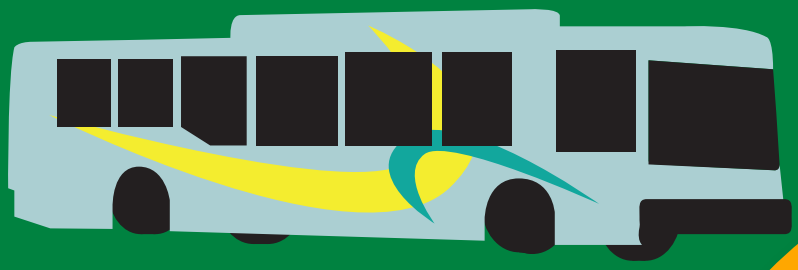
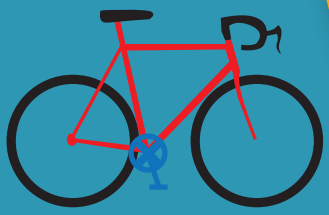
pompano beach

Florida's Warmest Welcome





Complete Streets Design Manual

Contents

1. Complete Streets Policy

1. City of Pompano Beach's Complete Streets Policy

The City of Pompano Beach intends to create a mobility system that will realize long-term cost savings in terms of improved public health, reduced fuel consumption, reduced demand for single occupancy motor vehicles, and increased public safety through the implementation of this Complete Streets Policy. Complete Streets contribute to walkable, livable neighborhoods which aides in building a sense of community pride and improved quality of life.

The City will plan for, design, construct, operate and maintain appropriate facilities for pedestrians, bicyclists, motor vehicles, transit vehicles and transit riders, freight carriers, emergency responders, and adjacent land users. All users will experience a safe, functional, and visually appealing environment while traveling safely and conveniently on and across all surface roadways in Pompano Beach. This policy will apply to all development and redevelopment.

1.1 Connectivity

(A) The City of Pompano Beach will ensure the transportation network in the city is designed, operated and maintained to provide a connected network of facilities and services accommodating all modes of travel and all users.

(B) The City will actively look for opportunities to repurpose rights-of-way to enhance connectivity for pedestrians, bicyclists, and transit riders.

(C) The City will focus non-motorized connectivity improvements on access to transit, services, schools, parks, civic uses, regional connections and commercial uses.

(D) The City will require new developments and redevelopment projects to provide interconnected internal street and path networks with small blocks, as appropriate.

(E) The City will review existing regulations which may impact the successful implementation of Complete Streets and propose necessary revisions to promote multimodal-oriented development.

1.2 Jurisdiction

(A) This Complete Streets Manual is intended to cover all development and redevelopment in the public domain and all street improvements within Pompano Beach, and will also focus on regional connectivity.

(B) Every street within the City of Pompano Beach, regardless of the jurisdictional ownership or agency responsible for its maintenance and operation, shall be subject to the Manual.

(C) Every City Department including Public Works, Parks & Recreation, and Development Services will follow the Design Manual.

(D) The City requires all developers and builders to obtain and comply with the Manual.

(E) The City requires those agencies that it has permitting authority over, including, but not limited to, utilities and service contractors to comply with the Complete Streets Manual.

(F) The City will leverage the resources of other agencies, including, but not limited to, Federal agencies, Broward County Government, Broward County Transit (BCT), Florida Department of Transportation (FDOT), Broward Public School District, Florida Department of Health in Broward County, South Florida Regional Transportation Authority (SFRTA), and the Broward Metropolitan Planning Organization (Broward MPO) to achieve Complete Streets.

1.3 Approach

The City of Pompano Beach will apply this policy to all roadway projects. This includes projects involving new construction, reconstruction, retrofits, repaving, rehabilitation, or changes in the allocation of pavement space on an existing roadway, as well as those that involve new privately built roads and easements intended for public use. Complete Streets elements may be achieved through single projects or incrementally through a series of smaller improvements or maintenance and operation activities over time.

(A) The City will complete the Multimodal Transportation Plan to illustrate the needed transportation improvements in accordance with the Complete Streets Policy.

(B) The City will review and modify the Transportation Element of its Comprehensive Plan and its Unified Land Development Regulations (ULDR) to ensure consistency

with the Policy and Manual.

(C) The City shall coordinate its infrastructure investments with the Broward MPO Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRTP), agency work programs, the BCT Transit Development Plan (TDP), SFRTA TDP, and adjacent municipalities to increase the coordination of Complete Streets implementation.

1.4 Exceptions

The City of Pompano Beach will pursue Complete Streets elements in all corridors. Complete Streets principles and practices will be included in street construction, reconstruction, repaving, and rehabilitation projects, as well as other plans and manuals, except under one or more of the following conditions:

(A) A project that involves only ordinary or emergency maintenance activities designed to keep assets in serviceable condition such as mowing, cleaning, sweeping, spot repair, concrete joint repair, or pothole filling, or when interim measures are implemented on temporary detour routes.

(B) A project that is deemed excessive and to have a disproportionate cost according to Federal Highway Administration regulations.

(C) Unless otherwise determined by the City Commission, the Development Services Department, in conjunction with the Engineering Division will determine if certain Complete Streets projects/features are not feasible or cost effective to implement.

1.5 Design

The City will use the Complete Streets Design Manual to guide the design of new and modified streets in Pompano Beach while ensuring a context sensitive approach to unique circumstances of different streets and communities. All relevant City plans, manuals, rules, regulations and programs will incorporate Complete Streets Design Principles. The City will also:

(A) Provide well-designed pedestrian accommodations on all streets and crossings. Pedestrian accommodations can take numerous forms, including, but not limited to, traffic signals, access management, lighting, enhanced crosswalks, roundabouts, bulb-outs, curb extensions, sidewalks, buffer zones, shared-use pathways, and perpendicular curb ramps, among others.

(B) Provide well-designed bicycle accommodations along all streets. Bicycle accommodations can take numerous forms, including, but not limited to, the use of bicycle lanes, sharrows, shared use paths, slow speeds, education, enforcement, bicycle storage, traffic calming, signs, and pavement markings, among others.

(C) Where physical conditions warrant, landscaping shall be planted or other shading devices installed whenever a street is improved (such as the addition of medians or wider sidewalks), newly constructed, reconstructed, or relocated. An emphasis shall be placed on the addition of native trees that provide shade for pedestrians.

(D) Provide transit amenities when transit services are provided on the corridor including shelters, bus bulb-outs, safe pedestrian and bike access, benches, and bike racks, etc. An emphasis shall be placed on provided connectivity between transit stops and destinations.

1.6 Context Sensitivity

In accordance with Smart Growth Principles, the City of Pompano Beach will plan its streets in harmony with adjacent land uses and neighborhoods and promote walkable, livable communities through the design of a strong street network.

The City will solicit input from local stakeholders during the planning process and will design streets with a strong sense of place that will integrate natural features, such as beaches and waterways, into design of streets and use architecture, landscaping, street furniture, public art, signage, etc. to reflect the community and neighborhood. In and along retail and commercial corridors, the City will coordinate street improvements with merchants to develop vibrant and livable districts.

1.7 Performance Measures

The City will evaluate policy implementation using the following performance measures:

- Total miles of on-street bikeways defined by streets with clearly marked or signed bicycle accommodation.
- Total miles of streets with pedestrian accommodation.
- Number of missing or non-compliant curb ramps along City streets.
- Percentage of new street projects that are multi-modal.
- Traffic counts for major streets.
- Transit trips on services provided in the City.

- Multi-modal Level of Service improvements.
- Number and severity of pedestrian-vehicle and bicycle-vehicle crashes.

1.8 Implementation

(A) ***Lead Department:*** The Development Services Department shall lead the implementation of this policy and coordinate with other impacted departments to ensure a comprehensive adoption of the Design Manual.

(B) ***Inventory.*** The City will maintain a comprehensive inventory of the pedestrian and bicycling facility infrastructure integrated with the City's database and will prioritize projects through the Multimodal Transportation Plan to eliminate gaps in the sidewalk and bikeways networks.

(C) ***Capital Improvement Project Prioritization***. The City will reevaluate Capital Improvement Project prioritization to encourage implementation of bicycle, pedestrian, and transit improvements.

(D) ***Revisions to Existing Plans and Policies*****.** The City will reference and modify the Transportation Element of its Comprehensive Plan and any other existing plans related to the design of the public right of way to ensure consistency with the Design Manual.

(E) ***Public Official and Staff Training.*** The City will train pertinent leaders and staff on the content of the Complete Streets principles and best practices for implementing the policy.

(F) ***Coordination***. The City will utilize inter-departmental project coordination to promote the most responsible and efficient use of fiscal resources for activities within the public right of way.

(G) ***Funding*****.** The City will actively seek sources for public and private funding to implement Complete Streets. Furthermore, the City shall attempt to coordinate its infrastructure investments and Complete Streets implementation with the Broward MPO Transportation Improvement Program (TIP) and Long Range Transportation Plan (LRTP), Florida Department of Transportation (FDOT) work programs, and the Broward County and SFRTA Transit Development Plans.

2. Background

2. Background

The streets of Pompano Beach are navigated by a wide range of users on a daily basis. The City offers a variety of transportation routes, allowing riders to reach their destination safely and effectively. The automobile is currently given priority in Pompano Beach, as most streets have numerous lanes, high speeds, and lack of multi-modal options. These physical constraints raise safety concerns of pedestrians and bicyclists as they seek to utilize public spaces.

To address the apprehension of the non-motorists, and to allow an equal ridership experience among all modes of transportation, an effort to address multiple modes of transportation has become a recent goal. The city is proposing the inclusion of walking, biking, transit, and vehicle access into the design of the City's public streets.

2.1 Strategic Plan

The reason for creating a Complete Streets Manual is to implement the goals of the City's Strategic Plan. The City of Pompano Beach delineates the vision for their Strategic Plan as:

> "By 2030, Pompano Beach will be an even greater place to live along the Atlantic coast of South Florida. The sense of place and family, the distinctive architecture, the broad range of amenities, the comparative safety of the community and the opportunity for employment in many diverse economic sectors will make it a draw for many people. At the same time, the location and talent that exists in the City make it a very attractive site for businesses to locate and grow. Pompano Beach is a city of great places and of great opportunity."

The Development Services Department supports the initiative, and is creating this manual to fulfill the City's overall vision. One of the operational goals and initiatives of the Strategic Plan is to "Increase community accessibility and mobility." This goal directly correlates to the Complete Streets Initiative and adequately supports the furtherance of this project. Below are the selected City of Pompano Beach initiatives and objectives that this policy promotes.

Goal 4.0. Increase community accessibility and mobility

Initiative 4.1 Increase pedestrian movement and safety

Objectives	Anticipated Completion Date (FY)	Objective Measures
4.1.1. Establish Sidewalk Installation Prioritization Schedule	2014	Schedule established
4.1.2 Install 1.5 miles of sidewalk per year	2015	Miles of sidewalk installed
4.1.3 Implement ADA improvements	2017	% of project completed
4.1.4 Install Traffic Calming	2014-2018	Improvements constructed ($)

Initiative 4.2 Increase bicycling and pedestrian network

Objectives	Anticipated Completion Date (FY)	Objective Measures
4.2.1 Rebuild roadways with bicycle lanes where ROW allows, on major roads	2015	Miles of bike lanes constructed
4.2.2. Host a series of three (3) bicycle safety rodeos for local children during the summer	2014-2018	# of bicycle safety rodeos held
4.2.3. BSO to partner with FDOT – Community Traffic Safety Program Manager to participate in pedestrian/bicycle safety campaigns in Broward County	2014-2018	Reduction in number of vehicle/bike & pedestrian accidents
4.2.4 Increase width of path around airport at .5 miles per year	2014-2018	Miles of widened bike path
4.2.5 Improve Air Park path landscaping and lighting at the rate of .5 miles per year	2014-2018	Miles of landscaping completed
4.2.6. Install six (6) foot wide sidewalk along the west side of SW 36th	2015	% of project completed

Initiative 4.3 Improve rail and public transit stops in the City

Objectives	Anticipated Completion Date (FY)	Objective Measures

4.3.1 Establish a commuter rail stop in the City on Dixie Highway	2021	Rail stop established
4.3.2. Provide five (5) presentations to the community about the benefits of higher densities along transit corridors	2015	# of presentations made
4.3.3. Increase densities around transit stops	2018	Land use and zoning changes
4.3.4 Identify areas with the highest transit user rates for sidewalk installations	2015	# of areas identified

Initiative 4.4 Enhance transit options

Objectives	**Anticipated Completion Date (FY)**	**Objective Measures**
4.4.1 Develop a transportation plan that focuses on providing comprehensive transit service in the City, which is focused around connecting to the neighborhood transit center and future rail station	2015	Plan developed
4.4.2. Establish a fourth Community Bus route	2014	Total # of bus routes
4.4.3. Apply for grants to enhance commuter services	2014-2018	# of grants submitted and amount of funding received

Initiative 4.5 Develop connections between major venues

Objectives	**Anticipated Completion Date (FY)**	**Objective Measures**
4.5.1. Identify major tourism related venues and incorporate into Transportation Master Plan	2015	Plan developed

Initiative 4.6 Improve City waterways

Objectives	**Anticipated Completion Date (FY)**	**Objective Measures**
4.6.1. Institute Canal Dredging Study	2016	% of study completed
4.6.2. Allocate funds to annually repair or replace seawalls	2014-2018	Linear feet of seawalls repaired or replaced per year

2.2 Infrastructure

According to the 2010 Census, the City of Pompano Beach covers an area of 24 square miles, with approximately 4,159.9 persons per square mile. Based on the high population density, a well-designed network of alternative of transportation modes can be successfully implemented. The City of Pompano Beach has approximately 382 miles of streets and 211 miles of sidewalks. Since there are many existing extended rights-of-way within the city, a plethora of opportunities exist for reducing lane widths to add bike accommodations, sidewalks, and landscaped buffers. The City's grid patterned streets and flat topography makes it the perfect showcase for Complete Streets. Pompano Beach's City leaders are committed to implementing strong transportation networks within the City and have directed the staff to follow through with the incorporation of a multi-modal transportation system.

2.3 Demographics

The 2010 population of the City of Pompano Beach was 99,845, with an estimated population of 102,984 in 2012 (2010 Census). Commuters utilize the City's transportation system in various ways, including those that prefer to use their car, those that prefer not to use their car, those that cannot afford a car, those that are too young to drive a car, and those that have reached an age where they no longer drive a car. In addition to the residents, there are some visitors and tourists that do not have access to their own private means of transportation. All of these individuals depend on the availability of safe and accessible alternate modes of transportation such as walking, biking, and mass public transit.

Approximately 60% of Pompano Beach's total population is in the work force. The remaining 40% are non-working commuters who would use the transportation system differently and rely on the most efficient and safe way to reach their destinations. This group may include children that are too young to drive, elderly people that no longer drive, and disabled people that cannot drive. Up to 14% of Pompano Beach's work force use alternate modes of transportation to get to work. (American Community Survey (ACS) 2008-2012).

Mode of commute	Commuters	Percentage
Total	**43,079**	**100%**
Walk	554	1.3%
Bike	523	1.2%
Transit	1,026	2.4%
Taxi, Motorcycle, Other	2,242	5.2%
Worked at home	1,849	4.3%
Car, Truck, Van	36,885	85.6%
Drove alone	*31, 759*	*86%*
Car pool	*5,126*	*14%*

Based on the ACS 2008-2012 estimates of how workers commute, 1.3% walk, 1.2% bike, and 4.3% work from home. The average travel time to work in a private vehicle is 25.2 minutes, while the average time for solely public transportation riders is 88.8 minutes. These statistics for the City of Pompano Beach give justification for improving the City's alternate modes of transportation and thereby reducing the reliance on personal vehicles.

Pedestrian and bicycle safety are matters of great concern in the United States. Between 2000 and 2009, 47,700 pedestrians were killed nationwide; 5,163 of those pedestrians were killed in the State of Florida. Out of the 50 states, Florida contains the top 4 most dangerous metropolitan areas for pedestrians. The Miami-Fort Lauderdale-Pompano Beach, FL metropolitan area is listed as the fourth most dangerous. These facts are based on the Dangerous by Design 2011 study that was completed by Transportation for America. The State of Florida has historically adopted transportation policies and development patterns that require vehicle-centric transportation systems. Such systems are inherently unsafe for pedestrians and bicyclists.

3. What are Complete Streets?

3. What are Complete Streets?

Complete Streets are designed to accommodate all types of users, including pedestrians, bicyclists, motorists, and transit riders of all demographics and abilities. They have many different elements incorporated into the design schemes depending on the location and environment of each roadway. The concept of Complete Streets supplements the improvement of concerns such as human health, equity, aesthetics, economic development, environmental protection, safety, and livability in relation to a specific neighborhood or area.

The Complete Streets idea presents a shift in the traditional concept of road construction. Unlike the reactive attempt, which is to design roads to accommodate bicycles and/or pedestrians *after* the initial road construction, Complete Streets policies require all road construction projects to *begin* by assessing how the right-of-way can best serve all its users.

3.1 Public Spaces

The city street is considered a public space because it can be utilized by all types of users. Complete Streets should provide:

- Safe and effective movement of goods and people of all ages and backgrounds
- Connected, attached multimodal systems
- A clean and attractive basis for economic development
- Space for social interaction and physical activity
- A place with a unique identity
- Sensitivity to users for protection from inclement weather

3.2 Complete Streets and Land Use

Because much of the City of Pompano Beach has a high mix of uses in dense areas, walking, cycling, and transit use are reasonable travel choices. The density of housing provides a variety of commercial opportunities for the City along its main thoroughfares. The City of Pompano Beach is working to ensure that its streets are designed with safety in mind, that multi-modal transportation is encouraged, and that a diverse and energetic landscape is created. These strategies are essential to ensuring the success of a socially and economically sound city.

3.3 Complete Streets as Multimodal Transportation Network

Complete Streets provide a variety of transportation options that can be used throughout the users' lifetime. From the child who cannot drive yet, to the senior citizen who can no longer drive (and everyone in between) transportation systems offer various choices for mobility. Complete Streets offer low-speed environments and shared use between all modes of transportation including, but not limited to:

- Pedestrians of all ages and backgrounds
- Bicycles and Scooters
- Transit vehicles
- Emergency vehicles
- Commercial trucks and vehicles
- Private motor vehicles
- Electric Vehicles/hybrids

3.4 Complete Streets are Context Sensitive

Complete Streets should be designed within the context of their surroundings. For example, streets within a downtown area would accommodate pedestrians, cyclists, and transit riders better than many residential streets would. Elements to consider when identifying the context of the area are:

- Significant destination
- Adjacent land uses
- Neighborhood density
- Neighborhood character and aesthetics
- Existing transportation systems
- Mobility hubs
- Charging stations

Studying the demographics and social lifestyles of the city and its communities also help identify who uses the streets on a daily basis. A low-income family that does not own a vehicle will likely need a strong pedestrian, bicycle, and transit system to be able to reach their destination safely and efficiently. Elderly residents that require more time to cross the sidewalk will want an especially effective pedestrian system that fits their needs and abilities.

4. Reasons for Completing Streets

4.1 Benefits

- Safety
- Public Health
- Sustainability
- Community Building

4.2 Guiding Principles for Pompano Beach

Complete Streets

- Connectivity
- Safety & Slower Vehicle Traffic
- Livability
- Human Health
- Economic Development
- Equity
- Aesthetics
- Context

4. Reasons for Completing Streets

The City of Pompano Beach is committed to creating a safe and connected transportation system for its residents, businesses, visitors, and tourists. Although the streets were originally designed to accommodate the needs of vehicular users, creating a multi-modal transportation network will lend to a safer, aesthetically pleasing and more convenient street network.

It has become impractical for the City of Pompano Beach to maintain their vehicle-centric street design. The population of the City continues to rise, resulting in an increase in the number of drivers and vehicles on the streets. Since there is no additional space to build more vehicular lanes, a safe and more efficient multi-modal transportation network needs to be incorporated into the City's streets. This would potentially increase ridership and use of public transportation. This could result in the reduction of vehicular congestion and could create a more desirable transportation system and support accommodations.

4.1 Benefits

By focusing more on implementing successful Complete Streets, over more commonly applied quick-fix planning practices, we begin to impress on our residents and visitors that the streets can be used by all members of the transportation network - not just for motor vehicular traffic. Complete Streets offer improvements that make driving safer by providing shared streets that simultaneously accommodate pedestrians, cyclists, and cars. Providing user friendly shelters and stops will encourage rider friendly environments. The use of street furniture, textures, surfaces and colors are passive ways of improving the commuting experience. Travel quality and traffic flow is improved by reducing the number of unnecessary stops. This lowers stress and anxiety, while encouraging slower and safer travel speeds.

The National Complete Streets Coalition has identified the following specific benefits of Complete Streets:

Safety

Complete Streets designed with sidewalks, raised medians, better bus stop placement, traffic calming measures, slower vehicle speeds, clear spaces for

modes of transportation on a street, and treatments for disabled travelers improve pedestrian safety, and many other design elements improve safety for all users.

Public Health

Complete Streets encourage walking and bicycling for health by providing safe places to be active. The Centers for Disease Control (CDC) identified a strong correlation between the level of planning and investments in infrastructure and decreasing incidents of some of the most serious health concerns facing the United States, including heart disease, obesity, and diabetes. The National Institutes of Medicine recommends fighting childhood obesity by establishing ordinances to encourage construction of sidewalks, bikeways, and other places for physical activity.

Sustainability

Complete Streets address climate change and oil dependence by allowing people to make short trips throughout the day by walking or biking instead of utilizing the car. The Broward Metropolitan Planning Organization (MPO) 2035 *Long Range Transportation Plan (*LRTP) calls for a shift from investment in automobile-centric projects to transit and other modes that support transit. The 2001 National Household Transportation Survey found that 50% of all trips in metropolitan areas are three miles or less and 28% of all metropolitan trips are one mile or less – distances easy to walk, bike, or hop a bus or train. Yet 65% of the shortest trips are now made by automobile, in part because of incomplete streets that make it dangerous or unpleasant for other modes of travel. Complete Streets support the sustainable transportation vision established by the MPO and its constituencies and city neighbors.

Community Building

Complete Streets play an important role in livable communities, where all people – regardless of age, ability or mode of transportation – feel safe and welcome on the roadways.

4.2 Guiding Principles for Pompano Beach Complete Streets

Connectivity

Connectivity between modes of transportation is essential for a complete and effective

transportation network. In areas where non-motorized transportation is promoted, there should be an emphasis on ensuring connections between bike routes, pedestrian routes, and streets. Pompano Beach should satisfy the users' travel needs by incorporating redundant routes and intact network systems.

Safety & Slower Vehicle Traffic

There are many ways to curb the ever increasing number of traffic injuries and fatalities. Oftentimes the accidents occur because high vehicle speeds allow insufficient reaction time. Pompano Beach's streets should be designed with safety in mind for all its users. Traffic-related injuries and fatalities are occurring at an unacceptable rate, and establishing a safer environment (for both vehicles and those who share space with vehicles) via street design to include; width, surface material, texture, color and other regulatory measures would aid in decreasing these accidents.

Livability

Livable cities enhance the quality of life by strengthening the communities, encouraging civic engagement, and promoting health. The City of Pompano Beach should be designed to increase the overall livability factor. This factor is heavily based on the users and their inherent or actual needs.

Human Health

With the implementation of Complete Streets guidelines, the community will become a healthier place to live. This is because more active transportation will be available (i.e. walking and biking), and because the reduction of motor vehicles on the street will aid in the decrease of air pollution.

Economic Development

Complete Streets help to support the City's economic vitality by creating easy access and viable transportation to its businesses. The City of Pompano Beach would benefit by allowing connection and a mixed use environment between both workers and their jobs and shoppers and stores. Parking systems should be deliberate and should include on street and parking structures.

Equity

The City's streets should be designed to provide transportation for all users (children, elderly persons, disabled persons, those who cannot afford a vehicle, etc.), no matter

their physical or economic state. Parking rates shall be graded and fluctuate with demand and availability.

Aesthetics

Pompano Beach's streets should be designed to be aesthetically pleasing. Attractive street design draws visitors to the streets both by car and by foot, and helps boost the economy in the process. Streets that are easy to navigate and provide a beautiful environment for businesses invite the right type of traffic to the City's doorsteps. These consumers will spend money and the City's economy will grow.

Context

Complete Streets should be context sensitive and designed to enhance the unique urban character, as well as the cultural and historical assets that are unique to the City of Pompano Beach. Context shall include uses and buildings adjacent to R.O.W., way finding signage, advertising signage, street furniture, street lights, public art, and potential event impact planning.

5. Process & Considerations

5. Process & Considerations

The main goal of the Complete Streets Manual is to validate a process for redesigning the streets of Pompano Beach in order to make the City more hospitable for pedestrians, bicyclists, and drivers. The redesign of the streets will strictly adhere to the goals set forth in this manual and will ensure that the streets not only support increased mobility, but also the Complete Streets Guiding Principles: connectivity, safety, livability, pedestrian scale, human health, economic development, equity, aesthetics, technology, event capacity and context.

5.1 Public Process

With the involvement of all parties (qualified professionals, community members, and the city staff), final street designs will result in a cohesive plan for the City of Pompano Beach that clearly reflects the needs of all users.

The steps shown below will be used in the Complete Streets design process. The first step—project initiation—can be performed by either the public or the city staff.

1. Project initiation
2. Public review
3. Plan development
4. Regulating bodies coordination
5. Funding & design
6. Installation

5.2 Using the Toolbox

For successful implementation of Complete Streets within the City, a number of design treatments can be employed. Varying degrees of community involvement, design, engineering, and education are necessary for this success to occur. Chapter 7 of this manual presents design options for Complete Streets. The content of this chapter is formulated into a “toolbox” where design guideline information can be found as it relates to all roadway projects in the City. The toolbox offers guidance on which appropriate elements will be used, given the context and goals of a particular project, to ensure successful Complete Streets in the City of Pompano Beach. This is also the mechanism to confirm compatibility along the entire corridor to the corresponding districts and other various master plans.

This toolbox offers practical implementation strategies that should be utilized as a resource in creating Complete Streets. If any other Complete Streets Best Practices are found, they may be used as a supplement to enhance the design guidelines already set forth in this manual.

5.3 Using the Design Guidelines

Appendix A of this manual is the design guideline for each street type within the City and will be used to assist in creating compliant Complete Streets. Each design element from the toolbox that corresponds with the appropriate street type is addressed in the guidelines.

5.4 Other Principles to Consider During Design

Complete Streets principles are not the only guidelines that the City of Pompano Beach is committed to following in the redesign of its streets. Other strategies will be used to help create a Livable Community, including:

Green Street Principles

The goal of Green Streets is to use a natural systems approach to beautify streets. Other benefits of Green Streets are the improvement in water quality, the reduction in urban heating and the carbon footprint, and an enhancement in pedestrian safety. These objectives can be met on different street types by combining various native plants and soils to produce a shaded and green streetscape without draining the area of its natural resources. Some of the Green Street features include vegetated curb extensions, sidewalk planters, landscaped medians, vegetated swales, permeable paving, and street trees.

5.5 Engineering Consideration

The Complete Streets program is the City's way of implementing the fourth goal of the Strategic Plan. Complete Streets will only be successful through the application of proper techniques and execution of every road project, major or minor. They range from general maintenance to the milling, paving and striping of roads. Complete streets solutions may include unique or specialized intersection construction, therefore, the role of engineering in construction and maintenance requires specific attention. Impacted roads range from large roads like industrial arterials that carry high volumes of truck

traffic to small local roads that carry low volume residential traffic.

These Complete Streets guidelines should be thoughtfully considered when creating roads that suit the needs of its users and the needs of its geographical context. It is especially important to account for the context, as some techniques that work in one location may not work in another. The Development Services Department must be active in regulating these street designs to ensure that they are safe, feasible, and cost effective.

6. Guidelines

6. Guidelines

The guidelines included herewith should be consistent with nationally and regionally recognized design guidelines and standards to reduce the amount of conflict that could arise from their implementation. The City of Pompano Beach has adopted criteria for sidewalk details, typical roadway sections, minimum width of pavement, turning radii, and other road characteristics for roadway design treatments. These standard details and requirements are available through the Engineering Division and "Chapter 100: Streets and Sidewalks" from the City's Code of Ordinances. Any and all of the proposed designs that include even minor deviations from these standards must be approved by the Engineering Division.

Bulleted below is a list of sources that provide guidance for developing a successful street design. These resources are references for engineers and some are currently being redrafted to accommodate multimodal transportation standards.

- American Association of State Highway and Transportation Officials (AASHTO) *"Geometric Design of Highways and Streets"* is a primary reference for any transportation design. It is perfect for geometric considerations of street designs and should be used as such, though it offers flexibility based on the geographical context of the area.
- Federal Highway Administration, publishes the applicable documents below:
    - Manual on Uniform Traffic Control Devices (MUTCD)
    - FHWA Traffic Calming State of the Practice
    - National Committee on Uniform Traffic Control Devices
- Americans with Disabilities Act (ADA) Guidelines
- Florida *"Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways". (Florida Greenbook)* These guidelines are meant to supplement the State Highway System by providing minimum standards for use on all public streets.
- Florida Department of Transportation, *"FDOT Plans Preparation Manual (PPM) Volume I",* outlines procedures and design criteria to be used on the State Highway System (SHS) and FDOT projects. The PPM supplies the requirements for the design of FDOT projects. The second volume describes further requirements with regard to preparing and assembling contract plans for FDOT projects.
- Broward County Public Works Guidelines, *"Final Report on Alternative Roadway Design Guidelines for Broward County"* outlines roadway design guidelines that correspond with one of the County's main goals of establishing a "sense of place". These guidelines are

consistent with the county-wide *Community Design Guidebook (CDG)*, which is intended to develop, promote and implement urban design guidelines and principles that will enforce the County's distinctive character and the uniqueness of each individual city.

- Broward County Complete Streets Manual

6.1 Roadway Functional Classification

The City of Pompano Beach has worked to categorize their existing streets to better understand how the streets serve vehicular traffic. The state has determined each road's classification through guidelines developed by AASHTO (*American Association of State Highway and Transportation Officials).* The needs of the road and network must be determined by taking into consideration traffic volume and other conflicts that may occur due to design changes to the Complete Streets projects. This method is also used in determining Federal or State funding for roadway improvements as they are needed. The road classifications for the City of Pompano Beach are as follows:

- **Urban Principal Arterial** – Serves major centers of activity and has the highest traffic volumes and longest trips. Generally carries urban commuters and includes both interstate highways and local roads. Examples include I-95, US-1, and Atlantic Boulevard.

- **Urban Minor Arterial** – Serves to interconnect with principal arterials and other roads and has a lower level of travel mobility. Often used for commuting to places of employment from principle arterials. Examples include Andrews Avenue and Powerline Road.

- **Urban Major Collector** – Provides land access and traffic circulation in residential neighborhoods, commercial and industrial areas. Examples include Cypress Road, SW 3rd Street and McNab Road.

- **Urban Minor Collector** – Provides land access and traffic circulation in residential neighborhoods and commercial and industrial areas on a smaller scale than a major collector. Examples include Riverside Drive, NW 3rd Avenue, and NE 5th Avenue.

- **Urban Local Road** – Provides primary access to residential property. These roads are found within residential neighborhoods and planned developments.

Through traffic is discouraged or prohibited. Includes most local streets, courts, and terraces. Examples include Harbor Drive and Briny Ave.

6.2 Complete Street Typologies

Complete Streets typologies go beyond functional classification to categorize streets according to the types of users as well as surrounding land uses and environmental factors. Such typologies allow for a more comprehensive understanding of a street's functions, both existing and desired. The City of Pompano Beach has used Broward County's typologies as a model to create a guideline for reviewing street type and identifying appropriate design treatments.

6.2.1 BOULEVARD

A walkable, divided street designed for high vehicular capacity and moderate speed, traversing the city center. Boulevards serve as primary transit routes and should have bike lanes and wide sidewalks. They serve as primary goods movement, emergency response and evacuation routes, and use vehicular and pedestrian access management techniques. Boulevards may have bus-only lanes or frontage roads buffering sidewalks and buildings. They may have landscaped medians.

- **City Center Boulevard (arterial)** – City Center Boulevards consist of the portions of Boulevards that run through the highest-density mixed-use center in the City including the Downtown Core. High-rise development may be located along or adjacent to the City Center. Due to its density of mixed uses and proximity to the center of activity, these streets should contain the highest level of multimodal accommodations including dedicated bike lanes, slow traffic speeds, enhanced pedestrian areas including wide sidewalks, special treatments for crosswalks, transit accommodations – with integrated bus shelters, and on-street parking to support street level businesses.

- **Commercial Boulevard (arterial)** – Commercial Boulevards serve primarily commercial uses, moving high vehicular volumes. Traffic may flow faster than desired for ideal pedestrian and bicycling conditions. Surrounding land uses include retail, commercial, and some higher density residential. They serve as primary routes for transit and the movement of goods. These streets should

include dedicated bike facilities, pedestrian enhancements, and transit accommodations – with freestanding bus shelters.

- **Residential Boulevard (arterial)** – Residential Boulevards serve primarily residential uses to move high vehicular volumes. Traffic runs slower than on other boulevards. Transit service may be provided where suitable. There are frequent curb-cuts for driveways. Bike lanes and sidewalks are provided on both sides of the street and should lend to an accessible bus shelter.

6.2.2 AVENUES

Avenues are walkable streets of moderate to high vehicular traffic capacity and low to moderate speed that are short distance connectors between urban centers and serve as access to abutting uses. Avenues serve as primary pedestrian and bicycle routes and may also serve local transit routes. The functional streets classification identifies avenues as similar to urban minor arterials or urban collectors.

- **Center City Avenue (urban minor arterial/urban collector)** – Center City Avenues traverse higher-density mixed-use areas, such as the Downtown Core. The surrounding built environment consists of mid- to high-rise buildings that support a variety of functions, are closely spaced, have minimal setbacks, and contain active uses on the ground floor. Management of parking and loading facilities on these avenues is critical, as these uses are imperative to the vitality of businesses despite potential conflict with pedestrian and bicycle use. These avenues should contain premium transit facilities – with integrated bus shelters, enhanced pedestrian facilities to accommodate the high pedestrian use, and on-street parking to support ground floor access.

- **Commercial Avenue (urban minor arterial/urban collector) –** Commercial Avenues tend to have faster moving traffic than other avenues and serve to connect one development node to another. They are secondary to commercial boulevards and serve more local population. Transit facilities shall respond to the level of demand but meet a minimum standard for design and effectiveness. The surrounding land uses are low- to mid-rise structures at a lower density that may have larger setbacks and serve as transition areas to the higher density of the Center City. The uses on these avenues typically consist of restaurants, shops,

small offices, and multi-family homes. On-street parking should be provided for street-fronting businesses. Structured parking may also be needed.

- **Residential Avenue (urban minor arterial/urban collector) –** Residential Avenues are smaller in scale than commercial avenues with slower moving traffic, but may serve as alternative routes to connect neighborhoods. Bus shelters are required to be integrated into the solutions. They typically contain signalized intersections where they cross boulevards. Surrounding land uses are generally residential with some neighborhood commercial.

6.2.3 STREETS

Streets are local, walkable, multi-movement facilities with motor vehicle posted speeds that should be no higher than 25 MPH. Streets should contain raised curbs (small corner radii, wide sidewalks, parallel parking, and trees in individual or continuous planters. The primary purpose is to serve local traffic and provide vehicular and pedestrian access to abutting properties.

- **City Center Street** – City Center Streets are located within the City Center, and run through the highest density mixed-use centers including the Downtown Core. High-rise development may be located along or in close proximity to these streets. Due to its density of uses and proximity to the center of activity, these streets should contain the highest level of multimodal accommodations including dedicated bike lanes, slow traffic speeds, enhanced pedestrian areas, bus shelters, special treatments for crosswalks, and on-street parking to support street-level commercial.

- **Commercial Street** – Commercial Streets are less dense than a City Center Street in character, and primarily serve commercial districts. These streets are secondary to Commercial Avenues and serve more local population. The surrounding land uses are low- to mid-rise structures at a lower density and may have larger setbacks and serve as transition areas to the higher density of the Center City. The uses on these Streets typically consist of restaurants, shops, small offices, and multi-family homes. Bus shelters shall be strategically placed

based on demand, however included to comply with minimum criteria. On-street parking should be provided for street-fronting businesses.

- **Residential Street** – Residential Streets are purely residential in character and serve lower-density neighborhoods. These streets have low volume, slow moving traffic. Separate bike lane facilities are typically not required. Bus shelters shall be strategically placed based on demand, however included to comply with minimum criteria. Sidewalks should be provided on both sides of the street.

6.2.4 SPECIAL STREET DESIGNATION

Pompano Beach has two very distinct typologies of roadways that warrant a designation unto themselves. The land uses and multimodal use of these streets are very different than any other type of street in the City. They are as follows:

- **Beach Thoroughfare -** Beach Thoroughfare applies to roads adjacent to or near the beach. These roads have very high levels of every mode of travel. They support festivals, parades, and high levels of tourists throughout the year. The built environment includes a vibrant mixture of low- to high-rise residential, hotels, restaurants, retail, bars, and cafes. Because pedestrians tend to cross at all points of the road, traffic calming and other pedestrian safety measures are essential. Beach thoroughfares are fronted by wide sidewalks that facilitate many types of activity, such as sightseeing, bicycling, exercising, shopping, and dining.

- **Industrial Thoroughfare -** Industrial Thoroughfares are mainly defined by surrounding land uses such as large-scale production, distribution, and repair facilities and are highly concentrated along the Florida East Coast Rail line and along Andrews Avenue. They have less active street frontage and focus less on the pedestrian environment due to the presence of large driveways, loading docks, and other motor vehicle or freight facilities necessary to support industrial operations. They are wider roads that can accommodate large trucks and are unlikely to include many pedestrian or transit amenities, however these roads could benefit from such improvements.

6.3 Vehicle Target Speeds

Vehicle target speed is the preferred motor vehicle speed, identified by the street type and what uses the street supports. One of the primary goals of Complete Streets is to reduce the severity and number of crash related injuries and deaths. Part of this issue can be addressed through the reduction of vehicle target speed.

These target speeds can be achieved by combining design treatments with driver education and enforcement. Complete Streets should be designed with target speeds and speed limits that are appropriate for current and future context.

Certain design enhancements (i.e. lane width, surface texture, color and edge treatment) can be utilized to achieve the desired target speeds and volume reductions. In the process, all of the potential impacts on parking and emergency vehicles must be considered. For maximum bicycle and pedestrian safety, target speeds set at 15 mph should be established on local roads and in school zones.

6.4 Intersections

Given the complexity of environments where a variety of users are negotiating the same space, intersections are statistically the most dangerous part of the street network. Special care must be taken to implement design features that contribute to controlling vehicle speed and reducing conflicting traffic points. Because the chance of conflict between motorists and pedestrians is highest at intersections, there should be clear markings, signage, and zones for all modes of transportation.

Minor design elements - like using the smallest possible turning radii, crosswalks, lighting, textured pavement, color variations, roundabouts, and other design elements that mitigate speed - should be prioritized in the construction of any Complete Street to ensure the safety of all users.

6.5 On-Street Parking

In the City of Pompano Beach, on-street parking offers many important benefits. Having enough on-street parking is an important issue for some residential streets. This type of parking can also be very useful to supporting businesses. On-street parking is much more efficient than off-street parking in many circumstances, and can be used for a variety of purposes. There are many methods used in determining the mix and pricing

strategies in a city's parking program, such techniques, with sound strategies should be employed to formulate a parking system plan.

On-street parking can also have a traffic calming effect by slowing vehicle speeds. This only occurs, however, if on-street parking is properly oriented. Another method for slowing down traffic is the implementation of chicanes (see Section 7.1.26). This, combined with on-street parking, can help to break up the road and discourage speeding. There are also many opportunities throughout the city to increase the available number of parking spaces by narrowing the roadway and adding street-side parking spaces.

Parking on the side of the street can present certain challenges for pedestrians and those using the parking spaces. In order to minimize negative consequences, appropriate design techniques must be applied. If designed correctly, the cars parked on the street will not impede the sightline of pedestrians and others entering the crosswalk. On-street parking should be properly priced through the usage of meters, kiosks, or residential parking permits, which in turn will aid in controlling the availability of parking in the city center. (Refer to high cost of free parking study for relevant principles). These principle include techniques in applying/sharing funds gained from parking fees to improve the lesser used areas, making them more attractive to users. Special consideration should be given regarding the provision of buffer areas between on-street parking and bike accommodations to reduce the risk of bicyclists being hit by swinging vehicle doors.

Environmentally friendly stormwater practices, such as the use of pervious pavers and stormwater infiltration, should be included in the construction of on-street parking. The differentiation of surface materials used in these techniques also helps to create a traffic calming effect, which increases the safety of pedestrians and bicyclists.

6.6 Pedestrian & Bicycle Use

The City of Pompano Beach's Complete Streets Policy requires that all streets be designed to consider the needs of all users, regardless of age or ability. This includes both pedestrians and bicyclists. Refer to the City's park and recreation master plan for the bike paths and connectivity plan. This includes both pedestrians and bicyclists. A few of the factors that help to ensure a safe walking environment that should be incorporated in all designs are as follows:

- Shaded sidewalks
- Frequent crosswalks
- Pleasant visual environment
- Continuous pedestrian facilities separated from traffic
- Short street crossing distances
- Mixture of land uses
- Pedestrian scale lighting
- Slow and controlled vehicle movements
- ADA compliance
- Transit connections

Factors that contribute to an enhanced cycling experience are as follows:

- A well-connected network of bicycling facilities
- Convenient bicycle parking
- Safe travel routes
- Direct travel routes
- Slow and controlled vehicle movements
- Transit connections
- Bicycle transportation features

The following data should be taken into consideration when evaluating and prioritizing the needs of the users as well as choosing the appropriate design treatments:

- **Speed** – Safe pedestrian and bicycle environments are not compatible with high vehicle speeds. As a result, speeds should be reduced and bicycle lanes should be separated. Where it is not possible to separate traffic, parallel facilities should be developed.

- **Existing pedestrian/bike volumes** – Volume counts are very useful in determining how to best design streets for all modes of transportation. The areas that contain significant activity and proper facilities should receive priority, while areas that lack significant activity and facilities may require additional efforts.

- **Major pedestrian/bicycle generators** – Some of the places that generate the most pedestrian traffic are schools, hospitals, shopping areas, parks, transit points, employment centers, libraries, and centers of neighborhood interest. New and planned developments may also generate pedestrian traffic that may not be reflected in current volumes. Special attention should be given to these areas of concern to ensure that the accommodations of pedestrians and bicyclists are being met.

- **Crash data** – Recent data shows an increasing number of pedestrian and bicycle accidents that are caused by vehicles. The need for traffic calming measures and/or pedestrian/bicycle improvement is absolutely clear.

- **Schools and Parks** – Prioritization should be given to those streets and street networks that help to connect residents to schools and parks in their neighborhood through other means of transportation besides vehicles.
- School walking zones, transit routes, commercial areas, and neighborhood characteristics should also be considered.

6.7 Public Transportation

Public transportation is a key element in the creation of a Complete Street. The public transit services in Pompano Beach serve the people who live, work, shop, and play within the city's boundaries. The users of these transit vehicles are not only the passengers who use them as their sole form of transportation, but also pedestrians and bicyclists who use the transit for portions of their trips. For these users, transit service completes gaps in commuting that would be too far for bicycling or walking. Complete Streets techniques allow the city to provide adequate facilities and enable intermodal access for each type of rider.

Transit vehicles, transit stops, shelters, and multimodal locations should be considered in the City's road projects to ensure the pedestrians' safety as they cross the roadway to access the transit system and nearby destinations. The Complete Streets process will provide opportunities to prioritize transit improvements for traditional road construction projects that would normally exclude the needs of transit users in the design phase.

Once transit is incorporated more successfully in road projects, transit usage can increase through its effectiveness and reliability. Some of the most important considerations for all transit users are safety, reliability, convenience, and comfort. More people will be encouraged to use alternate modes of transportation if the streets are designed to improve the pedestrian and bicycle interface within the transit system. If ridership increases, transit will become more competitive with cars. This is especially true if the streets are prioritized for transit, which would improve the running time of buses. Prioritization can occur with deign or technology.

6.8 Land Use Context

Adjacent land uses should also be considered when designing Complete Streets. Different land uses require and accommodate different street networks and layouts. Street designs that may be appropriate for low-density residential areas may not be well-suited to downtown areas that have a much higher number of pedestrians and vehicles on the street level. Similarly, large trucks that frequently traverse through industrial areas require streets with larger curb radii and wider travel lanes - types of elements that should be avoided in areas that have a high level of pedestrian activity. With that in mind, streets should be designed with safety as a main priority for all users.

6.9 Environmental Design

Environmental quality and aesthetic appeal are a few other characteristics that roadway designs should incorporate. Integrating the use of new techniques or materials with innovated water distribution, storage and dissipation can require less area and be retrofitted into existing conditions. Requiring landscaping and street trees can aid in addressing these issues. Reducing air pollution and improving stormwater control helps to contribute to a pleasant and appealing environment. Green Streets principles use a natural systems approach that promotes the reduction of stormwater flow, the improvement of water quality, the enhancement of pedestrian safety, the reduction of carbon footprints, and the beautification of neighborhoods.

6.10 Smart Growth Principals

What, where, and how development occurs will have a long-lasting effect on the lives of neighboring residents and businesses. By designing neighborhoods that have shops, offices, schools, churches, parks, and other amenities near homes, residents and visitors have the option of walking, bicycling, taking public transportation, or driving

as they go about their business. The Smart Growth Network developed a set of ten basic principles for Smart Growth:

Mix land uses

Mixed land uses are a critical component of achieving better places to live. By putting residential, commercial and recreational uses in close proximity to one another, alternatives to driving - such as walking or biking - become viable. Mixed land uses also provide a more diverse and sizable population and commercial base which in turn creates a location that can accommodate a variety of transportation networks. Mixed use attracts pedestrians and helps revitalize community life by turning streets, public spaces, and pedestrian-oriented retail into places where people meet.

Take advantage of compact building design

Principles of compact building design suggest that development occur in a way that preserves more open space, and requires individual buildings to make more efficient use of land and resources. Compact building design is necessary to support varied transportation choices and provides cost savings. Compact building also reduces air pollution by encouraging the use of public transportation. In order to make public transit networks viable, however, minimum levels of density are required.

Create a range of housing opportunities and choices

Providing quality housing for people of all income levels is an integral component in any Smart Growth strategy. Housing availability is a key factor in determining households' access to transportation, commuting patterns, services, education, and consumption of energy and other natural resources. By using Smart Growth approaches to create a wider range of housing choices, communities can mitigate the environmental costs of auto-dependent development, use their infrastructure resources more efficiently, ensure a better jobs-housing balance, and generate a strong foundation of support for neighborhood transit stops, commercial centers, and other services.

Create walkable neighborhoods

Walkable neighborhoods are desirable places to live, work, learn, and play. Goods and services are located within an easy and safe distance to walk or ride a bike. Walkable neighborhoods make pedestrian activity possible, thus expanding

transportation options and creating a streetscape for a range of users (e.g. pedestrians, bicyclists, transit riders, and drivers).

Foster distinctive, attractive communities with a strong sense of place

A vision and standards for development that both respect community values of architectural beauty and distinctiveness and expand the choices in housing and transportation, are important for smart growth. Smart growth seeks to create interesting, unique communities that reflect the values and cultures of the people who reside there. These types of communities foster physical environments that support a more cohesive community fabric.

Preserve open space, natural beauty, and critical environmental areas

Open space preservation supports smart growth goals by bolstering local economies, preserving critical environmental areas, improving community quality of life, and guiding new growth into existing communities. Additionally, preservation of open space benefits the environment by combating air pollution, reducing noise, controlling wind, providing erosion control, and moderating temperatures.

Strengthen and direct development towards existing communities

Smart growth directs development towards existing communities already served by infrastructure, seeking to utilize the resources that existing neighborhoods offer, and conserve open space and irreplaceable natural resources on the urban fringe. By developing in existing communities, the developer benefits from a stronger tax base, closer proximity to a range of jobs and services, increased efficiency of already-developed land and infrastructure, and reduced development pressure in edge areas.

Provide a variety of transportation choices

Providing people with more choices in housing, shopping, neighborhoods, and transportation is a key objective of smart growth. A wider range of transportation options is necessary to improve the current system. Traffic congestion is worsening, and the best way to counteract this congestion is to implement a multi-modal approach to transportation by creating a variety of transportation options and reducing the reliance on personal vehicles.

Make development decisions predictable, fair, and cost effective

To successfully implement Smart Growth Principles, the concept must be embraced by the private sector. Development is usually initiated by the private sector. In order to realize the positive effects of Smart Growth, private developers and their lenders need to buy into the Smart Growth principles and be able to market those ideas to make their projects profitable. If the right infrastructure and regulatory decisions are made, the private sector will support fair, predictable, and cost-effective smart growth.

Encourage community and stakeholder collaboration in development decisions

Growth can create great places to live, work and play - if it responds to a community vision. Some Smart Growth principles are more appropriate in certain types of communities than others. Any plans for redevelopment should comply with the vision of the specific neighborhood so that designers have a clear understanding of what is most important to their community.

6.11 Livability Principals

On June 16, 2009, the U.S. Department of Housing and Urban Development (HUD), U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA) joined together to help communities nationwide improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment.

The Partnership for Sustainable Communities works to coordinate federal housing, transportation, water, and other infrastructure investments to make neighborhoods more prosperous, allow people to live closer to jobs, save residents' time and money, and reduce pollution. The partnership agencies incorporate six principles of livability into federal funding programs, policies, and future legislative proposals.

The Partnership for Sustainable Communities established six livability principles that will act as a foundation for interagency coordination:

Provide more transportation choices

Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

Promote equitable, affordable housing

Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

Enhance economic competitiveness

Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers as well as expanded business access to markets.

Support existing communities

Target federal funding toward existing communities - through such strategies as transit-oriented, mixed-use development and land recycling - to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

Coordinate policies and leverage investment

Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

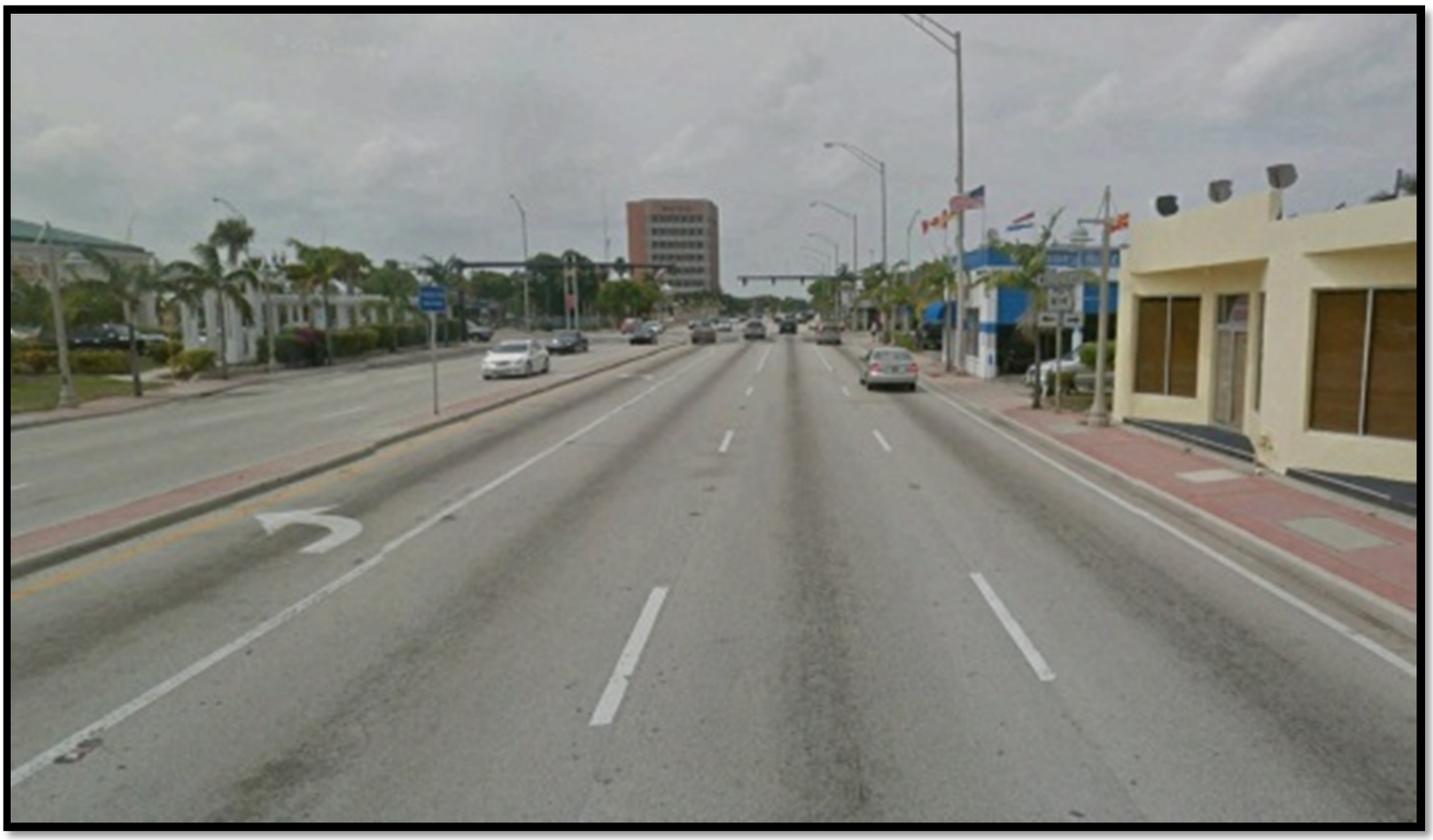
Value communities and neighborhoods

Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods— rural, urban, or suburban.

7. Creating Complete Streets

7. Creating Complete Streets

A variety of design treatments can be employed to create Complete Streets, each with varying degrees of community involvement, engineering and education necessary for successful implementation. Following is a list of treatments that are most likely to be applicable to Pompano streets. This manual represents them as options in the form of a “toolbox”, and it is expected that all roadway projects – whether initiated by the city, state, county or community groups – will employ the toolbox as a starting point. The toolbox does not prescribe which specific tools must be used in a given situation; instead, it offers users guidance in determining which elements are most appropriate and feasible given the context and goals of the particular project. In cases of significant safety concerns along a roadway, all measures necessary to increase safety may be utilized based on best practices even if they are in conflict with these general guidelines.



Source: Google – City of Pompano Beach

7.1 Complete Streets Design Components & Treatments

All street design should include a consistent set of design treatments that are easily understandable to pedestrians, bicyclists, and motorists. These treatments should be carefully selected to accommodate all roadway users, encourage predicable and desirable travel behavior, and account for the different uses and contexts of various street types throughout the City. Good Complete Streets design should also provide for and balance the multiple functions of streets as spaces for travel, social/cultural events, commerce, and stormwater management. Wherever possible; the City, County and FDOT should coordinate street improvement projects so that related improvements can be made simultaneously. Standalone projects should also be pursued whenever opportunities arise to implement the Complete Streets initiative.

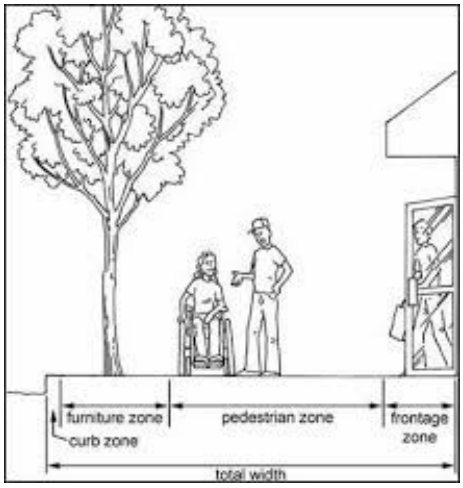
The following section provides specific design guidance for individual Complete Streets design treatments that are appropriate on various street types throughout the City. This section does not provide guidance on specific construction materials, but instead on the general treatment practices preferred as examples in constructing Complete Streets.

7.2 Pedestrian Component

The Pedestrian Component addresses the clear area located between the curb and the adjacent building frontage where pedestrians travel. Sidewalks that are designed and maintained to create an attractive pedestrian environment and provide safe access for all citizens. Use pedestrian volumes and the significance of a street within the pedestrian network as defined by the Street Typology to inform design decisions. Minimize vehicle intrusions into the pedestrian zone via driveways. Provide direct pedestrian routes between destinations and frequent crossing opportunities wherever possible

7.2.1 SIDEWALKS

Sidewalks should provide an active and accommodating public realm that creates a pleasant pedestrian environment and serves multiple public functions, including: space for walking, landscaping and green infrastructure, lighting, seating, and other amenities, as well as commercial activities. Sidewalks should almost always be provided on both sides of the street. To balance desire for amenities in the public realm with the need to maintain a safe and comfortable street for pedestrians, the sidewalk must be organized. This organization can be viewed as a series of sidewalk zones from the property line to the curb:



Source: FHWA

- **Frontage Zone** – The transition area between the property line and sidewalk where awnings, stairs, storefront displays, and other building elements intrude into the sidewalk.
- **Pedestrian Zone** – The clear portion of the sidewalk on which pedestrians travel.
- **Furnishing Zone** – The portion of the sidewalk used for street furniture, trees and landscaping, transit stops, lights, fire hydrants, and other furnishings.
- **Curb Zone** – The portion of the sidewalk where the curb is located.

7.2.2 SIDEWALK WIDTH

ADA standards specify a minimum of 5 feet clear path width without utilities or other impediments to accommodate two wheelchairs passing each other. Sidewalks should be wider (8'-16') in

Source: Google – City of Pompano Beach

areas with; high pedestrian volume, street furnishings and/or landscaping, transit stops, street-level commercial activity, civic or ceremonial functions, tall buildings, high traffic volumes or speeds. No existing sidewalks should be reduced. Landscape buffers should be used on high traffic volume streets to provide a barrier for pedestrian safety. Opportunities for widening sidewalks and narrowing streets should be considered whenever roads are reconstructed.

7.2.3 STREET FURNITURE

Source: Google – City of Pompano Beach

Functional and aesthetically pleasing street furniture contributes to a pleasant walking environment, transit use, provides places to rest, and supports the use of the street as a public space. Examples of street furniture include benches, lighting, bike racks and shelters, newsstands, informational signs and kiosks, and waste receptacles. Proper design and application is essential to maintain functionality and accessibility of the sidewalk.

7.2.4 LIGHTING

Source: Google – City of Pompano Beach

Street lighting helps to increase visibility of pedestrians and bicyclists, thereby increasing their comfort and safety. Illumination along corridors to increase motorists' ability to see pedestrians walking along the road at night is particularly important along Boulevards and Avenues where transit service and land uses that generate pedestrians during evening hours are located. Pedestrian scale lighting can be used to supplement or replace standard lights on streets with high pedestrian significance, high expected night usage, high pedestrian or bicycle crash rates, and complex geometries. The use of state-of-the-art technology is encouraged to provide effective, energy efficient lighting that is dark sky compliant and minimizes light trespass.

7.2.5 TREE BELT ENHANCEMENTS

Source: Google – City of Pompano Beach

A tree belt area is recommended between the curb and the sidewalk whenever possible. A minimum width of 5' is desired unless site conditions do not make this width feasible. Street trees and other landscaping not only provide aesthetic enhancements to a street, but also help mitigate air pollution, provide shade and lower temperatures, help reduce traffic speeds, buffer pedestrians, and provide opportunities for green stormwater management. Proper maintenance is key to the success of planted areas. Native, non-invasive plant species should be utilized. Opportunities for widening tree belts, and narrowing streets should be considered whenever roads are reconstructed. When possible, green stormwater practices should be included in the design of any tree belt.

7.2.6 SIDEWALK SURFACE TREATMENTS

Source: Google – City of Pompano Beach

Sidewalks are typically constructed of standard concrete, but permeable tinted concrete or asphalt can also be used for aesthetic enhancements that contribute to a pleasant walking environment, as well as to improve stormwater control through permeability. Pavers are not preferred due to the significant cost of maintenance required. Proper maintenance is essential, as some materials can settle over time.

7.2.7 ALTERNATIVE USE OF PARKING SPACES/PARKLETS

Source: Pavement to Parks, San Francisco

Parking spaces can be temporarily or permanently converted to other uses that enhance the pedestrian environment, including parklets, planters,or café/restaurant seating. This strategy should be considered on high volume pedestrian

streets, and cannot be considered on streets with restricted peak hour on- street parking. They provide additional flexibility for streets with narrow sidewalks, where there is not space to accommodate planters and/or seating, while helping to calm traffic as well. Safety improvements must be included to separate users from vehicles such as bollards, curbs, or other fixed objects. Alternative uses of parking must not impact bike lanes or stormwater management systems.

7.2.8 VEGETATED SWALES.

Swales are long shallow vegetated depressions with a slight longitudinal slope. As water flows through the swale, it is slowed by the interaction with plants and soil, allowing sediments and pollutants to settle out. Water soaks into the soil and is taken up by plants, and may infiltrate further into the ground if the soil is well drained.

Source: Center for Neighborhood Technology

7.2.9 STORMWATER PLANTERS.

Stormwater planters are specialized planters installed in the sidewalk area or median, and are designed to manage stormwater runoff by providing storage and infiltration. They are appropriate on all street types and should be located so that they maintain minimum clear walking zone widths and do not create pinch points or tripping hazards. Stormwater planters should be considered in curb extensions and medians and the furnishing zone, and must consider passenger and wheelchair accessibility at transit stops. They are generally designed with 4 concrete “curbed” sides and inlets that allow runoff to flow into the planter. The planter is lined with permeable fabric, gravel, and soil and filled with plants and/or trees.

Source: Environmental Protection Agency

7.2.10 STORMWATER TREE TRENCHES.

Source: Capital Region Watershed District

A stormwater tree trench is a system of trees that are connected by an underground infiltration structure. On the surface they look like normal tree grates; however, under the sidewalk there is an engineered system to manage the incoming runoff. This system is composed of a trench dug along the sidewalk, lines with a permeable geotextile fabric, filled with stone or gravel, and topped off with soil and trees. Stormwater runoff flows through a special inlet leading to the stormwater tree trench, is stored which waters the trees and slowly infiltrates through the bottom.

7.3 Intersection & Crossing Component

The Intersection & Crossing Component addresses design treatments to facilitate safe movement of all modes at intersections. This component includes treatments that influence the safety, function, and quality of intersections and street crossings for all users, including intersection geometry, pavement markings, and traffic signals. Fundamentals:

- Design intersections to reduce conflicts between modes and promote pedestrian and bicycle safety and comfort.
- Make intersections and crossings accessible by installing curb ramps and providing adequate time to cross.
- Keep pedestrian crossing distances as short as possible to reduce exposure and increase safety.
- Providing increased frequency of crossing opportunities.
- Reduce vehicle speeds and increase visibility at intersections to decrease the number and severity of crashes.

PEDESTRIAN CROSSINGS

7.3.1 MARKED CROSSWALKS AT CONTROLLED INTERSECTIONS

Source: www.redmond.gov

Marked crosswalks delineate the preferred crossing routes for pedestrians and alert other road users where to expect crossing pedestrians. Marked crossings should be utilized at all signalized and stop controlled intersections. Enhanced treatments should be used at high priority intersections where greater visibility is desired such as school crossings, where 2 or more transit routes cross, and within the business districts. Crosswalks must be paired with curb ramps and tactile warning strips per ADA guidelines. Crosswalks should be 15' wide in the Center City and 10' outside the Center City. Wider crosswalks may be provided to accommodate larger volumes of pedestrian traffic.

7.3.2 UNCONTROLLED MID-BLOCK CROSSWALKS

Credit: Kimley-Horn and Associates, Inc.

Crosswalks should generally be installed at signalized intersections only. Mid-block crosswalks on arterials and collector roads will be considered as needed on long blocks, subject to traffic studies and engineering judgment as well as existing safety concerns. In most cases, mid-block crosswalks should be installed in conjunction with other tools such as bump-outs, pedestrian refuges, flashing beacons, in-pavement lighting, and raised crosswalks.

7.3.3 CURB RAMPS

Credit: Ryan Snyder

Access for all users is an important part of any Complete Street. Per ADA guidelines, wheelchair ramps with detectable warning strips should be installed wherever a sidewalk crosses a curb, and existing ramps should be upgraded on any project to meet current ADA guidelines. Stormwater bumpouts should be considered. Curb ramps are appropriate on all street types and are required with new development, reconstruction, or alteration of a street.

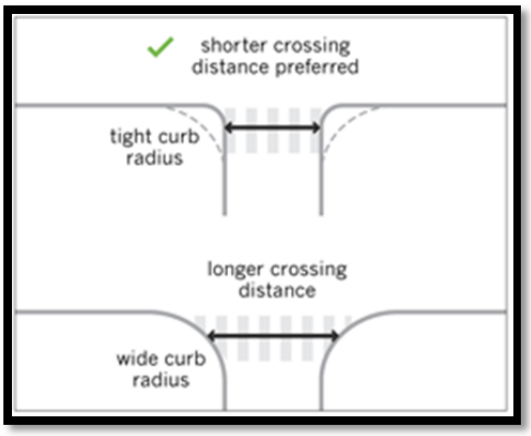
7.3.4 STORMWATER CURB EXTENSIONS

Source: streetscapewiki.wikispaces.com

Conventional curb extensions are used regularly to enhance pedestrian safety and help in traffic calming. A stormwater curb extension incorporates a rain garden into which runoff flows.

7.3.5 CURB/CORNER RADII

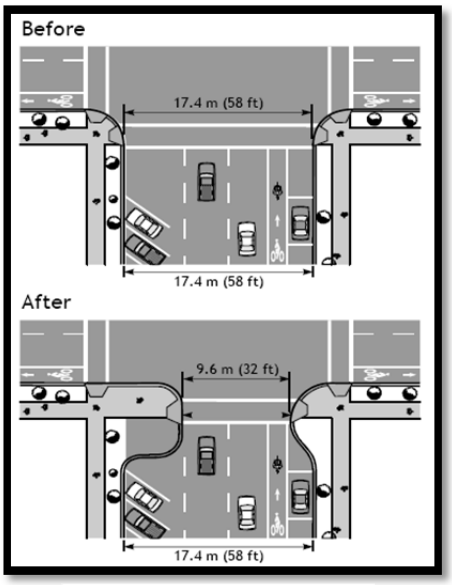
The curb radius of intersection corners impacts turning vehicles and pedestrian crossing distances. Larger curb radii allow larger vehicles, such as buses and trucks, to make right turns without encroaching on adjacent travel lanes or the sidewalk, but increase the crossing distance for pedestrians and allow smaller vehicles to turn at faster speeds. Shorter curb radii slow turning traffic and create shorter crossing distances, but can make it difficult for larger vehicles to navigate the intersection. Curb radii are contingent on the context and traffic character of an intersection as well as; volume of pedestrians, length of crossing, size and location of curb ramps, right turns by larger vehicles regularly using the intersection, and width of intersecting streets.



Source: www.mto.gov.on.ca

7.3.5 BUMP-OUTS/CHOKERS

Bump-outs are an expansion of the curb line into the adjacent roadway either at a corner or mid-block. Two bump-outs can be located on either side of a street to create a choker. Bump-outs narrow the roadway both physically and visually, slow turning vehicles, shorten crossing distance and reduce potential conflicts between vehicles and pedestrians, make pedestrians more visible to drivers, highlight the presence of the crosswalk and discourage illegal parking within the crosswalk, provide a location for street furniture, and can discourage truck turns onto local streets.



Source: www.fhwa.dot.gov

CROSSING SIGNALS

7.3.6 SIGNAL TIMING AND OPERATION

The timing, phasing, and coordination of traffic signals impact all modes. Well-planned signals reduce delay and unnecessary stops at intersections, thus improving traffic flow without roadway widening.

Source: www.greeleygov.com

7.3.7 PEDESTRIAN SIGNAL CROSSINGS

Pedestrian signal indicators inform pedestrians when to cross at signalized intersections by providing WALK, flashing DON'T WALK, and DON'T WALK indicators. Pedestrian countdown displays inform pedestrians how long they have to cross a street before the signal changes. Signals should be used at all crossings more than 26' wide, but should be prioritized based on pedestrian volume, crossing length, pedestrian crashes, and proximity to schools and senior facilities. Audible pedestrian signals should be used where appropriate. Pedestrian walk signals should be built in to the signal cycle when there are regular high volumes of pedestrians. Leading Pedestrian Intervals (LPI) can be used to allow pedestrians a head start to cross the street before traffic moves.

Source: www.gelightingsolutions.com

7.3.8 BIKE SIGNAL ACCOMMODATIONS

Signals should accommodate bicycles by providing adequate clearance time. At actuated signals, bicycle detection should be provided. Where high volumes bicycle movements conflict with vehicle movements, a separate bicycle signal phase is recommended. Bike signals are used in combination with conventional traffic signals

Source: www.alexandriava.gov

and use the standard green, yellow, and red lenses with the addition of a bicycle stencil.

7.3.9 PEDESTRIAN HYBRID BEACONS (HAWK)

Source: FHWA

Hybrid beacons remain unlit until a pedestrian actuates the signal to indicate they want to cross. The hybrid beacon first shows a yellow light to alert drivers, then a solid red light that requires drivers to stop while pedestrians have the right of way to cross the street. They are used at uncontrolled crossings with high pedestrian volumes, especially on larger roadways where crossing opportunities are limited and difficult, but a full traffic signal is not desired and/or warranted. They must be pedestrian activated, and their location must be supported by an engineering study. Outreach needs to be conducted to educate users on this treatment.

7.3.10 RECTANGULAR RAPID FLASHING BEACONS (RRFB)

Source: FHWA, MUTCD

Similar to hybrid beacons, RRFB's are a pedestrian actuated crossing treatment. RRFBs are signs with a "Strobe light" flashing pattern that attracts attention and notifies motorists that pedestrians are crossing. RRFB should be used at uncontrolled crossings with high pedestrian volumes. Outreach needs to be conducted to educate users on this new treatment.

7.3.11 ON-STREET PEDESTRIAN CROSSING LIGHTING

Source: Solar Path USA

Good visibility is vital to keeping pedestrians safe, especially at uncontrolled crosswalks. Providing in-street lighting provides additional attention to motorists of pedestrians within a crosswalk during evening hours when it is more difficult to see crosswalks. The lighting is triggered by the pedestrian entering the crosswalk by either a sensor in the sidewalk or actuated. Lighting should be solar powered LED lighting if possible.

7.4 Vehicle Component

The vehicle component addresses the portion of the public right-of-way that is intended primarily or exclusively for motor vehicle use, including travel lanes.

Fundamentals:

- Sidewalks that are designed and maintained to create an attractive pedestrian environment and provide safe access for all citizens.
- Use pedestrian volumes and the significance of a street within the pedestrian network as defined by the Street Typology to inform design decisions.
- Minimize vehicle intrusions into the pedestrian zone via driveways.
- Provide direct pedestrian routes between destinations and frequent crossing opportunities wherever possible.

7.4.1 SPEED HUMPS

Source: Google – City of Pompano Beach

A speed hump is a raised area in the roadway pavement surface that can help reduce speeds. Speed humps may be most effective when used in combination with other traffic calming/speed reducing measures, however, they are not suitable for all locations. They should be used with care on streets that are designated for transit, freight, and emergency evacuation routes. They are typically 3" to 4" above the roadway surface and 13' wide. Warning signs and pavement markings should be used to alert drivers. Spacing should be so that the designed operating speeds are maintained.

7.4.2 RAISED TABLE INTERSECTIONS

Source: Google – Florida Atlantic University

A raised table intersection is where the entire intersection is raised and generally treated with a different pavement surface that can help reduce speeds. This has a traffic calming effect where drivers slow down as they negotiate the elevated intersections. They are typically 3" to

4” above the roadway surface. Warning signs and pavement markings should be used to alert drivers.

7.4.3 REFUGE ISLANDS

Islands enhance pedestrian safety and accessibility on streets with two-way traffic by reducing crossing distances and providing space for pedestrians to cross one direction of traffic at a time. They can also serve as a traffic calming tool by narrowing the roadway at intersections, forcing vehicles to move more slowly.

Source: Google – City of Pompano Beach

7.4.4 CHICANES

A chicane shifts traffic from one side of the street to the other through the use of staggered curb extensions or a serpentine roadway alignment. Chicanes create an ‘S’-curving street, which can reduce vehicular speeds. Chicanes may also be created by staggering on-street parking. Permeable surfaces, planters, or green stormwater management practices should be utilized in the installation of chicanes. Alternating on-street parking can create a chicane effect as well. Drainage must be studied to ensure that there are no adverse impacts to stormwater.

Credit: Ian Lockwood

7.4.5 DIVERTERS

Diverters are physical barriers that redirect motor vehicle traffic with the purpose of reducing cut- through traffic and vehicle speeds on local streets. They are not a preferred design feature due to the break in connectivity of the network that they cause.

Source: Google – City of Fort Lauderdale

Diverters must be designed with particular consideration for drainage and emergency vehicle access, and designs should not impede bicycle and pedestrian circulation. They should be only used on local streets with speed or non-local traffic issues. They provide a green infrastructure opportunity. However due to their nature, stormwater and traffic issues must be closely studied prior to implementation.

7.4.6 MEDIANS

Source: Google – City of Pompano Beach

Medians separate different lanes or directions of traffic within the roadway and may be raised concrete islands or landscaped boulevards. They provide opportunities for plantings, green infrastructure, and allow for pedestrian refuge islands. Raised medians should be considered at all pedestrian crossings where the total roadway width exceeds 60' and on 2-way multi-lane streets. The design should account for changes in traffic circulation and emergency vehicle access. Medians should have pervious surfaces and include green infrastructure when possible. The height of plantings should be restricted so that sight lines are not obstructed.

7.4.7 NEIGHBORHOOD TRAFFIC CIRCLES

Source: Google – City of Pompano Beach

A neighborhood traffic circle is a round island at the center of an intersection. It is best suited to low- volume streets, with the purpose of reducing speeds and intersection conflicts, thereby reducing the crash rate and severity. They also provide an opportunity for landscaping and other aesthetic enhancements, and they can usually be installed without changes to adjacent curbs. These should be avoided on major truck routes and should accommodate turning buses and emergency vehicles.

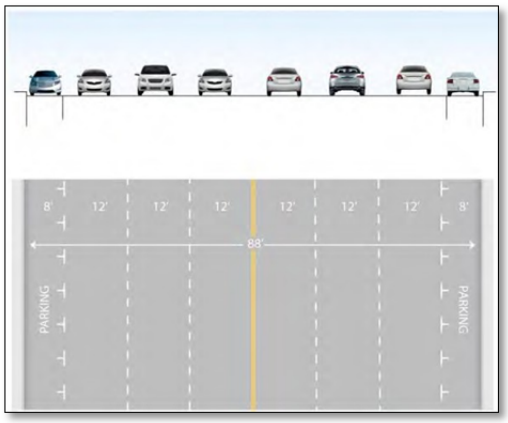
7.4.8 ROUNDABOUTS

Source: FHWA

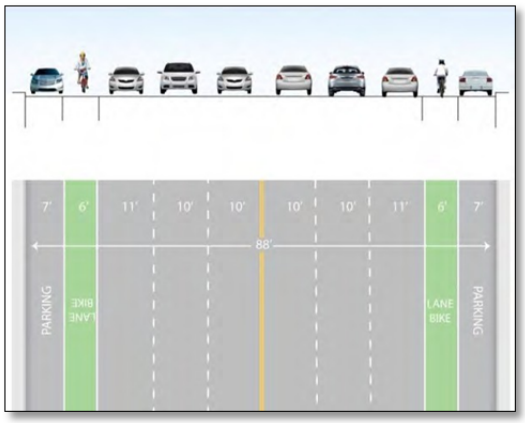
A roundabout is an intersection with one-way, counter-clockwise traffic around a central circle where traffic entering the circle yields to traffic already inside. The main benefit of roundabouts is the elimination of left-turn conflicts, which are a primary cause of accidents. Roundabouts can improve pedestrian safety by simplifying pedestrian crossings, but care must be taken to maintain pedestrian routes that are direct and easily accessible. Larger vehicles should be accommodated in the design, including potentially a truck apron around the center island, if appropriate.

7.4.9 VEHICLE TRAVEL LANE NARROWING

In general, narrower areas for vehicle travel result in lower vehicle speeds. The width of a roadway sends an implicit message to drivers about how they should drive – wide streets encourage high speeds, while narrower streets force vehicles to move more slowly to stay in their lane and prepare for potential conflicts. Narrow streets are also easier and safer for pedestrians to cross. Roadway narrowing is a relatively easy design treatment, as it can often be implemented with the relocation of pavement markings. Below are recommended lane widths for various roadway types, although lane width requirements for any given street are subject to professional engineering judgment and applicable design standards and design criteria.



Existing 88’ wide Boulevard



Narrow travel lanes to add bike lanes

Source: Michele Weisbart

Avenues & Boulevards – Roadways classified as arterials or collectors should have travel lanes generally between 10-12’ wide. The wider lane should be located at the outside lane to accommodate truck and bus traffic. This width does not include on-street bike lanes or shoulders. Desired travel speed is also a factor; roads with posted speed limits below 35 mph should have lane widths at the lower end of the range.

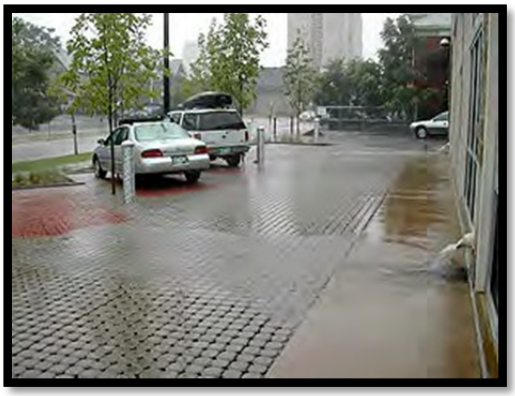
- Local Streets – Two-way local roads often consist of a paved street with no center stripe. These streets generally operate in one of two ways:
- The pavement is wide enough to accommodate two vehicles
- traveling in opposite directions at the posted speed limit. The pavement should be 18-20’ wide.
- The pavement is wide enough to accommodate both vehicles, but a narrower width forces the vehicles to slow down before passing each other, or one vehicle to yield to the other. This is sometimes called a “yield street.” The pavement should be 14-18’ wide.
- Local roads in residential neighborhoods should be as narrow as possible with “yield street” operation unless the need for free flow of traffic can be justified.

7.4.10 ON-STREET PARKING.

Source: Google – City of Pompano Beach

On-street parking serves an important need for motor vehicles. Parking lanes can also help to make streets more comfortable for pedestrians and bicyclists by providing a buffer from traffic and calming traffic by narrowing the perceived width of the roadway. Back-in angled parking may be considered on wide streets in commercial areas with lower volumes and speeds and are typically 8 ½' wide. The desired dimensions of a parking space are 8' wide by 20' long, exclusive of handicapped spaces. At least 1 ½' should be left clear between the curb and any trees, poles, or other objects on the sidewalk to allow for opening and osing car doors.

7.4.11 PERVIOUS PAVEMENT PARKING AREAS.



Source: thebedfordcitizen.org

Permeable pavers in parking lanes creates pervious surfaces to allow stormwater to absorb into the ground, which reduces the amount of runoff without any loss of parking on the street. The aesthetics of permeable paving can also give the illusion of a narrower street and therefore help calm the traffic.

7.4.12 MAX POSTED SPEEDS

The target speed is the desirable speed at which vehicles should operate on a street in a specific context. Design speed should be no greater than 5 mph higher than the target speed, and may be equal to design speed in developed urban areas. The existing or projected operating speed should not be used as the basis for determining design speed since operating speed may be higher than desirable in an urban area with high levels of pedestrian and/or bicycle activity,

particularly on existing roadways originally designed with high design speeds. Complete street design should start with the selection of a target speed. The target speed is achieved through a combination of measures that include: using physical measures such as curb extensions and medians to narrow the traveled way; setting signal timing for moderate progressive speeds between intersections; using narrower travel lanes that cause motorists to naturally slow; and using design elements such as on-street parking to create side friction. A target speed range is initially identifed based on the street type and context including whether the area is predominantly residential or commercial.

7.5 Bicycle Component

The Bicycle Component addresses bikeways and other facilities within the public right-of- way that accommodate bicycle travel, such as pavement markings and signage.

Fundamentals:

- Connect bicycle facilities to local bicycle and transit networks.
- Provide convenient bicycle connections to residences, work places, and other destinations.
- Select appropriate bicycle facility design based on local street context; design should always be selected to maximize the comfort and safety of bicycling as a transportation option.

7.5.1 BIKE ROUTES

All roads except for limited access highways are available for bicycle use. Vehicle drivers are legally required to share the road with bicycles, and cyclists have a legal responsibility to obey all traffic regulations. Dedicated bicycle facilities generally fall into one of the three categories below:

1. **Shared use paths** (Class 1) provide separate travel ways designed for non-motorized uses. Bicycles, pedestrians, skaters may use these paths for commuting or recreational purposes with limited conflicts with vehicles. They require a significant amount of land, but in some instances can be accomplished by widening an existing sidewalk. Shared use paths should be at least 10' wide, should have frequent connections to the street network, but also have few street or driveway crossings. A local example is the Flagler Greenway.

Source: www.bicylcinginfo.org

2. **Conventional bike lanes** (Class 2) are dedicated lanes separated from vehicle lanes with pavementmarkings. These facilities should be considered on two-way Boulevards & Avenues wide enough to accommodate a bike lane in each direction. Usually signage is used to further enhance awareness. Bike lanes can be combined with other pavement markings as part of an overall street narrowing effort. Designated bike lanes should be at least 4' wide, when next to on-street parking lanes should be at least 5' wide, and buffers should be provided when space allows. Lanes should be painted green to draw motorist attention to the facilities.

Source: Seattle Transit

3. **Marked Shared Lanes** (class 3) are roadways that are designated for bicycle use but contain no dedicated bike lane. They may be used on streets without sufficient width for bike lanes. This facility is more appropriate for slower speed roadways. Sharrow pavement markings and signage are used to remind drivers of the presence of bicycles, but do not require any additional pavement or lane alterations. Sharrows should be placed every 50' to 200' depending on traffic volumes and should be located 4' from the curb or edge of parking lane, if present.

Source: Transit Miami

7.5.2 BIKE PARKING

Bicycle parking is an important "end of trip" facility that helps make bicycling a more viable transportation option for multiple trips. An ample supply of bike parking can increase the number of cyclists on the road. Bicycle parking is appropriate on all street types, and should be prioritized in high demand areas. Bicycle parking must be provided with most new developments. Parking should provide support for bicycle frames in two locations, and not impede upon the minimum sidewalk clear width. Parking should be

located in conjunction with transit stops and structured parking lots. Bicycle parking can be broken down into four broad categories:

- **Short term public parking**. Short term public parking is the most commonly utilized. It is typically provided in the form of bike racks and is used for short trips. Most often it is provided within the right of way along the sidewalk, but may be installed in the shoulder or in a parking space where demand warrants. Parking should be installed both in anticipation of demand as well as upon requests from neighbors and community and business groups in a visible location.

Source: Boston Complete Streets

- **Long term public parking**. Long-term bicycle parking is necessary when cyclists have to store their bicycles away from their homes for an extended period of time such as at major transit hubs, as well as major employment centers. Long-term bicycle parking should be located inside when possible to protect from theft and inclement weather which can include within parking garages.

Source: Kimley-Horn and Associates, Inc.

- **Short- and long- term private parking**. Private bicycle parking includes those locations provided by a private business or an institution. As part of the efforts to develop a transportation system that serves all users effectively, the City will encourage businesses and institutions to provide safe and accessible bicycle parking. Considerations will be made during development reviews to the accommodations of short and long-term bicycle parking. As with publically provided parking private organizations should provide both types of parking facilities.

Source: www.bikeleague.org

7.5.3 SHARED LANE MARKINGS

Shared lane markings, “Sharrows”, are arrows painted on the roadway, usually in combination with signage, to alert drivers to the presence of bicycles on roads that have no dedicated bicycle lanes (usually Class 3 bike routes). They are often used in locations where a bike lane is desired but not feasible due to roadway width constraints.

Source: www.bicyclinginfo.org

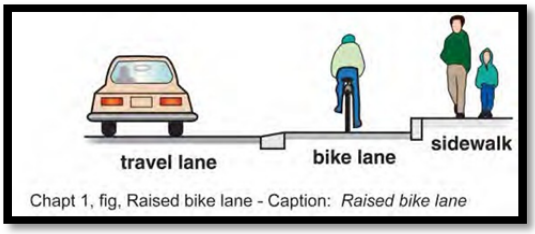
7.5.4 BUFFERED BIKE LANE

Buffered bike lanes are conventional bike lanes with a designated buffer space separating the bicycle lane from adjacent lanes for motor vehicles or parking. They can be used to create a larger space for bicyclists without potentially causing the bike lane to look like a travel lane or parking lane for motorists. They should be considered on streets with high traffic volumes, speeds, or truck travel. Buffers should be 2’ to 3’ wide.

Source: cityofdavis.org

7.5.5 RAISED BIKE LANES

Raised bike lanes incorporate the convenience of riding on the street with some physical separation. This is accomplished by elevating the bicycle lane surface 2 to 4 inches above the street level, while providing a traversable curb to separate the bikeway from the adjacent motor vehicle travel lane.



Source: Live Active

7.5.6 BIKE RAKE ZONING

Bicyclists use all types of streets, and signs can be used on any type of roadway to increase awareness of bicycle use. On Class 2 and 3 routes, “Bike Lane” or “Bike Route” signs are typically used. On other roads, signs with messages such as “Share the Road” can improve awareness of motorists that bicyclist may be present. Additionally, signage can be used to direct cyclists on where and how to ride, thereby reducing conflicts with vehicles and improving safety. Current available options for roadway signage typically come from the Manual on Uniform Traffic Control Devices (MUTCD).

Source: Knoxville Regional Planning Org.

7.5.7 COLORED PAVEMENT IN BIKE LANES

Colored pavement should be used to identify bicycle lanes. Green colored pavement is typically used to increase visibility to prevent conflicts, and reinforce priority to bicyclists when approved. Other colors may be utilized in context to the districts in which they are located. Colored paint increases the visibility of bicyclists and promotes the multi-modal nature of a corridor. The paint should be skid resistant and retro- reflective.

Source: publicbikes.com

7.6 Transit Component

The Transit Component addresses accommodations for transit services, such as shelters and stop locations.

Fundamentals:

- Develop major transit corridors tied to land use.
- Transit should interface seamlessly with other modes, recognizing that successful transit depends on customers getting to the service via bicycle, walking, car, taxi or paratransit.
- Provide convenient, safe and inviting connections to residences, work places, and other destinations for bicyclists and pedestrians.
- Design transit features for people; providing benches, trash receptacles, shading louvers, bike racks, and access by the stop for pedestrians.
- Green elements should be incorporated whenever possible.

Well-planned and designed transit facilities provide safe, comfortable and intentional locations for riders to access transit. They send a message to all street users that transit is a legitimate and viable form of transportation. *Broward County County-wide Community Design Guidebook (CDG)* and the *FDOT District 4 Transit Facilities Guidelines* recommend design principles for transportation that integrate public transit into street design and urban form. These principles are integrated into this chapter.

There are three levels of transit passenger facilities on complete streets:

- Stops – dedicated waiting areas with appropriate signage for passengers waiting to board a transit vehicle;
- Benches – dedicated seating for transit passengers; and
- Shelters – covered locations, usually with seating and other amenities, for transit passengers.

7.6.1 TRANSIT STOP

Source: BCT

The transit stop should be located on a level surface, such as a concrete pad, that provides a safe distance from moving vehicles in the traveled way. The stop should be located to provide passengers convenient access to and from their likely destinations, particularly passengers with disabilities. Transit stops also should maintain a clear area for disabled access from the bus shelter to a waiting transit vehicle. A transit stop must meet all ADA standards.

7.6.2 LOCATION OF STOP

Transit stop locations should be to the far side of intersections wherever possible because intersections are generally more convenient for passengers intercepting other transit connections, accessing crosswalks, and connecting to pedestrian routes and building entrances. At signalized intersections, far side placement is generally recommended. Far-side placement helps reduce transit delays, encourages pedestrians to cross behind the vehicle where they are more visible to traffic, minimizes conflicts between buses and right-turn vehicles, and allows transit vehicles to take advantage of gaps in traffic flow. Location selection should be done on a case by case basis.

7.6.3 SHELTERS


Source: Google – City of Pompano Beach

Ideally, passenger shelters should be located at occasional intervals along all transit routes and especially at stops with substantial passenger activity. At stop locations with passenger activity throughout the day, a shelter is preferred. Green shelters should be incorporated whenever possible. Larger developments – shopping centers, office buildings, etc. – should be encouraged to build transit shelters concurrent with construction (this can be achieved through land development regulations).

7.6.4 TRANSIT STOP SIGNAGE

Transit stop signs indicate where people are to wait and board a transit vehicle. The signs should clearly identify the transit operator, route number, and schedule. Maps showing transit lines servicing the stop should also be provided. Flag signs should be located towards the front of the stop.

Source: BCT

7.6.5 TRANSIT BULD-OUTS

Bus bulb-outs are typically more pedestrian friendly than bus turnouts. Besides allowing for better visibility of transit riders waiting at stops, they can be an effective traffic calming strategy for traffic adjacent to the curb.

Source: rtamobility.com

7.6.6 BUS TURNOUTS

Bus turnouts should be used only where there is ample opportunity for buses to re-enter the traffic stream, such as on the far side of a traffic signal.

Source: rtamobility.com

7.6.7 BIKE RACK

Bike racks should be included at transit stops. They can either be part of the shelter, when appropriate, or supporting adjacent to the stop. Bicycles are often used to get to and from transit stops, but there is not always a need for the transit rider to take it with them.

Source: sfgate.com

7.6.8 SIDEWALK CAPACITY AT TRANSIT STOPS

Source: Google – City of Pompano Beach

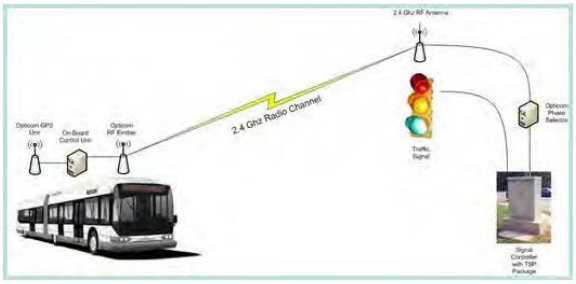
Sidewalks at transit stops should extend to the curb so that passengers may access the sidewalk directly from the bus doors. It is desirable to provide a continuous wide area at least the distance between the front and rear bus doors. The sidewalk capacity should be increased where higher volumes of pedestrians on the sidewalk and high transit use exist. Where the sidewalk does not contain sufficient width, curb extensions can be installed to increase capacity.

7.6.9 MID-BLOCK CROSSWALKS

Source: National Complete Streets Coalition

It is often necessary for pedestrians to cross roadways to access a transit stop. Where bus stops are located mid- block on a long block, a mid-block crossing should be considered. The crosswalk should be located behind the stop and controlled by a traffic device. Pedestrians will begin to seek out mid-block crossing opportunities when signalized crosswalk spacing exceeds 400 feet. The distance can be even less when two high-volume, complementary uses are located directly across the street from each other. It is at these locations that mid-block crossing treatments should be considered. Installing mid-block crossings can: (1) help channel crossing pedestrians to the safest mid-block location, (2) provide visual cues to allow approaching motorists to anticipate pedestrian activity and stopped vehicles, and (3) provide pedestrians with reasonable opportunities to cross during heavy traffic periods when there are few natural gaps in the approaching traffic streams.

7.6.10 SIGNAL PRIORITIZATION



Source: Hillsboro Area Regional Transit Authority

Signal prioritization is a component of technology- based “intelligent transportation systems” (ITS). These systems should be used in conjunction with transit agencies to help improve the roadway system’s overall operations by: reducing traffic signal delays for transit, help reduce transit vehicles’ travel time, help improve transit system reliability and reduce waiting time for people at transit stops. Priority transit corridors should utilize signal prioritization to ensure transit reliability. ITS can include equipment to extend green lights for approaching transit vehicles to increase efficiency.

7.6.11 BUS LANES

Source: New York City DOT

Bus lanes provide exclusive or semi-exclusive use for transit vehicles to improve the transit system’s travel time and operating efficiency by separating transit from congested travel lanes. They can be located in an exclusive right-of- way or share a roadway right-of-way. They can be physically separated from other travel lanes or differentiated by lane markings and signs.

7.7 What not to do

Street design should solve problems rather than merely shifting traffic or other negative impacts from one street or neighborhood to another. Particular care should be taken to avoid negative impacts on federally protected populations. Other practices that should be avoided include:

One-way Streets. Sometimes street design treatments intended to solve a traffic or safety problem have unintended impacts. An example is the conversion of two-way streets to one-way operation. Despite the benefits of reducing some turning conflicts and cut- through traffic, one-way streets run at cross purposes with most of the Complete Streets guiding principles. As a general principle, conversion from two-way to one-way operation should be avoided, and conversion from one-way to two-way operation should be considered when appropriate and feasible.

Signage. A properly designed roadway will elicit the proper behavior from drivers without cluttering the right-of-way with unattractive signage. Road design is an exercise in behavioral engineering.

Street Closures. The connectivity of the street network should be maintained. Vacation of Rights of Way should be avoided as well as the use of diverters. A connected street grid reduces traffic congestion by providing the ability for users to choose a variety of paths to get to their destination instead of all trips required on one main roadway.

Oversaturation of Traffic Calming – the use of too much traffic calming reduces mobility through the connected street network. It makes people avoid the area and diverts traffic onto other streets instead of it being distributed across the street network.

8. Measurement

8. Measurement

The continued measurement and evaluation of the overall use of the transportation system is an essential part of creating Complete Streets. This entails determining who is using the street network, how they are using it, how usage changes over time, and establishing the adequacy of the street network as it pertains to each of the major modes of transportation utilized within the City of Pompano Beach.

8.1 Why Measure?

The purpose of the Complete Streets Manual is to ensure that all streets are designed to provide a safe and comfortable environment for all roadway users. It is essential, therefore, that the quality of the transportation system, and the users' experiences of that system, are measured and evaluated continually to ensure that any changes and improvements facilitate the achievement of the program's objectives. Additionally, by measuring the effects of each roadway improvement, we can fine tune the approach to street design while providing neighbors with quantifiable results. Specifically, the measurement and evaluation program is necessary in order to:

- Provide baseline data to determine trends, evaluate effects, determine where improvements are most needed;
- Support estimates of costs and benefits;
- Determine the overall level of travel demand by mode;
- Assist in the data collection necessary for the continued application for, and receiving of, state and federal grants; and
- Assist in the allocation of funding for transportation projects.

8.2 Who to Measure?

Complete Streets safely and comfortably accommodate all roadway users. In order to move toward a transportation system where all users count, all users must first be counted. Until recently, however, data collection for transportation planning has focused largely on counting the number of automobiles on a roadway and to a lesser extent the number of bicycle riders on a roadway. The actual numbers of other users of the transportation system by pedestrians and bicyclists is unknown. While estimates may be available through the data compiled by the U. S. Census, travel behavior as it pertains to

cyclists, transit users and pedestrians remains largely unknown. Data should be collected as it becomes available.

8.3 How to Measure?

Measurement and evaluation of the transportation system should focus on the collection of both objectives and subjective data.

8.4 Objective data

Objective data includes the volume of users, the number and rate of traffic accidents, travel speeds, and the demographics of roadway users. Objective data may be obtained using a variety of methods and sources including manual counts, automated counts, user surveys, and accident reports. In order to ensure that all roadway users are counted, it should be a requirement that pedestrians, cyclists, and transit users are counted whenever automobile counts are undertaken. Existing counts carried out by other agencies should be utilized when possible and supplemented with the additional data needed.

In addition to collecting data, it is important to make use of objective performance measures for each major mode of transportation, including automobile, bicycle, pedestrian, transit and multimodal levels of service (LOS). Much of the current imbalance in our transportation system has come about in part as a result of overreliance on automobile LOS as a metric for the quality of a given roadway segment, intersection, or corridor. Recognizing that all transportation modes must be provided for, the measures mentioned above should be reported in the course of all major studies and projects, allowing for a comprehensive and thorough summary of the quality of the transportation network.

9. Future Strategy

9. Future Strategy

9.1 Funding

Local funding sources are limited relative to the citywide mission; however, the funding strategy going forward includes the use of MPO, FDOT, grant and private developer funds to implement Complete Streets retrofit projects as appropriate. The Complete Streets Manual will be used with private developers on major projects and with the State and County for transportation improvements.

9.1.1 City of Pompano Beach

The City of Pompano Beach administers the following programs which relate specifically to Complete Streets and transportation investments.

- Capital Improvement Program (CIP)
- Sidewalk construction & repair
- Pavement management
- Street reconstruction
- Major sidewalk reconstruction
- Traffic calming initiatives
- Lane Reduction initiatives
- Transportation Enhancements

In addition, private developments are reviewed by City staff. As part of this review, Complete Streets will now be reviewed for consistency with the proposed design.

9.1.2 Broward MPO

The Broward MPO has led the way in Complete Streets by developing a county-wide Complete Streets Design Manual. That manual has been tailored to meet the needs of Pompano Beach. The City works closely with the Broward MPO on planning and implementation of projects in the City. For these projects, the City will work with project planners and engineers to review specific projects from a Complete Streets perspective.

9.1.3 State of Florida

The City works with the Florida Department of Transportation (FDOT) on planning and implementation of transportation projects under their jurisdiction in the City. For these

projects, the City will work with project planners and engineers to review specific projects from a Complete Streets perspective.

9.1.4 Broward County

The City works with Broward County on planning and implementation of transportation projects under their jurisdiction in the City. These include Broward County Traffic Engineering and Broward County Transit projects. For these projects, the City will work with project planners and engineers to review specific projects from a Complete Streets perspective.

9.2 Future Strategy

The City has developed a Complete Streets Master Plan that includes a detailed implementation plan of necessary strategies to fulfill the Complete Streets Policy as well as other transportation goals for Pompano Beach. This Plan is using the Complete Streets Manual as a guide to develop the implementation strategies.

Pompano Beach will work with its partners including the Florida Department of Transportation (FDOT), Broward County, Broward MPO, and local developers to develop these goals into reality and make the city a more livable community.

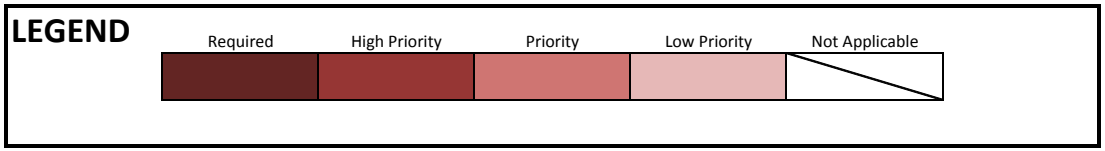
The City will work closely with the Broward MPO to program the projects as part of the Long Range Transportation Plan as well as the Broward MPOs Transportation Improvement Program (TIP). The City will aggressively pursue funding through competitive grant programs including the Transportation Alternatives Program (TAP) as well as through private foundations, developers and local funding where appropriate.

10. Exhibits

10. Exhibits

10.1 Components

Pedestrian Component



	Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Outdoor Display/Dining	Sidewalk Surface Treatments	Stormwater Planters	Stormwater Tree Trenches	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
City Center Boulevard	Minimum 8'									
City Center Avenue	Minimum 8'									
City Center Street	Minimum 8'									
Commercial Boulevard	Minimum 6'									
Commercial Avenue	Minimum 6'									
Commercial Street	Minimum 5'									
Residential Boulevard	Minimum 6'									
Residential Avenue	Minimum 6'									
Residential Street	Minimum 5'									
Industrial Thoroughfare	Minimum 5'									
Beach Thoroughfare	Minimum 8'									

Bicycle Component

LEGEND

	Colored Pavement in Bike Lanes	Bike Route Signs	5' Bike Lane	Bicycle Parking	Buffered Bike Lane	Shared Lane Markings	Conventional Bike Lanes	Raised Bike Lane	Shared Use Path
City Center Boulevard									
City Center Avenue									
City Center Street									
Commercial Boulevard									
Commercial Avenue									
Commercial Street									
Residential Boulevard									
Residential Avenue									
Residential Street									
Industrial Thoroughfare									
Beach Thoroughfare									

Vehicle Component

LEGEND

Required	High Priority	Priority	Low Priority	Not Applicable

	Lane Width	Max Posted Speed	Medians	Refuge Islands	On-Street Parking	Neighborhood Traffic Circle	Pervious Pavement Parking Areas	Traffic Calming	Roundabout
City Center Boulevard	10'-11'	25 MPH			Min. 8' Pk Ln				
City Center Avenue	10'-11'	20 MPH			Min 7' Pk Ln with 4' door zone				
City Center Street	9'-11'	15 MPH			Min 7' Pk Ln with 4' door zone				
Commercial Boulevard	10'-12'	25 MPH			Min 7' Pk Ln with 4' door zone				
Commercial Avenue	10'-11'	30 MPH			Min 7' Pk Ln with 4' door zone				
Commercial Street	9'-11'	20 MPH			Min 7' Pk Ln with 4' door zone				
Residential Boulevard	10'-11'	35 MPH							
Residential Avenue	10'-11'	30 MPH			Min 7' Pk Ln with 4' door zone				
Residential Street	9'-11'	25 MPH			Min 7' Pk Ln with 4' door zone				
Industrial Thoroughfare	11'-12'	35 MPH							
Beach Thoroughfare	9'-11'	25 MPH			Min 7' Pk Ln with 4' door zone				

Intersection & Crossing Component

LEGEND

Required	High Priority	Priority	Low Priority	Not Applicable

	Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Stormwater Curb Extensions	Bump-outs/ Chokers	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons
City Center Boulevard				25'-30'							
City Center Avenue											
City Center Street				15'							
Commercial Boulevard				Minimum 25'							
Commercial Avenue											
Commercial Street				15'							
Residential Boulevard				15'-20'							
Residential Avenue				15'-20'							
Residential Street				15'							
Industrial Thoroughfare				30'							
Beach Thoroughfare				15'							

Transit Component

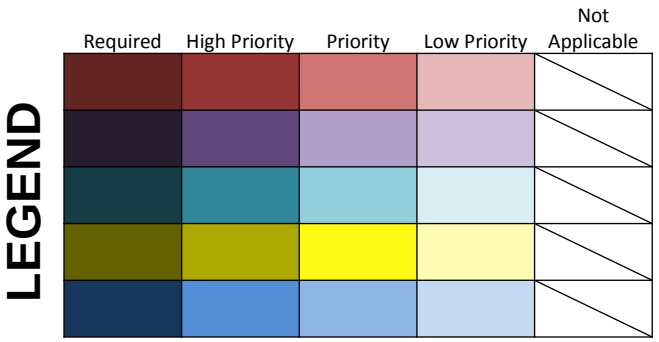
LEGEND

Required	High Priority	Priority	Low Priority	Not Applicable

	Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes
City Center Boulevard									
City Center Avenue									
City Center Street									
Commercial Boulevard									
Commercial Avenue									
Commercial Street									
Residential Boulevard									
Residential Avenue									
Residential Street									
Industrial Thoroughfare									
Beach Thoroughfare									

10.2 Street Typologies

City Center Boulevard



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Outdoor Display/Dining	Sidewalk Surface Treatments	Stormwater Planters	Stormwater Tree Trenches	Alternative Uses of Parking Lanes/Parklets	Street Furniture	Vegetated Swales
Minimum 8'									

Bicycle Component

Colored Pavement in Bike Lanes	Bike Route Signs	5' Bike Lane	Bicycle Parking	Conventional Bike Lanes	Shared Lane Markings	Raised Bike Lane	Buffered Bike Lane	Shared Use Path

Vehicle Component

Lane Width	Max Posted Speed	Medians	Refuge Islands	On-Street Parking	Roundabout	Pervious Pavement Parking Areas	Traffic Calming	Neighborhood Traffic Circle
10'-11'	25 MPH			Min. 8' Pk Ln				

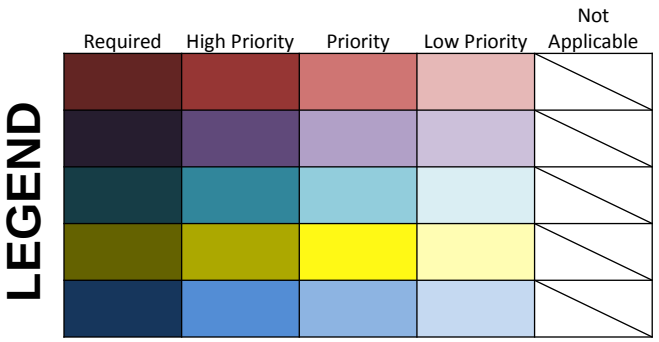
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Stormwater Curb Extensions	Bump-outs/ Chokers	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons
			25'-30'							

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

City Center Avenue



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Outdoor Display/Dining	Sidewalk Surface Treatments	Stormwater Planters	Stormwater Tree Trenches	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
Minimum 8'									

Bicycle Component

Colored Pavement in Bike Lanes	Bike Route Signs	5' Bike Lane	Buffered Bike Lane	Bicycle Parking	Conventional Bike Lanes	Shared Lane Markings	Raised Bike Lane	Shared Use Path

Vehicle Component

Lane Width	Max Posted Speed	Medians	Refuge Islands	On-Street Parking	Roundabout	Pervious Pavement Parking Areas	Traffic Calming	Neighborhood Traffic Circle
10'-11'	20 MPH			Min 7' Pk Ln with 4' door zone				

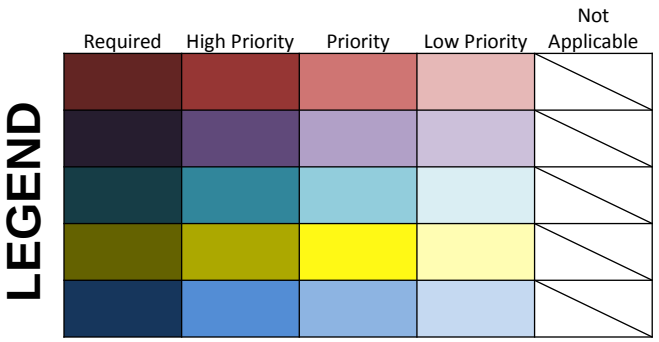
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Stormwater Curb Extensions	Bump-outs/ Chokers	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

City Center Street



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Outdoor Display/Dining	Sidewalk Surface Treatments	Stormwater Planters	Stormwater Tree Trenches	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
Minimum 8'									

Bicycle Component

Colored Pavement in Bike Lanes	Shared Lane Markings	Bicycle Parking	Bike Route Signs	Buffered Bike Lane	Conventional Bike Lanes	Raised Bike Lane	5' Bike Lane	Shared Use Path

Vehicle Component

Lane Width	Max Posted Speed	On-Street Parking	Medians	Pervious Pavement Parking Areas	Traffic Calming	Neighborhood Traffic Circle	Refuge Islands	Roundabout
9'-11'	15 MPH	Min 7' Pk Ln with 4' door zone						

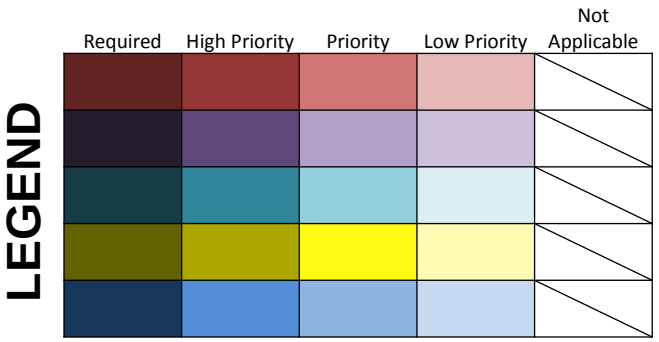
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Bump-outs/ Chokers	Stormwater Curb Extensions	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons	Bike Signal Accomodations
			15'							

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

Commercial Boulevard



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Outdoor Display/Dining	Stormwater Planters	Sidewalk Surface Treatments	Stormwater Tree Trenches	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
Minimum 6'									

Bicycle Component

Colored Pavement in Bike Lanes	Bicycle Parking	Bike Route Signs	5' Bike Lane	Shared Lane Markings	Conventional Bike Lanes	Shared Use Path	Buffered Bike Lane	Raised Bike Lane

Vehicle Component

Lane Width	Max Posted Speed	Medians	Refuge Islands	On-Street Parking	Roundabout	Pervious Pavement Parking Areas	Traffic Calming	Neighborhood Traffic Circle
10'-12'	25 MPH			Min 7' Pk Ln with 4' door zone				

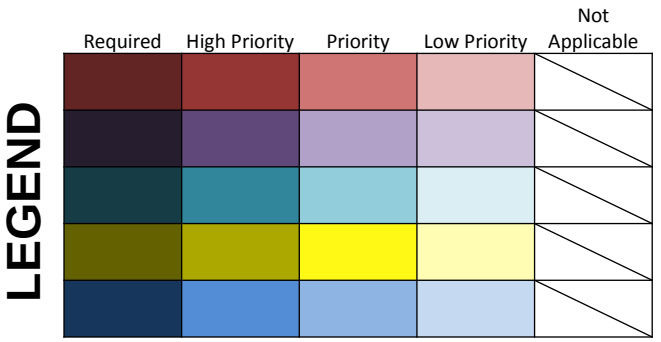
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Stormwater Curb Extensions	Corner Radii	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Bump-outs/ Chokers	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons
				Minimum 25'						

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

Commercial Avenue



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Stormwater Planters	Sidewalk Surface Treatments	Stormwater Tree Trenches	Outdoor Display/Dining	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
Minimum 6'									

Bicycle Component

Colored Pavement in Bike Lanes	Bicycle Parking	Bike Route Signs	5' Bike Lane	Shared Lane Markings	Conventional Bike Lanes	Shared Use Path	Buffered Bike Lane	Raised Bike Lane

Vehicle Component

Lane Width	Max Posted Speed	On-Street Parking	Medians	Refuge Islands	Traffic Calming	Roundabout	Neighborhood Traffic Circle	Pervious Pavement Parking Areas
10'-11'	30 MPH	Min 7' Pk Ln with 4' door zone						

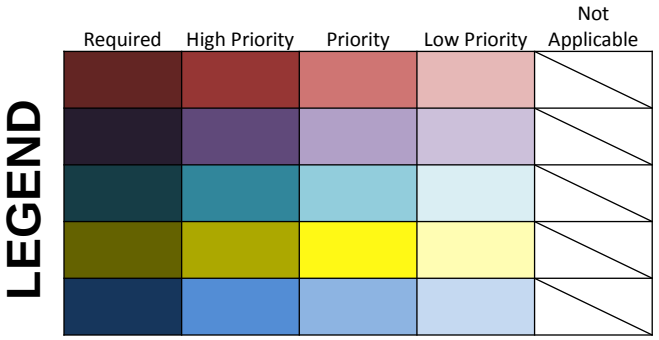
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Stormwater Curb Extensions	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons	Bump-outs/ Chokers

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

Commercial Street



Pedestrian Component

Sidewalk Width	Lighting	Tree Belt Enhancements	Street Furniture	Stormwater Planters	Sidewalk Surface Treatments	Stormwater Tree Trenches	Outdoor Display/Dining	Alternative Uses of Parking Lanes/Parklets	Vegetated Swales
Minimum 5'									

Bicycle Component

Colored Pavement in Bike Lanes	Shared Lane Markings	Bicycle Parking	Bike Route Signs	Buffered Bike Lane	Raised Bike Lane	5' Bike Lane	Conventional Bike Lanes	Shared Use Path

Vehicle Component

Lane Width	Max Posted Speed	On-Street Parking	Neighborhood Traffic Circle	Pervious Pavement Parking Areas	Medians	Refuge Islands	Roundabout	Traffic Calming
9'-11'	20 MPH	Min 7' Pk Ln with 4' door zone						

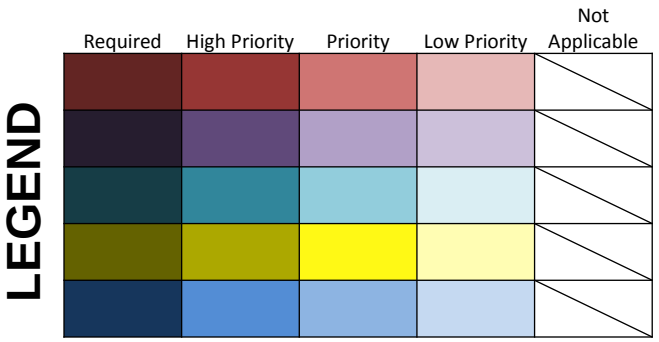
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Bump-outs/ Chokers	Stormwater Curb Extensions	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons	Bike Signal Accomodations
			15'							

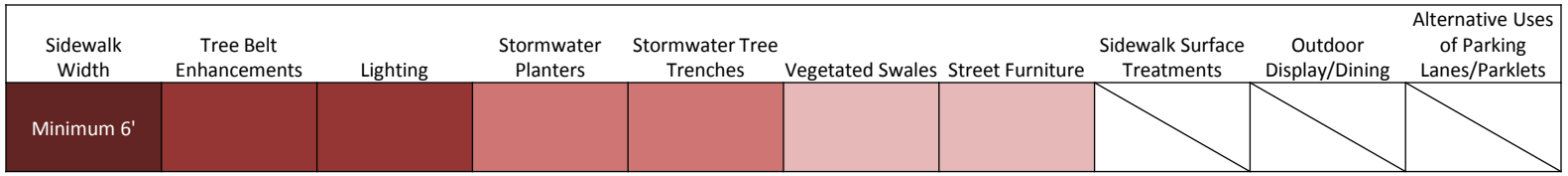
Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

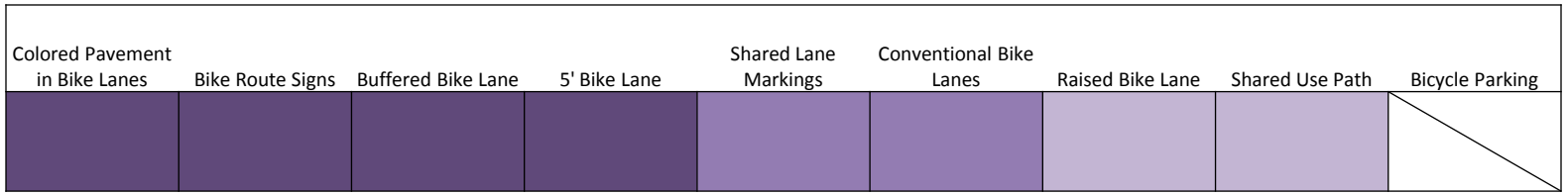
Residential Boulevard



Pedestrian Component



Bicycle Component



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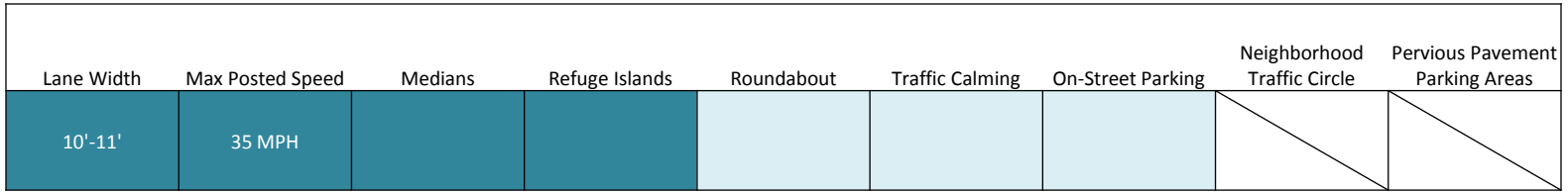
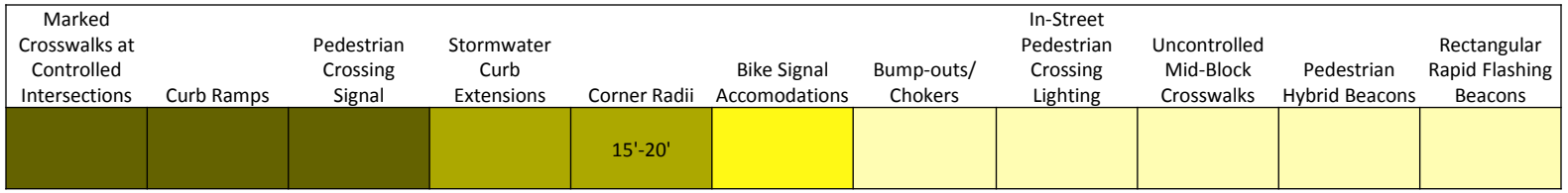
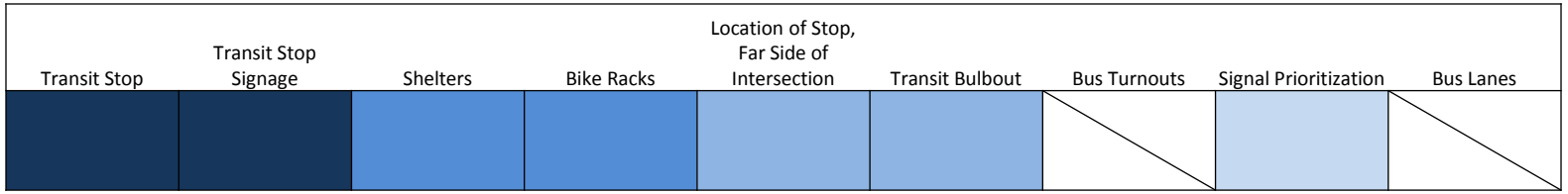


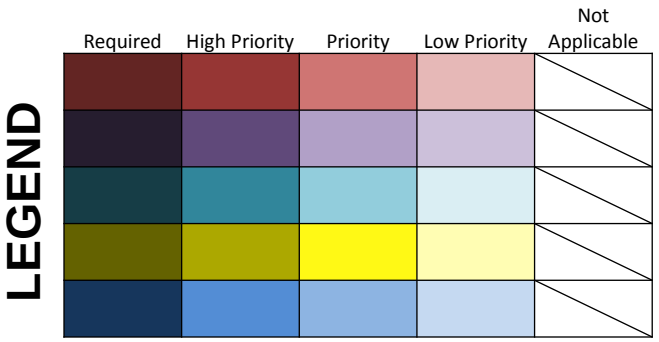
Intersection & Crossing



Transit Component



Residential Avenue



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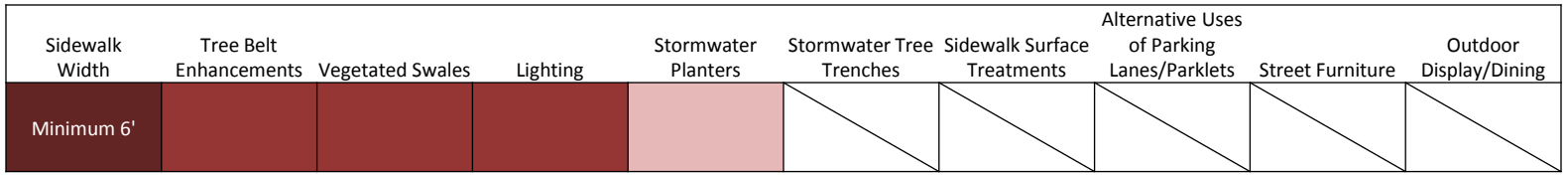
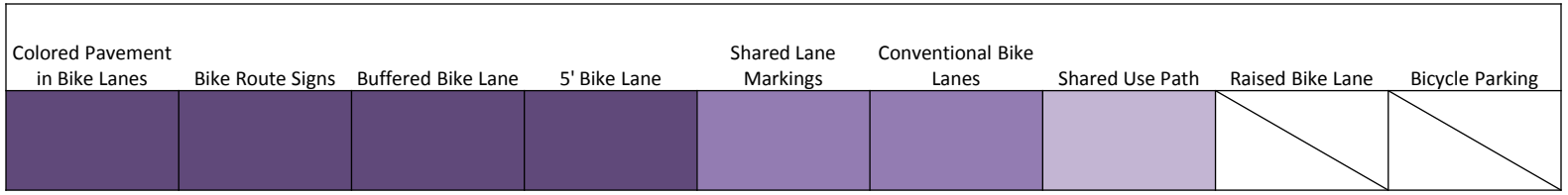
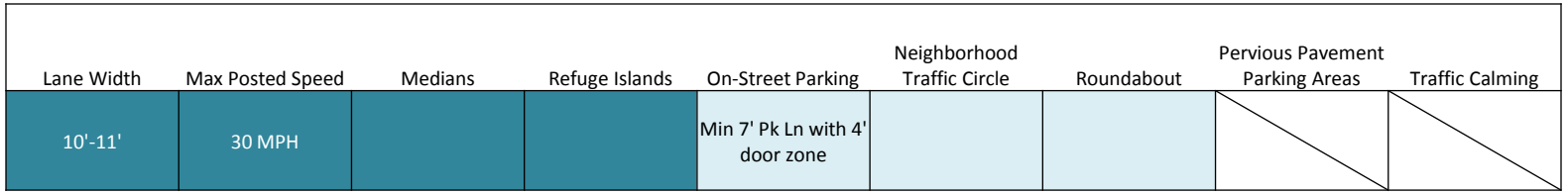


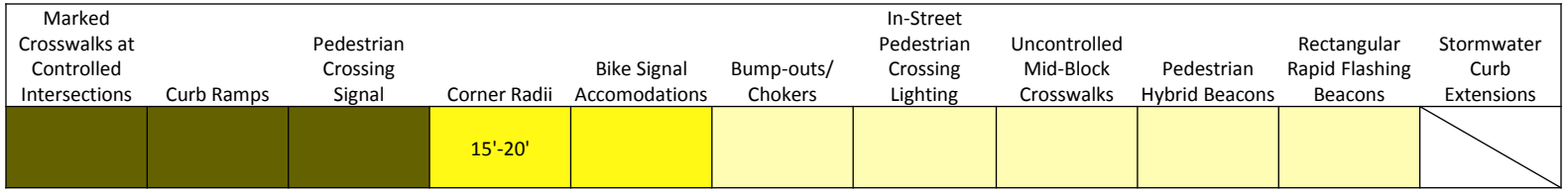
Bicycle Component



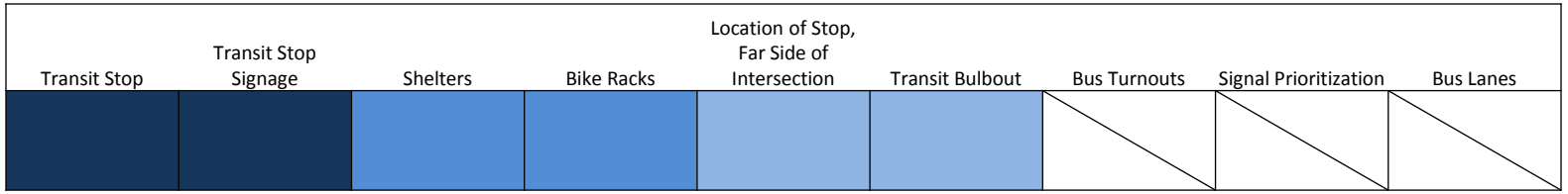
Vehicle Component



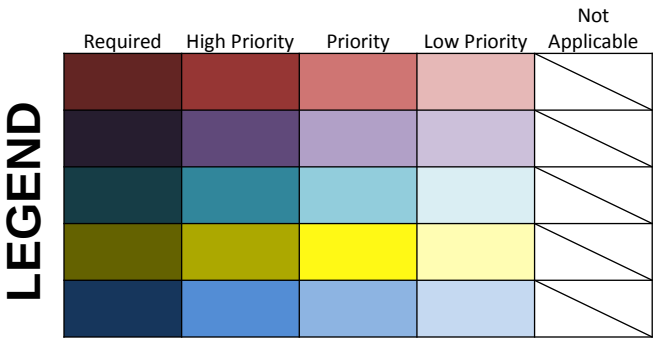
Intersection & Crossing



Transit Component



Residential Street[1]



Pedestrian Component

Sidewalk Width	Tree Belt Enhancements	Vegetated Swales	Lighting	Stormwater Planters	Stormwater Tree Trenches	Sidewalk Surface Treatments	Alternative Uses of Parking Lanes/Parklets	Street Furniture	Outdoor Display/Dining
Minimum 5'									

Bicycle Component

Shared Lane Markings	Colored Pavement in Bike Lanes	Bike Route Signs	Buffered Bike Lane	5' Bike Lane	Conventional Bike Lanes	Shared Use Path	Raised Bike Lane	Bicycle Parking

Vehicle Component

Lane Width	Max Posted Speed	On-Street Parking	Medians	Neighborhood Traffic Circle	Pervious Pavement Parking Areas	Traffic Calming	Refuge Islands	Roundabout
9'-11'	25 MPH	Min 7' Pk Ln with 4' door zone						

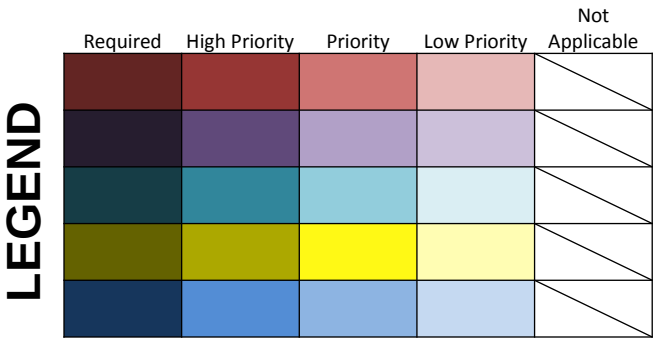
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Bump-outs/ Chokers	Stormwater Curb Extensions	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons	Bike Signal Accomodations
			15'							

Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

Industrial Thoroughfare



Pedestrian Component

Sidewalk Width	Lighting	Vegetated Swales	Stormwater Planters	Stormwater Tree Trenches	Tree Belt Enhancements	Sidewalk Surface Treatments	Street Furniture	Outdoor Display/Dining	Alternative Uses of Parking Lanes/Parklets
Minimum 5'									

Bicycle Component

Colored Pavement in Bike Lanes	5' Bike Lane	Conventional Bike Lanes	Buffered Bike Lane	Shared Lane Markings	Bike Route Signs	Shared Use Path	Raised Bike Lane	Bicycle Parking

Vehicle Component

Lane Width	Max Posted Speed	Medians	Refuge Islands	On-Street Parking	Neighborhood Traffic Circle	Pervious Pavement Parking Areas	Traffic Calming	Roundabout
11'-12'	35 MPH							

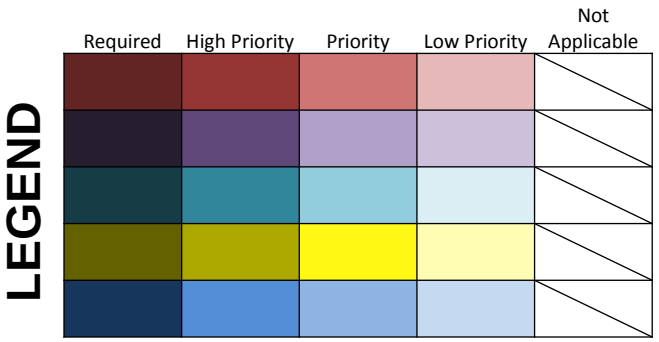
Intersection & Crossing

Marked Crosswalks at Controlled Intersections	Curb Ramps	Pedestrian Crossing Signal	Corner Radii	Bump-outs/ Chokers	Stormwater Curb Extensions	Bike Signal Accomodations	In-Street Pedestrian Crossing Lighting	Uncontrolled Mid-Block Crosswalks	Pedestrian Hybrid Beacons	Rectangular Rapid Flashing Beacons
			30'							

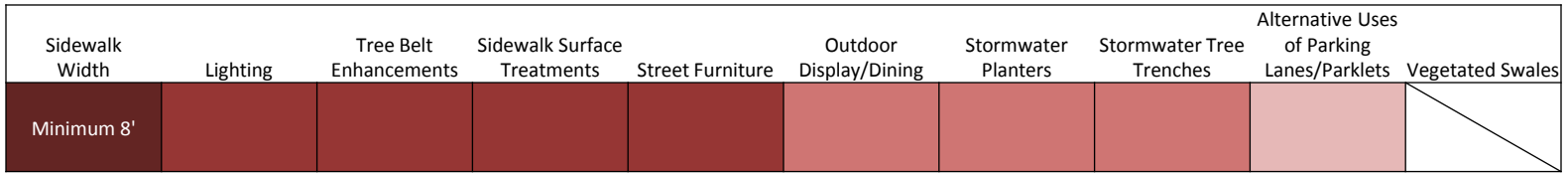
Transit Component

Transit Stop	Transit Stop Signage	Shelters	Bike Racks	Location of Stop, Far Side of Intersection	Transit Bulbout	Bus Turnouts	Signal Prioritization	Bus Lanes

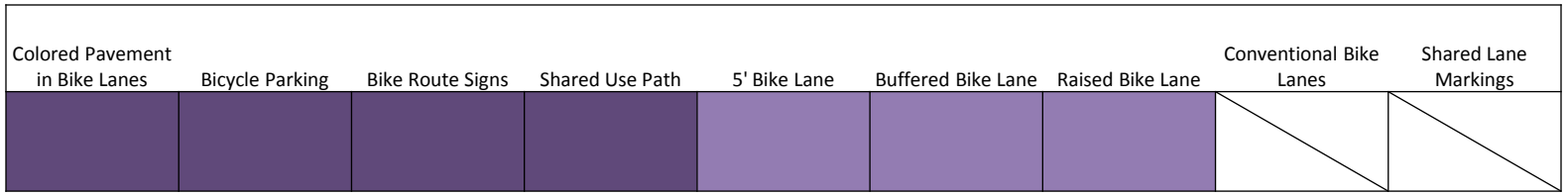
Beach Thoroughfare



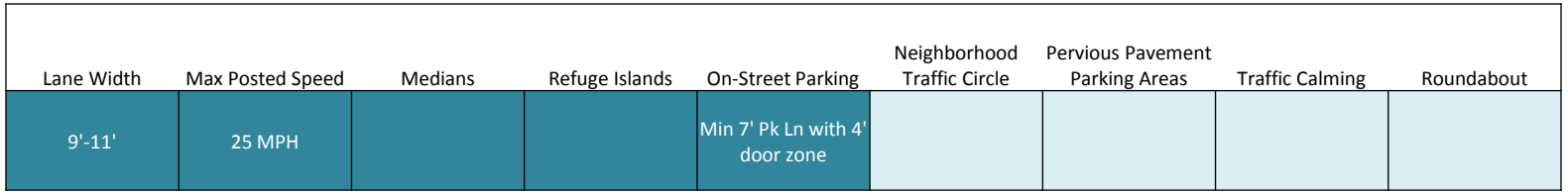
Pedestrian Component



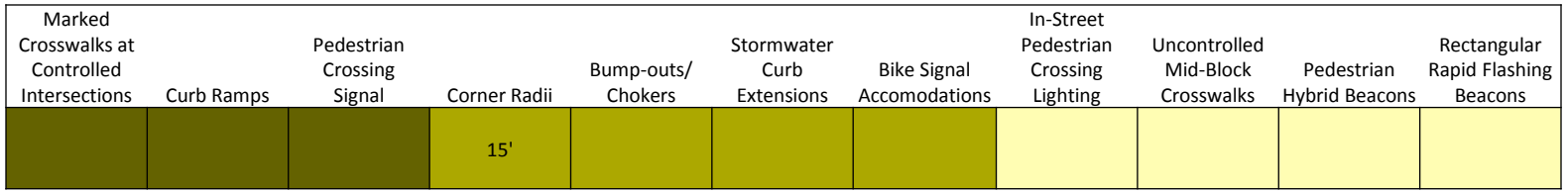
Bicycle Component



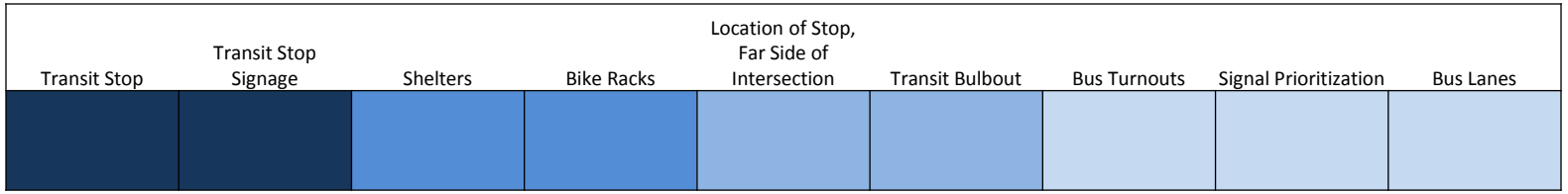
Vehicle Component



Intersection & Crossing



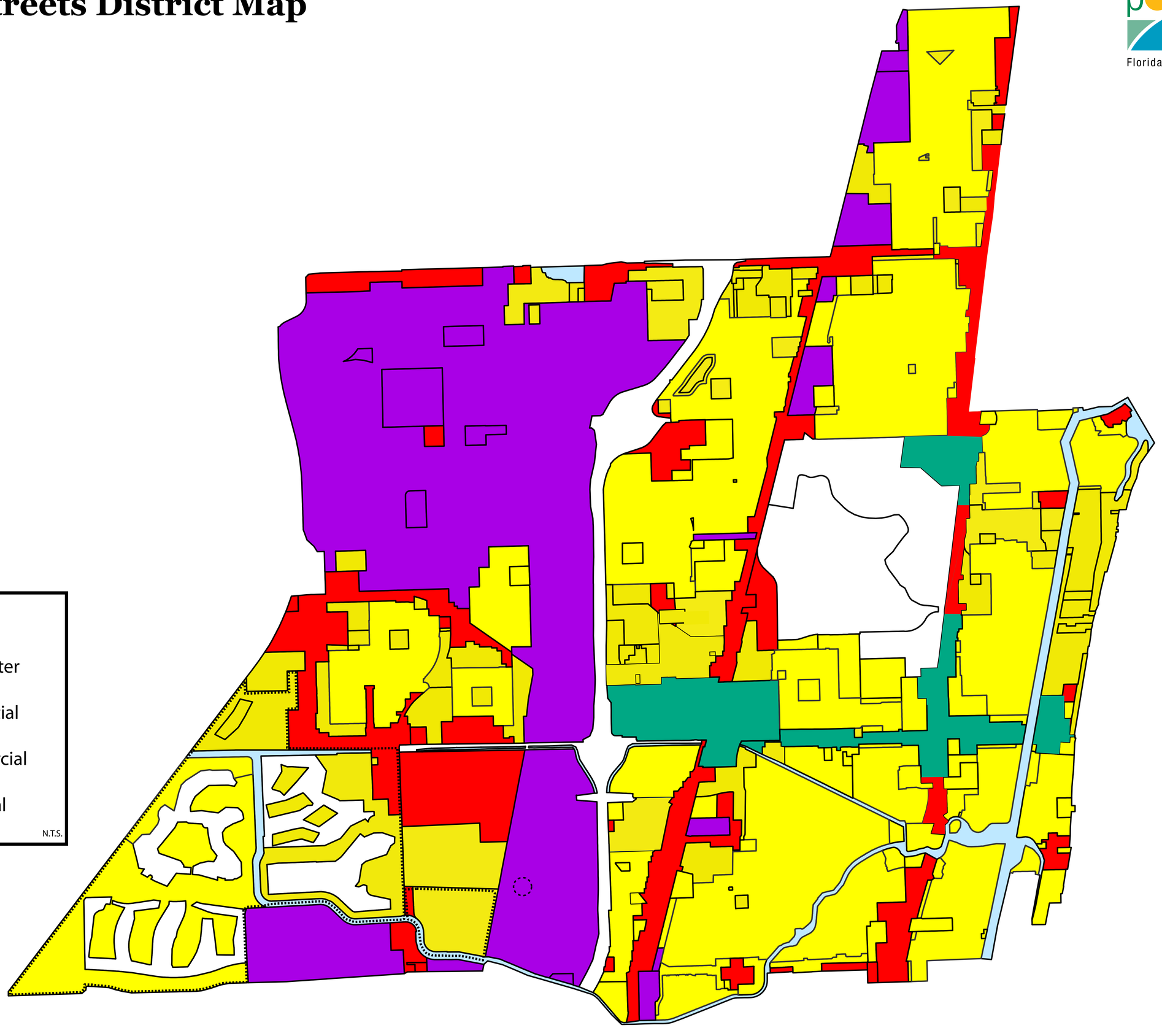
Transit Component



10.3 District Map

City of Pompano Beach
Complete Streets District Map

pompano beach
Florida's Warmest Welcome



LEGEND

- City Center
- Residential
- Commercial
- Industrial

N.T.S.

N

10.4 Complete Streets Master Plan

City of Pompano Beach
Complete Streets Master Plan

pompano beach
Florida's Warmest Welcome

CORAL SPRINGS

INDIAN RESERVATION

COUNTY REGIONAL FACILITY

DEERFIELD BEACH

HILLSBORO

LIGHTHOUSE POINT

COCONUT CREEK

POMPANO BEACH

NORTH LAUDERDALE

FORT LAUDERDALE

OAKLAND PARK

FORT LAUDERDALE

LAUDERDALE BY THE SEA

LEGEND

- City Center Blvd
- City Center Ave
- City Center St
- Commercial Blvd
- Commercial Ave
- Commercial St
- Residential Blvd
- Residential Ave
- Residential St
- Beach Thoroughfare
- Industrial Thoroughfare

N

0 0.075 0.15 0.3 0.45 0.6
Miles

Significant Streets in Pompano	Complete Streets Designations		
Atlantic Blvd (W-E)	Commercial Blvd (Turnpike - I-95)	City Center Blvd (1-95 - Beach)	
Copans Road (W-E)	Industrial Thoroughfare (Turnpike - I-95)	Residential Blvd (I-95 - Dixie Hwy)	Commercial Blvd (Dixie Hwy - NE 5th Ave)
	Residential Blvd (Ne 5th Ave - NE 12th Ter)	City Center Blvd (NE 12th Ter - Federal Hwy)	
Sample Rd (W-E)	Commercial Blvd (whole length of the street)		
Dixie Hwy (S-N)	Commercial Ave (City Line - Atlantic Blvd)	City Center Ave (Atlantic Blvd - NW 6th St)	Commercial Ave (NW 6th St - Sample Rd)
	Industrial Thoroughfare (Sample Rd - NE 51 St)		
Federal Hwy (S-N)	Commercial Blvd (City Line - SE 4th St)	City Center Blvd (SE 4th St - NE 10th St)	Commercial Blvd (NE 10th St - NE 16th St)
	City Center Blvd (NE 16th St - Copans Rd)	Commercial Blvd (Copans Rd - City Line)	
Ocean Blvd (S-N)	Residential Ave (City Line - SE 2nd St)	City Center Ave (SE 2nd Ave - Atlantic Blvd)	Residential Ave (Atlantic Blvd - City Line)
McNab Rd (W-E)	Residential Ave (Turnpike - SW 36th Ave)	Industrial Thoroughfare (SW 36th Ave - Dixie Hwy)	Residential St (Dixie Hwy - Sw 1st Ter)
	Commercial St (SW 1st Ter - SE 4th Ave)	Residential St (SE 4th Ave - NE 21st Ave)	Commercial St (NE 21st Ave - S Fed Hwy)
Andrews Ave (S-N)	Industrial Thoroughfare (whole way)		
Powerline Rd (S-N)	Commercial Blvd (McNab Rd - Palm Aire Dr)	Residential Blvd (Palm Aire Dr - Racetrack Rd)	Commercial Blvd (Racetrack Rd - NW 5th St)
	Residential Blvd (NW 5th St - NW 10th Ct)	Commercial Blvd (NW 10th Ct - NW 15th St)	Industrial Thoroughfare (NW 15th St - Sample Rd)
Hammondville Rd (W-E)	Commercial Ave (Turnpike - NW 16th Ave)	Residential Ave (NW 16th Ave - Andrews Ave)	Industrial Thoroughfare (Andrews Ave - I-95)
	City Center Ave (I-95 - Dixie Hwy)		
Riverside Dr (S-N)	Residential St (SE 10th St - SE 2nd St)	City Center Street (SE 2nd St - NE 2nd St)	Residential Ave (NE 2nd St - NE 14th St)
	Residential St (NE 14th St - Beacon St)		
Racetrack Rd/SW 3rd Street (W-E)	Commercial Ave (Powerline Rd - SW 15th Ave)	Industrial Thoroughfare (Sw 15th Ave - I-95)	Residential Blvd (I-95 - SW 4th Ave)
	Commercial Ave (SW 4th Ave - Cypress Rd)		
Briny Ave (S-N)	Residential Ave (Atlantic Blvd - SE 8th St)		
Cypress Road (S-N)	Residential Ave (McNab Rd - SW 6th St)	Commercial Ave (Sw 6th St - Sw 2nd St)	City Center Ave (Sw 2nd St - Atlantic Blvd)
NE 10th St (W-E)	Residential Ave (Dixie Hwy - NE 5th Ave)	Residential Blvd (NE 5th Ave - NE 23rd Ter)	Residential St (NE 23rd Ter - Harbor Dr)
Atlantic Blvd Ext (S-N)	Commercial Ave (Hammondville Rd - Atlantic Blvd)		
Harbor Drive (S-N)	City Center St (Atlantic Blvd - NE 2nd St)	Residential St (NE 2nd St - NE 12th St)	
N Pompano Beach Blvd (S-N)	Beach Thoroughfare (Ocean Blvd - Atlantic Blvd)		
NE 14th Street (W-E)	Commercial St (Federal Hwy - NE 23rd Ave)	Residential Blvd (NE 23rd St - Ocean Blvd)	
NW 15th Street (W-E)	Industrial Thoroughfare (Powerline Rd - NW 17th Ave)	Residential Ave (NW 17th Ave - Andrews Ave)	Industrial Thoroughfare (Andrews Ave - I-95)
	Residential Ave (I-95 - Dixie Hwy)		
Blount Rd (S-N)	Industrial Thoroughfare (Sample Rd - Hammondville Rd)		