi-directional bike lane, and on-street parking. Figure 3 illustrates the Segment 1 preferred concept.

Segment 2: North Myrtle Avenue to North Keene Road

Segment 2 is located from North Myrtle Avenue to North Keene Road and is comprised of four narrow travel lanes and residential driveways with direct access to Drew Street. The preferred concept from the previous study proposes to reduce the number of lanes to two wider lanes and a two-way center lane. Landscaped medians are proposed throughout at unspecified locations, along with mid-block pedestrian crossings. Design elements were selected with the goal of reducing speeds and increasing safety through the residential corridor. Figure 4 illustrates the preferred concept for Segment 2 of Drew Street.

Figure 2: Drew Street Corridor Segments



Figure 3: Drew Street from North Osceola Avenue to North Myrtle Avenue (Segment 1)

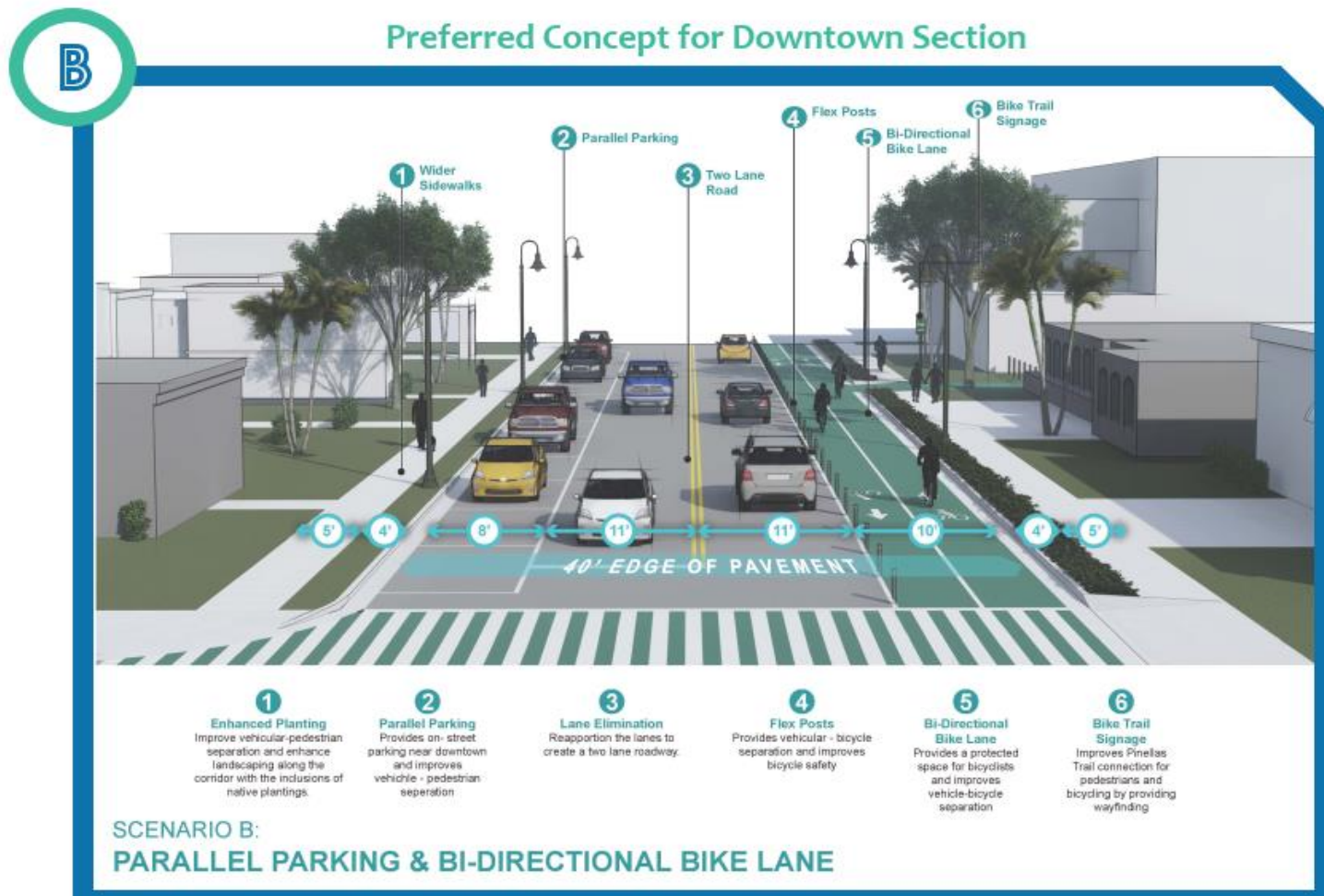


Figure 4: Drew Street from North Myrtle Avenue to North Keene Road (Segment 2)

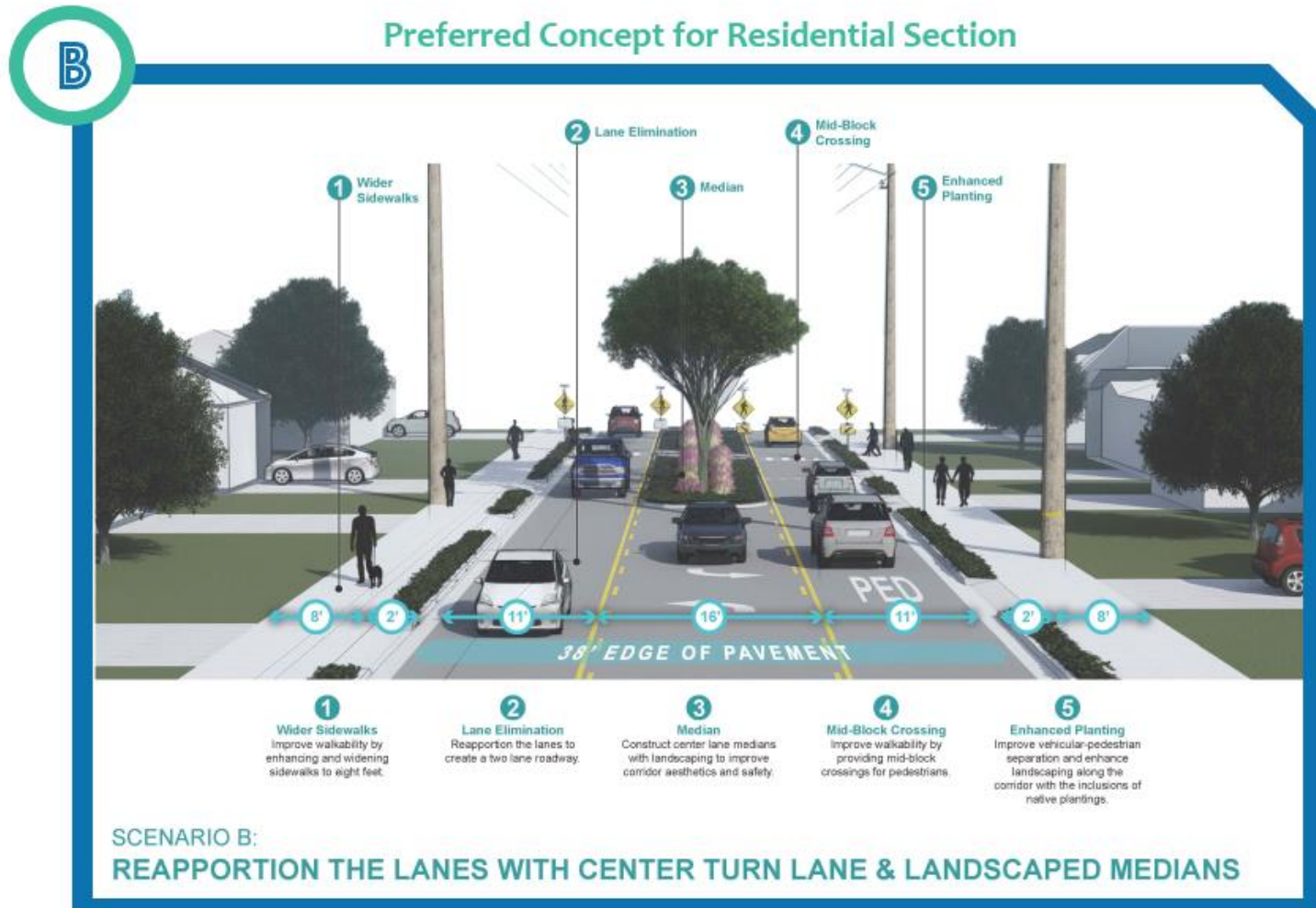
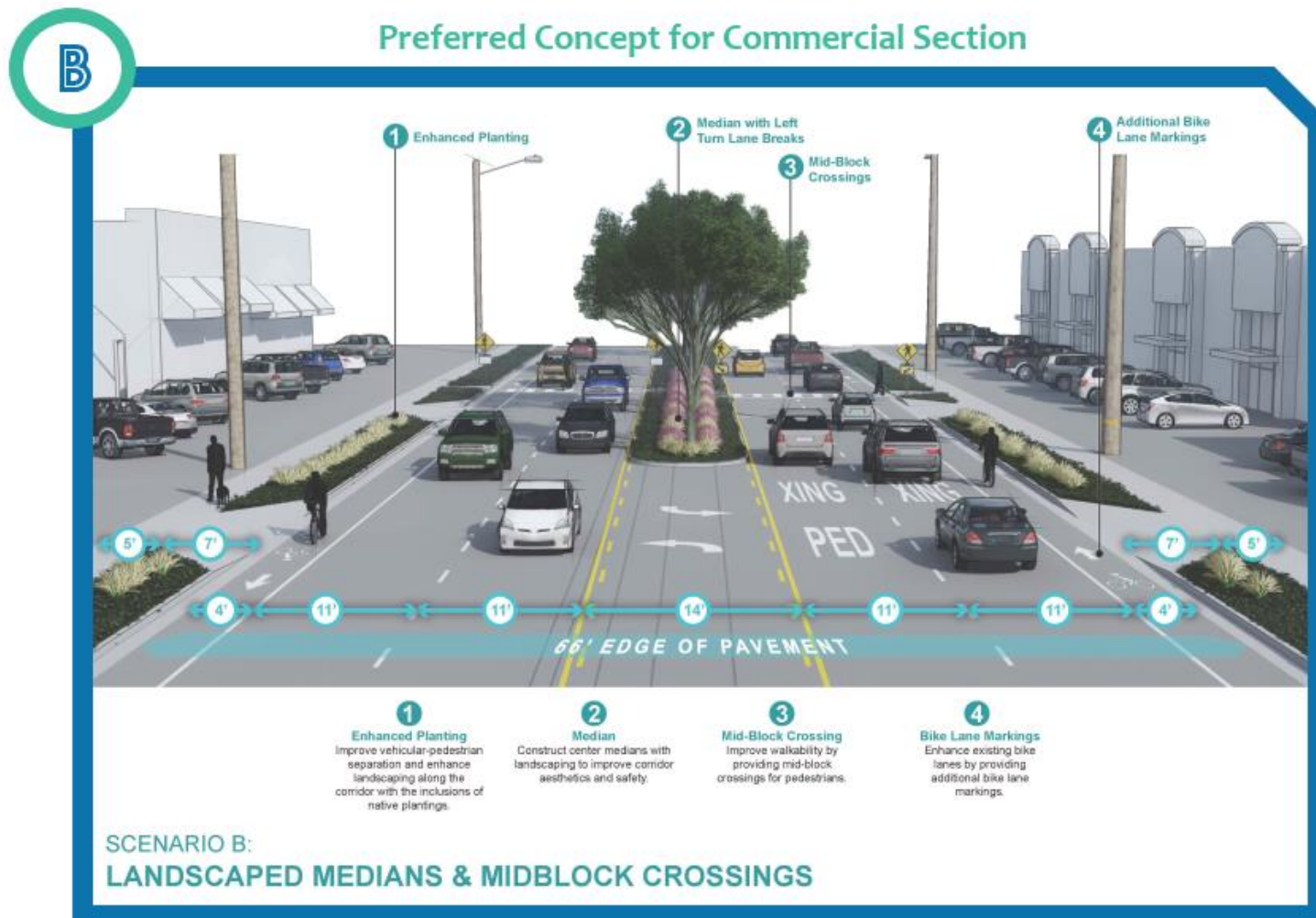


Figure 5: Drew Street from North Keene Road to US 19 (Segment 3)



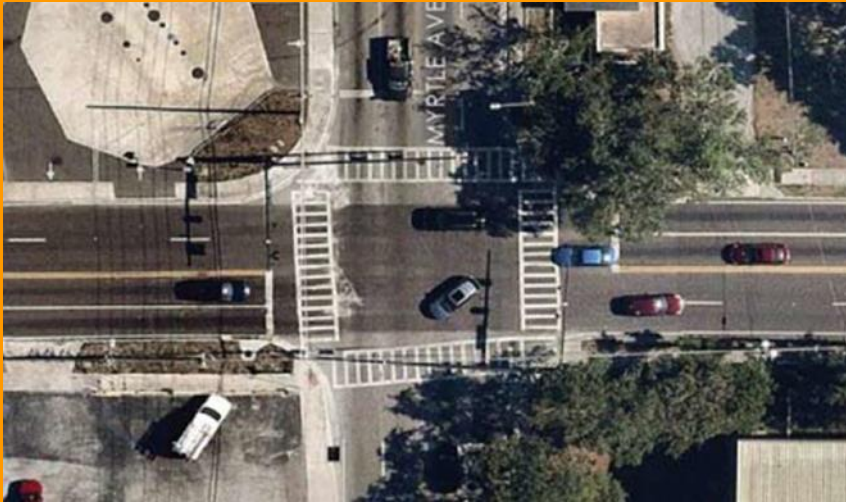
Recommended Intersection Improvements

The Complete Drew Street Concept Plan recommended some potential intersection improvements that could be implemented in the shorter term to improve safety along the corridor. Four intersections were identified based on the level of concern from community feedback or where modifications to improve the safety of the corridor area can be made quickly and without significant study or investment. The improvements recommended from the Complete Drew Street Concept Plan are shown below along with the improvement reference number on the recommended intersection improvement rendering.

Drew Street and North Myrtle Avenue

- (1) Add left turn lanes on Drew Street for northbound Myrtle Avenue
- (2) Modify the signal head
- (3) Provide enhanced planting to buffer vulnerable users

Existing Intersection



Proposed Intersection



Source: Complete Drew Street Concept Plan Report, City of Clearwater, 2018

Drew Street and North Betty Lane

- (1) Add a left turn lane on Drew Street for northbound Betty Lane
- (2) Modify the sidewalk
- (3) Add a new curb
- (4) Provide landscaped medians

Existing Intersection



Proposed Intersection



Source: Complete Drew Street Concept Plan Report, City of Clearwater, 2018

Drew Street and North Corona Avenue

- (1) Add landscaped medians
- (2) Crosswalk barrier medians

Existing Intersection



Proposed Intersection



Source: Complete Drew Street Concept Plan Report, City of Clearwater, 2018

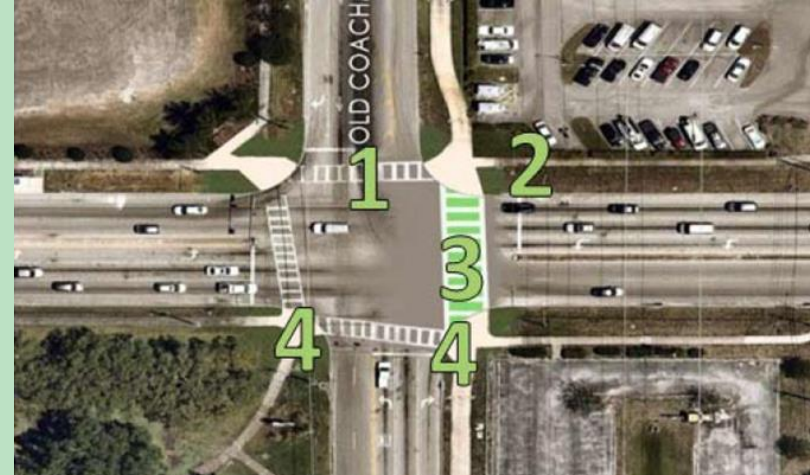
Drew Street and Old Coachman Road and Duke Energy Trail

- (1) Incorporate no right turns on red
- (2) Improve trail signage
- (3) Add widened stamped high emphasis crosswalks
- (4) Decrease the radii and add ADA ramp improvements

Existing Intersection



Proposed Intersection



Source: Complete Drew Street Concept Plan Report, City of Clearwater, 2018

IMAGINE CLEARWATER MASTER PLAN

Imagine Clearwater is a community-driven plan to reimagine and revitalize the Downtown Clearwater waterfront area. The plan concept, shown in Figure 6, includes a redesigned open space offering an active edge to Coachman Park, North Osceola improvements to complement Cleveland Street, and multimodal accessibility throughout. Drew Street is located along the northern edge of the master plan area with the Main Library and Coachman's Garden located just west of North Osceola, where a new interactive family space and playground is envisioned. This enhanced space will influence the modal needs within the downtown portion of the Drew Street corridor. The Imagine Clearwater plan emphasizes non-vehicular infrastructure to support pedestrian and bicycle activity. The plan also identifies the need for complete street treatments along North Osceola Avenue to support this use.

The Imagine Clearwater plan prioritizes pedestrian and cycling mobility options, as well as parking elements needed to make

Figure 6: Imagine Clearwater Master Plan



Image Source: <https://www.myclearwater.com/home/showdocument?id=2343>

the public space accessible. As shown in Figure 7, Drew Street between North Osceola and Garden Avenues will be one of the closest parking locations to access the waterfront and will require safe pedestrian infrastructure to access the public space.

Figure 7: Imagine Clearwater Plan Site Access

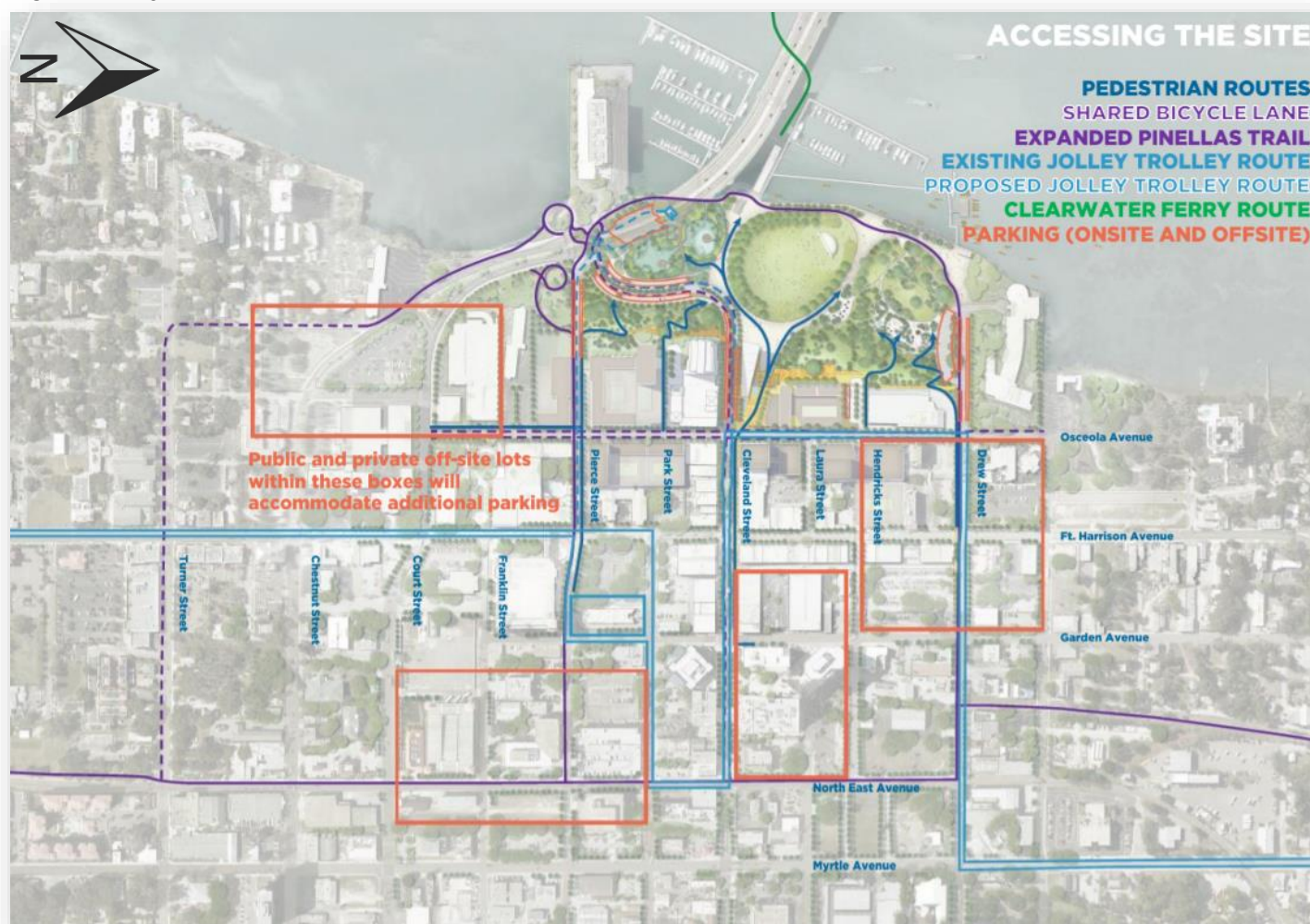
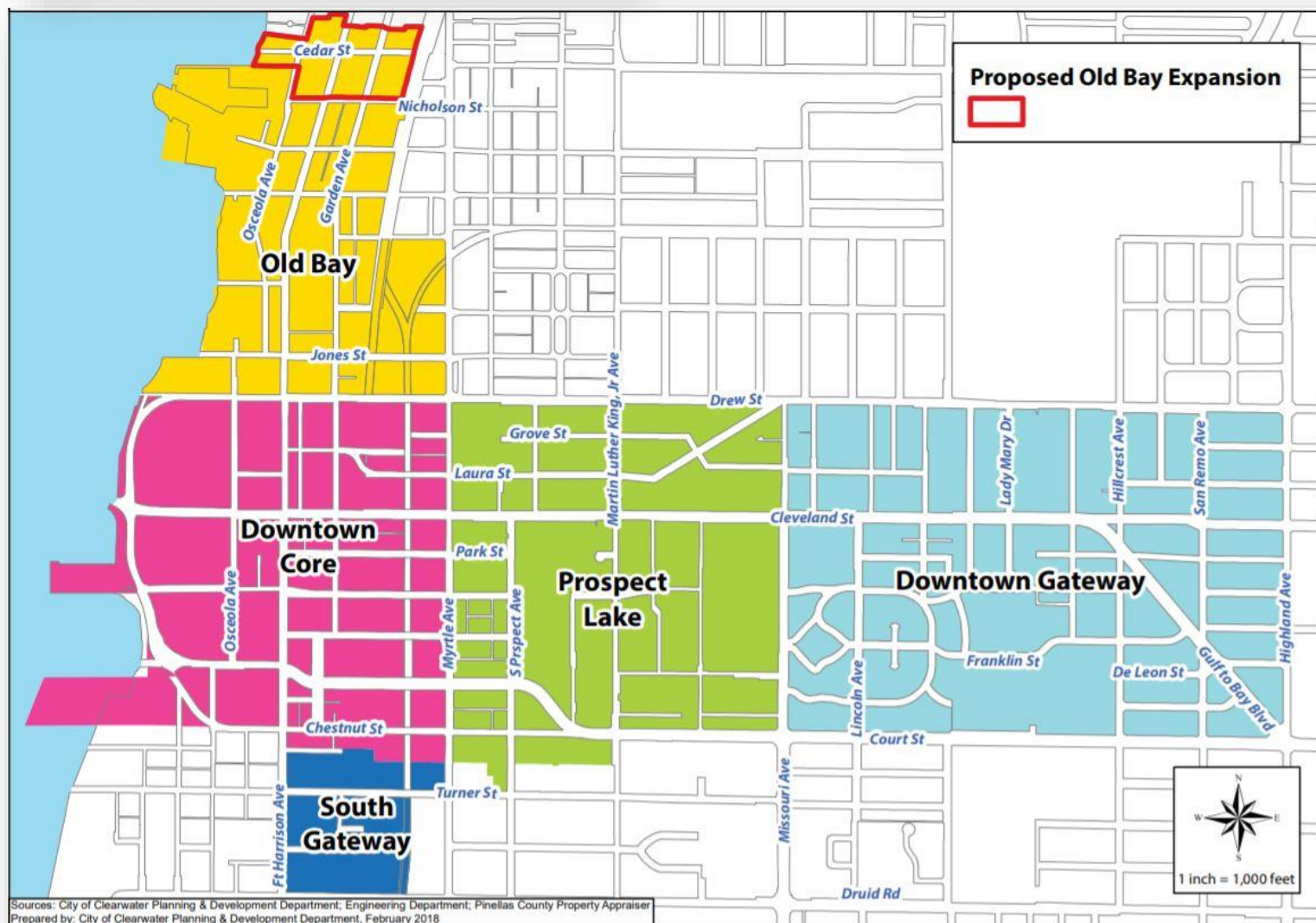


Image Source: <https://www.myclearwater.com/home/showdocument?id=2343>

CLEARWATER DOWNTOWN REDEVELOPMENT PLAN

The Clearwater Downtown Redevelopment Plan, updated in 2018, is a Special Area Plan developed in accordance with the Countywide Rules of Pinellas County. The plan guides growth and redevelopment within the City of Clearwater. The update involved increasing density to meet desired residential infill on small sites in a way that is compatible with surrounding community features. This is done by establishing various zoning districts throughout the City. The districts set forth within the plan are provided in Figure 8. As depicted, Drew Street is within the Downtown Core District, proposed Prospect Lake District, and proposed Downtown Gateway District.

Figure 8: Clearwater Downtown Redevelopment Character Districts



Source: Clearwater Downtown Redevelopment Plan, <https://www.myclearwater.com/government/city-departments/planning-development/divisions/long-range-planning/adopted-long-range-plans/downtown-clearwater-redevelopment>

The Downtown Core district is located on the south side of Drew Street from North Osceola Avenue to North Myrtle Avenue. It is characterized as a critical employment area for businesses and government. The vision for the district includes vibrancy and walkability with an active waterfront and attractions. This district allows for the greatest amount of intense development in the City.

The Old Bay District is located on the north side of Drew Street from North Osceola Avenue to North Myrtle Avenue and has lower density residential areas north of Drew Street. The vision for this area is mixed-use neighborhood and limited neighborhood commercial and office uses. The Pinellas Trail crosses Drew Street and is identified as an economic opportunity for both residential and commercial potential.

The Prospect Lake District is considered a transitional district between Downtown Core and Downtown Gateway, located along the south side of Drew Street from North Myrtle Avenue to Missouri Avenue. The area includes mixed uses such as residential, retail, office, utility/infrastructure and vacant or underutilized parcels. The area is considered an emerging residential district with multi-family and smaller infill projects underway.

The Downtown Gateway District is located on the south side of Drew Street from Missouri Avenue to Highland Avenue. The district is mostly residential with some limited low scale commercial buildings. There are 33 townhomes located at the corner of Drew Street and North Betty Lane. The community vision is for a diverse and walkable neighborhood, with attractive landscaping, streetscaping and wayfinding to increase walkability and connectivity. The residential neighborhoods are envisioned to remain as such with small infill where appropriate.

CITY OF CLEARWATER COMPLETE STREETS IMPLEMENTATION PLAN

The City of Clearwater developed the Complete Streets Implementation Plan in June 2019 as a framework to achieve a balanced transportation system for all users with safety, comfort and economic viability in mind. The development of the plan included best practices, design resources, interdepartmental coordination, and public involvement. In addition to setting forth guiding principles for planning and coordinating complete streets, the plan identified hot spot locations where there are issues with congestion, sidewalk connectivity, intersection safety, speeding, and transit accessibility and infrastructure. Drew street was identified as one of the major hot spot corridors.

While the strategies and framework are for guidance only, key elements established within the plan are provided herein and will be considered as part of the design development within the Drew Street Corridor Study and Concept Evaluation.

The City of Clearwater's guiding principles to address complete streets include:

Safe, Comfortable Travel: Provide safe and comfortable options to reduce crashes and encourage non-automobile travel. Allow all street users to be safe and feel safe.

Transportation Accessibility: Develop a transportation system that provides ease and efficiency for all modes of transportation.

Multimodal Mobility: Build a transportation system that provides a variety of multimodal travel options. Develop a regional transportation network that adapts to technological changes to achieve the City's mobility and economic goals.

Connected and Inviting: Encourage walking, biking, and accessible transit use through a system of well-connected streets.

Economic Vitality and Placemaking: Support local businesses by providing safe, convenient access for residents, employees, and customers who walk, bike, ride transit, and drive. Incorporate signage and wayfinding to identify distinct and unique places within the City.

Community Health: Promote active transportation (walking, cycling, transit) to improve health and reduce chronic diseases. Improve air and water quality by reducing the number of vehicles on the road.

Social Equity and Investment: Plan streets as pathways for people of all ages, abilities, races, and incomes to socially interact and be able to travel using affordable modes of transportation. Design streets to serve people with the greatest need, which improves mobility and access for all people.

Community Character and Context Sensitivity: Respect and enhance neighborhood identities, character, history, and cultural context. Support different context and features like natural resources, public art, aesthetic views, and gateways.

Environmental Protection and Sustainability: Protect the natural resources and environment with a balanced transportation plan. Increase non-automobile forms of travel to reduce greenhouse gases and pollution.

Technology: Improve mobility services and encourage alternate modes of travel through technology. Apply technological innovations to enhance options and equitable access to multimodal transportation.

Flexible Street Design Strategies

The Complete Streets Implementation Plan provides flexible strategies to align street design with the roadway classifications and characteristics. This includes setting a framework based on street types, context, infrastructure and plans, and street design.

Street Types categorize street functions and provide a classification based on the type of trips, capacity, speeds and function within the larger transportation network.

West of NE Coachman Road, Drew Street is identified as a **Community Connector**. Community Connectors are characterized as Minor Arterials by the FDOT Functional Classification. The characteristics of a community connector include providing local and city connections, medium speeds, freight, limited pedestrian and bicycle facilities, and high accessibility to drivers. East of NE Coachman Road, Drew Street is identified as a **Local Collector**. Local Collectors are Major and Minor Collectors according to FDOT Functional Classification. Their characteristics include local and neighborhood connections, medium-low speeds, and pedestrian and bicycle facilities.

Clearwater Context Classification categorizes roadways based on the surrounding existing and future land uses and developments.

In terms of context classification, Drew Street west of North Highlands Avenue is identified as **Urban Core**, **Urban General** and **Urban Edge**. On the west side of North Highlands Avenue, Drew Street is characterized as mostly **Urban Residential** and Urban General, with some **Community Nodes** near US 19.

Tables 1 through 4 are from the plan and set forth the principles that relate to the Drew Street context, providing elements of pedestrian, curb and gutter and travel way street design. These elements are characterized as a toolkit rather than design standards.

Table 1: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Core

	Urban Core	Community Connector	Local Collector
Pedestrian Realm	Frontage Zone	Refer to Downtown Redevelopment Plan and Beach by Design (intent is to create active pedestrian realm)	
	Pedestrian Zone	12' (8')	12' (8')
	Furnishings (landscaping, furnishing, utility)	Preferred	Preferred
Curb and Gutter	Curb Zone	2'	2'
	Bicycle Recommendations	Separated or on Parallel Streets	Neighborhood Greenway
	On-Street Parking	Encouraged	Encouraged
Traveled Way	Transit Recommendations	High	Low
	Desired Operating Speed	20-30 mph	20-25 mph
	Number of Lanes	2-4 lanes	2-4 lanes
	Lane Widths	10' to 11'	10' to 11'
	Crossing Density	1/8 mile	1/8 mile

Table 2: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Edge

	Urban Edge	Community Connector	Local Collector
Pedestrian Realm	Frontage Zone	Refer to Downtown Redevelopment Plan and Beach by Design (intent is to create active pedestrian realm)	
	Pedestrian Zone	10' (8')	10' (8')
	Furnishings (landscaping, furnishing, utility)	Preferred	Preferred
Curb and Gutter	Curb Zone	2'	2'
	Bicycle Recommendations	Separated or on Parallel Streets	Separated or on Parallel Streets
	On-Street Parking	Encouraged	Encouraged
Traveled Way	Transit Recommendations	High	Low
	Desired Operating Speed	25-30 mph	20-30 mph
	Number of Lanes	2-4 lanes	2-4 lanes
	Lane Widths	10' to 11' w	10' to 11' w
	Crossing Density	1/8 mile	1/8 mile

w Depends on transit, freight plans and solid waste considerations

Table 3: Complete Streets Implementation Plan Flexible Street Design Elements: Urban General

	Urban General	Community Connector	Local Collector
Pedestrian Realm	Frontage Zone	See appropriate zoning code and Beach by Design	
	Pedestrian Zone	8' (6')	8' (6')
	Furnishings (landscaping, furnishing, utility)	Preferred	Preferred
Curb and Gutter	Curb Zone	2'	2'
	Bicycle Recommendations	Separated or on Parallel Streets	Separated or on Parallel Streets*
	On-Street Parking	In denser areas	Encouraged
Traveled Way	Transit Recommendations	Medium	Low
	Desired Operating Speed	25-35 mph	20-30 mph
	Number of Lanes	2-4 lanes	2-4 lanes
	Lane Widths	10' to 11' w	10' to 11' w
	Crossing Density	1/8 mile	1/4 mile

*Or Neighborhood Greenway on low speed, low volume streets

w Depends on transit, freight plans and solid waste considerations

Table 4: Complete Streets Implementation Plan Flexible Street Design Elements: Urban Residential

	Urban Residential	Community Connector	Local Collector
Pedestrian Realm	Frontage Zone	See appropriate zoning code and Beach by Design	
	Pedestrian Zone	8' (6')	8' (6')
	Furnishings (landscaping, furnishing, utility)	Preferred	Preferred
Curb and Gutter	Curb Zone	2'	2'
	Bicycle Recommendations	Separated or on Parallel Streets	Separated or on Parallel Streets*
	On-Street Parking	In denser areas	Encouraged
Traveled Way	Transit Recommendations	Medium	Low
	Desired Operating Speed	25-35 mph	20-30 mph
	Number of Lanes	2-4 lanes	2-4 lanes
	Lane Widths	10' to 11' w	10' to 11' w
	Crossing Density	1/8 mile	1/4 mile

Infrastructure and Plans consider requirements of other necessary roadway components within the right-of-way (ROW) like *utilities, stormwater, parks and recreation, and traffic operations.*

Street Design guidance within the plan provide design elements based on established industry standards and guidance, as well as existing plans in place.

The Street Design guidance offers a flexible design framework to address each of the elements of the roadway, which are broken into the following realms, including:

- » **Pedestrian Realm:** Includes the frontage zone, pedestrian zone, and furnishing zone between the sidewalk and curb.
- » **Curb and Gutter Zone:** located between the pedestrian zone and the traveled roadway, including curb extensions, on-street parking, stormwater infrastructure, and bike facilities.
- » **Traveled Way:** The portion of the roadway where vehicles travel, including the travel lanes, median and pedestrian infrastructure.

Each of these elements is provided in the Context Design Matrix within Clearwater's plan, depicted in Figure 9.

Figure 9: City of Clearwater Complete Streets Implementation Plan Context Design Matrix

Context Classification		Street Type			
		Thoroughfare	Community Connector	Local Collector	Local Streets
Street Zone Elements	Urban Core	Refer to Downtown Redevelopment Plan and Beach by Design (intent is to create active pedestrian realm)			
	Curb and Gutter	Separated or on Parallel Streets	Separated or on Parallel Streets	Neighborhood Greenway	Neighborhood Greenway
		Analysis Recommended	Encouraged	Encouraged	Encouraged
		High	High	Low	Low
	Traveled Way	25-30 mph	20-30 mph	20-25 mph	15-25 mph
		4-6 Lanes	2-4 Lanes	2-4 Lanes	2 Lanes
		11'	10'-11'	10'-11'	10'
		1/8 mile	1/8 mile	1/8 mile	Every Block

Source: City of Clearwater Complete Streets Implementation Plan

Strategies and Recommendations

The plan also offers strategies and examples for addressing Complete Street improvements. A few strategies provided include, but are not limited to:

PEDESTRIAN DESIGN STRATEGIES:

Sidewalks: Wider sidewalks adjacent to public spaces

Traffic Signals: Signalization design strategies, Leading Pedestrian Intervals (LPI), fixed signals

Intersections: Striped crossings, curb extensions, street furniture, landscaping, pedestrian safety islands

Placemaking: Branding, wayfinding, landscaping, canopy trees, shade structures

CURB AND GUTTER ZONE DESIGNS FOR BICYCLISTS AND OTHER CONSIDERATIONS

Bike Lanes and Cycle Tracks: Designate exclusive space, physical barriers, protected cycle tracks, buffered bike lanes

Bicycle Facilities and Furniture: Bicycle parking, bicycle furniture such as leaning rails, footrests, and placement of buttons for easy reach at signals

Green Infrastructure: Bioswales or rain gardens

On-Street Parking: Physical barrier to pedestrian traffic to slow vehicles

TRAVELED WAY DESIGN STRATEGIES

Transit Stops and Intersections: Well-placed transit stops, dedicated bus lanes where feasible, overhead structure/shelter, benches, lighting, trash cans, transit route/map, wayfinding/signage, bicycle racks

Travel Lanes: Appropriate lane widths for all users, left turns avoided except for low traffic corridors

Traffic Signals: Transit Signal Priority (TSP), bicycle signals

Roadway: Road diets, medians with landscaping, mid-block crosswalks, bicycle lanes, dedicated vehicle turn lanes

Speed Reduction: Manage speeds, also consider elements to slow traffic such as chicanes, pinch points, speed bumps, speed tables, speed cushion, landscaping

INTERSECTION DESIGN STRATEGIES

Intersection Redesign: Raised intersections, neighborhood traffic circles, painted intersections, appropriate turning radius for curves, gateways, tactical public spaces, improved visibility where needed with removals of trees, utility boxes, other necessary objects

Traffic Signal Timing: Shorter signal cycles, adjusted cycles throughout day for varying traffic

Crossings: Crosswalk striping, pavement treatment crosswalks, curb ramps, Rectangular Rapid Flashing Beacon (RRFB), adequate lighting

ACTIONS FOR IMPLEMENTATION

The plan's actions for implementation suggest four main avenues to implement complete streets elements in infrastructure projects. The areas for implementation include policy and regulatory improvements, project delivery and process improvements, capital improvement projects, and measuring and evaluating performance.

Policy and regulatory improvements:

- » Adopt a complete street policy
- » Develop a complete street checklist
- » Update community development code and comprehensive plan
- » Update engineering standards to allow for implementation plan design standards

Project delivery and process improvements:

- » Create an interdepartmental review process that includes Complete Streets design assessments and hold regularly scheduled meetings
- » Develop an annual and five-year project priority list with ranking criteria and proposed costs for all infrastructure and maintenance projects. Create master list. Map projects
- » Establish a formal Complete Streets Advisory Board/Committee

- » Provide training and educational opportunities for staff from interdepartmental review team on national Complete Streets best practices and innovations

Project delivery and process improvements:

- » Enact temporary pop-up or demonstrations that assess/lead to Quick Build Projects
- » Pursue dedicated and additional funding for Complete Streets

Measuring and evaluating performance

- » Safe and comfortable travel
- » Accessibility
- » Multimodal mobility and technology
- » Connected and inviting
- » Economic vitality and placemaking
- » Community health
- » Social equity and investment
- » Community character and context sensitivity
- » Environmental protection and sustainability

SR 60 MULTIMODAL IMPLEMENTATION PLAN

The Forward Pinellas SR 60 Multimodal Implementation Plan identified short and long-term multimodal complete street improvements along SR 60 between Clearwater Beach and McMullen Booth Road, in addition to improvements on parallel facilities such as Drew Street. The goals of the study included:

- » Mobility: Improve accessibility and connectivity to key destinations and activity centers
- » Land Use and Economics: Encourage economic growth and redevelopment potential
- » Safety: Improve safety through multimodal investments

Objectives of the SR 60 Multimodal Implementation Plan were to:

- » Connect residential areas and activity centers within the corridor and the region
- » Provide connections that quickly and efficiently move people within the corridor
- » Enhance economic competitiveness through better access to employment centers
- » Create opportunities for transit oriented development and sustainable hubs around major station locations
- » Enhance economic competitiveness through better access to tourist, recreational and educational destinations
- » Reduce the number of crashes that result in serious or fatal injuries

A gap analysis was performed throughout the east-west parallel corridors. The plan evaluated multimodal network gaps to identify where improvements were needed in order to increase corridor connectivity. Most of the gaps identified related to bicycle infrastructure. Gaps identified along Drew Street are provided in Table 6.

Table 5: East-West Corridor Network Gaps

Facility	From	To	Network Gap
Drew Street	North Myrtle Avenue	Saturn Avenue	Multi-use Accommodations
Drew street	Betty Lane	Highland Avenue	Multi-use Accommodations

Facility	From	To	Network Gap
Drew Street	Myrtle Avenue	N Osceola Avenue	Bicycle Accommodations

Once projects were identified through the gap analysis, stakeholder coordination and public involvement, evaluation criteria was used to calculate and prioritize projects based on composite cores. The following summarizes the short and long-term strategies related to Drew Street that resulted from this plan.

Short-term Strategies

DREW STREET FROM NORTH MYRTLE AVENUE TO SATURN AVENUE

Multi-use accommodations were identified between North Myrtle Avenue and Saturn Avenue on Drew Street. Improvements may include shared-use paths for non-motorized travel that may include bicyclists, walkers, skaters, and people with disabilities. The total estimated cost for this improvement is indicated to be is \$3.4 million.

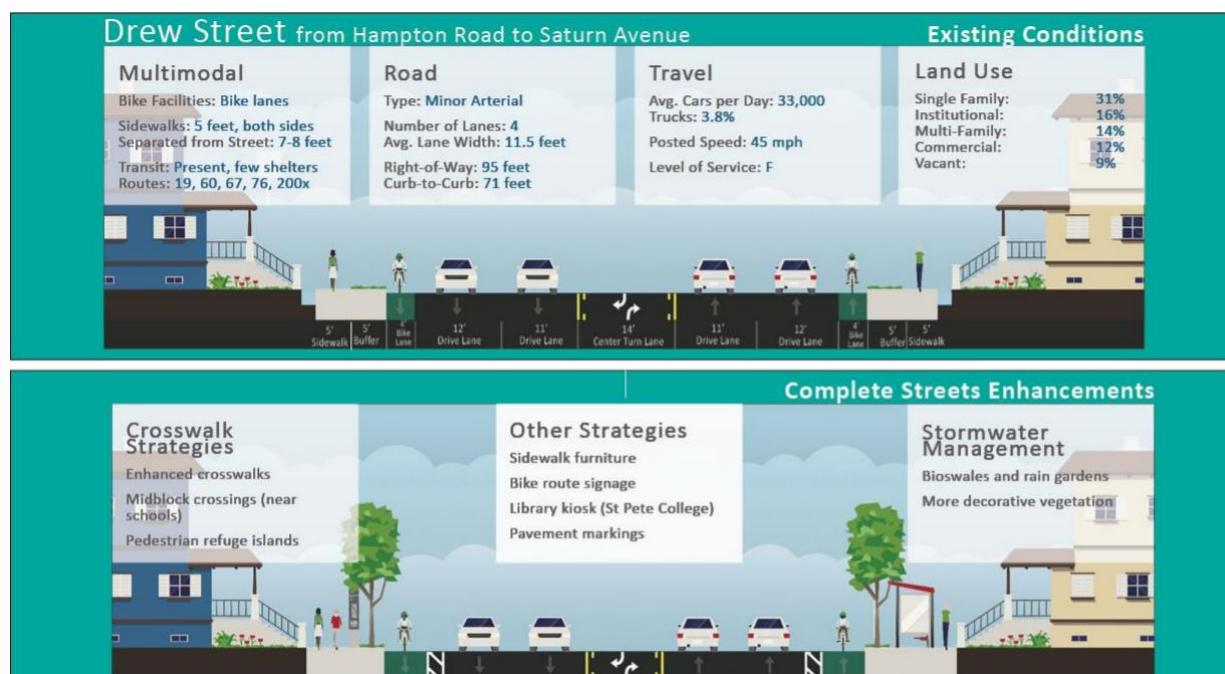
Long-term Strategies

Long-term strategies within the plan focus on filling in gaps throughout the parallel east-west roads to develop complete streets that are functional and safe for all users. The following concepts reflect those long-term multimodal strategies identified within the Connecting People and Places portion of the SR 60 Corridor Plan that are on Drew Street within the study area.

DREW STREET FROM HAMPTON ROAD TO SATURN AVENUE

The strategies identified along Drew Street from Hampton Road to Saturn Avenue (shown in Figure 10) focus on providing enhancements that serve residential uses to the west and commercial uses and St. Pete College to the east. The plan focuses on separating the multiple modes utilizing narrowed travel lanes, enhanced landscaping, on-street painted and buffered bike lanes, enhanced crosswalks (particularly near St. Pete College), mid-block crossings near schools, bioswales where applicable, transit shelters, a library kiosk at the St. Pete College location, and multi-path/wider sidewalks. Channelized medians are referenced for the western portion of this segment to support the residential uses. The estimated cost of the referenced improvements was identified to be \$4.4 million.

Figure 10: Drew Street from Hampton Road to Saturn Avenue Concept



DREW STREET FROM NORTH MYRTLE AVENUE TO SATURN AVENUE

Long-term strategies on Drew Street from North Myrtle Avenue to Saturn Avenue included a road diet and a complete streets improvement. The road diet option includes reducing Drew Street along this segment from four travel lanes to two travel lanes, leaving one lane in each direction. The additional lanes would be replaced with enhanced landscaping, on-street painted and buffered bike lanes, enhanced crosswalks, channelized median to control access, midblock crossings near parks, bioswales where necessary, transit shelters, and multi-use/wider sidewalks. This strategy is illustrated in Figure 11.

The Complete Street option between Saturn Avenue and Myrtle Avenue is a lower cost option within the ROW. This includes narrowed travel lanes, enhanced landscaping, sidewalk furniture, enhanced crosswalks, midblock crossings near park, bioswales where needed, transit shelters, and multi-use trail/wider sidewalks.

The capital cost estimate for this portion of Drew Street would cost between \$4.9 and \$10.60 million. The road diet option is depicted in Figure 11 and the complete street option is shown in Figure 12.

Figure 11: Drew Street from Saturn Avenue to Myrtle Avenue Concept Road Diet Option

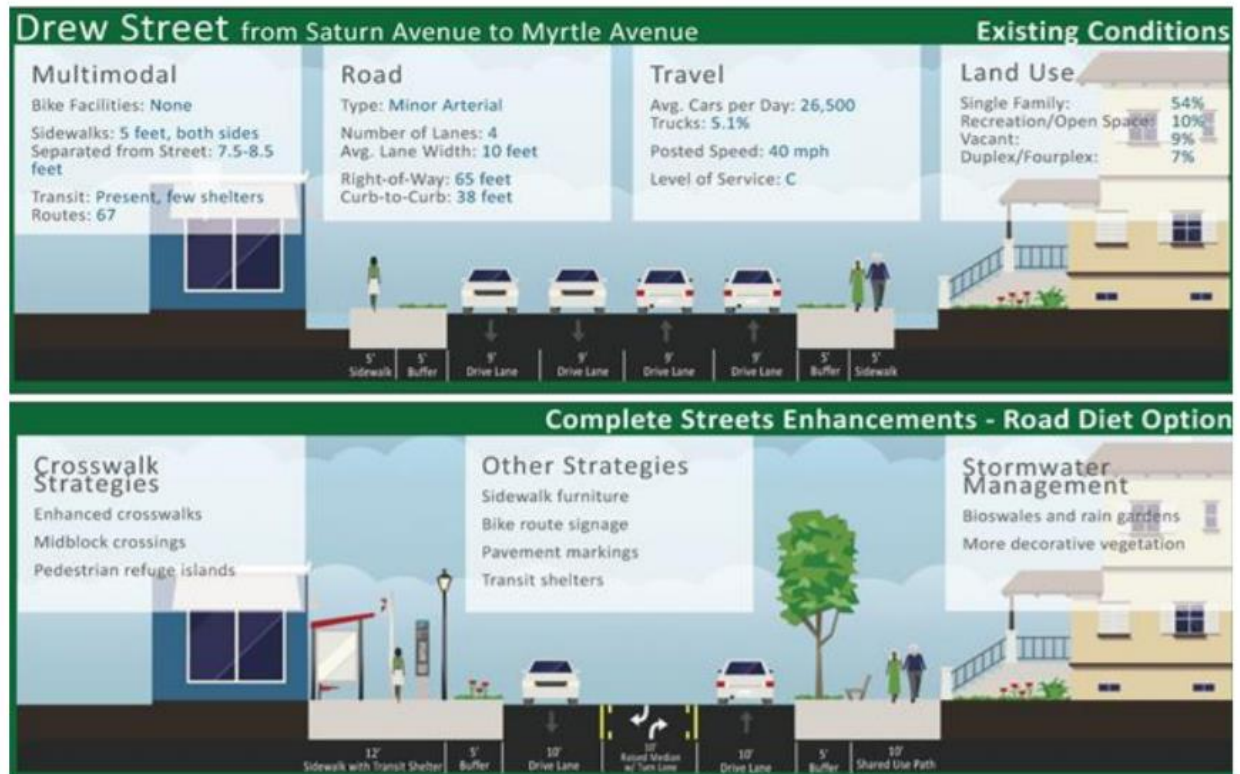
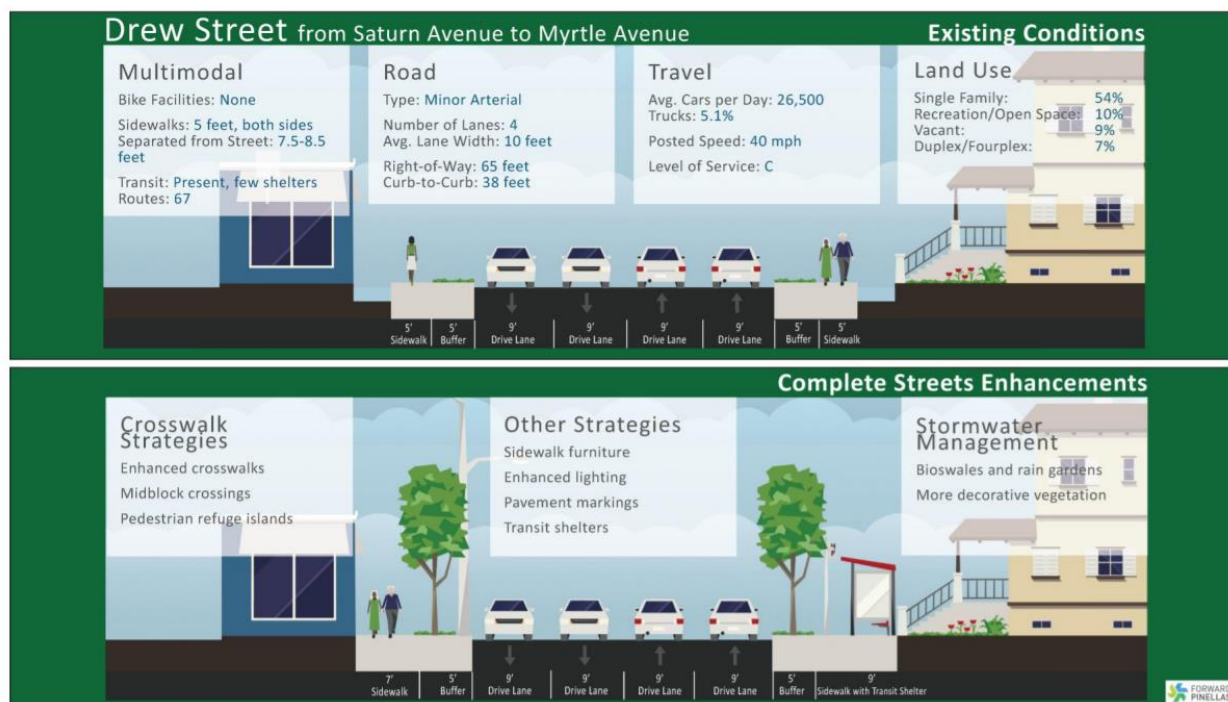


Figure 12: Drew Street from Saturn to Myrtle – Complete Street Option



DREW STREET FROM MYRTLE AVENUE TO NORTH OSCEOLA AVENUE

The Downtown Clearwater segment between Myrtle Avenue and North Osceola (shown in Figure 13) includes almost 27 percent of vacant land for redevelopment. Strategies identified include narrowed travel lanes, enhanced landscaping, on-street painted bike lanes, enhanced crosswalks, and channelized a median to control access.

Redevelopment

The plan indicates that there are little opportunities for redevelopment along Drew Street due to the smaller parcels along the corridor. A senior facility at Betty Lane could have potential in the future given the age of the building and location within the Hurricane Storm Surge Area of Stevenson Creek. Potential locations for infill redevelopment are identified on the western end of the project corridor, near US 19. The plan identifies high intensity, high-density uses. In addition to older buildings such as the Park Place and Madison Place apartments, the plan identifies the St. Pete College as having the opportunity to expand utilizing its surface parking area.

Critical Intersections

Intersections with high crash rates were identified within the study as critical intersections for safety improvements. Intersections were evaluated based on the total number of crashes at the intersection and the total daily volume at the intersection. Critical intersections within the study area of this study were identified at US 19 and Belcher Road.

Figure 13: Drew Street from Myrtle Avenue to North Osceola Avenue



SAFE STREETS PINELLAS

Safe Streets Pinellas is Pinellas County's Vision Zero initiative to reduce severe accidents and fatalities on the roadway network to zero.

The Safe Streets Pinellas Action Plan identifies the High Injury Network within Pinellas County and focuses on six key areas to implement in support of Vision Zero goals: data collection, monitoring and analysis, education campaign, street and roadway design, funding, and legislation. The plan lays out safe street countermeasures and strategies to reduce crashes, crash severity and fatalities on the roads. The plan integrates a safe system approach that incorporates key principles.

Vision Zero is the vision, goal and strategies to reduce road fatalities to zero and create a safer multimodal transportation system for all users.

- » Death/serious injury is unacceptable
- » Humans make mistakes
- » Humans are vulnerable
- » Responsibility is shared
- » Safety is proactive
- » Redundancy is crucial

According to the plan, an average of two individuals a day are either seriously injured or killed in a traffic collision in Pinellas County. While automobile collisions have remained at a constant rate, bicycle and motorcycle collisions have reportedly decreased while collisions involving pedestrians has risen. The High Injury Network identifies corridors where there are a significant number of continued crashes resulting in serious injury or fatalities. Within the Drew Street corridor study area, N Hercules Avenue to US 19 is identified on the High Injury Network. Figure 14 illustrates the High-Injury Network and Hot Spots identified as part of the Safe Streets Action Plan. The portion of Drew Street that is on the network is surrounded by

communities of concern as illustrated in Figure 15. This area is a priority for targeted equitable transportation measures to support the low-income and communities of concern along this corridor. Figure 16 illustrates the ridership at stops along the High Injury Network corridors, which is on the eastern end of the Drew Street study area.

Figure 14: Safe Street Pinellas High Injury Network and Hot Spots



Figure 15: Safe Streets Pinellas High Injury Network around Communities of Concern

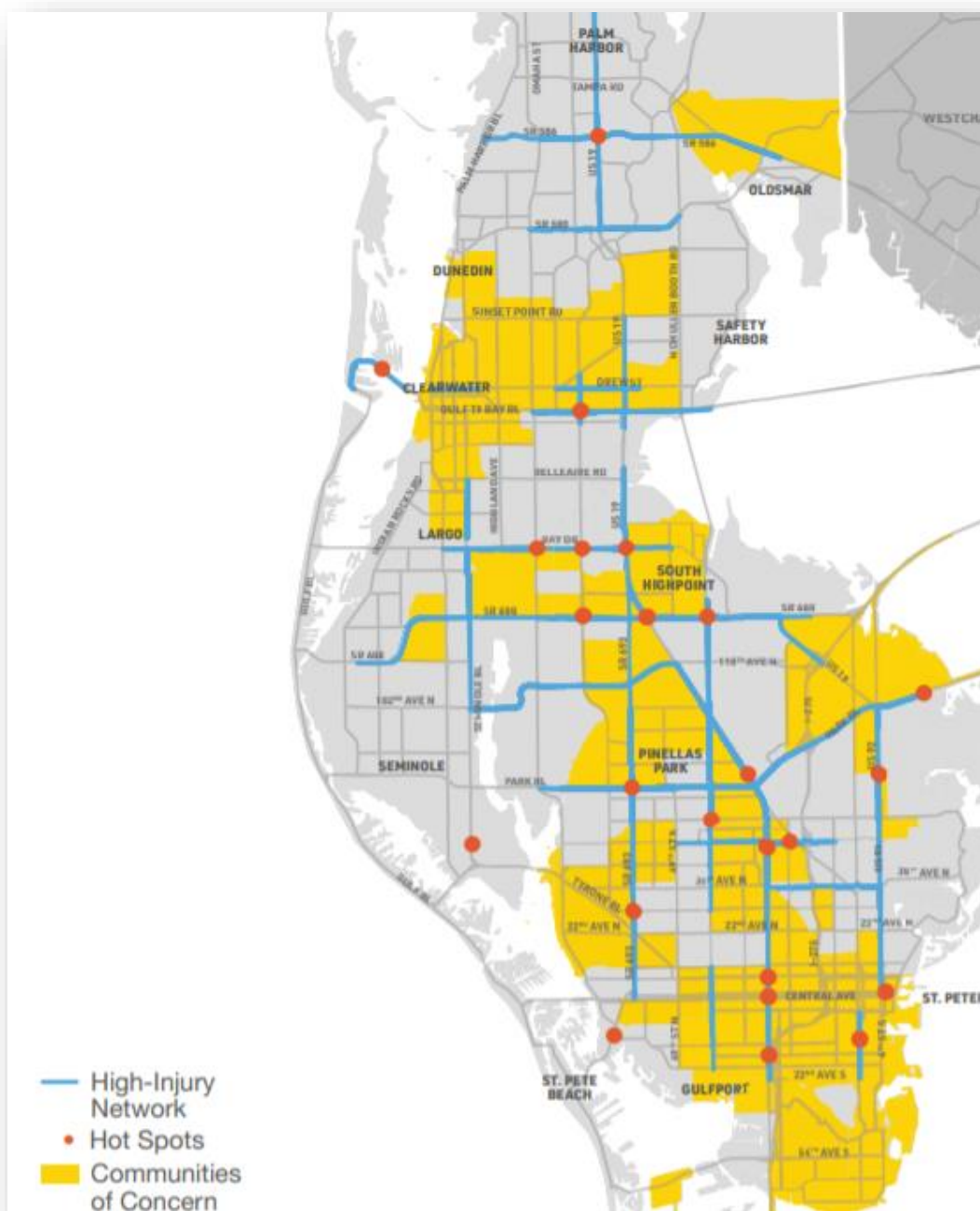
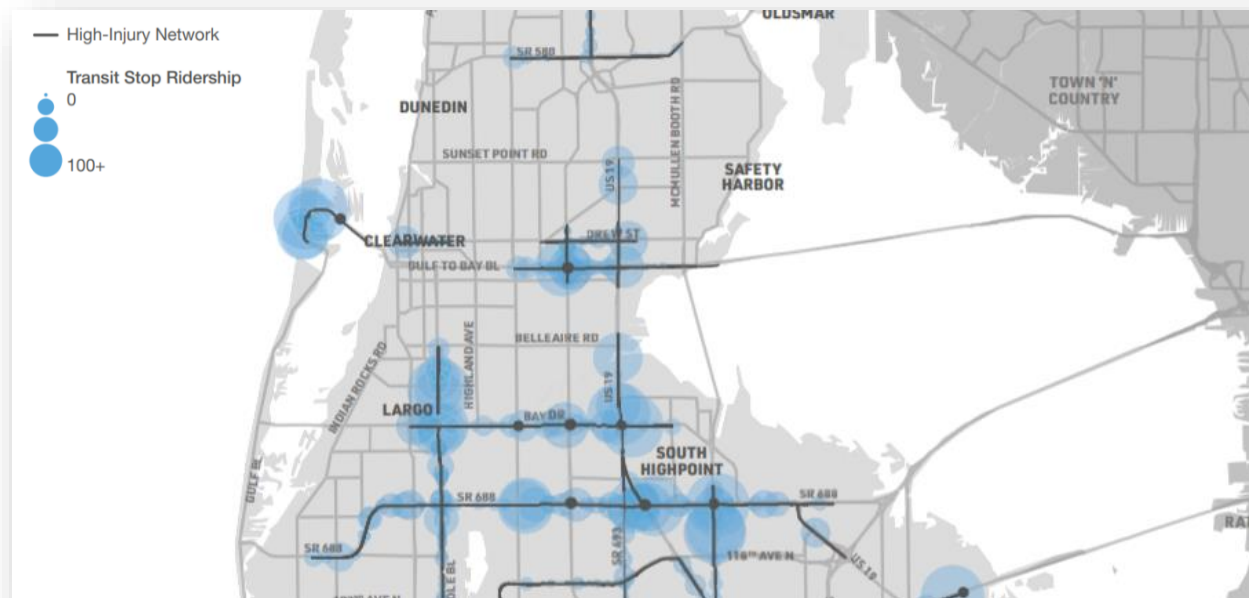


Figure 16: High Injury Network with Ridership at Transit Stops on the Network



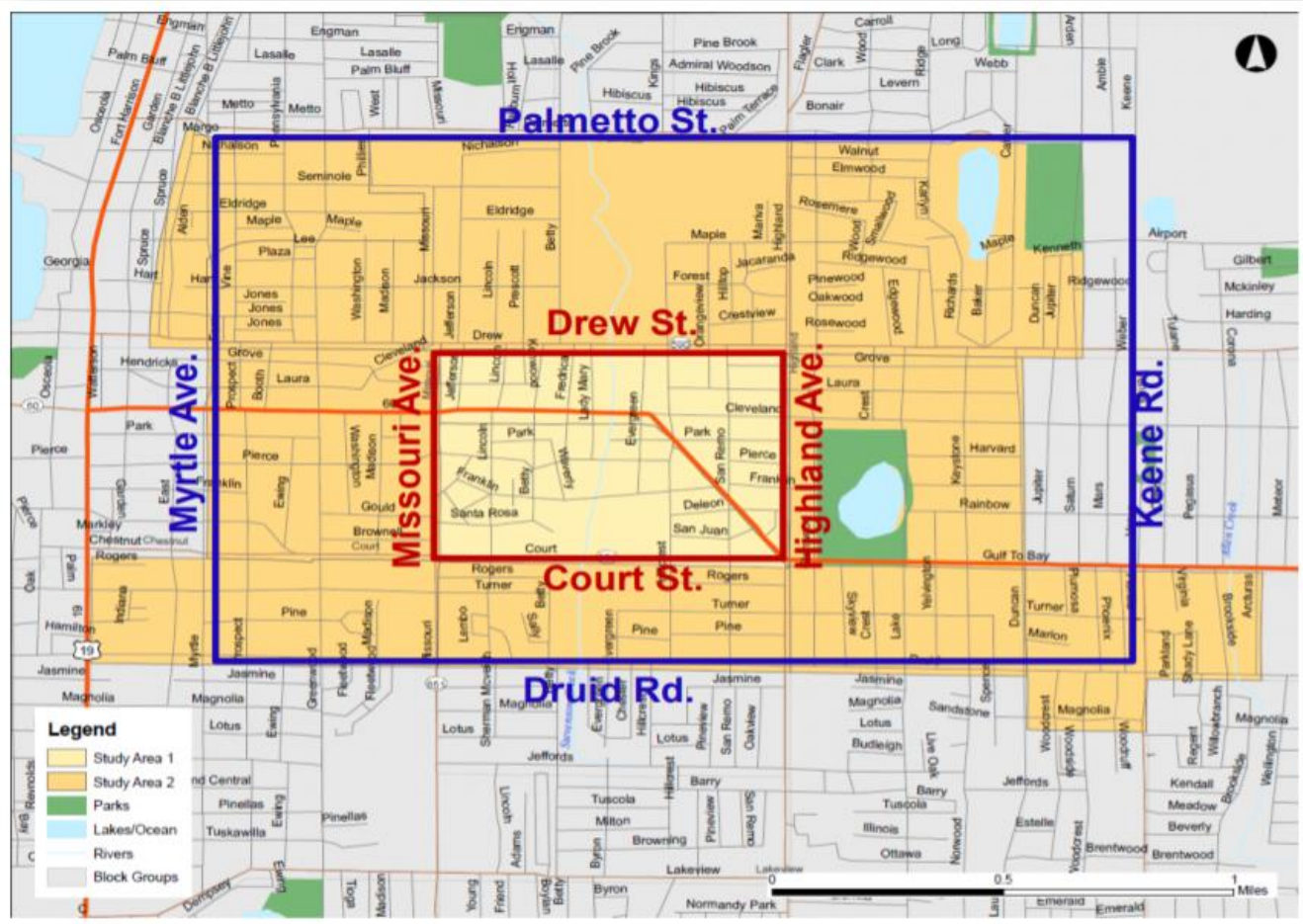
The plan provides elements and countermeasures that have been used in demonstration projects, such as technology (camera detection, notifications) and physical treatments (protected intersections, corner islands, curb extensions, colored paint, as well as two-stage left turn lanes). Countermeasures are also provided for each category of collision: Pedestrian (signalized and non-signalized intersections), Bicyclists (Intersections and non-intersections/corridors), Rear-end collisions (Signalized corridors, non-signalized corridors, distracted driving/careless driving), Turning collisions (Left turns at signalized intersections, left turns at unsignalized intersections, right turns), Sideswipe collisions (departure to left, departure to right, sideswipes, at night, impaired driving), and Other collisions (fixed object, at night, and impaired driving).

Engineering countermeasures are identified and include signals, intersections and roadway design, signs and markings, bikeway facilities, pedestrian facilities, and low-cost and quick build solutions.

CLEARWATER EAST GATEWAY DISTRICT VISION PLAN

The City of Clearwater developed the East Gateway District Vision Plan in 2012 to establish a vision for the area that serves as a gateway to Downtown Clearwater, bounded by Drew Street to the north and Court Street to the south. As part of Development Zone III – Open Space portion of the vision concept, the plan establishes the need for open space, identifying Stevenson Creek which connects Glen Oaks Park to the south, across Court Street to the Clearwater Country Club, across Drew Street to the north. The plan formalizes the goal to connect the locations and sets forth a strategy to work with FDOT for Court Street and Drew Street to develop pedestrian crossings for safe connectivity beyond the district borders. This is intended to develop north-south connectivity of open space and community amenities. The plan parameters are shown in Figure 17.

Figure 17: East Gateway District and Extended Study Area



Source: East Gateway District Vision Plan,

<https://www.myclearwater.com/home/showpublisheddocument/5417/636591320497130000>

SR 60 CORRIDOR STUDY

The Florida Department of Transportation (FDOT) completed the SR 60 (Gulf to Bay Boulevard) Corridor Study in 2017 to evaluate options for increasing safety and operations along SR 60, as well as Drew Street as a parallel corridor. The study examined SR 60 between Bay Avenue and McMullen Booth Road, and Drew Street from North Osceola Avenue to McMullen Booth Road. The analysis considered both short-term and long-term improvements along both corridors, with a focus on short-term improvements that could be advanced quickly to provide the greatest benefit. Potential improvements were evaluated based on their level of benefit towards improving safety, average delay, multimodal impact, and operations; as well as their relative cost and feasibility.

Short-term improvements along Drew Street identified from the analysis are shown in Table 6. Longer-term improvements are shown in Table 7.

Table 6: SR 60 Corridor Study Short-Term Project Improvement Recommendations

Improvement Location	Recommended Improvement
Drew Street at N Keene Road	Extend eastbound left turn lane
Drew Street at US 19	Extend eastbound dual left turn lanes
Drew Street at US 19	Extend westbound left turn lane
Drew Street Corridor	Add InSync Adaptive Signal Implementation
Drew Street Corridor	Add Dynamic Message Signs (DMS)

Table 7: SR 60 Corridor Study Long-Term Project Improvement Recommendations

Improvement Location	Recommended Improvement	Long-Term Condition
Drew Street at N Missouri Avenue	Provide exclusive westbound left turn lane and additional westbound thru lane	Lane continuity
Drew Street at N Keene Road	Add exclusive westbound right turn lane	ROW acquisition
Drew Street at N Keene Road	Add exclusive eastbound right turn lane	ROW acquisition
Drew Street at N Belcher Road	Add exclusive westbound right turn lane	ROW acquisition

ADVANTAGE PINELLAS COUNTYWIDE PLAN

Forward Pinellas completed the Advantage Pinellas Countywide Plan in November 2019, which aligns the long-range transportation plan with land use strategies to ensure an integrated vision. The plan is guided by six advantages that serve as a foundation for selecting projects and initiatives, including:

- » Attractive and unique destinations
- » Resilient community
- » Safe and healthy communities
- » Strong economic opportunity
- » Collaborative vision for the future
- » Mobility and accessibility for everyone

The plan identified activity centers for connectivity, as well as “20-minute Neighborhoods” (shown in Figure 18) which illustrates the travel sheds where people accomplish the most of their activities. The City of Clearwater on the western end of the project study corridor is noted as an “Urban Center”. To the east, Drew Street at US 19 is identified as a “Major Center.”

Active Transportation Plan

As part of the Countywide Plan, Forward Pinellas also developed the Advantage Pinellas: Active Transportation Plan to emphasize strategy priorities for bicycle and pedestrian mobility. Specific to this strategic plan, the goals include:

- » Improve safety and reduce bicycle and pedestrian conflicts
- » Connect with destinations and integrate with other modes, such as transit
- » Provide accessibility and comfort to all users, with all abilities, and in all communities
- » Enhance the quality of life, economic condition, and health of the region

The Master Plan recognizes the City of Clearwater’s goals to achieve a Bicycle Friendly Community (BFC) Designation from the League of American Bicyclists, which includes the City’s comprehensive application of complete streets, including the Drew Street Complete Streets Concept Design.

Drew Street ranked fourth for an overpass for the Duke Energy Trail. Currently there is a traffic signal for trail users to cross Drew Street at Old Coachman Road for the Duke Energy Trail. An overpass is listed in the Active Transportation Plan to provide trail users with a safer, above grade crossing. The width of the overpass is approximately 100 feet over Drew Street.

PINELLAS COUNTYWIDE PLAN

The Countywide Plan is developed by Forward Pinellas and sets for the guidance and strategies to achieve growth while preserving community character. The following transportation goals are those with relevance to and support the Drew Street Corridor Study and Concept Evaluation.

Transportation Goal 3.0: Transit-Oriented Pedestrian/Bicycle Planning: Enhance the existing transportation network to provide functional and effective pedestrian, bicycle, and transit connections in transit-oriented areas.

Transportation Goal 4.0: Complete Street Design: Design streets to be multimodal “Complete Streets,” with an emphasis on safety, access and circulation for all users, regardless of age, ability, based on the context of the roadway and its surrounding area.

Figure 18: Forward Pinellas 20- Minute Concept Vision Map, Advantage Pinellas Plan



Source: Forward Pinellas Advantage Pinellas 2045 Long Range Transportation Plan <https://forwardpinellas.org/wp-content/uploads/2020/02/AdvantagePinellasPlan2045FullDoc.pdf>

Transportation Goal 7.0: Streetscapes in Transit-Oriented Areas: To facilitate and encourage transit use, streetscapes in transit-oriented areas must be designed to provide a safe and attractive environment so as to encourage pedestrian activity.

Transportation Goal 11.0: Design and Landscape: Encourage superior community design and enhanced landscape treatment, both outside of and within the public ROW, and foster community awareness of the scenic nature of these corridors.

Community Characteristics

DEMOGRAPHICS REVIEW

There are approximately 20,000 residents living within a one-mile area surrounding the study corridor with nearly 23,000 jobs in the immediate proximity (see Figure 19 and Figure 20). The median income is \$38,320 and approximately 21 percent of residents within half of a mile of the corridor are below poverty. Figure 21 illustrates the percent of population below poverty levels within one half-mile of the corridor. Figure 22 provides the percent of renters along each portion of the corridor.



In the City of Clearwater, 11% of households do not own a vehicle and 23% have a person with a disability.

Complete Streets for Clearwater Implementation Plan, 2019.

There are significant levels of poverty within the corridor study area. The highest concentrations are located on either end of the study area. On the western end of the corridor to the north between Downtown Clearwater and N Highlands Avenue, 23% to 29% of the population is below poverty level. On the eastern end to the north and south between N Hercules Avenue and US 19, there is 17% to 23% below poverty levels.

Figure 19: Study Area Population

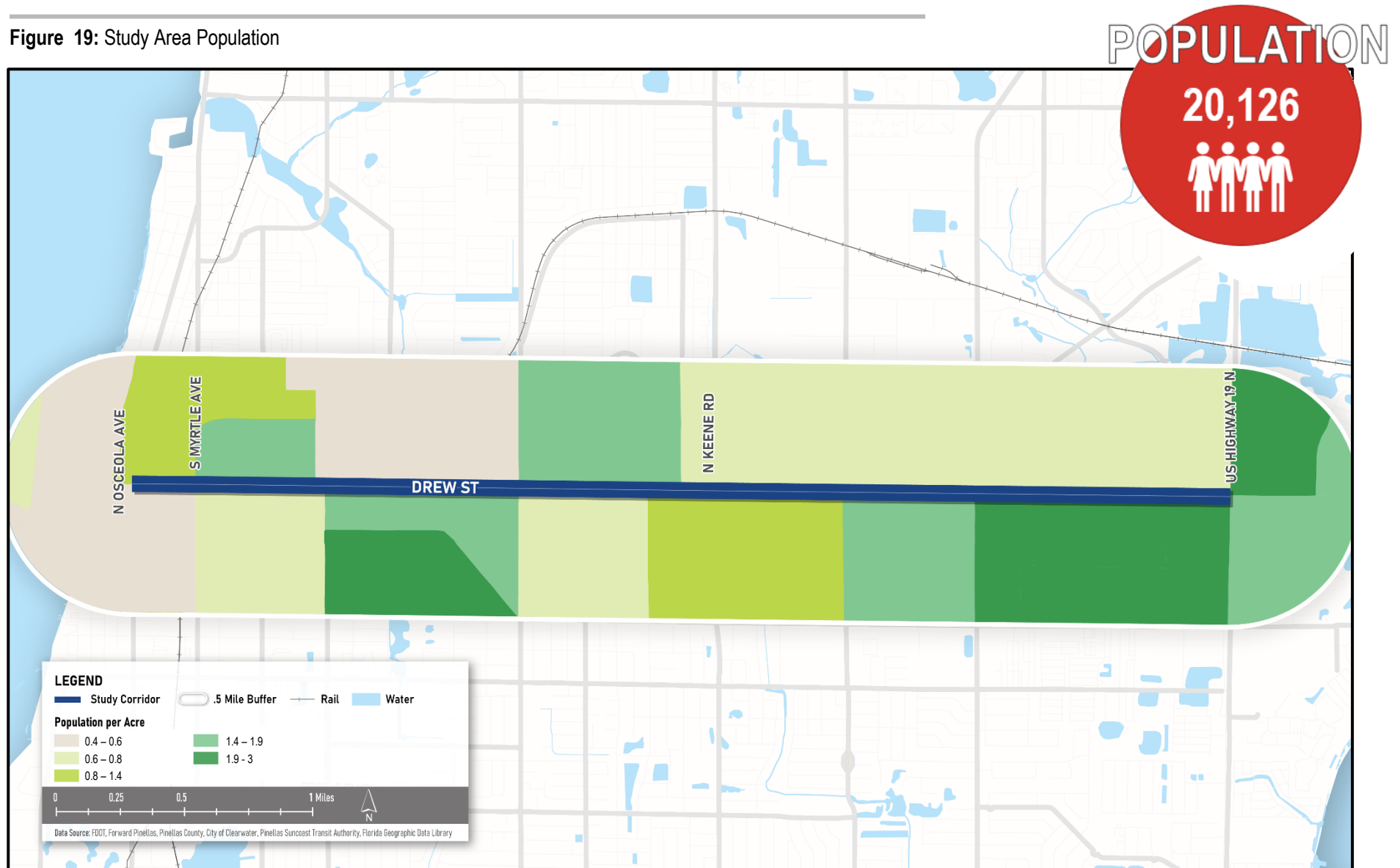


Figure 20: Study Area Employment

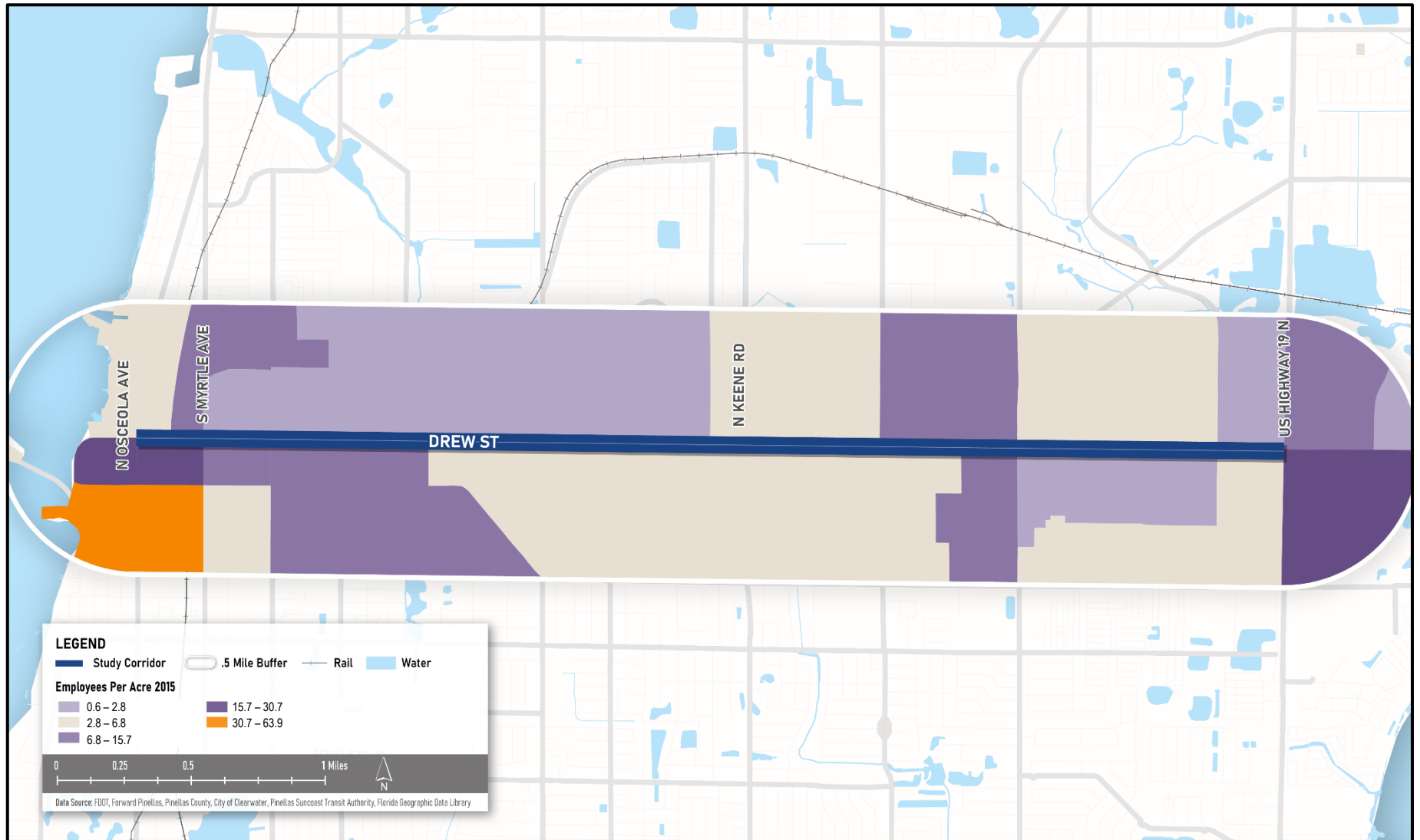


Figure 21: Study Area Demographics

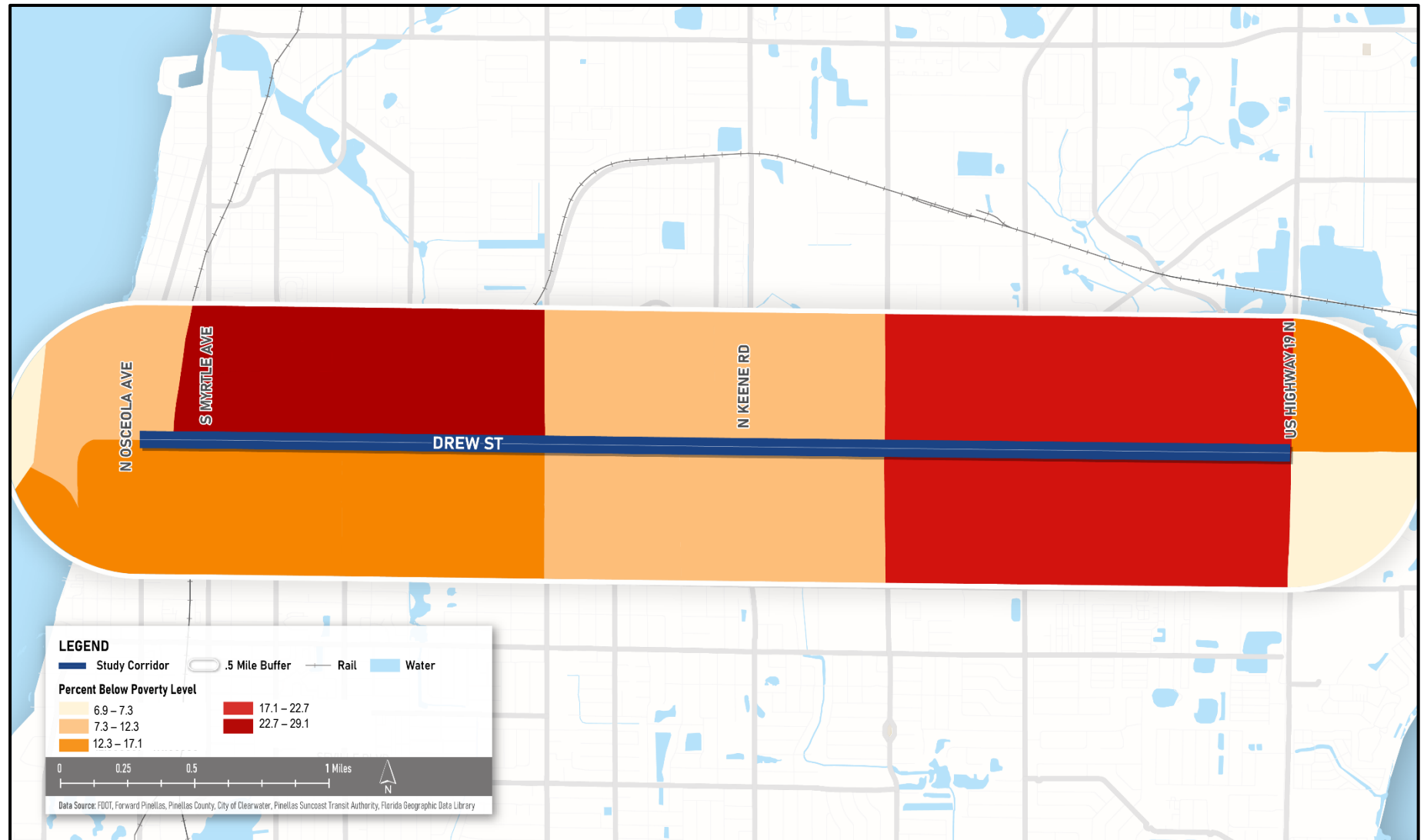
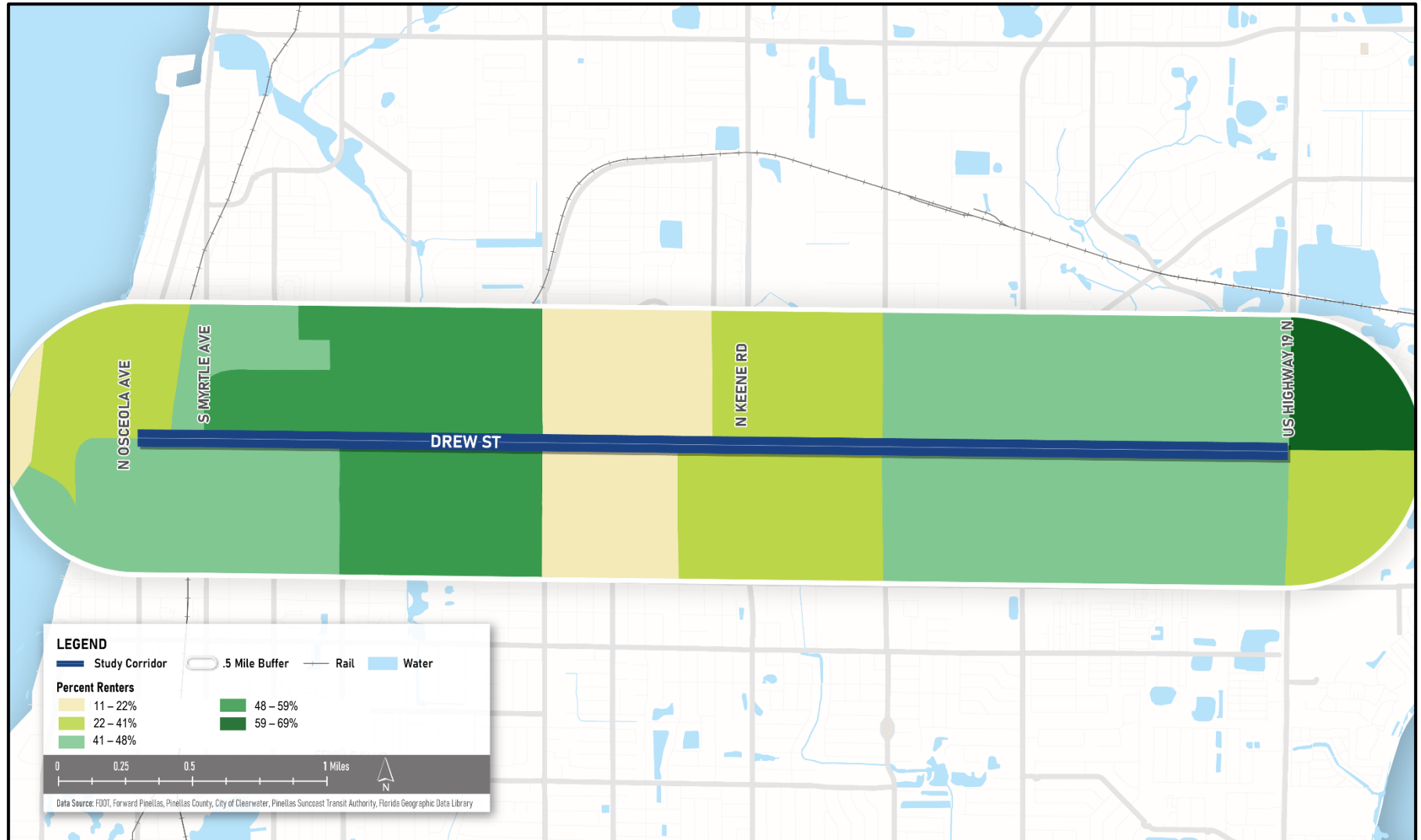


Figure 22: Study Area Housing



Land Use

EXISTING LAND USE

Drew Street serves various distinct land uses across the corridor, providing access to both local and regional needs in the community. The land uses are described within each of the study area segments. Each segment has its own unique land use characteristics and uses. The Land Use Strategy map shown in Figure 23 identifies activity centers throughout Pinellas County. Figure 24 depicts the existing zoning and land uses throughout and near the study area corridor. There are significant public and community uses along the corridor; many of which are schools. Figure 25 illustrates where schools are located within one half-mile from Drew Street.

Segment 1: North Osceola Avenue to North Myrtle Avenue

Segment 1 is located on the western end of Drew Street in Downtown Clearwater. This entire section is designated as an Urban Center and is in the Downtown (D) commercial district. Segment 1 has several major attractions including the City of Clearwater Public Library, Church of Scientology, Coachman Park, Pinellas Trail Railroad Crossing, and numerous hotels.

Segment 2: North Myrtle Avenue to North Keene Road

Segment 2 of the corridor is mostly comprised of single-family residences, with driveways that directly access Drew Street. Between North Missouri Avenue and North Duncan Avenue, there are predominately single and multi-family homes, with a golf course facing Drew Street from the Clearwater Country Club. The area from Betty Lane to NE Coachman Road is considered the SkyCrest area and there are several large churches and schools.

The land uses along Segment 2 are commercial from Duncan Avenue to North Keene Road, with small and strip retail uses. There is a school crossing located at the intersection of Drew Street and Corona Avenue to serve the SkyCrest Elementary School south of Drew Street.

Segment 2 has Urban Center zoning to the south, with Low Medium Density Residential (LMDR) to the north. There are some smaller portions of Commercial (C) and Open Space Residential (OS/R) near North Keene Road. The northern side of Drew Street has more diverse land uses. Near North Myrtle Avenue, there is a small amount of Office (O) uses. While the remaining northern side of the corridor is mostly Low Medium Density Residential (LMDR), there are also portions along the corridor that are Medium Density Residential (MDR), Commercial (C) and Open Space/Recreational (OS/R).

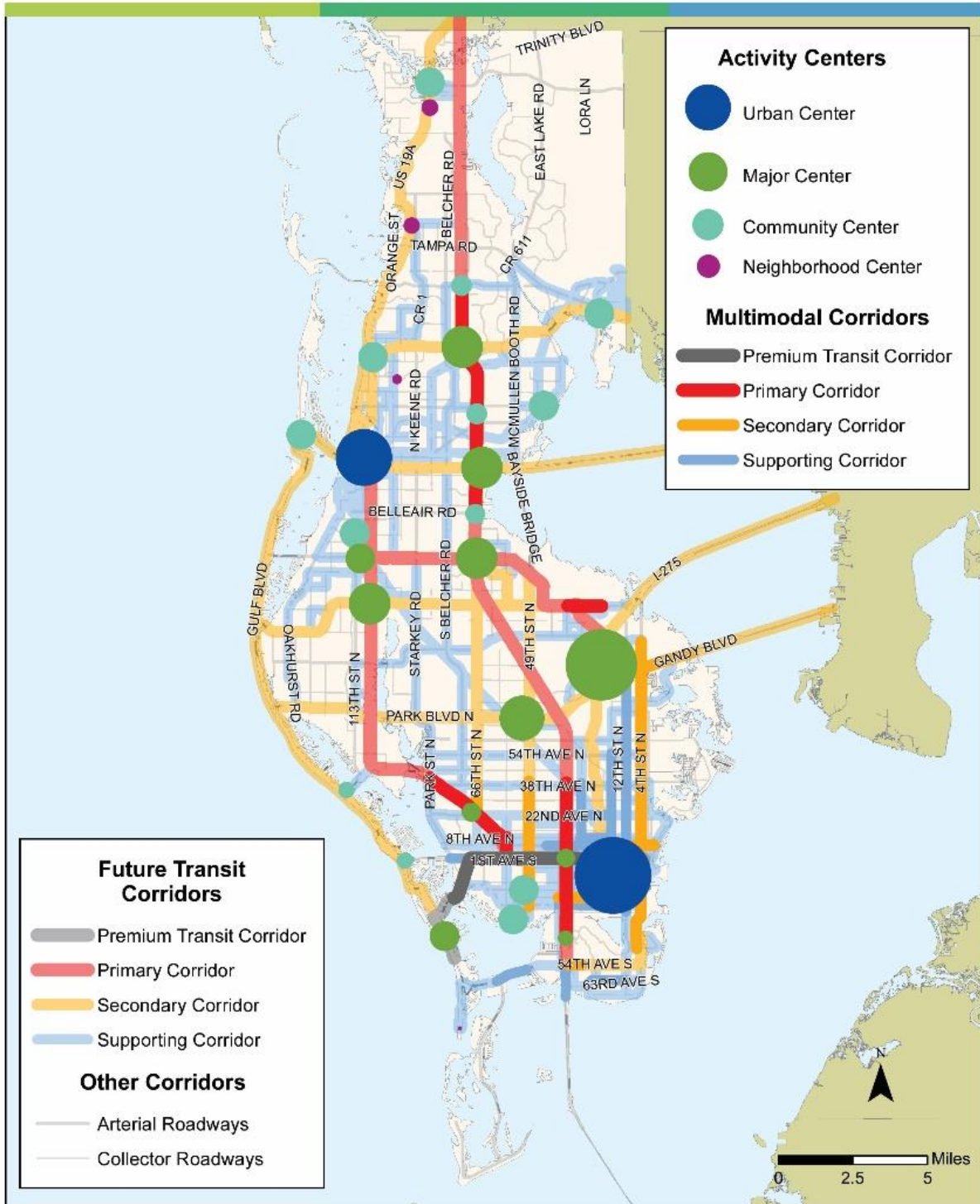
Segment 3: North Keene Road to US 19

The land uses in Segment 3 are generally commercial in nature from North Keene Road to US 19. North Keene Road to US 19 has several major attractions, including Delphi Academy, Skycrest Elementary School, Florida Spine Institute, Clearwater East Community Library, Skycrest Christian School, St. Petersburg College, Joe DiMaggio Sports Complex, and Spectrum Stadium Railroad Crossing.

Segment 3 also shares a diverse assortment of uses. Both the north and south sides of Drew Street have small Commercial (C) directly abutting the corridor, with substantial low Medium Density Residential (LMDR) zoning directly behind the frontage properties. Other uses towards the center of the corridor segment include Medium Density Residential (MDR), Office (O), Institutional (I), and a small amount of Preservation Area (P).

Figure 23: Forward Pinellas Land Use Strategy Map

The Land Use Strategy Map



The Countywide Plan Strategies, Forward Pinellas <https://forwardpinellas.org/wp-content/uploads/2016/06/Countywide-Plan-Strategies.pdf>

Figure 24: Study Area Existing Land Use

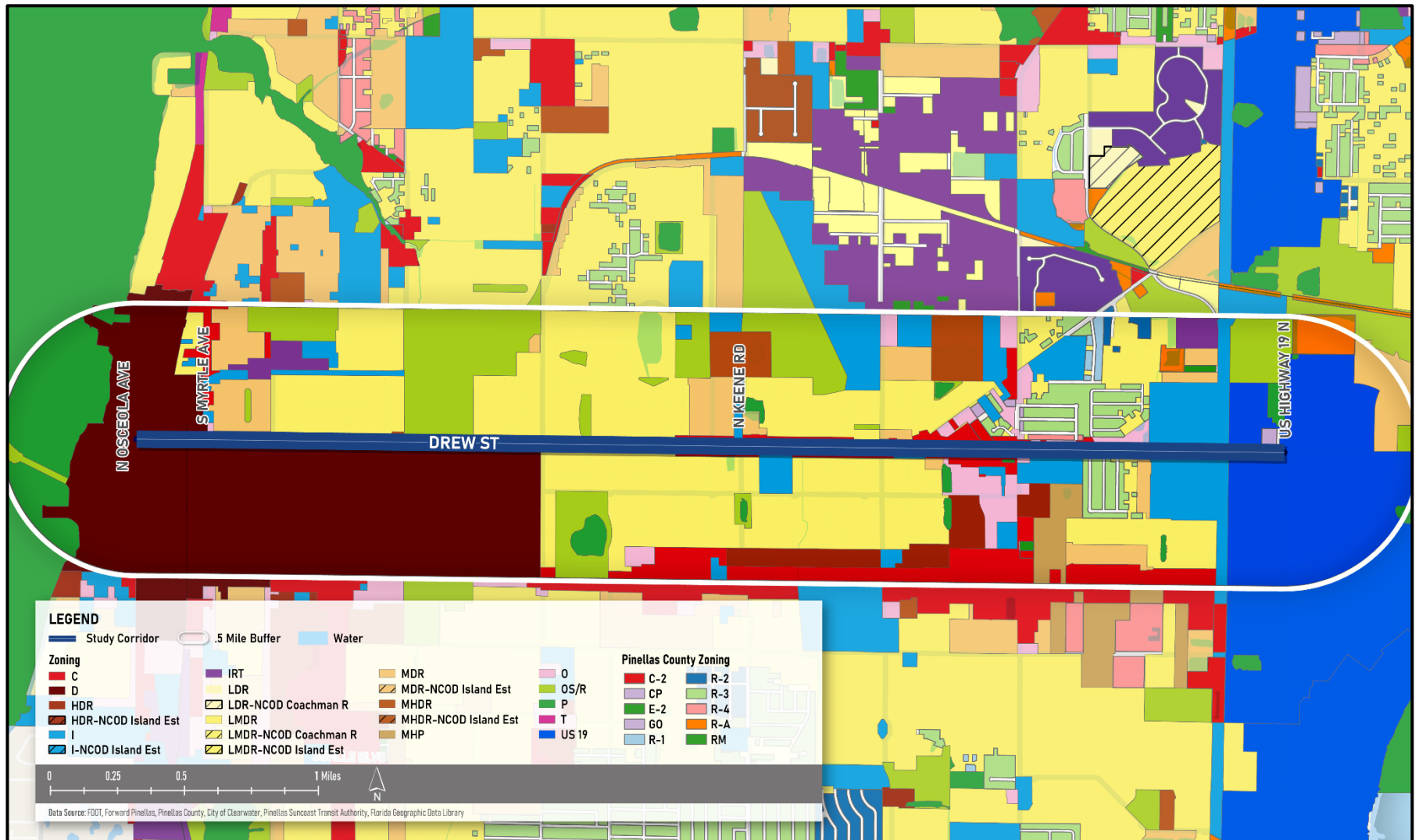
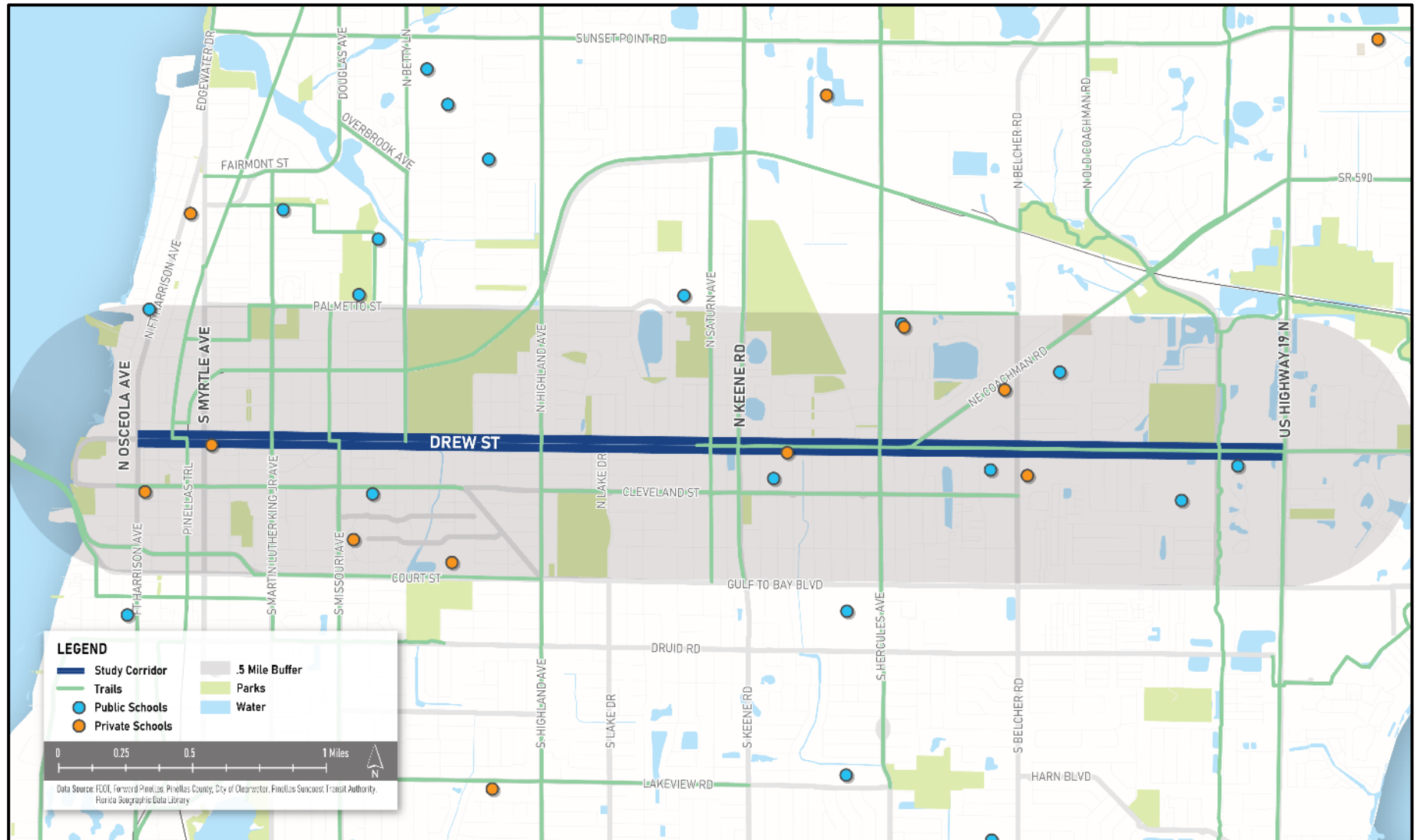


Figure 25: Study Area Schools

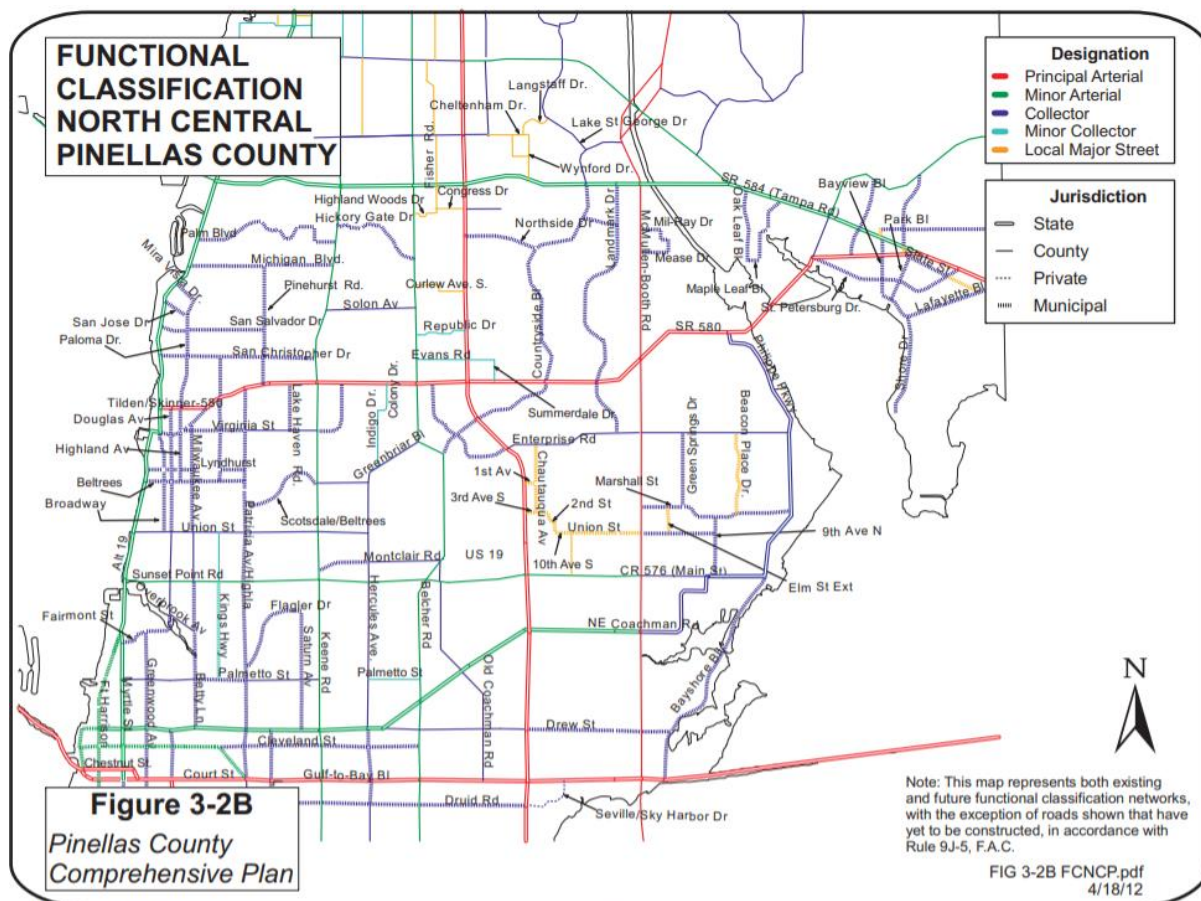


Roadway Characteristics

Drew Street is primarily a four-lane roadway that serves both local and regional east-west travel across north-central Pinellas County. Drew Street from North Osceola Avenue to North Keene Road is undivided with no turn lanes or medians. From North Keene Road to US 19, Drew Street has a two-way center left turn lane, which alternates between a raised median and a turn lane at major intersections. The Advantage Pinellas Plan does not identify Drew Street as a constrained road.

The Pinellas County Comprehensive Plan identifies the functional classifications and roadway jurisdiction, as shown in Figure 26. From North Osceola Avenue and Ft. Harrison, Drew Street is under the City of Clearwater's jurisdiction and is considered a Minor Arterial. Between Ft. Harrison and NE Coachman Road, Drew Street continues as a Minor Arterial as SR 590 under FDOT jurisdiction. The eastern portion between NE Coachman to US 19 is designated as a Collector and falls under Pinellas County jurisdiction.

Figure 26: Pinellas County Comprehensive Plan Functional Classification



Source: Pinellas County Comprehensive Plan http://www.pinellascounty.org/Plan/comp_plan/03trans/app-b/fig3-2b.pdf

CONTEXT CLASSIFICATION

The FDOT Context Classification describes a roadway based on the corridor function, surrounding land uses, community characteristics, and environment surrounding a specific corridor. This classification provides the basis for determining design criteria appropriate for the corridor based on its function, character and needs.

Drew Street is classified as a C4 Urban General roadway for the entire length of the study area corridor from North Osceola Avenue to US 19. The C4 Urban General classification is described as a well-connected roadway network with small blocks and a mix of uses. The corridor connects residential uses directly abutting the roadway and within the study area. Based on this classification, the allowable design speeds along the corridor are 30-45 mph and should support multimodal accommodations. Table 8 provides the design controls for the C4 Urban General classification. Land uses include single-family or multi-family, residential, institutional, neighborhood scale retail, and/or office. Employment density is greater than 20 jobs per acre, and the population is greater than 10 persons per acre.

Table 8: Drew Street Context Classification Design Control

DESIGN CONTROL	C4
Allowable Design Speed Range (mph)	30-45
SIS Minimum Design Speed (mph)	45
Minimum Travel & Auxiliary Lane Width	30-35 mph: 10 ft 40-45 mph: 11 ft ≥ 50 mph: 12 ft
Two-Way Left Turn Lane	25-35 mph: 11 ft 40 mph: 12 ft
Median Width	25-35 mph: 15.5 ft 40-45 mph: 22 ft
Sidewalk Width	6 ft

Segment 1: North Osceola Avenue to North Myrtle Avenue

Segment 1, located on the western end of Drew Street in Downtown Clearwater between North Osceola Avenue and North Myrtle Avenue is within the City of Clearwater's jurisdiction. The corridor is 1,700 feet in length and consists of a four-lane undivided roadway with two lanes in each direction and lane widths that range between nine and eleven feet. As illustrated in Figure 27, the total typical section pavement width is approximately 40 feet to edge of pavement, with approximately 60 feet of ROW. However, upon field review, it was determined that there are portions of Segment 1 that are only 37 feet to edge of pavement.

This segment of Drew Street is classified as an urban minor arterial roadway. The speed limit is 35 mph eastbound and 30 mph westbound. There are no bike lanes and no on-street parking, however there is access to surface parking and the Pinellas Trail directly from Drew Street. Five-foot wide sidewalks are located on either side of the road. A railroad crossing is located on Drew Street at NE Avenue, near to the Pinellas Trail connection. There are signalized gates, signs and flashing lights for this crossing.

Figure 27: Segment 1 Existing Conditions Typical Section



The existing pavement through this segment of the project is in fair to poor condition. There is some noticeable cracking and rutting throughout the road's overall surface, with some major peeling issues at the curb line where the curb & gutter has been paved over. Additionally, there is evidence of some ponding due to pavement failures and/or grading issues at several of the intersection's turnouts. Images depicting the existing pavement conditions are shown in Figure 28. There are also areas that lack landscaping along the corridor to provide a buffer between the vehicular traffic and sidewalks.

MAJOR INTERSECTIONS

There are three signalized intersections in Segment 1:

- » North Osceola Boulevard
- » North Ft. Harrison Avenue
- » North Myrtle Avenue (Alt US 19)

Figure 28: Drew Street Segment 1 Pavement Conditions

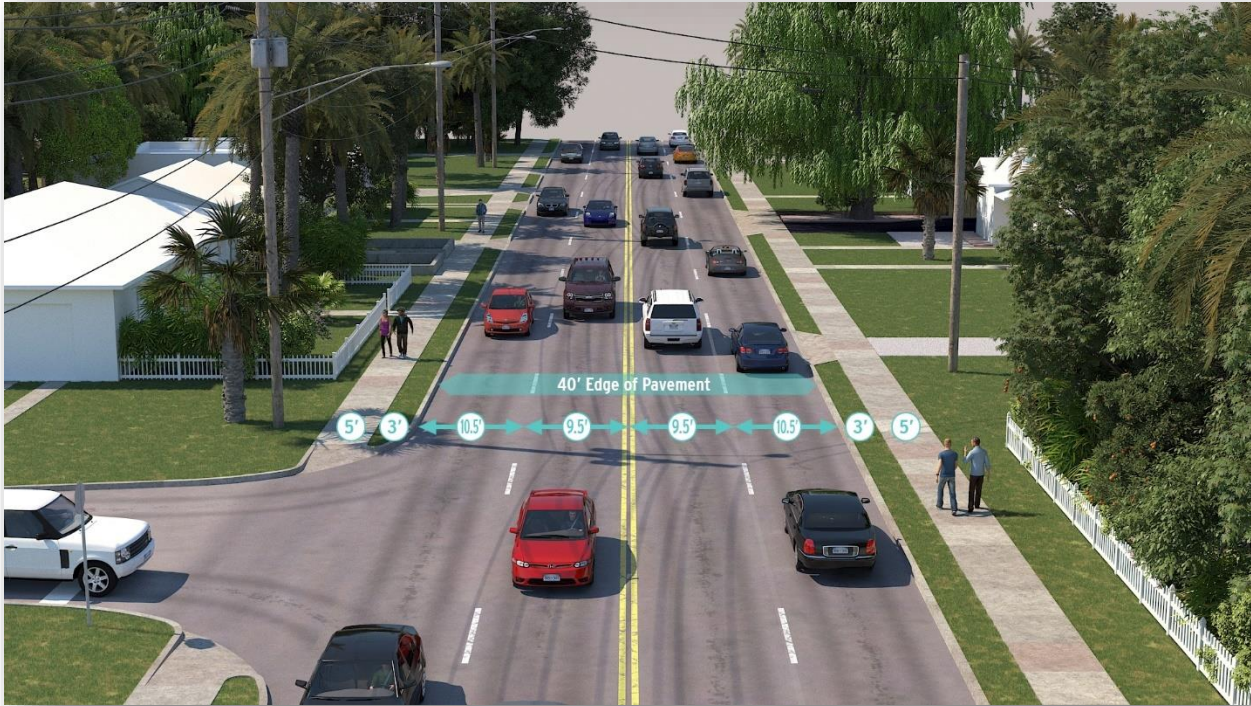


Segment 2: North Myrtle Avenue to North Keene Road

Segment 2, illustrated in Figure 29, is under FDOT jurisdiction between Myrtle Avenue and North Keene Road. This segment of Drew Street is a four-lane undivided Urban Minor Arterial with travel lane widths ranging from nine to ten feet. The speed limit is 35 mph in both the eastbound and westbound directions. There are five-foot sidewalks on either side of the roadway with varying widths of space buffering the sidewalks from the travel lanes. There are sidewalk gaps along portions of the corridor, some of which are currently being addressed by FDOT. Bike lanes are only provided in of this section of the corridor between North Jupiter Avenue and North Keene Road. There is no landscaping, no on-street parking and pedestrian crossings are only located at traffic signals.

The ROW is approximately 70 feet but varies throughout this segment of roadway, with approximately 40 feet to edge of pavement. There are also several properties along this segment which appear to have walls and other structural elements at the back of sidewalk and/or ROW line that will limit the amount and type of improvements that can be implemented (see photos in Figure 30).

Figure 29: Drew Street Segment 2 Existing Conditions Typical Section



The existing pavement through this segment of the project appears to be in good to fair condition. There is some minor cracking and rutting over the road's overall surface, with some scaling issues at the curb line where the curb and gutter has been paved over (shown in Figure 31). There are also some isolated locations that have experienced some degree of pavement failures which is visually evident from the repaired/patch work which appears to have occurred.

MAJOR INTERSECTIONS

There are six signalized intersections in Segment 2:

- » North Martin Luther King (MLK) Boulevard
- » North Missouri Avenue
- » North Betty Lane
- » North Highland Avenue
- » North Saturn Avenue
- » North Keene Road

Figure 30: Drew Street Segment 2 Structural Elements within ROW



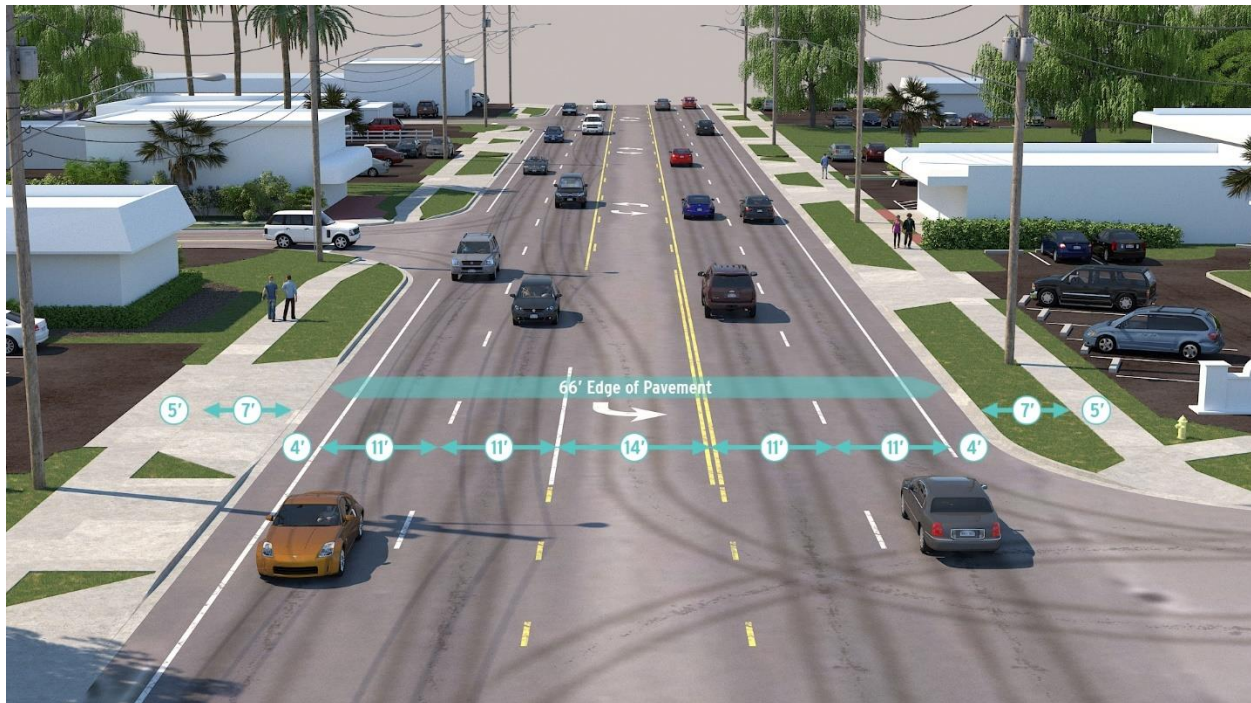
Figure 31: Drew Street Segment 2 Pavement Conditions



Segment 3: North Keene Road to US 19

Segment 3 is the eastern portion of the study area stretching for two miles between North Keene Road and US 19. The roadway is under FDOT jurisdiction from North Keene Road to NE Coachman Road and under Pinellas County jurisdiction between NE Coachman Road to US 19. The roadway is a four-lane undivided Urban Major Collector segment with lane widths of approximately 11 feet for thru travel lanes and 14 feet for the two-way left turn center lanes. Figure 32 illustrates the existing conditions typical section throughout this portion of the corridor. The speed limits vary between 40 and 45 mph. The median is mostly comprised of bi-directional left turn lanes with a raised median at major intersections for left turn protection. The ROW is approximately 90 to 94 feet in width and approximately 66 feet to edge of pavement. This segment has four-foot bike

Figure 32: Segment 3 Existing Conditions Typical Section



lanes on both sides of the road and approximately five-foot sidewalks on both sides of the roadway. Pavement in the eastern segment is in fair to good condition with only minor cracking.

MAJOR INTERSECTIONS

There are five signalized intersections in Segment 3:

- » North Hercules Avenue
- » NE Coachman Road
- » North Belcher Road
- » Old Coachman Road
- » US 19 (major intersection/interchange)

Intelligent Transportation Systems

Pinellas County will be completing an Adaptive Traffic Control System (ATMS) project scheduled for design in 2023 with construction anticipated in 2025. Considerations and technology applications along the corridor will need to be consistent and integrated into these plans. Intelligent Transportation System (ITS) elements planned as part of this project through the corridor from North Ft Harrison to McMullen Booth Road, which is the majority of the study area corridor. Technology being considered includes fiber-based communication subsystem, Arterial Dynamic Message Signs (DMS) subsystems, Closed Circuit Television (CCTV) camera subsystem, Adaptive Traffic Control System with video detection at signalized intersections and new stop bar loops at strain pole locations. The County anticipates no more than five DMS structures along the corridor and between six and 12 CCTV cameras. The CCTV camera subsystem is intended to monitor the DMS operations and provide security surveillance of important infrastructure.

The potential camera locations may include:

- » North Fort Harrison
- » North Myrtle Avenue
- » Martin Luther King Jr. Boulevard
- » NE Cleveland (2 cameras)
- » North Betty Lane
- » North Highland Avenue
- » North Corona Avenue
- » Hercules Avenue
- » NE Coachman Road
- » Old Coachman Road
- » Bayview Avenue (HM)

The location of DMS will be determined through the upcoming design project. The support structures are anticipated to be located at Jupiter Avenue (eastbound), Marywood Avenue (eastbound), Fornwood Avenue (westbound), and Bayview Avenue (eastbound and westbound).

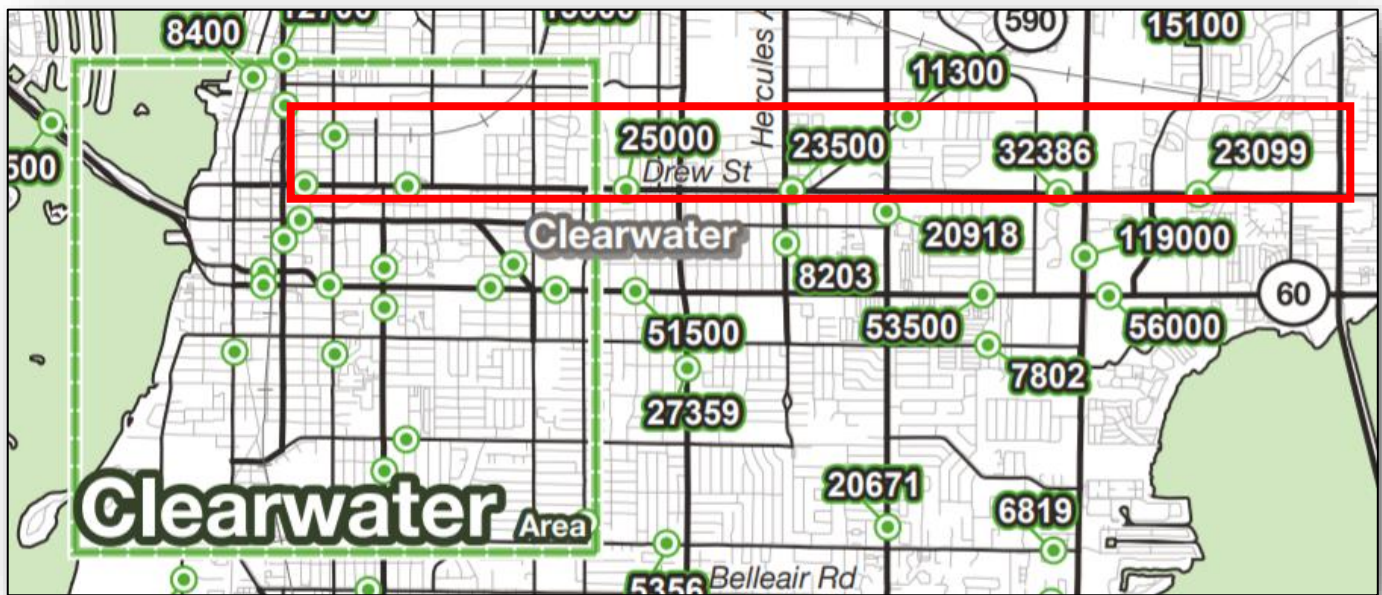
A new fiber optic trunkline will be designed for the entire corridor.

Existing Traffic

ANNUAL AVERAGE DAILY TRAFFIC

Every year, Forward Pinellas publishes the Annual Average Daily Traffic (AADT) for Pinellas County. Forward Pinellas gathers the data at specific locations along the roadway network over a three-day period between Tuesday and Thursday, to gather “typical day” between Tuesday and Thursday volumes, and then averages the data to report the AADT. East of North Myrtle between Vine Avenue and Pennsylvania Avenue east of North Myrtle Avenue reports 13,500 AADT. East of Missouri Avenue has 20,200 AADT. East of Highland Avenue and west of North Keene Avenue has 25,000 AADT. Between Hercules Avenue and NE Coachman Road has 23,500 AADT. Between Old Belcher Road and US 19 there is an AADT of 32,386. Figure 33 illustrates the AADT along Drew Street from the Forward Pinellas 2019 AADT, with City of Clearwater AADT provided in Figure 34.

Figure 33: Drew Street AADT



Source: Forward Pinellas, 2019 AADT in Pinellas County, <https://forwardpinellas.org/document-portal/traffic-count-2019/?wpdmdl=47787&refresh=6052177ad557a1615992698>

Figure 34: City of Clearwater AADT



Source: Forward Pinellas, 2019 AADT in Pinellas County, <https://forwardpinellas.org/document-portal/traffic-count-2019/?wpdmdl=47787&refresh=6052177ad557a1615992698>

TRAFFIC VOLUME AND LEVEL OF SERVICE

The FDOT SR 60 Corridor Study was completed in June 2017, which evaluated Drew Street as a primary parallel alternative facility to SR 60. Since Drew Street has not experienced significant increases in traffic since the completion of the SR 60 Corridor Study, the existing traffic volumes and level of service (LOS) from the study were used as the baseline to this study analysis.

The SR 60 Corridor Study analysis utilized 2015 existing traffic volumes, with eight-hour turning movement traffic counts at the signalized intersections of both SR 60 and Drew Street. At the time of the study, turning movements were collected between 7:00am and 10:00am for AM peak period and between 3:00pm and 6:00pm for the PM peak period. The AM peak period for Drew Street was noted between 7:45am and 8:45am for most of the intersections. The PM peak period along Drew Street is between 5:00pm and 6:00pm. Traffic volumes were adjusted to reflect peak season traffic conditions by applying the peak seasonal adjustment factors of 1.05 or 1.06 (based on the date of the data collected) obtained from the FDOT Florida Traffic Online (2014) website, to the raw turning movement volumes. They were then manually balanced and adjusted for reasonableness. The intersection peak hour traffic volumes are available in the SR 60 Corridor Study Existing Conditions Summary Report.

An operational analysis of existing year 2015 traffic conditions was performed using the Highway Capacity Manual (HCM) 2010 module of the Synchro software. Based on the analysis at the time, Drew Street LOS F intersections were located at US 19 ramps and at McMullen Booth Road (not within the limits of this study area). The Drew Street intersections at North Keene Road and North Belcher Road operated at LOS E.

The Drew Street eastbound segments of North Osceola Avenue to North Ft. Harrison Avenue, North Saturn Avenue to North Keene Road, and Old Coachman Road to Park Place Boulevard (including US 19 Ramps Intersections), operate at LOS F

during 2015 AM and/or PM peak hours. The Drew Street westbound segments of Hampton Road to Park Place Boulevard, Access Road A to US 19, NE Coachman Road to North Hercules Avenue, and Corona Avenue to North Keene Road operate at LOS F during the year 2015 AM and/or PM peak hours.

Drew Street eastbound travel speeds were estimated to be 20.2 mph and 18.1 mph for the AM and PM peak hours, respectively, which is LOS D traffic conditions for both AM and PM peak hours. The Drew Street westbound travel speeds are 22.4 mph and 19.1 mph for the AM and PM peak hours, respectively, which is LOS C and LOS D traffic conditions for AM and PM peak hours, respectively.

Table 9 displays intersection data from the SR 60 Corridor Study specifically for Drew Street, within the study limits.

Table 9: Drew Street Intersection Delay

Roadway	Intersection	AM/PM Overall Average Delay (sec/veh)	AM/PM Overall Intersection Level of Service (LOS)
Drew Street	N Osceola Avenue	30.2/8.6	C/A
Drew Street	N Ft Harrison Avenue	12.0/10.3	B/B
Drew Street	N Myrtle Avenue	19.3/24.7	B/C
Drew Street	N MLK Avenue	6.4/6.6	A/A
Drew Street	N Missouri Avenue	10.9/30.7	B/C
Drew Street	N Betty Lane	12.4/11.3	B/B
Drew Street	N Highlands Avenue	28.0/29.1	C/C
Drew Street	N Saturn Avenue	5.2/5.0	A/A
Drew Street	N Keene Road	42.8/75.8	D/E
Drew Street	N Hercules Avenue	24.9/48.1	C/D
Drew Street	NE Coachman Road	19.7/19.3	B/B
Drew Street	Belcher Road	49.9/71.6	D/E
Drew Street	Old Coachman Road	21.4/25.7	C/C
Drew Street	US 19 Ramps	75.8/94.4	E/F
Drew Street	Access Road A	13.5/42.4	B/D
Drew Street	Park Place Boulevard/ Fairwood Avenue	22.3/30.4	C/C
Drew Street	Hampton Road	8.8/16.4	A/B
Drew Street	McMullen Booth Road	89.3/108.7	F/F

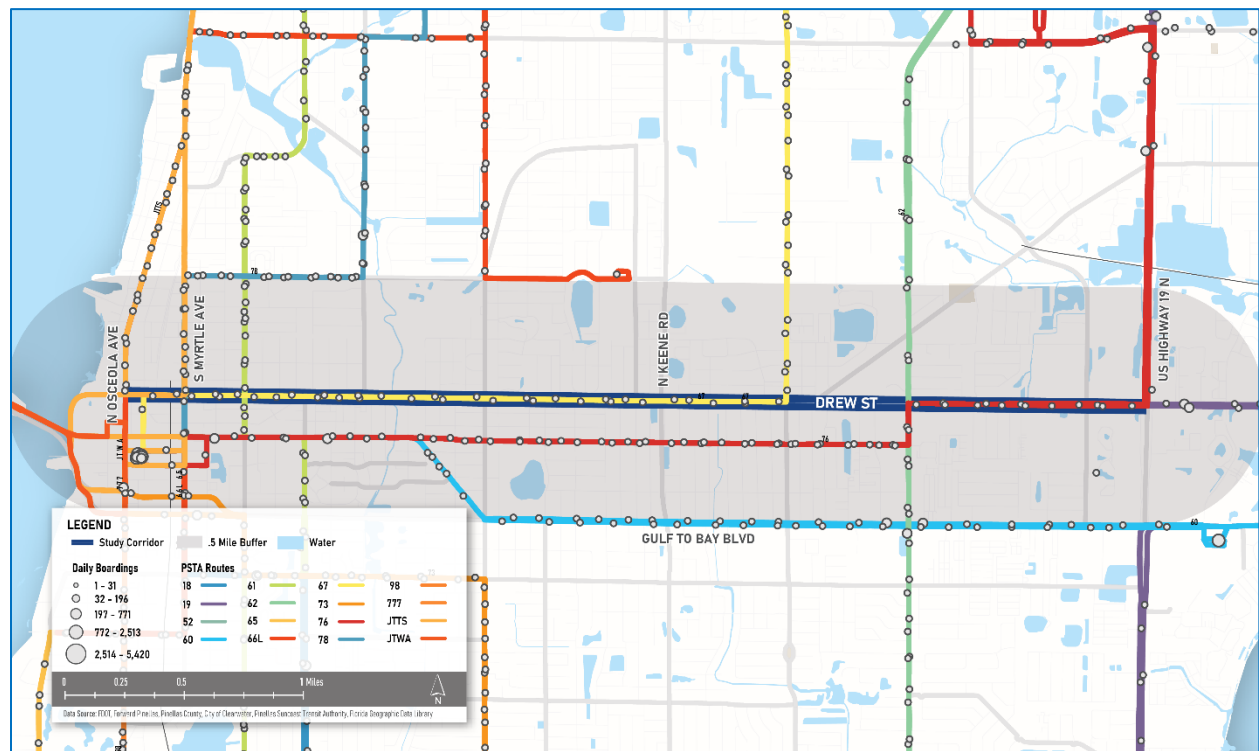
Multimodal Accommodations

Given the nature of diverse land uses along Drew Street and its proximity to Downtown Clearwater, there are various multimodal accommodations that must be emphasized to preserve and enhance safety and accessibility along the corridor. Multimodal infrastructure includes transit, bicycles and pedestrians.

TRANSIT

There are two transit service providers currently operating within the Drew Street Corridor. This includes the Pinellas Suncoast Transit Authority (PSTA) and the Jolley Trolley. Figure 35 shows the transit accommodations along the study corridor along with daily boardings.

Figure 35: Existing Transit Service



Pinellas Suncoast Transit Authority

PSTA provides public transportation throughout Pinellas County. There are two main routes that currently operate along Drew Street; Route 67 and Route 76. Route 67 travels between Garden Avenue and Hercules Avenue and Route 76 serves Belcher Road to Old Coachman Road. Both routes operate on one-hour headways between 7:00am and 7:00pm with no evening, weekend or holiday service. Route 67 destinations include Hercules Avenue and Sunset Point Road, Park Street Terminal, McMullen Booth Road and Enterprise Road, and Tampa Road and Street Petersburg Drive. Route 67 had an annual ridership of 103,324 in 2018. Route 76 destinations are Park Street Terminal, St. Petersburg College, On Top of the World West, and Westfield Countryside. Route 76 annual ridership in 2018 was 105,659.

There are three bus stops from North Osceola Avenue to North Myrtle Avenue. Major attractions include the City of Clearwater Public Library, Church of Scientology, Coachman Park, Pinellas Trail, and numerous hotels.

There are 20 bus stops from North Myrtle Avenue to North Keene Road., This segment is primarily residential with few major attractions, including Clearwater Academy International and Clearwater Country Club.

There are 14 bus stops from North Keene Road to US 19. This segment has several major attractions including Delphi Academy, Skycrest Elementary School, Florida Spine Institute, Clearwater East Community Library, Skycrest Christian School, St. Petersburg College, and Spectrum Stadium.

Table 10 describes the bus routes, stop location and the bus stop elements.

Table 10: Bus Stop Attributes

Bus Route	Location	Sign Only	Bench	Weather Protection
67	Drew St and Garden Ave	X		
67	Drew St and Myrtle Ave N *	X		
67	Drew St and Pennsylvania Ave	X		
67	Drew St and Booth Ave	X		
67	Drew St and MLK Ave N	X		
67	Drew St and 9 th St N	X		
67	Drew St and Madison Ave West N	X		
67	Drew St and Madison Ave East N		X	
67	Drew St and Lincoln Ave N	X		
67	Drew St and Kenwood Ave	X		
67	Drew St and N Betty Ln N*	X		
67	Drew St and Evergreen N	X		
67	Drew St and Orangeview Ave N *	X		
67	Drew St and Highland Ave N	X		
67	Drew St and Edgewood Ave	X		
67	Drew St and Orangewood Ave	X		
67	Drew St and Keystone Dr N	X		
67	Drew St and Duncan Ave N	X		
67	Drew St and Saturn Ave East N		X	
67	Drew St and Saturn Ave West N			X
67	Drew St and Tulane Ave	X		
67	Drew St and Corona Ave	X		
67	Drew St and Meteor Ave	X		
67	Drew St and Hercules Ave N	X		
76	Drew St and Belcher Rd	X		
76	Drew St and Terrace Drive E	X		
76	Drew St and Maywood Ave N	X		
76	Drew St and Anne Ave*		X	
76	Drew St and Pinewood Ave*	X		
76	Drew St and Fernwood Ave		X	
76	St. Petersburg College			X
76	Drew St and Old Coachman Road			X

Bus Route	Location	Sign Only	Bench	Weather Protection
76	Drew St and Old Coachman Rd			X

Jolley Trolley

The Jolley Trolley Coastal Route connects destinations along the coastal communities in Pinellas County, with the northern route connecting Downtown Clearwater to visitor destinations in Dunedin, Palm Harbor, and Tarpon Springs. The trolley route travels along Drew Street between Douglas Avenue and the waterfront to provide northbound and southbound service. The Jolley Trolley has no unique stops along Drew Street, however there are stops located within walking distance at Coachman Park and on Cleveland Street and North Osceola that operate on a 60-minute frequency. Jolley Trolley does share most of the designated stops with the PSTA and drivers will stop anywhere along the route where it is safe to do so. Figure 36 illustrates the North Pinellas Jolley Trolley Route.

Figure 36: North Pinellas Jolley Trolley Route



Image Source: <https://clearwaterjolleytrolley.com/trolley-route-fares/>

BICYCLE AND PEDESTRIAN INFRASTRUCTURE

In order to serve the variety of diverse land uses and functions along Drew Street, there is significant demand for bicycle and pedestrian accommodations. Supportive bicycle and pedestrian infrastructure is necessary to support the safe use and access to various community trails, residential and business uses, and schools throughout the corridor. Figure 37 shows the trail and bicycle lane network within the study area.

Segment 1 North Osceola to North Myrtle Avenue

From North Osceola to North Myrtle Avenue, there are sidewalks on both sides of the road, but no bike lanes or paved shoulders. The Fred Marquis Pinellas Trail (Pinellas Trail) is the largest trail in Pinellas County and traverses Drew Street. The

Pinellas Trail turns at Drew Street from the north, and travels along the north side of Drew Street for approximately 300 feet, then turns south at North East Avenue. The sidewalk connecting the trail connections is approximately eight feet in width.

Segment 2: North Myrtle Avenue to North Keene Road

Segment 2 has a sidewalk on the north side of Drew Street, and intermittent sidewalk on the south side of Drew Street. East of North Jefferson Avenue there is a significant sidewalk gap of approximately 650 feet that begins in front of the Drew Ridge apartment community to North Betty Lane.

While there are no bike lanes for a majority of Segment 2, there are bike lanes that begin at Juniper Avenue and continue to North Keene Road, that are approximately four feet in width.

“Community Trails” intersect Drew Street at South Martin Luther King Jr Boulevard, South Missouri Avenue, North Betty Lane, North Highlands Avenue, North Saturn Avenue, and North Keene Road.

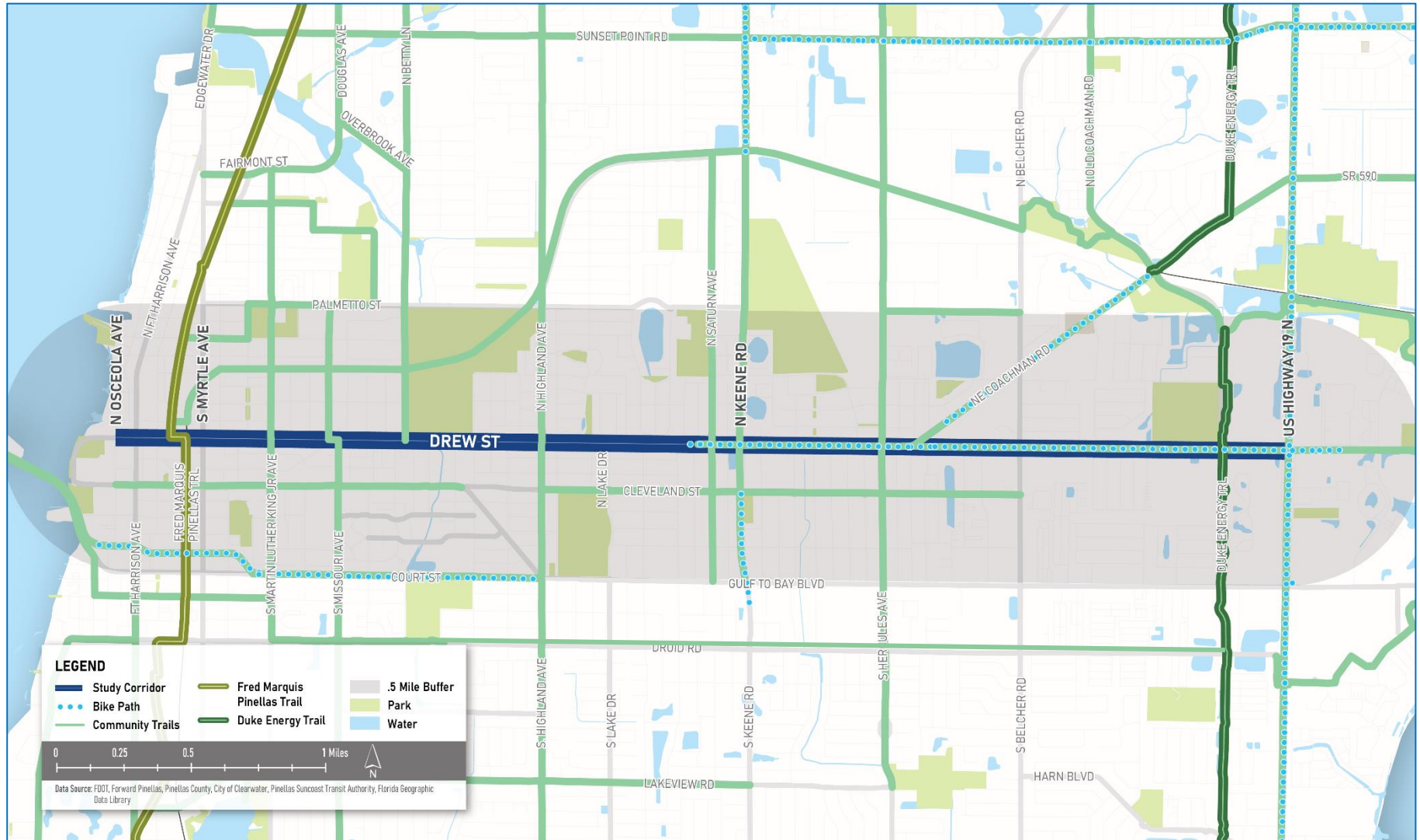
Segment 3: North Keene Road to US 19

Segment 3 has four-foot to five-foot sidewalks on the north and south side of Drew Street. Bicycle lanes are located along the eastbound side of the road. The Duke Energy Trail is located within Segment 3, adjacent to Old Coachman Road. Additional “Community Trails” are located along S Hercules Avenue, NE Coachman Road, and US 19.

Freight Considerations

The Tampa Bay Regional Strategic Freight Plan, updated in 2018, identifies Drew Street as a Freight Distribution Route. At the eastern end of the corridor, Drew Street intersects with US 19, which is categorized as a Regional Freight Mobility Corridor. SR 60 runs parallel to Drew Street, approximately one-half mile to the south and also serves as a Freight Distribution Route.

Figure 37: Trails and Bike Paths



Safety

The crash records for the most recent five-year period of 2015 to 2019 were obtained from FDOT D7 Crash Data Management and Analysis (CDMS) database. The crash records show crashes on Drew Street between North Osceola Avenue and US Highway 19 and on the side streets within 250 feet radius of the intersections on Drew Street. CDMS was utilized since it includes not only crash data from the CARS database for crashes that have occurred on the state facilities but also crash reports from other local and state agencies. These crash data were compiled and analyzed in this section.

CRASH SUMMARY

Table 11 summarizes the overall crash history along the corridor between 2015 and 2019. It provides an overview of the fatal and injury crashes for the individual years. A total of 1,415 crashes occurred within the study area during the five-year period. There were 415 injury crashes that resulted in a total of 603 injuries, 53 serious injuries, and five fatalities.

Table 11: Overall Crash Summary, 2015 to 2019

YEAR	FATAL CRASHES	INJURY CRASHES	OTHER	TOTAL CRASHES	TOTAL INJURIES	TOTAL SERIOUS INJURIES
2015	0	89	169	258	128	15
2016	1	101	187	289	143	12
2017	3	88	229	320	141	13
2018	1	92	203	296	126	4
2019	0	45	207	252	65	9
Total	5	415	995	1415	603	53

CRASH TYPES

Crash types are important to understanding the characteristics of the crash. Table 12 summarizes crashes by crash types for each segment.

Table 12: Crash Type Summary, 2015-2019

CRASH TYPE	SEGMENT 1	SEGMENT 2	SEGMENT 3	LOCATION UNKNOWN	TOTAL	PERCENTAGE	RANK
Rear End	12	129	435	1	577	41%	1
Angle	31	107	155	0	293	21%	2
Sideswipe	5	36	123	0	164	11%	3
Head On	0	9	16	1	26	2%	7

Bike	0	5	18	1	24	2%	8
Pedestrian	3	7	10	2	22	1%	9
Single Vehicle	0	1	10	0	11	1%	10
Hit Fixed Object	1	14	17	5	37	3%	6
Hit Non-Fixed Object	0	3	3	0	6	0%	13
U-Turn	0	1	8	0	9	1%	12
Left Turn	2	61	53	0	116	8%	5
Right Turn	0	3	7	0	10	1%	11
Unknown	7	16	95	2	120	8%	4
Total	61	392	950	12	1415	100%	

Rear End - The vast majority of crashes are rear end crashes (41%). These are crashes caused by one vehicle impacting the rear of the vehicle ahead of it while two vehicles are traveling in the same direction. These crash types are typical of signalized intersection operations, as vehicles slow and accelerate related to signal operations, but may occur midblock when a car is slowing to make a turn. These crash types are not typically susceptible to correction through engineering means when they occur at an intersection. However, under some circumstances, adjusting signal timings may improve operations to address them. Also, these crashes are typically low speed and low injury events. When these crashes are prevalent at a mid-block location, it could indicate the need to limit or modify access.

Angle - The next most prevalent crash type is angle crashes (21%). These crashes can typically result from a vehicle weaving in front of another vehicle where the first vehicle is hit on the side by the vehicle they cut off, or by a vehicle trying to turn. This crash type generally causes more injuries than rear end crashes and, depending upon the circumstances, these crash types may be susceptible to correction.

Sideswipe - The third most prevailing crash type is sideswipe crashes (11%). This crash type is usually caused by vehicles changing lanes into each other. They can also be related to merging activities where auxiliary lanes end. The injury and damage rates with these crash types are widely variable. Depending upon the circumstances, they may be susceptible to correction.

HIGH CRASH LOCATIONS

Based upon review of the crash records, 61% of the total intersection crashes occurred at the top five intersections. The total number of crashes at each intersection, in order, is identified in Table 13. The crash types at intersections with more than 50 crashes are summarized in Table 14.

The US 19 intersection has the highest number of crashes along this corridor. At this location, most crashes are rear end; the sideswipe crashes were also the highest along the corridor. The intersection at North Myrtle Avenue had the highest angle crashes. The intersection at Belcher had the highest pedestrian crashes. The highest intersection crash locations are shown in Table 14, and illustrated in Figure 38.

Table 13: Number of Crashes at Intersections

INTERSECTION	# OF CRASHES	RANK	INTERSECTION	# OF CRASHES	RANK
Drew St @ US Highway 19	333	1	Drew St @ N Jefferson Ave	5	32
Drew St @ Belcher Rd	233	2	Drew St @ N Lincoln Ave	5	32
Drew St @ Old Coachman Rd	146	3	Drew St @ N Fredrica Ave	5	32
Drew St @ N Myrtle Ave	94	4	Drew St @ N Lady Mary Dr	5	32
Drew St @ Keene Rd	56	5	Drew St @ N Glenwood Ave	5	32
Drew St @ Hercules Ave	41	6	Drew St @ N Lake Dr	5	32
Drew St @ Highland Ave	40	7	Drew St @ Orangewood Ave	5	32
Drew St @ N Missouri Ave	39	8	Drew St @ Keystone Dr	5	32
Drew St @ Fort Harrison Ave	38	9	Drew St @ N Mars Ave	4	40
Drew St @ N Betty Ln	31	10	Drew St @ Comet Ave N	4	40
Drew St @ N Main Ave	31	10	Drew St @ Cincinnati Pkwy	4	40
Drew St @ Martin Luther King Ave N	24	12	Drew St @ Maywood Ave	4	40
Drew St @ N Jupiter Ave	24	12	Drew St @ Booth Ave	3	44
Drew St @ N Saturn Ave	20	14	Drew St @ Crest Ave N	3	44
Drew St @ NE Coachman Rd	17	15	Drew St @ Orion Ave N	3	44
Drew St @ Fernwood Ave	15	16	Drew St @ Pinewood Ave	3	44
Drew St @ Garden Ave N	14	17	Drew St @ Baywood Ave	3	44
Drew St @ Evergreen Ave	14	17	Drew St @ Watterson Ave	2	49
Drew St @ N Duncan Ave	13	19	Drew St @ Pennsylvania Ave	2	49
Drew St @ N Starcrest Dr	12	20	Drew St @ N Prescott Ave	2	49
Drew St @ Corona Ave	9	21	Drew St @ San Remo Ave	2	49
Drew St @ Terrace Dr E	9	21	Drew St @ Aurora Ave	2	49
Drew St @ Vine Ave	7	23	Drew St @ Patricia Ave	2	49
Drew St @ Orangeview Ave	7	23	Drew St @ Anna Ave	2	49
Drew St @ N Mercury Ave	7	23	Drew St @ Maplewood Ave	2	49
Drew St @ Osceola Ave	6	26	Drew St @ East Ave N	1	57

Drew St @ NE Cleveland St	6	26	Drew St @ Washington Ave N	1	57
Drew St @ Hillcrest Ave N	6	26	Drew St @ N Madison Ave	1	57
Drew St @ Baker Ave	6	26	Drew St @ Kenwood Ave	1	57
Drew St @ Tulane Ave	6	26	Drew St @ Mariva Ave N	1	57
Drew St @ N Meteor Ave	6	26	Drew St @ Hobart Ave	1	57

Table 14: Crash Types at High Crash Locations

LOCATION/ CRASH TYPE	REAR	ANGLE	SIDE- SWIPE	HEAD ON	BIKE	PED	SINGLE VEHICLE	HIT FIXED OBJECT	HIT NON- FIXED OBJECT	U-TURN	LEFT TURN	RIGHT TURN	UN- KNOWN	TOTAL
Drew ST @ US Highway 19 N	164	55	54	3	5	2	2	6	0	2	7	2	31	333
Drew ST @ Belcher Rd	99	40	29	3	1	4	2	0	1	2	16	1	35	233
Drew ST @ Old Coachman Rd	68	14	13	3	4	1	3	3	1	2	14	2	18	146
Drew ST @ N Myrtle Ave	21	29	5	2	0	1	0	0	0	0	20	0	16	94
Drew ST @ N. Keene Rd	32	7	3	2	0	1	1	1	0	0	9	0	0	56

Figure 38: Crash Types at High Crash Locations



BICYCLE AND PEDESTRIAN CRASHES

Bicycle and pedestrian crashes are of special concern due to the vulnerability of those involved. Reducing bicycle and pedestrian crashes is a special emphasis area for FDOT. The bicycle and pedestrian crash histories over the five-year analysis period are reported in Table 15 and Table 16, respectively. The areas with the highest numbers of bicycle and pedestrian crashes coincide with areas of high bicycle and pedestrian activity.

Table 15: Bicycle Crashes, 2015-2019

INTERSECTION	# OF CRASHES	YEAR
Drew St @ US Highway 19	5	2015 (2), 2016, 2018(2)
Drew St @ Old Coachman Rd	4	2015, 2016, 2018, 2019
Drew St @ Fernwood Ave	2	2015, 2017
Drew St @ Corona Ave	2	2018, 2019
Drew St @ Hercules Ave	2	205, 2018
Drew St @ Baker Ave	1	2015
Drew St @ Belcher Rd	1	2018
Drew St @ Booth Ave	1	2017
Drew St @ Crest Ave N	1	2018
Drew St @ N Madison Ave	1	2015
Drew St @ N Saturn Ave	1	2019
Drew St @ NE Coachman Rd	1	2019
Drew St @ Patricia Ave	1	2015
Unknown	1	2015
Total	24	

Table 16: Pedestrian Crashes, 2015-2019

INTERSECTION	# OF CRASHES	YEAR
Drew St @ Belcher Rd	4	2015, 2016, 2018, 2019
Drew St @ Fort Harrison Ave	3	2016, 2018, 2019
Drew St @ N Jupiter Ave	2	2016, 2017
Drew St @ N Missouri Ave	2	2018 (2)
Drew St @ US Highway 19	2	2018, 2019
Drew St @ N Prescott Ave	1	2015
Drew St @ Keene Rd	1	2016

Drew St @ N Lincoln Ave	1	2017
Drew St @ N Myrtle Ave	1	2019
Drew St @ N Starcrest Dr	1	2015
Drew St @ NE Coachman Rd	1	2016
Drew St @ Old Coachman Rd	1	2019
Unknown	2	2015, 2018
Total	22	

FATAL CRASHES

The fatal crash history over the five-year analysis period is reported in Table 17. The fatal crash near Missouri Avenue involved a pedestrian and the crash located near Booth Avenue involved a bicyclist. The serious injury and fatal crashes by crash type are shown in Table 18.

Table 17: Fatal Crashes, 2015-2019

INTERSECTION	NUMBER OF CRASHES	YEAR
Drew St @ N Betty Ln	1	2016
Drew St @ Keystone Dr	1	2017
Drew St @ Booth AVE	1	2017
Drew St @ N Duncan Ave	1	2017
Drew St @ N Missouri Ave	1	2018
Total	5	

Table 18: Crash Types for Serious Injury and Fatal Crashes, 2015-2019

INTERSECTION	SERIOUS INJURY CRASHES	FATAL CRASHES
Rear End	13	0
Angle	14	1
Sideswipe	1	1
Head On	0	1
Bike	3	1
Pedestrian	2	1
Single Vehicle	0	0

Hit Fixed Object	1	0
Hit Non-Fixed Object	1	0
U-Turn	0	0
Left Turn	8	0
Right Turn	0	0
Unknown	0	0
Total	43	5

SPEED ANALYSIS

The Complete Drew Street Concept Plan study analyzed the corridor speeds in July 2018 in response to public complaints and safety concerns related to speeding throughout the corridor. The analysis confirmed that more than 40 percent of vehicles in the corridor were observed to be speeding, traveling at a speed greater than 45 mph. At Hillcrest Avenue, the 85th percentile speed was 55 mph, which is 15 mph over the posted speed limit. For comparison, the speed limits posted through each corridor segment are 30 mph in Segment 1 from North Osceola Avenue to North Myrtle Avenue, 35 to 45 mph in Segment 2 between North Myrtle Avenue and North Keene Road, and 40 to 45 mph in Segment 3 between North Keene Road and US 19. Speed feedback signs have been placed at some locations throughout the corridor to increase driver awareness of speeding.