APPENDIX B
DESIGN GUIDELINES

The Design Guidelines on the following pages are intended to help create a more bicycle- and pedestrian-friendly community using time-honored principles of street and building design. This chapter is designed to be used as a standalone document that may be shared as a handout.

TALLAHASSEE-LEON COUNTY
METROPOLITAN PLANNING ORGANIZATION

BICYCLE AND PEDESTRIAN MASTER PLAN
FOR
TALLAHASSEE-LEON COUNTY

DESIGN GUIDELINES

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INTRODUCTION

PURPOSE AND SCOPE

Improving walking and bicycling conditions in Tallahassee and Leon County is more than identifying new facilities for construction. It requires a continued commitment over time from a wide range of participants in the planning, development and construction fields to ensure that the needs of pedestrians and bicyclists are considered and incorporated into the design of buildings and transportation facilities. Such consideration goes much beyond merely ensuring that a sidewalk or bicycle lane is built at the edge of a new street. It means that site design, building layout and supportive infrastructure, such as lighting and shade for pedestrians, are at least equal in weight to automobile traffic when considering accessibility for a given site. It means that roadway modifications should consider the entire street realm within the right-of-way line, and not just the area for motorized vehicles.

At public workshops on the Bicycle and Pedestrian Master Plan, it has been repeatedly observed by the citizens that Tallahassee lacks a "walking district" or a "100 percent" place like Winter Park's Park Avenue, Dunedin's Main Street, West Palm Beach's Clematis Street or St. Petersburg's Central Avenue, where all the elements come together to create a truly memorable experience for walking, shopping or just being seen. Those kinds of environments do not happen overnight; they take time, often with significant public investment. Tallahassee and Leon County have the opportunity to create such places with the planned University District and through various redevelopment initiatives. But along with public investment, there is a private development responsibility for making a community more walkable and supportive of bicycling.

The expected costs of the 2025 Needs Plan for bicycle and pedestrian projects far exceed the funds available for construction over the next 20 years. It is therefore imperative that public agencies and private developers incorporate good pedestrian- and bicycle-supportive design into their projects, making the system more seamless and convenient for the user. Simple things, like providing adequate bicycle parking at commercial buildings, or ensuring well-defined and physically separated pedestrian ways connecting public streets and adjacent development to non-residential buildings, are often overlooked in the site planning and design process.

These are not expensive treatments. Rather than thinking of them as amenities or ways to beautify a site after its basic design is complete, pedestrian- and bicycle-friendly design should be a cornerstone of site planning principles for new development and redevelopment of existing sites. Putting pedestrians first in the consideration of site design need not limit automobile access or convenience; however, it does require careful attention to what encourages people to walk and where those connections need to be made. Without those considerations, the projects in the Bicycle and Pedestrian Master Plan will have limited effectiveness in creating an interconnected transportation system that helps achieve both mobility and livability for all users.

This document presents a framework for creating a stronger pedestrian and bicycle environment in Tallahassee and Leon County. It provides guidance for both public and private sectors in the planning, design and construction of buildings, roadways, parking areas and public spaces. The focus is on ways to accommodate safe and convenient pedestrian, bicycle, and transit access for new development and redevelopment.

The recommendations contained in this document provide guidance to local staff and the development community on minimum standards, best practices, and preferred treatments that support walking and bicycling. These recommendations are not binding, but are intended to be incorporated into revised code for the development review and project development process to support the Bicycle and Pedestrian Master Plan.

ORGANIZATION OF THE DOCUMENT

The guiding concept for bicycle- and pedestrian-friendly design is placemaking, an approach to the design of public spaces that gives them a recognizable sense of place or community. Placemaking recognizes that all people – whether arriving on foot, or by car, bicycle, or bus - need convenient connections to pleasant, walkable destinations.

Section I: Site Planning and Design Principles gives shape to the concept of placemaking, with details about ideal design for streets, buildings, parking areas, parks, and bicycle and pedestrian facilities. The placement of a parking lot, for example, can define a place as auto-oriented or pedestrian-oriented.

Section II: Implementation Strategies describes ways for putting these design principles into action. Implementation strategies will require a shift in philosophy for both the public and private sector. Current policies and practices reflect the automobile-oriented trend of the last half-century, and it will take time to incorporate bicycle and pedestrian facilities as key features of land use and transportation planning. In order to balance the responsibility between the public and private sectors, a variety of strategies are provided, including policy updates and developer incentives. This section of the Design Guidelines also defines a variety of bicycle and pedestrian facilities and minimum standards for several facility types established by the city, county, and state government.

PRINCIPLES OF WALKABILITY: SETTING THE CONTEXT FOR PLACEMAKING

Simply put, walkability is the quality of an environment for people on foot. This environment includes the physical design of the street and street network, buildings and the way they address the street, and the roles and opportunities for bicycles, pedestrian, and cars within the network. Walkable streets provide better support for and access to transit, increased safety for homes, businesses, and individuals, and a viable transportation mode for those who choose not to drive or who can not drive due to age, disability, or economic disadvantage.

The dominant paradigm of transportation design since the mid-20th century has focused on the automobile, while facilities for cyclists and pedestrians have often been afterthoughts or omitted altogether. On the other hand, traditional civic design as it was practiced for centuries was compact, walkable and scaled for pedestrian access and enjoyment. The street was designed as a place to walk and socialize, rather than as a conduit to move cars. By sensitively incorporating the principles of traditional design into new development and redevelopment, Tallahassee and Leon County can create more bicycle- and pedestrian-friendly streets, commercial districts, and neighborhoods.

Figure 1 - Traffic calming slows traffic and improves bicycle and pedestrian visibility.

The process of creating a walkable, human-scaled environment is called placemaking. Ray Oldenburg, in his book The Great Good Place, refers to three types of place: home, work, and the "third place," a public place that is comfortable and convenient for social interaction. These places are pedestrian-oriented by design and may be found in a variety of contexts, from neighborhoods to urban centers. The way streets and buildings are designed and placed relative to one another helps to create focal points and boundaries in a physical environment conducive to the kind of interaction and community that characterize traditional neighborhoods, districts, and towns. Placemaking assumes that details such as sidewalks, tree-lined streets, storefronts, and front porches are more than just nostalgia – they are elements of a place that welcomes pedestrians, bicyclists, and motorists equally. Better balance between automobiles, bicycles and pedestrians on existing streets can be encouraged using traffic calming, which refers to a variety of strategies designed to slow traffic and improve bicycle and pedestrian visibility and status in the street realm (Figure 1). Traffic calming measures include choker islands, narrower lanes, extended medians at intersections, and other physical and visual cues.

Tallahassee and Leon County possess a rich foundation for creating an interconnected web of places. Placemaking can occur incrementally by establishing community focal points: existing destinations such as parks, schools, transit hubs, and commercial areas retrofitted into walkable, connected places. The streets that serve these community focal points should provide a walkable environment with bicycle and pedestrian facilities designed to ensure safe, convenient access.

SECTION I: SITE PLANNING AND DESIGN PRINCIPLES

SITE PLANNING

Well-organized and appropriately scaled places encourage people to enjoy the surroundings, thereby increasing street life and encouraging walking and bicycling. Compact, pedestrian-friendly places achieve the following objectives:

- Orient people and give them a sense of welcome in the street environment
- Provide convenience and a range of transportation options (which allows for the possibility of diminished vehicle trips)
- Encourage cycling and pedestrian activity (which have proven health benefits)
- Provide a variety of employment options, dwelling types and lifestyle options

MIXED-USE DEVELOPMENT

Mixed-Use development provides a wide range of services and opportunities within walking distance. Few trips are made between similar land uses – seldom does one travel from their home to another home, for example. Rather, trips are made between

different yet complementary uses, like a trip from home to work or from work to lunch. A greater diversity of uses within an area creates more opportunities for short trips, which are more likely to be made on foot or by bicycle. Walkable Mixed-Use development also allows users to park once and walk between several uses in a single trip. Additionally, a diversity of uses balances activity between the daytime, nighttime, and weekend hours, creating a busier, safer, and more exciting environment for all citizens to enjoy.

CONNECTIVITY AND BLOCK STRUCTURE

Well-connected areas promote pedestrian and bicycle activity by making connections between destinations accessible and convenient. The left illustration in Figure 1 illustrates the typical suburban condition, where both density and diversity exist but there are few direct, integrated connections. In contrast, connectivity takes prominence in the right-hand illustration of Figure 2. The interconnected street network creates proximate, direct connections between buildings and parking is tucked behind, and separated from, the street edge. Traffic is spread over several streets to minimize the conflict between walking and autos. More streets will disperse traffic and transform the streetscape back into a place for pedestrians.

Additionally, this framework promotes mixed-use development patterns with smaller block sizes and a greater diversity of building types within close proximity. Small blocks are an important element within a walkable area. Small blocks help to create a comfortable scale for pedestrians by creating an increased sense of location and direction, breaking down the space between intersections and destinations, and providing increased visibility for businesses and offices. The maximum block length per street edge should be 500′ although 300′-400′ blocks are recommended.

New connections may be made within existing areas to diversify vehicle trips and increase accessibility to important destinations, such as a community school facilities.

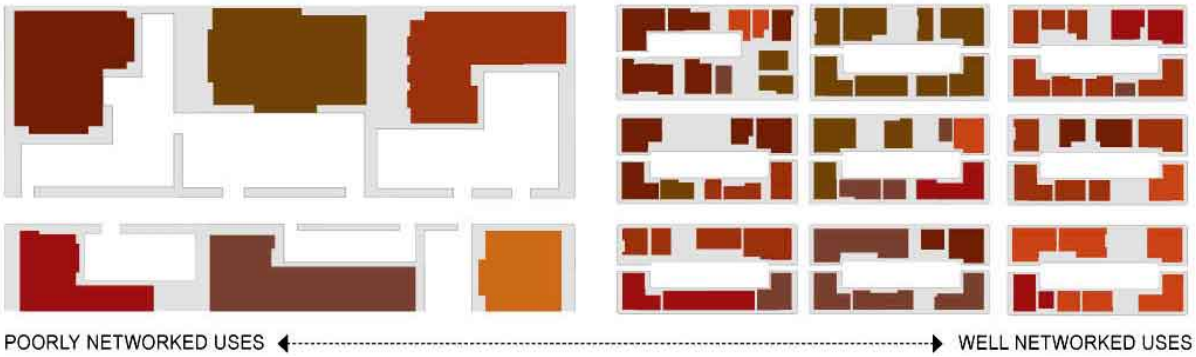

Figure 2 - Areas with diverse, interconnected uses provide a safe and accessible setting for pedestrians and bicyclists

BUILDING PROXIMITY

Placing buildings close to one another and close to the street edge helps to create an active street environment. Rather than separating buildings from the street with large expanses of parking, buildings should work collectively to form a “street wall.” The “street wall” helps to define the street as a pedestrian space. To provide a truly walkable area, buildings must be placed close to one another to allow pedestrians to move between transit stops, parking areas, and buildings without a car.

BUILDINGS AND FRONTAGES

Buildings and frontages are the interface between the public street and the building interior. Treatment of building fronts should reflect the use of the interior space. Retail frontage (storefront) is intended to draw the public into the interior, while residential frontage (setback with raised porch) protects the privacy of the interior, yet allows the residents to observe and engage with neighbors and passers-by. The ground level should always be given the most careful consideration. Ground floor heights, facade articulation, setbacks, and entry design have a critical impact on the overall street environment. The dimensions and relationships between elements vary depending upon building types and uses, vehicle traffic, and pedestrian traffic.

Figure 3 - Building Frontages are an important indicator of an active streetscape *(image courtesy of pedbikeimages.org / Dan Burden)*

BUILDING ORIENTATION

Much of the current development pattern in Tallahassee and Leon County is oriented toward the automobile. By simply reconfiguring a site, building placement can reduce walking distances for customers and make streets more useful for pedestrians, transit customers and cyclists. Drawing buildings to the street edge, as shown in Figure 4, provides access for pedestrians, which is safe and unimpeded by vehicles. Buildings should be sited to complement the existing built environment while recognizing the characteristics of the specific project site. Building placement must respect important existing features of the site, such as natural elements or historical structures. Building orientation should balance the combined impacts to building occupants, pedestrians, and open space users. Building entries should border main streets and public thoroughfares to foster vibrant, walkable streetscapes and allow for clear pedestrian access and circulation. When possible, principles of passive solar design, such as screening the south elevation to avoid daytime heat gain, should be employed to help orient buildings. Parking and building service equipment should be placed at the rear of the building lot, visually removed from the streetscape.

Figure 4 - Drawing buildings to the street edge along Duval Street creates a 'public room' for pedestrians

Placement and orientation of buildings and entrances may be determined using a walkability audit during the site planning phase. This process will help to locate pedestrian desire lines, identify adjacent uses that will attract or generate walking trips, and plan connecting points to other modes. Site layout should maximize these opportunities through direct connections and use of shade or buffers to enhance comfort.

BUILDING MASSING

Building massing describes the physical form of a building or group of buildings. In order to maintain a comfortable feeling of scale, building massing must be carefully considered in building design. Massing should be compatible with surrounding buildings to create a streetscape that maintains a consistent scale while allowing unique articulation between buildings. A single, uniform building mass should be avoided. Variations in height and horizontal divisions may be used to create façade articulation. Visual aspects of larger buildings must be detailed to maintain a sense of human scale, particularly at the pedestrian level. Varying window treatments and façade materials helps break the mass of a building. Façade elements should highlight primary entrances and different building uses. Roof equipment should be screened from view using setbacks and parapets.

SPATIAL ENCLOSURE

Spatial enclosure refers to the relationship of buildings to the street. Drawing buildings to the edge of the street creates a human-scaled pedestrian environment with a clearly defined edge. Using buildings to transform the street into a "public room" is essential in creating an attractive, walkable streetscape. Certain elements such as parking lots and large building setbacks discourage the sense of spatial enclosure and result in an unfriendly pedestrian environment. Ideally, maximum setbacks should be established so that the building height to street width ratio is no less than 1:3, thereby creating a feeling of spatial enclosure which dignifies the street as a public space, calms traffic, and fosters pedestrian activity.

BUILDING FACADES

Articulation refers to architectural composition in which elements and parts of a building are expressed logically, distinctly, and consistently, with clear joints. Highly articulated building facades add interest and variety to the pedestrian experience. Detailed building facades generally provide unique visual sequences that focus pedestrian attention on the setting rather than the walk itself. Many studies conducted throughout the country have documented how redundant environmental forms and sequences have the ability to extend the pedestrian's perception of time and space. In multiple story buildings, floors should have distinctive changes in exterior material, texture, ornamentation, and color. Floor articulation is especially important for mixed-use buildings. Façade treatment should reflect different interior uses, combining larger degrees of transparency for retail space and smaller openings for residential use. Typically, the first one or two stories of multiple story buildings are articulated as an architectural base meant to complement human scale and movement. The increased floor height of the base and covered walkways tie the building to the pedestrian realm. Prominent façade treatments at ground level help to highlight public entrances. Upper stories may be set back from the base and treated with different materials and colors, a particularly useful model for mixed-use development.

BUILDING ENTRY

Building entry treatment is dependent on use. Retail, office, and residential entries have different purposes and priorities. Retail space should have a ground-floor entry fronting the public thoroughfare and visible to pedestrians. The entrance should incorporate transparent areas that integrate the interior space with street activity. Signage may be incorporated into the building facade or covered walkway. Often, offices require more private interiors. Office entries should also front public thoroughfares to ensure visibility. For residential uses, significant entries are often located along the street edge, but side and rear options handle routine traffic. Side and rear entries should be well-lit and provide high visibility to ensure safety. In less dense areas, single-family residence entries are set back from the street right-of-way. Covered porches and stoops are suggested to make visual and spatial connections between the house and street.

BICYCLE AND PEDESTRIAN FACILITIES

Streets and corridors provide the framework for bicycle and pedestrian friendly areas. Streets must provide an efficient and interconnected network for pedestrians, bicycles, and vehicles. Street function and appearance must be balanced with the built environment to create a pleasant and safe experience for travelers, residents, and business owners. An interconnected street network disperses vehicle traffic, allowing for narrower streets and a more comfortable pedestrian environment. On-street parking and street trees help define a comfortable pedestrian realm buffered from vehicular traffic.

Multi-Use Paths

A multi-use path is a paved facility separate from vehicle lanes that is available for non-motorized modes including pedestrians, cyclists, skaters, and wheelchairs. These paths may run parallel to the roadway, such as the southern leg of the St. Marks Trail, or may serve as a shortcut along a utility easement, such as portions of the Goose Pond Trail. Another option for a multi-use facility is an easement that connects adjacent neighborhoods or land uses, such as a cut-through from a local street to a shopping center. Florida DOT design guidelines recommend 12-foot widths for paved, multi-use paths.

SIDEWALKS

Public sidewalks should be provided on both sides of all urban roadways. Sidewalks should be wide enough to comfortably serve the volume and type of pedestrian traffic expected in a particular area. For example, certain urban core areas may benefit from a sidewalk wide enough to accommodate heavy pedestrian traffic in addition to outdoor dining or retail display. All sidewalks should be designed to have a minimum width of five feet. Sidewalks and pedestrian facilities should meet or exceed *Americans with Disabilities Act (ADA)* regulations to ensure the safety and access for all citizens. Curb ramps provide sidewalk and crosswalk access to the elderly and persons with disablities throughout the pedestrian network. Curb ramps should be included at all intersections and pedestrian crossings. Pedestrian pads at transit stops create a paved link from the sidewalk to the curb, making it easier for wheelchairs to get on the bus.

Sidewalks should maintain a 3′ minimum separation between the road and the paved sidewalk. This zone provides a buffer between pedestrians and vehicular traffic. Street trees are recommended to provide shade for pedestrians and are also an effective way to ensure a comfortable pedestrian zone protected from moving traffic. This 3′ seperation may be used as a planting strip for street shade trees with a caliper of 2.5″ to 3″, spaced one for every 35′ of street frontage. Street trees should not obstruct visibility at intersections.

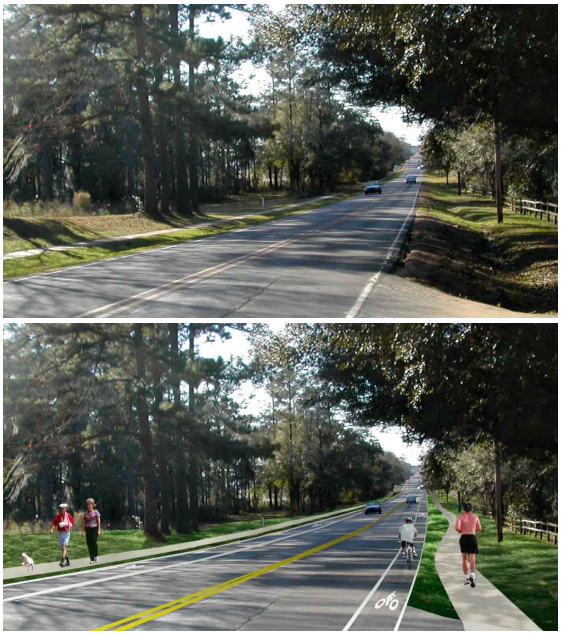

Figure 5 - Sidewalk and bike lane photo-simulation along Paul Russell Road

BICYCLE FACILITIES

The selection of appropriate streets for bicycle lanes is very important for the safety and the continuity of the bicycle system. Streets that provide the most direct and safest route to popular destinations such as, business districts, schools, parks, etc., and trail heads should be primary choices for inclusion on the on-street bicycle system.

Designated Bicycle Lanes

A designated bicycle lane is a portion of the roadway designated by striping, signing, and special pavement markings for the exclusive use of bicyclists. For safety purposes, sidewalks are not encouraged as substitutes for bicycle lanes. Regulatory bike lane signs inform motorists and bicyclists of this condition and are supplemented with pavement markings, including striping. Bike lanes are one-way facilities where the bike traffic moves in the same direction as the adjacent vehicular movement. In circumstances where on-street parking occurs, the bike lane should be located between the parking area and the travel way. Bike lanes should never be placed between the parking lanes and the curb, and parking lanes should be clearly marked with striping markings. The minimum bike lane width for curb and gutter roadways should be four feet. When on-street parking is present, the bike lane width should be five feet wide. At intersections with right turn lanes, the bicycle lane should continue adjacent to the through lane between the through lane and the right turn only lane. Advancing the stop bar in the bicycle lane ahead of the stop bar for cars creates a queue area for cyclists and increases their visibility to drivers.

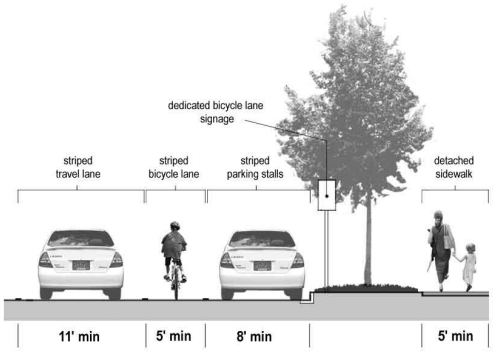

Figure 6 - Designated Bike Lane with On-Street Parking

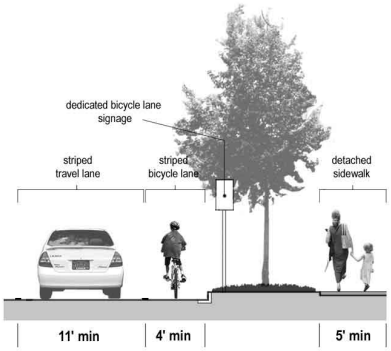

Figure 7 - Designated Bike Lane w/o On-Street Parking

Undesignated Bicycle Lanes (Paved Shoulders)

An undesignated bicycle lane, or paved shoulder, is open to motorized traffic. The use of "Share the Road" signage is useful to alert motorists to the likely and legitimate presence of bicyclists and to encourage cooperation between motorists and bicyclists. Undesignated bicycle lane marking arrows can be useful to define the likely travel corridor of bicyclists within the this lane.

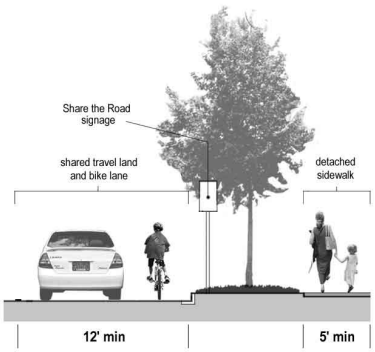

Figure 8- Undesignated Bicycle Lane

Bicycle Boulevards

A bicycle boulevard is a roadway that is shared by bicycles and cars. There is no single design for a bicycle boulevard; rather they are typically local streets redesigned to reduce cut-through traffic and balance local automobile traffic with bicycle traffic. Basic tools for bicycle boulevards include signage, unique pavement materials and markings, and landscaping. Site specific tools include intersection treatments such as bulb-outs and traffic circles or roundabouts, special markings for crosswalks, and special timing of traffic signals to allow for safe navigation of intersections. Berkeley, California has developed a toolbox of strategies for the design and implementation of bicycle boulevards - (http://www.ci.berkeley.ca.us/transportation/Bicycling/BB/Guidelines/linkpag.htm).

Bicycle Sensitive Signals

Bicycle sensitive signals provide added incentive and convenience for bicycle travel. Bicycle sensitive signals are commonly used when bicycle lanes are located between the through- and right-turning traffic lanes. The signal sensors must be well-marked on the pavement with nearby posted signs indicating that "X" marks the proper spot for bicycles to trigger the traffic signals.

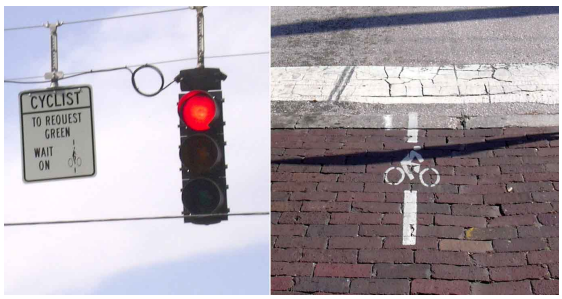

Figure 9 - Bicycle Sensitive Signal

PEDESTRIAN AND BICYCLE CROSSINGS

Pedestrian and bicycle crossings are a critical element of the pedestrian network. Safe, convenient, and highly visible crosswalks make a sidewalk system usable and appealing, encouraging pedestrian activity. Where pedestrian and bicycle ways access or intersect a roadway, landscaping should not obstruct visibility of non-auto traffic to vehicles approaching on the roadway. Crosswalks should be provided at all signalized intersections. Additional mid-block crossings should be provided when there are large uninterrupted distances between intersections or heavy pedestrian traffic. Crosswalks should be clearly marked and located carefully in relation to vehicular traffic. Marked crosswalks (specially paved, stamped, or painted) indicate the appropriate route across traffic for pedestrians, assist the visually impaired, serve as a reminder to motorists, and add aesthetic value to an area. Crosswalk pavers must meet ADA requirements.

Intersections and crossing areas with heavy traffic or wide crossing distances require timed pedestrian crossing signals to aid pedestrians and motorists. To ensure safety and usability, crossing distances should not exceed 50 feet. Curb extensions (bulb-outs) and median refuge islands should be used to reduce crossing distances for pedestrians. Bulb-outs also provide additional space at intersections, increasing visibility between pedestrians and motorists. To assist pedestrians who are visually or mobility impaired, curb ramps should be incorporated parallel to the crossing to function as a directional tool.

Figure 10 - Mid-Block and Angled Pedestrian Crossings

Angled crosswalks may be used to further enhance visibility between pedestrians and motorists. Angled crosswalks are oriented to allow pedestrians to face oncoming traffic, instead of moving perpendicular to it. This orientation creates a strong awareness and visual connection between moving traffic and crossing pedestrians.

Figure 11 - Bicycle parking should be separated from pedestrian walkways and convenient to the building entrance *(image courtesy of pedbikeimages.org / Dan Burden)*

BICYCLE PARKING

Secure, conveniently located bicycle parking is necessary to encourage bicycle use as an alternative mode of transportation. The bicycle parking area should be as close or closer than the nearest parking space and located in proximity to the building entrance to ensure visibility and accessibility. Large, distant, or hidden bicycle parking areas serving multiple buildings are discouraged. Smaller, more convenient racks provide greater accessibility and security for cyclists. The bicycle parking area location should not inhibit pedestrian or vehicular flows. Additionally, the area should provide aisles separating individual racks. The minimum aisle width between each row of parked bicycles should be 48 inches. Wider aisles should be used to accommodate areas with heavy bicycle traffic. A sheltered rack area located adjacent to a building wall or an awning is preferred to protect bicycles and riders from the elements. Effective bicycle racks should support the bicycle upright by its frame in two places. This allows for the bicycle to be secured in two places and prevents the bicycle from tipping over. The rack must be anchored and resistant to metal cutting tools to prevent vandalism.

Bicycle lockers are recommended for extremely high traffic, high turnover areas where bicycles are often parked for extended periods. A locker box should provide a sturdy, secure, and weather proof place to store a bicycle, equipment, and additional personal items. Parking garages, railroad and bus stations, and other transit hubs are examples of locations that should have bicycle lockers available in addition to bicycle racks. Lockers should be located in an area that is monitored to provide security.

As a minimum standard for commercial and retail development, one bicycle parking space should be provided for every four motor vehicle spaces. Multi-family residential uses and public institutional uses, such as community schools, should provide one bike space per three vehicle spaces.

PARKING

The proper supply, placement and design of parking is a key element in creating an environment conducive to pedestrians, bicyclists, transit users, and those traveling by car. Standard parking requirements can lead to an oversupply of parking spaces and open expanses of asphalt. Reducing minimum off-street parking requirements and setting average-usage standards instead of peak-usage standards make additional land available for development. Typical requirements should be 3 to 4 spaces per 1,000 square feet. To reduce surface parking needs, on-street parking should be counted towards the required number of spaces. Structured parking is appropriate in high-density areas. Garages reduce the total amount of paved area and can blend into an urban setting by maintaining the scale and facade articulation of surrounding buildings. Large lots of surface parking should also relate to the established block size of the surrounding street grid.

Figure 12 - On-street, Surface, and Structured Parking

PARKING LOT LAYOUT

Parking lots should be placed at the rear of buildings rather than directly adjacent to the roadway. This configuration allows the buildings to be drawn to the street edge and contribute to the pedestrian atmosphere of the street. This also provides convenient building entry access from the sidewalk and transit. This strategy reduces walking distances and enlivens the streetscape while leaving parking quantity unchanged.

Parking lots should provide clear, safe pathways for pedestrians. It is important to have direct and well-marked circulation between parking spaces and building entrances. Parking rows should be organized perpendicular to the building. This limits the number of aisle crossings and creates a clear, direct route for pedestrians. Parking areas should integrate paved paths that are comfortably separated from the parking aisles. As with streetscapes, trees should be provided to shade walkways. Buildings with both street frontages and parking lot frontages should provide two entrances, one providing access from the street sidewalk and another providing access from the parking area. Pedestrian alleys may also be provided as links between the street and parking area. New development shall provide a direct, unobstructed pedestrian access way from the public street to the building entrance. This access way should be a standard sidewalk with pavement markings at any places it crosses with parking rows or service drives.

ON-STREET

On-street parking provides parking spaces within the thoroughfare right-of-way. It contributes to the street environment, helping to buffer pedestrian space from vehicular traffic. Spaces are distributed evenly along the street edge, helping maintain visual consistency and appeal in downtown areas. On-street parallel parking is preferred over angled parking on low speed urban streets. Parallel parking provides more space for bike lanes and wider sidewalks.

SURFACE

Landscaping is required to break the visual blight of large paved areas. Surface lots should be placed in the rear of buildings or in block interiors to minimize visual impact. Trees provide screening and noise reduction to help ease disruption. Well-defined pedestrian pathways can be used to break up parking rows and provide safe access to buildings. Plantings within parking lots also help to reduce storm water runoff, filter air, provide shade, and maintain property values.

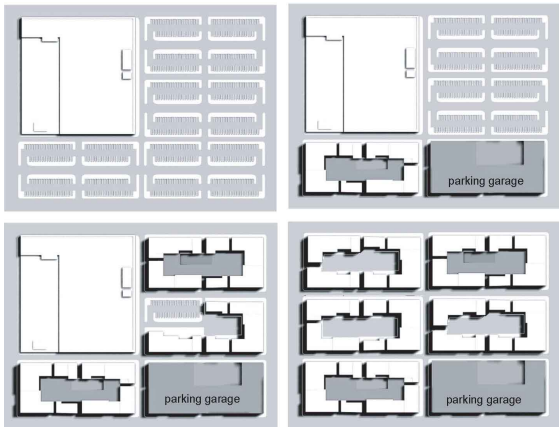

Figure 14 - Large surface parking areas present the opportunity for phased, mixed-use redevelopment

STRUCTURED

Structured parking allows for an efficient use of space in high density areas. Garages eliminate the need for extensive surface parking and help maintain a consistent density within downtown areas. Garages should be located within block interiors wrapped by perimeter liner buildings, or as stand alone structures with active, retail use occurring on the first floor. They should have facades that reflect the proportion, rhythm and massing of surrounding buildings.

PLANNING FOR THE FUTURE

Low density retail development is often characterized by wide, uninterrupted expanses of asphalt. Parking design and site layout often limit the opportunity for future development and increased density. Well-planned parking strategies, however, can prepare a site for future growth. Arranging surface parking in accordance with standard block size and orientation allows the site to be developed gradually, lot by lot and block by block. Aisle designs should be consistent with downtown right-of-way dimensions, creating a framework for future road development. Piece by piece, paved open lots may be transformed into a higher-density activity center of commercial focal point.

LIGHTING AND LANDSCAPING

LIGHTING

Lighting should be carefully integrated with the built landscape. Building, streetscape, and high-speed roadway lighting have unique purposes and requirements. Scale, intensity, and fixture design should vary between areas of different densities and uses. Ornamental light posts and fixtures help to create an attractive streetscape and should be consistent with the architectural character of the immediate area. In addition to concerns of aesthetics and scale, lighting is an important element of public safety. All areas with pedestrian and bicycle traffic should be well-lit to ensure visibility and safety. Well-lit streets and alleys help to promote a secure environment and encourage night time activity.

Pedestrian lighting should guide pedestrians to and along intended walkways and highlight destination points including building entrances, public spaces, and significant intersections. For pedestrian lighting, a large number of low-intensity lights is preferred to fewer, higher-intensity lights to create an attractive pedestrian streetscape. Pedestrian street lights should not exceed 12 feet in height and should have a maximum of 10,000 to 15,000 lumens, with light posts placed no further than 30 feet apart. For natural quality, lighting elements should provide full-spectrum light to prevent color distortion. Light shields keep light focused downward, preventing light from leaking into adjacent land uses and polluting the night time sky. Ornamental fixtures allow lighting to fit seamlessly into the streetscape.

Figure 15 - Special lighting and landscape treatments highlight crosswalks for pedestrians and motorists. Similar treatments may be used to announce special districts or downtown areas.

Roadway lighting should be designed to enhance the safety of vehicular and pedestrian flows. Light posts may be located at both edges of the right-of-way or within a landscaped central median. Roadway lighting should be designed to provide the minimum lighting necessary to assure adequate vision and comfort along streets and to minimize glare and adverse impacts on adjacent properties. Ornamental posts or posts that incorporate signage may be used to highlight dense centers and gateways. Lighting should be concentrated at intersections and crosswalks to ensure visibility for pedestrians, bicyclists, and vehicles. Roadway lighting should transition to pedestrian street lighting in walkable areas.

Exterior building and landscaping lighting serves safety and aesthetic purposes, illuminating dark areas and providing highlights and accents. Effective lighting should showcase building and landscape features, add emphasis to important spaces and promote night time vitality, appearance, and safety. Lighting should be used to highlight entries and architectural features where appropriate. All light sources should be carefully located, aimed, and shielded so that light is not directed toward adjacent uses, streets or roads. Building mounted lights may be used in place of light posts to safely illuminate alleys and narrow side streets.

LANDSCAPING

By drawing natural elements into the built environment, landscape helps to maintain a pedestrian-friendly and visually appealing streetscape. Landscaping includes trees, shrubs, and other plantings as well as hardscape elements such as brick and pavers. Landscape design should aesthetically complement and enhance the character of buildings, roads, and the pedestrian streetscape.

Landscape design should help to define major pedestrian paths and building entrances. Landscape treatments, including planting strips and street trees, are recommended to create a comfortable separation between vehicular traffic and sidewalks to form a safe, intimate, and attractive environment for pedestrians. Trees and vegetation may also be used to screen parking lots and building and service equipment. To ensure the safety and security of sidewalks, buildings, and roads, such screens should not form opaque barriers or create concealed areas. In keeping with the safety recommendations of the Crime Prevention Through Environmental Design (CPTED) method, a landscaping 'clear zone' from 2' to 10' above the ground provides safety and clear visibility. Specific landscape treatments are encouraged for significant streets and entrance corridors. Hardscape and specialty pavers should be used to highlight important public spaces and signal significant roadway elements including bus stops and crosswalks. Where pedestrian and bicycle ways access or intersect a roadway, landscaping should be setback 6' from the road or be limited to not more than 3' in height to ensure visibility of non-auto traffic to vehicles approaching on the roadway.

Landscape materials should enhance the building's texture, color, and pattern. Primary consideration should be given to elevations that border public streets. Buildings may also use landscape elements to create outdoor civic spaces and seating. If planned considerately, trees can provide solar shading and visual screening for interior spaces. Trees and plantings also have important environmental benefits, protecting air quality and water run-off and providing shade for buildings, cars, and pedestrians.

CPTED

Crime Prevention Through Environmental Design (CPTED) provides the proper design and effective use of the built environment to lead to a reduction of crime and fear, and an improvement to the quality of life in a community. CPTED is based on the concept that crime prevention is a community-wide responsibility, not only a police responsibility.

There are four integral CPTED strategies:

- Natural Surveillance - promotes visibility and is responsible for keeping potential offenders observable.
- Territorial Reinforcement – extends a sphere of influence over a space through its physical design, where residents take responsibility in exerting control over their private and semi-private environments.
- Natural Access Control - seeks to decrease crime risk by clearly indicating public realms, denying access to private entries, and creating a perception of risk to a potential offender.
- Maintenance - proper upkeep and care and landscaping and lighting treatment maintenance are an expression of ownership over a space and will promote the other principles of CPTED.

Natural Surveillance
• Mixed-use development is encouraged to ensure people are present at all times of day. • Exterior doors should be visible from the street and neighbors. • Parking areas and pedestrian walkways should be well lit and visible from all doors and windows. • Landscaping should not create blind spots or hiding spots; Shrubbery should be no more than 3′ high for clear visibility. • Avoid opaque fences and walls to promote safety with minimum loss of privacy.
Territorial Reinforcement
• Exterior private areas should be clearly distinguishable from public areas. • Low landscaping or changes in ground treatment can be used to signal property boundaries. • Design spaces that encourage interaction between neighbors; e.g. seating, playgrounds. • Front porches or stoops create a semi-public transitional area. On-street entrances for multi-family residential uses create a sense of community ownership for the streetscape.
Natural Access Control
• Streets are to be designed so that cut-through traffic is discouraged. • Entrances should be clearly defined by walkways, signage, lighting, landscaping, and architectural elements • Pedestrian circulation routes should be clearly defined with paving patterns, lighting, and landscaping
Maintenance
• Proper maintenance of lighting fixtures and landscaping • Minimize conflicts between surveillance and landscaping • Property is to be in good repair and free from trash and litter

CONSIDERATIONS FOR THE ELDERLY AND YOUTH

All pedestrian and bicycle facilities should exceed minimum ADA requirements. Particular care should be given to pedestrian crosswalks and school zones. In addition to ADA requirements for physical design, consideration should be given to roadway speeds, crosswalk signalization and markings, and the overall visibility between pedestrians, motorists, and bicyclists to ensure safety and accessibility. Count-down pedestrian signals are encouraged at crossings to aid pedestrians in determining that adequate time is provided for crossing. Bulb-outs and refuge islands may also be used to minimize crossing distances and provide a safe marked area for pedestrians between the travel lanes. Larger signage text and automated flashing yellow lights may be appropriate for intersections in areas where elderly populations are significant.

ADA Minimum Standards

According to the Florida Department of Transportation (FDOT) Plans Preparation Manual, pedestrian facilities must be designed to accommodate citizens with physical and visual disabilities. This includes curb ramps placed parallel to the crossing itself, which help citizens, with visual disabilities or those using a wheelchair, navigate safely. Where a curb ramp is present on one side of a roadway, another curb cut or at-grade sidewalk must be provided on the other side of the roadway. Sidewalks must also be designed with a specific degree of cross-slope to allow proper drainage, so that rain water does not impede the progress or safety of pedestrians with disabilities. Parking spaces of a specific size must also be provided for the use of lift-equipped vans, and bus stops should be designed to allow wheelchair access to the stop and from the stop to the bus.

More detail on ADA-compliant facility design may be found in Chapter 5 of the FDOT Pedestrian Planning and Design Guidelines.

Sidewalks	• Sidewalk must have a clear width of at least 36″ (FDOT standards require 60″ minimum) • Cross-slope may be no greater than 2% • Walkarounds at driveways must be at least 48″ wide with 2% maximum cross-slope • Sidewalk surfaces must be firm, stable, and slip-resistant (FDOT standards require broom-finished concrete)
Street Crossings	• Crosswalk must have a width of at least 6′ • Curb ramp must be provided within the limits of any crosswalk markings • Cross-slope may be no greater than 2% • Transition from curb ramp to street surface should be no greater than 11%
Curb Ramps and Detectable Warnings	• Curb ramps may have a running slope no greater than 1:12 (8.3%) • Cross-slope may be no greater than 2% • Curb ramp must have a landing a minimum of 48″ deep by the width of the curb ramp • Curb ramps must have detectable warning that extends the full width of the ramp and 24″ from back of curb.

Pedestrian Pushbuttons	• Pedestrian push buttons may be no more than 48″ above the walking surface (FDOT standards require 42″) • There must be a level maneuvering area in front of each pedestrian button that is at least 30″x48″ • The reach distance from the edge of the maneuvering area to the ped button may be no more than 10″
Signs & Landscaping	• Sign posts must not obstruct the required clear sidewalk width of 36″ • Signs must be at least 80″ above the walking surface (FDOT standards require 84″) • Any object located between 27″ and 80″ above the walking surface that protrudes into the walking path may project no more than 4″ from a wall or 12″ from a post. At no time may a projecting element reduce the clear width of the path to less than 36″

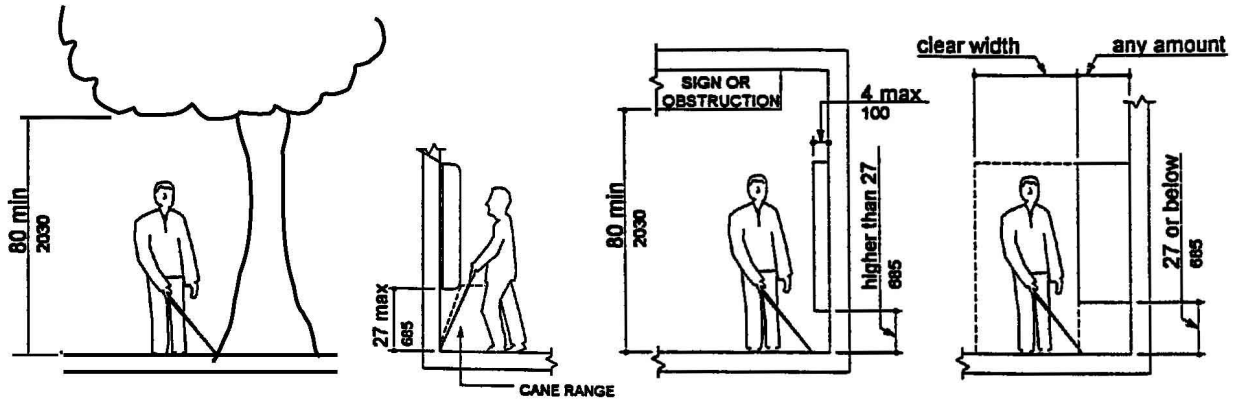

Figure 16 - Signs and Landscaping

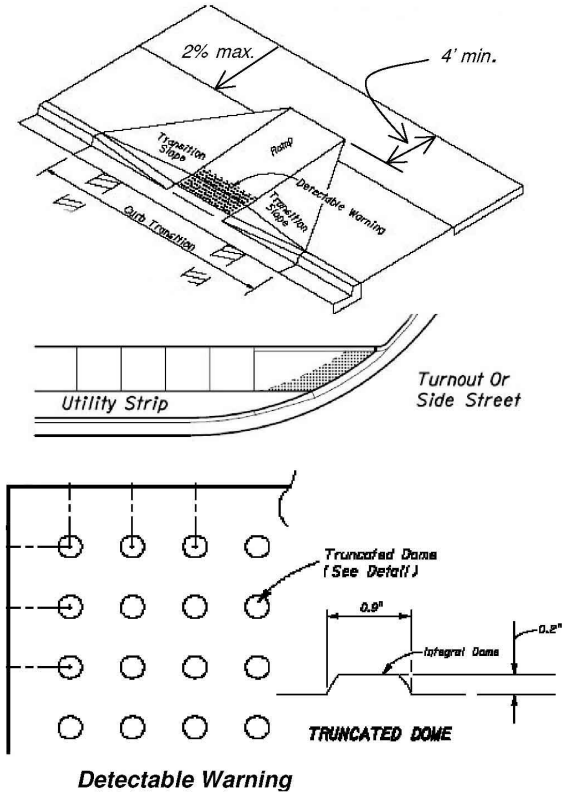

Figure 17 - Curb Ramps and Detectable Warnings

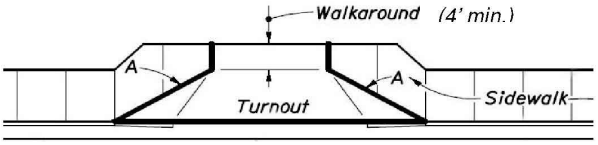

Figure 18 - Sidewalks

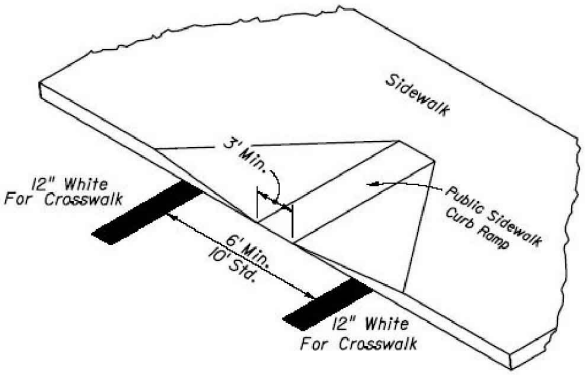

Figure 19 - Street Crossings

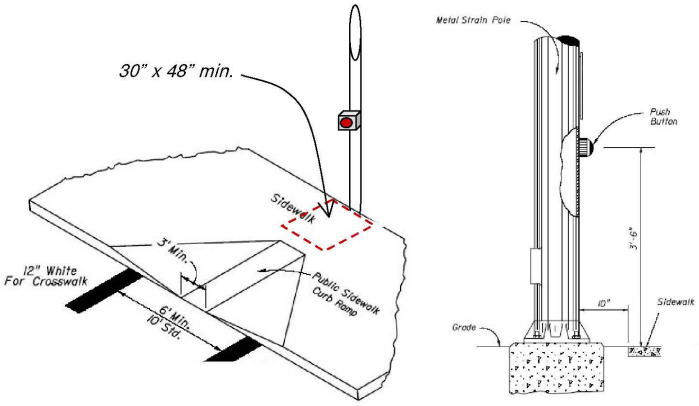

Figure 20 - Pedestrian Pushbuttons

SECTION II: IMPLEMENTATION STRATEGIES

Implementation of bicycle- and pedestrian-friendly community design must be a collaborative process undertaken by the public and private sectors. Regulatory measures instituted by the public sector may include the following:

- Amendment of the city and county Comprehensive Plans to provide policy guidance, such as:
    - Urban Design Element
    - Establishment of community focal points and activity centers where walkable, mixed-use development will be required
    - Installation of bicycle sensors at major intersections
    - Prohibition of right turns on red at specific intersections;
- Adoption of city and county Land Development Code regulations for streets and street networks, sidewalks, bicycle parking and facilities, lighting, and parking lot design and placement;
- Municipal Services Taxing Units (MSTU), long-term programs in designated areas that are paid in small increments by residents of the taxing unit; used to fund projects such as streetscaping or parking garages;
- Modification of zoning code to allow higher densities and more pedestrian-oriented and mixed-use districts;
- Amendment of City of Tallahassee Public Works Design Standards. Another route for encouraging bicycle and pedestrian development is to provide incentives to private developers:
- Density bonuses allow higher floor area ratios in exchange for specified bicycle and pedestrian facilities installed at the developer's expense;
- Low-interest loans to encourage walkable, pedestrian-scaled redevelopment;
- Reduced Developer's Fees for walkable pedestrian-scaled development;
- Establishment of Multimodal Transportation Districts, which are used in areas with transportation concurrency problems. Such districts require urban design standards that support site planning and design for non-auto modes and street connectivity.

BICYCLE AND PEDESTRIAN FACILITIES

The following tables display minimum and desired standards for a variety of facility types. These facility definitions and desired criteria represent ideal facility design aggregated from a variety of sources, including FDOT design guidelines, established standards in other municipalities, and published standards for pedestrian- and bicycle-friendly urban design.

SIDEWALKS

	Current Minimum Standard	Desired Over the Minimum Standard
Width	5′ when separated from traffic with 2′ (min.) buffer 6′ when placed at back of curb	Residential: Minimum 6′ unobstructed Commercial/Mixed use: Minimum 8′ unobstructed Urban Core: Minimum 12′ unobstructed
Location	All local and minor collector streets with development frontage on both sides All newly constructed roadways	On both sides of: - all arterial and major collector roads - minor collector and local roads - all roads within 0.25 miles of a school or park
Lighting	None set by local jurisdictions	- 8′ to 12′ light poles, placed no further than 30 feet apart, with full-spectrum light bulbs - maximum of 10,000 to 15,000 lumens
Shade	None set by local jurisdictions	Awnings or arcades to protect from the elements, trees spaced 30′ on center
Amenities	None set by local jurisdictions	Newspaper boxes, benches, planters
Buffer	Minimum 2′ horizontal buffer from traffic	Street side: Minimum 3.5′ horizontal buffer for local and collector streets. 5′ for arterials. On-street parking and/or bicycle lane also preferred Back side: 1′-3′ buffer to prevent encroachment from vegetation, walls, buildings, etc.
Materials	Concrete or asphalt	Bricks, pavers, or other decorative treatment (treated to avoid slippery conditions when wet)

BICYCLE FACILITIES

Designated Bicycle Lanes

	Current Minimum Standard	Desired Over the Minimum Standard
Width	4′ from lip of gutter 5′ when on-street parking is present	Wider bicycle lanes on roads with high motor vehicle speeds or heavy bicycle traffic
Location	Minor collector streets	All arterial and collector roads; local roads where ROW permits
Signage	MUTCD standard signs	Color-coded route system
Pavement Markings	Stencil with Bike Lane text and symbol	Minimum standards, plus embedded flashers or reflectors in areas with high automobile traffic
Pavement Condition	Free of debris, garbage, dead animals, drainage grates or inlets, manholes	Minimum standards, plus alternate pavement color and/ or materials to distinguish; bicycle-friendly grates

Shared-Use Lanes

Shared-use lanes are acceptable when right-of-way constraints exist on a four lane roadway. This treatment should be considered during all resurfacing projects if widening and right-of-way constraints prohibit bicycle lanes, or as a temporary measure until bicycle lanes are striped. This treatment is most appropriate for arterial roadways.

Undesignated Bicycle Lanes (Paved Shoulders)

Appropriate for rural roadways. A paved shoulder has the same width requirements as designated bicycle lane and should be delineated with a line, but should not have bicycle lane signs or special pavement materials or markings. Undesignated bike lanes shall include “Share the Road” signage.

INTERSECTIONS AND CROSSINGS

Intersections are where the paths of motorists, cyclists, and pedestrians converge. Every intersection contains a variety of conflict points where crashes may occur, so good intersection design requires that the paths and roles of all travelers are clear and visible.

	Current Minimum Standard	Desired Over the Minimum Standard
Spacing	None set by local jurisdictions	Arterials: 0.5 miles Collectors: 0.25 miles or less Locals: 500 feet
Geometry	None set by local jurisdictions	Maximum curb radius under 15′
Crosswalks	Lined crosswalks at least 10′ wide at all signalized intersections	Crosswalks oriented perpendicular to the sidewalk
Bicycle/ Pedestrian Signals	Walk/Don't Walk signals at all signalized intersections	Leading Pedestrian Interval
Vehicle Movement	No right on red when pedestrians present	No right on red at any time (downtown)
Signage	None set by local jurisdictions	Crosswalks, No turn on red, Accessible Pedestrian Signals, Bicycle Sensors to trigger signals

Pedestrian Emphasis and Pedestrian Supportive Intersections

For the purposes of the Tallahassee-Leon County Bicycle and Pedestrian Master Plan, two types of intersection treatments have been developed as blueprints for bicycle and pedestrian improvements at key locations. The Pedestrian Emphasis intersection is a higher level of treatment, including changes to the physical character of the intersection as well as pavement markings and signal improvements. These changes include:

- Painted and textured crosswalks
- Leading Pedestrian Interval – pedestrians begin crossing before conflicting traffic is released
- Countdown signals
- Decreased intersection radius and/or bulb-outs
- Raised medians extended into crosswalk
- Pedestrian-scale lighting to illuminate waiting pads
- Advanced stop bar for bicycle lanes; bicycle sensors in the pavement
- No right turn on red

At lower-traffic intersections, the Pedestrian Supportive treatment is a suitable alternative. This treatment includes:

- Painted and textured crosswalks
- Decreased intersection radius and/or bulb-outs
- Pedestrian-scale lighting to illuminate waiting pads
- No right on red when pedestrians present

Mid-Block Crossings

Many pedestrian crashes occur when a pedestrian attempts to cross the street at mid-block. Where such crossings are frequent, a special crosswalk between intersections may be appropriate. Such crossings should be designated with signage, flashing lights and highly visible pavement markings, because motorists do not expect pedestrians at mid-block.At mid-block crossings with particularly heavy traffic, a signal warrant study may be conducted to determine if a pedestrian-actuated signal may be installed.

MULTI-USE PATHS

A multi-use path is a paved facility that is separate from vehicle travel lanes, though it may or may not be within the right-of-way of a road. These paths are designed for walking, jogging, cycling, and in-line skating, and occasionally may also be designated for equestrian use as well. The design of multi-use paths is highly flexible, but they should be at least 12 feet wide and should have at least four feet horizontal clearance on each side.

SIGNAGE

The size, height, location, and lateral clearance of signage is regulated by the *Manual on Uniform Traffic Control Devices* (MUTCD). Within MUTCD requirements there is considerable room to create personalized wayfinding signage that reflects local preferences, such as a system of color-coded routes that connect defined locations, such as parks, historic sites, universities, and shopping districts. Typical signage and markings designate separate areas for pedestrians and faster-moving bicycles and skaters.

TRANSIT STOPS

Transit stops must, by definition, be accessed by wheelchair or on foot. Therefore, the minimum standards for transit stops should be sidewalk connectivity, posted route information and a bench for waiting passengers, and a 5'x8' concrete loading pad for boarding transit vehicles. Higher-volume stops should have additional amenities such as shelters, trash cans, newspaper boxes, bicycle racks, and electronic kiosks to display bus arrival times and other information.

LYNX, the Central Florida regional transit system, has developed a *Mobility Design Manual* to address issues of transit infrastructure design. TalTran's bus stop design criteria are adapted from LYNX and TCRP Report 19 Bus Stop Design Standards.

TRAILHEADS, HUBS, COMMUNITY FOCAL POINTS

Trailheads, transportation hubs such as the C.K. Steele Transit Plaza, and community focal points are destinations where all modes of transportation converge, providing the opportunity to raise the visibility and status of cycling and walking. Bicycle parking, internal and external sidewalk connectivity, interpretive and wayfinding signage, explicit pavement markings in areas shared with cars, and landscaping to shade and protect will highlight the presence of pedestrians and cyclists. Minimum standards for urban trailheads should include wayfinding signage and route maps, bicycle racks, seating, and public water fountains.

CURRENT MINIMUM STANDARDS

The following table compares City of Tallahassee and State of Florida recommendations and/or requirements for bicycle and pedestrian facilities. At this time no standards are available for Leon County.

TABLE 1 CITY, COUNTY, AND STATE STANDARDS FOR BICYCLE AND PEDESTRIAN FACILITIES

	Tallahassee Source: Proposed Public Works Design Standards	**Florida** Source: FDOT Plans Preparation Manual, Vol. I (unless otherwise noted)[1]
Sidewalks	**6.5** Required on all local and minor collector streets with development frontage on both sides, except in residential streets where average abutting residential lots are greater than 1 acre. Minimum required width 6 feet if sidewalk is located 18 inches or less from back of curb. **6.9** Traditional Neighborhood Design **6.11.1** Arterial Streets Suburban – 6′ minimum Central City – 8-12′ on both sides **6.11.2** Collector Streets Suburban– 6′ residential, 8′ non-residential Central City - 8-12′ on both sides, 12′ in downtown commercial areas **6.11.3** Local Streets Suburban – 6′ minimum in residential areas, 8′ in non-residential (one side of street only) Central City – 6-12′, depending on intensity of adjacent use; 12′ in downtown commercial areas	**8.3.1** Width: 1.5m (5 feet) when separated from traffic with 2′ (min.) buffer; 1.8m (6 feet) when placed at back of curb Should be provided on both sides of arterial roadways
Bicycle lanes (Designated)	**6.6** Shall be provided along both sides of all minor collector streets that form logical extensions to the adopted Bikeway Plan. **6.9** Traditional Neighborhood Design **6.11.1** Arterial Streets Suburban –required – 5′ (substitute 14′ outside lane where ROW is constrained) Central City – required except on downtown street where speed is expected to be less than 25 mph – 5′ (substitute 14′ outside lane where ROW is constrained) **6.11.2** Collector Streets Suburban – required – 5′ (substitute 14′ outside lane where ROW is constrained) Central City - required except on downtown street where speed is expected to be less than 25 mph – 5′ (substitute 14′ outside lane where ROW is constrained) 6.11.3 Local Streets Suburban – Not typically required Central City – Not typically required	**8.4.1** Width: 4′ from lip of gutter; 5′ when on-street parking is present and on rural roads Pavement markings: edge stripe to separate lane from traffic, and stencil of bicycle and "Bike Lane"
Bicycle Lanes (undesignated)	none	**8.4.2** Same requirements for width and location as Designated, but without special pavement markings or signage
Wide curb lanes	Allowed on arterial and collector roads where ROW is insufficient for designated bicycle lanes. See Bicycle Lanes (Designated) above.	**8.4.1** No longer constructed on state roadways
Shared-use paths	**6.6** Bicycle Facilities …As an alternative to required on-street bike lanes, a system of off-street bikeways to serve the same estimated bicycle trips may be approved.	Width: 6′ for one-way path, 12′ for two-way path Horizontal Clearance: 4′ on each side
Pedestrian overpasses	none	In accordance with AASHTO criteria; minimum width 8′ or the same width as the approach path; chain-link enclosure; ramp required, stairs optional; full-length handrails[1]

[1] FDOT Plans Preparation Manual, Chapter 8.7

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Bicycle Parking Guidelines. 2002: Maricopa County Department of Transportation; adopted by the Association of Pedestrian and Bicycle Professionals.

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Burden, Dan, Michael Wallwork, Ken Sides, Ramon Trias, and Harrison Bright Rue. *Street Design Guidelines for Healthy Neighborhoods*. 2002: Center for Livable Communities.

Central Florida Mobility Design Manual. 1995: Glatting Jackson Kercher Anglin Lopez Rinehart, Inc. & Helbert Halback and Assoc., Inc.; adopted by LYNX.

City of Seattle Excecutive Services Department - CPTED Guidelines:
http://www.cityofseattle.net/facilitydevelopment/docs/Apdx_1-P.pdf

FDOT Pedestrian Planning and Design Guidelines.

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