This master plan document represents the citizens’ ideas and vision for the future of transit on the FEC rail road and its integration into the City of West Palm Beach. The designs, illustrations, and graphics included within this report are meant to convey that vision and are conceptual by nature.
Although the City of West Palm Beach has passenger rail service on the CSX railroad, the FEC corridor, which runs through the downtown and the eastern neighborhoods, is a testament to the vital role railways played in the development of the city and South Florida. For about 70 years, passenger trains ran north/south from Jacksonville to Miami on the FEC, with east/west trains at key points through the state. Towns and cities grew around these stations, emanating east to the ocean and west into agricultural lands; the region utilized a connected, balanced transportation network of trains, cars, marine vessels, and bicycle/pedestrian routes. In the early 1960s, passenger service was eliminated from the FEC railroad, accelerating a trend towards suburban, auto-dominated sprawling land use patterns that have nearly consumed southeast Florida. Today, auto trips continue to dominate the transportation network, with transit accounting for less than 1% of all roadway trips. State experts project the population in the three southern counties (Miami-Dade, Broward, and Palm Beach) will grow by 48% through 2025; however, highway capacity is planned to only grow by 14%, accelerating the need for a multi-modal transportation network to support continued economic expansion, mobility, and a high quality of life.

For decades, local governments, citizens, and business leaders have advocated for alternative transportation modes through southeastern Florida and the state. The region's current passenger rail system, Tri-Rail, was established on the CSX tracks in the late 1980s as a commuter line running mostly west of I-95, serving eighteen stations along 72 miles. Given the steady increases in roadway congestion, gasoline prices, and environmental awareness, Tri-Rail's ridership has steadily increased over two decades of operation. In the first six months of 2008, Tri-Rail became the fastest-growing commuter rail system in the country, with some statistics indicating an increase in ridership of more than 30%. Palm-Tran, the county bus service, has also experienced significant ridership increases, with nearly a 30% ridership increase over the past three years. The growing demand for transit has expanded the state's focus east to the FEC tracks and, since 2005, the FDOT has been leading a three-county “South Florida East Coast Corridor” (SFECC) Study. This effort is examining the reintroduction of passenger transit on the 85-mile long section of the FEC railroad that connects downtown Miami to Jupiter, which could yield tremendous benefits to individual communities and the region as a whole.

Many regions of the US have developed balanced transportation networks, with easy interconnectivity between modes. The integration of land use and transportation planning has been determined to be critical to success. Where land use patterns are transit-supportive, characterized by a mix of land uses, comfortable pedestrian accessibility, and properly placed buildings with appropriately designed improvements, transit ridership tends to increase. This trend of transit-oriented development (TOD) has been recognized by the local, state, and federal decision-makers as a key component to improve the success of transit. As a result, the SFECC Study currently underway has highlighted land use planning in conjunction with transit planning along the FEC Corridor.
Communities receive many benefits from well-integrated land use/transportation planning. Operationally, the land use pattern dictates the ease in which transit can function. For users, a transit-supportive environment improves the ease and efficiency of accessing the transit system. For property owners, a well-organized land use plan that addresses the interplay of building form and pattern, mobility, and land use increases predictability. Predictability creates confidence in potential investors, thereby stimulating desired development. The funding arrangements for transit also rely on land use patterns. Like roadway projects, transit funding is typically a blend of federal, state, and local dollars, with federal funding playing a primary role. Increasingly, the federal government has included land use ratings in its funding decisions; therefore, the region's opportunities to secure federal funding is increased as land use patterns become more transit supportive.

For the City of West Palm Beach, this charrette offered an opportunity for citizens, property owners, and other stakeholders to identify and evaluate future station locations and the related surrounding land use patterns. This visioning process expanded the role of citizen input, highlighting the relationships between land use, mobility, economics, and other factors. With an adopted Citizens’ Master Plan, the City will be able to clearly communicate its expectations to citizens, business owners, investors, and various agencies well ahead of the capital investments necessary to enable the transit system. With the future transit system as the core focus of the charrette, the Citizens’ Master Plan addresses the surrounding land use patterns to maximize the benefits of transit for the community. Over time, the implementation of the Citizens’ Master Plan will encourage transit-supportive development, both public and private, which will produce a more successful transit system as it evolves. This is crucial as issues of sustainability, energy, and mobility become paramount to local governance in Florida.

The Citizens’ Master Plan and charrette would not have been possible without the support, cooperation, and enthusiasm of the citizens and staff of West Palm Beach. A special note of gratitude goes to the:

**City Commission**
Mayor Jeri Muoio, Commissioner Keith James, Commissioner Kimberly Mitchell, Commissioner Sylvia Moffett, Commissioner William Moss, Commissioner Isaac Robinson, Commissioner Molly Douglas and Mayor Lois Frankel

**City Staff**
City of West Palm Beach Planning Department
City of West Palm Beach CRA
City of West Palm Beach DDA

**Sponsoring Agencies**
SFRTA
Palm Beach MPPO
FDOT, District 4
# Treasure Coast Regional Planning Council

## Indian River - St. Lucie - Martin - Palm Beach

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>Background</td>
<td>5</td>
</tr>
<tr>
<td>Creation of the Charrette Master Plan</td>
<td>21</td>
</tr>
<tr>
<td>Principles of Planning and Urban Design</td>
<td>29</td>
</tr>
<tr>
<td>Existing Conditions</td>
<td>53</td>
</tr>
<tr>
<td>CSX-FEC Connector Charrette Master Plan</td>
<td>59</td>
</tr>
<tr>
<td>Implementation</td>
<td>121</td>
</tr>
<tr>
<td>Glossary</td>
<td>125</td>
</tr>
<tr>
<td>Acronyms</td>
<td>130</td>
</tr>
</tbody>
</table>
Purpose

The purpose of this effort, as part of the ongoing South Florida East Coast Corridor Study (SFECC), is to reactivate passenger rail service on the existing FEC corridor infrastructure in a manner that will best serve the surrounding communities and ensure the success of the new service. The ultimate vision is to establish an integrated transportation network that combines Tri-Rail, local transit, and new SFECC services, working in unison to establish a viable transit system. A combination of local and express services that balance travel speed with local access will provide efficient, attractive, sustainable transportation options for coastal communities in the region.

In coordination with the ongoing SFECC, the West Palm Beach CSX-FEC Connector Charrette Master Plan provides clear design recommendations for (1) connecting the FEC and CSX rail lines, (2) primary station locations, (3) transit and pedestrian links among parcels, and (4) detailed urban design and redevelopment scenarios around potential stations. During the Tier One phase of the SFECC, a connection between the two rail lines and eight potential stations on the FEC were identified within the City limits. These determinations were made due to the close proximity of the FEC and CSX, the densely populated adjacent areas, the significant job base in the City, and the location of regional shopping and workplace destinations.

This effort has been a multi-agency process including the Florida Department of Transportation (FDOT), the Palm Beach Metropolitan Planning Organization (MPO), South Florida Regional Transportation Authority (SFRTA), the Treasure Coast Regional Planning Council (TCRPC), and the elected officials, business leaders, and residents of the City of West Palm Beach.

Study Area

The Florida East Coast (FEC) rail line, once the main transportation corridor along the east coast of Florida, passes through the downtowns of major cities from Jacksonville to Miami. The inception of the City of West Palm Beach is intrinsically tied to the FEC rail road, as the extension of the rail road into Palm Beach County by Henry Flagler sparked its settlement. The FEC corridor traverses the city, running through the city’s downtown and historic neighborhoods. The focus of the study is the area extending one-half mile east and west of the FEC corridor within the City boundaries.
Key Recommendations

Given its early growth patterns, West Palm Beach is positioned to receive tremendous benefits from access to a revived passenger rail system on the FEC corridor. The surrounding areas are dense, interconnected and highly walkable, characteristics of places that embrace good transit systems. For West Palm Beach, the combination of its regional prominence, potential ridership, and physical qualities establish the possibility of up to eight new local train stations along the FEC, as well as a new Airport Station located on the CSX rail line.

After considering four alternatives, the recommended location of the CSX-FEC connector rail is along 25th Street in the Northwood industrial area. The crossover rail line proposes a future station. Constructing the new connector will require moving some businesses and the acquisition of additional right-of-way; however, the master plan demonstrates that the industrial area has room to accommodate most, if not all, relocated businesses, and the potential to utilize the investment of new infrastructure to augment both the viability of the industrial area as well as reflect the importance of two sacred sites in the area (the Storm of ’28 Memorial and the Evergreen Cemetery).
Key Recommendations

1. The 25th Street Industrial Area is the preferred location for the CSX-FEC connector;
2. Eight local train stations are planned for the following areas, although it is not likely all will be implemented:
   - Forest Hill Boulevard (Palm Coast Plaza site)
   - Southern Boulevard
   - Belvedere Road
   - CityPlace (Hibiscus Avenue)
   - Banyan Boulevard
   - Palm Beach Lakes Boulevard
   - 25th Street
   - St. Mary’s Medical Center (Greenwood Avenue);
3. The Forest Hill and Belvedere Stations have significant redevelopment potential, which should occur in the form of good urbanism, which supports transit-oriented development;
4. The main Airport Station should be located at the intersection of Southern Boulevard and the CSX, consistent with the SFRTA analysis.
BACKGROUND
Historical Growth Trends in South Florida

The history of growth in Florida is one of real estate creation and development. In less than four decades, swampland and mangrove laden shorelines were drained, platted, and turned into lots for sale to northerners looking to retire, heal, or hide. The current character of south Florida has been defined by accommodating cyclical migrations of new residents from other states and countries. Growth and development emerged as the primary economy of many areas of the State, leaving valuable lessons regarding how Florida has grown and why.

The Role of the Railroad in the History of West Palm Beach

Julia Tuttle, credited as the “Mother of Miami,” famously sent an orange blossom to Henry Flagler during the great freeze of 1895 as an enticement to extend his railway to Miami by proving that the freeze had spared the Miami River area. Her strategy and persistence paid off. The rail was extended. Stops along the way gave birth to Palm Beach, West Palm Beach, and Miami, terminating at the already established city of Key West. Unlike settling other parts of the nation, settling Florida required dredging as the vast majority of “land” was sheeted over with Everglades water. During this time, the State was offering land to those who would build railroads or drain the “swamp and overflowed” regions south of Orlando. Consequently, land barons and railroad companies were the primary settlers of south Florida.

By 1901, Flagler’s railroad extended south of Miami, and his string of new settlements and hotels from St. Augustine to Key West proved to be a strong allure to wealthy northerners looking for winter repose in the Florida sunshine. With the wealthy vacationers came the notion of opportunity: given the will and the right equipment, a vacationing baron could convert useless muck into valuable real estate to be sold to future vacationers, retirees, and land speculators.

Henry M. Flagler, a partner in Rockefeller’s Standard Oil Company, was building the railroad that would open the East Coast of Florida for development. In addition to providing transportation, Flagler added luxurious hotels and also created destinations. The main attraction, then like now, was the region’s weather. Flagler built two hotels in St. Augustine: the Ponce de Leon (1885) and the Alcazar (1888). The architecture was fanciful and romantic, recalling the Spanish past. The fact that they were located in the oldest city in the United States, founded and settled by authentic conquistadors, added flair to the resorts. However, the emphasis was fantasy, not historicism. The architects often found their inspiration in picture books on distant locales.

Excited by the possibilities of creating more resorts, Flagler bypassed established growing towns such as Fort Pierce and Stuart and built his next hotel on the island of Palm Beach. In 1893, construction began on the largest hotel in the world: the Royal Poinciana. Two years later, construction began for the Palm Beach Inn, known today as The Breakers Hotel.
At the time, few people lived on the shores of the Lake Worth Lagoon. Juno Beach was the county seat of Dade County. “In a few years there’ll be a town over there as big as Jacksonville, and St. Augustine will be a way station for it.” Flagler was speaking of West Palm Beach, which today is the principal city of the region.

West Palm Beach was originally built on the shore of Lake Worth to house those who constructed and serviced Flagler’s hotels, which were located across the lagoon on the barrier island. Flagler’s surveyors laid out a simple grid of rectangular blocks perpendicular to the shore. Clematis Street, a substantial main street, connected the train station to a ferry that took visitors to the island. Flagler built housing for many hotel workers in West Palm Beach. He also financed the city hall, a fire station, and a courthouse. He was not a land speculator. “I have not bought any land at Palm Beach with the expectation or desire to sell it again ... As to a matter of profit I think I can make more in one week in Wall Street than I can make in one year in real estate in Florida.”

The Town of Palm Beach grew as a winter resort. Victorian cottages, Flagler’s palatial Whitehall, and Mediterranean villas were built around the hotels. By the roaring twenties, Palm Beach had become a town with a mixture of housing types, civic buildings, and commercial structures. Flagler’s initiative evolved into a major industry: real estate development for “out-of-towners.” Many ambitious entrepreneurs followed his lead and created fantasy communities out of swamplands. All had big plans. Only some proved to be successful, yet for a number of years, the American public bought most that was offered.

**Boom and Bust**

Not unlike the boom and bust conditions of the century (1990-2010), Florida’s growth has seen periods of great retraction and stagnation. The boom times of the teens and twenties slowed with the 1926 hurricane and then halted with the stock market crash of 1929. George Merrick, founder and developer of Coral Gables, went broke and could not complete his original vision for the city. Between 1926 and 1930, real estate values in Florida dropped from $623 million to $441 million. Over time, however, the allure of sunshine, warm weather, and beaches kept converting vacationers to residents.
During the 1940s and 1950s, the U.S. Army Corps of Engineers dredged miles of drainage canals throughout south Florida in an effort to better manage water flow, mitigate flooding, and assist in irrigation for agricultural lands. These systems of canals had the added effect of draining lands further inland making these territories prime for development interests.

In the 1950s, developers rediscovered the nation’s retirement market. In some ways, the retirement boom was similar to the original boom of the 1920s. The region’s land became a product that could be marketed to out-of-towners. This marketing initially focused on fantasy, luxury, and good weather. After 1950, the emphasis was on affordable retirement and good weather.

Three major types of projects were developed for this market segment: garden apartments owned as condominiums, beachfront high rises, and mobile home parks. While the retiree market seemed to bring development and wealth, most of the housing units developed were small and inexpensive. Consequently, these new inhabitants paid little taxes but had increasing need for public services. During this time, the region’s metropolitan areas quadrupled. The cycle of reclaiming land from the marshes, platting it, and selling it for development continues to this day.

A Living Laboratory

The preferred development formula of the 1950s and 1960s had a noble goal: provide every American family with an affordable single-family house. This type of development had never been possible in American history and soon became the foundation of one of the most profitable industries in the region: the construction of subdivisions and, later, master planned communities for new residents.

In the past, adequate land for residences had been limited by available means of transportation. In colonial times, these areas were limited by the distances that could be traveled by foot. After the industrial revolution, residents could live in neighborhoods around transit stops. With the arrival of inexpensive automobiles, plentiful gasoline, and a network of highways linked to an interstate system, more land became suitable for building residences. Attainability increased and the overall quality of housing improved.

In West Palm Beach, I-95 replaced the natural ridgeline as the boundary of the original coastal settlements.
BACKGROUND

The combination of aging infrastructure and lifestyle expectations promoted by new developments lured residents out of the city center and original neighborhoods into new developments located west of I-95. Shops and businesses followed over time lining the roadways with strip shopping centers. As a result, consistent with a nationwide trend, the subdivisions of the 1950s and 1960s established the norms for sprawl development. City-making was reduced to a series of simplistic formulas that addressed each issue associated with growth in isolation.

In new development, uses were separated while the characteristics perceived as more marketable were maximized. Residential developments became increasingly isolated and uniform. Shopping centers increased in size and required enormous amounts of parking. No serious attempt was made to shape new developments into towns or to coordinate land use on adjacent properties. Since any parcel of land could be used for practically anything, the result was sprawl. Individually, each project provided a product that was marketable: inexpensive housing, cost-effective shopping, offices, etc. Collectively, the compounded effects of so many uncoordinated decisions levied a financial burden on the existing citizens. Taxes increased to fund building larger roads to service poorly laid-out suburban tracts, yet roads continued to be congested. Green space and natural areas gave way to development. Quality of life for many citizens declined.

A Sustainable Future?

During the 1970s and 1980s, a series of growth management laws were passed by the State in an attempt to combat the negative effects of suburban sprawl. Mandatory local government comprehensive plans were prepared and adopted. These plans contained policies that sought to address existing problems and create new standards for managing growth. Protection of the natural environment became an important element of planning. Greater care was given to the provision of services. Policies that addressed transportation, affordable housing, land use and other fundamental planning issues were adopted and implemented. Although most comprehensive plans included outstanding policies to address development processes, no vision was established for the ultimate, desired build out of most communities, a weakness which partially undermined the intended effects of the policies.

Recent broad sweeping changes to Florida’s growth management policies reduce state oversight and lessen requirements for the assessment of environmental and community impacts from development. As development review shifts from the state to local governments, the importance of community participation in local planning decisions increases. Citizens must participate in creating a vision for the future of their community and support alternative methods to manage growth, ensure mobility, and improve quality of life.

TREASURE COAST REGIONAL PLANNING COUNCIL
Indian River - St. Lucie - Martin - Palm Beach
History of Transit in the Region

Like most east coast Florida communities, the development of West Palm Beach is inextricably tied to the Florida East Coast (FEC) railroad. Rail service was critical for economic expansion and passenger travel. Cities along Florida’s east coast flourished with the convenient interconnectivity – both north and south.

In the mid-1960s, due to a labor dispute, passenger service on the FEC was terminated, thereby shifting service inland to the Chessie and Seaboard railroad (CSX) tracks. For the past half-century, the FEC has carried only freight through South Florida. The hope of reintroducing passenger transit on the FEC rail line has persisted ever since.

By the 1980s, the impacts of suburban sprawl and the elimination of passenger rail service to Florida’s coastal cities had become evident by the declining downtowns surrounding many of the former Flagler train stations. Redevelopment programs were initiated in dozens of downtowns with varying levels of success. The reintroduction of passenger rail transit on the FEC corridor has long been identified as one of the necessary components both to catalyze revitalization and to improve regional mobility, which was beginning to present challenges in the late 1980s.

West Palm Beach Transit Overview

The Creation of Tri-Rail

As South Florida’s population continued to increase, the historic job centers along the coast remained, surrounded largely to the north, south, and west by suburban residential development. Concerns over regional mobility intensified in the late 1980s, so when expansion plans for Interstate 95 materialized, the State of Florida Governor and Cabinet created the Tri-Rail Authority to provide inter-regional commuter rail service from Miami-Dade County north through Broward County into Palm Beach County. The FEC corridor was initially evaluated for Tri-Rail service, but negotiations

Tri-Rail currently provides passenger service in southeast Florida, between West Palm Beach and Miami.
with the FEC railroad were unsuccessful, pushing the commuter rail service west onto the CSX rail corridor.

Tri-Rail currently operates with eighteen stations through the three counties with a northern terminus at Mangonia Park in central Palm Beach County. The Tri-Rail Authority was reconstituted as the South Florida Regional Transportation Authority (SFRTA) in 2003 with a broader focus including land use surrounding the corridor and stations. In the early 2000s, the SFRTA began evaluating an extension of service north into Jupiter utilizing a new crossover from the CSX to FEC tracks north of the Mangonia Park Station. Unfortunately, methodological questions caused the agency to suspend its study efforts in 2004.

During the past three years, Tri-Rail has increased ridership each year, in some cases by as much as 30 percent. The current Tri-Rail service exceeds previous ridership projections so significantly that many stations now lack adequate parking. The affected communities and the SFRTA have several different options to resolve the parking issue: (1) provide more station area parking; (2) improve transit service interconnections; or, (3) provide a combination of both.
The South Florida East Coast Corridor Study

In 2005, the Metropolitan Planning Organizations (MPOs) in Miami-Dade, Broward, and Palm Beach counties partnered with the Florida Department of Transportation (FDOT) to initiate the SFECC Study. This multi-year analysis is evaluating the potential reintroduction of transit on the FEC railroad along the 85-mile stretch of railroad from downtown Miami north to the northern Palm Beach County line. The SFECC Study initially identified sixty potential “station areas” within the three counties, generally located along roadways with I-95 access and/or in close proximity to town centers, major employment centers, and dense residential populations. Since initiation of the study, the number of station areas under consideration has grown to more than eighty in response to local requests, updated information, and the addition of previously overlooked station opportunities. The general study area is depicted in the map to the right.

The first phase of analysis for the SFECC Study was completed in late 2007, which included preliminary environmental analysis, review of various transit technologies (e.g., light rail, commuter rail, bus rapid transit), and the conclusion that passenger service along the FEC corridor will yield positive transportation benefits for the region, complementing the current Tri-Rail service. The 85-mile FEC corridor was divided into three distinct segments: a southern segment (from downtown Miami to Pompano Beach), a central segment (from Pompano Beach to downtown West Palm Beach), and a northern segment (from downtown West Palm Beach to Jupiter).

SFECC Core Concepts

1. Restore Passenger Transit Service to the FEC Corridor (Flagler’s Old Line);
2. Extend Existing Tri-Rail Service North to Jupiter (on the FEC Corridor).

The Datran Center in Miami-Dade county is an example of an employment center station type and is linked to regional shopping, workplace, and housing via the Metrorail.

The SFECC study is a comprehensive analysis to improve transit mobility throughout Southeastern Florida.
The first phase of the SFECC Study included the identification of the initial sixty potential “station areas” and a roughly one-mile diameter of land surrounding each potential station. These areas considered key transportation facilities (e.g., major east/west roadways connecting to I-95 or the Florida Turnpike; airports; seaports; and major employers such as hospitals, business parks, universities, and major event venues). Part of the analysis included the assignment of preliminary station area ratings. Utilizing a rating system derived from Federal Transit Administration (FTA) evaluation factors, each station area was evaluated on the basis of land use patterns, future development potential, rider-ship forecasts, and regulatory framework (e.g., comprehensive plans, land development regulations). National research indicates transit service in areas with more transit-supportive land use patterns tend to attract greater ridership, therefore making them more effective and efficient. Accordingly, each station area was assigned a preliminary score and suitability rating from “low” to “high.” The map at the right depicts the preliminary land use ratings for the northern section of the corridor.

On the “SFECC Station Suitability Analysis” map to the right, preliminary station areas in Palm Beach County are represented by colored circles, whereby the size of the circle indicates projected ridership for the station location, and the colors indicate land use suitability for transit. Green and blue colors indicate land use patterns that are highly supportive of transit. The downtown areas of West Palm Beach, Fort Lauderdale, and Miami are designated as highly supportive places. The yellow areas may not have ideal land uses in place today for transit, however, they have strong ridership potential. Red and orange circles indicate station areas that have lower levels of transit-supportive land use patterns or policies, which tend to occur in many areas of Palm Beach County. The northern segment (north of West Palm Beach) contain relatively lower station area ratings compared to the central (West Palm Beach to Pompano Beach) and southern

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**Top Four Transit Myths**

1. There will not be enough riders to justify transit on the FEC.
2. Transit service is not viable because it requires subsidies.
3. Train service is a distant dream.
4. There is no money to support transit.
Recent spikes in ridership have strained the parking capacity at some Tri-Rail stations. Bicycle parking is at a premium as well. Transit station areas must be designed and detailed to safely accommodate interconnections with all modes of mobility.

The current Tri-Rail system carries approximately 16,000 passengers per day through the three counties. At build-out, the combined Tri-Rail/FEC train network is projected to carry at least 110,000 passengers per day. Given escalating fuel prices, energy concerns, and future projected constraints of the existing roadway network, this transit capacity is critical to ensure the continued mobility, economic vitality, and good quality of life for the region’s population.

The second phase of SFECC analysis is currently underway, with completion and transmittal to FTA anticipated in 2012. FDOT is considering funding from a variety of sources, including Federal funding, which could provide up to 50% of project costs, and a mix of State and Local funding. This phase of the SFECC Study will fine-tune project cost estimates and funding sources. One local source is the Palm Beach MPO, which has already begun setting aside $24 million for right-of-way acquisition for the local portion of rail service to Jupiter.

Service Options

A number of different service options are being evaluated in the SFECC Study, utilizing both the existing Tri-Rail service on the CSX corridor as well as varied service options on the FEC corridor. The graphic to the left depicts a conceptual illustration of the transit network at build-out, which would provide local, regional, and express services between the three counties integrated with the existing Tri-Rail service. While the ultimate service pattern will be determined through the SFECC Study, it is important to note the key differences in station spacing and numbers in the system illustration. The current Tri-Rail service was designed as
a true commuter rail system with only eighteen stations spaced miles apart along its 72-mile portion of the CSX corridor. In contrast, the future transit system on the FEC corridor is envisioned to have far more points of access with fifty to sixty stations distributed throughout 85 miles. With a variety of service options, including local trains stopping at most stations, express trains stopping only at major downtowns, and a variety of other service arrangements, the future system forecast indicates substantial ridership, which is then projected to grow exponentially as the system is expanded.

Transit-Oriented Development

To frame the discussion and analysis in terms of the future potential station areas in West Palm Beach, it is important to generally define the concept of Transit-Oriented Development (TOD). TOD is a pedestrian-friendly, mixed-use form of development designed to complement and integrate with a transit station or transit corridor. TOD should typically encompass a quarter- to half-mile radius around transit (5- to 10-minute walking distance) and include city or regional shopping or civic destinations, multi-modal transit hubs, job centers, and both attainable (workforce) and market-rate housing. Because the half-mile radius area is the potential pedestrian catchment area, each station location analyzed in the charrette has a circle drawn around it representing this context.

Ideally, TOD includes a mix of uses (e.g., housing, retail, restaurant, office) such that eighteen hours of daily activity occur in close proximity to the transit station. TOD is characterized by easy mobility for pedestrians and bicyclists, and successful TOD is well-integrated into collector transit systems, such as trolleys and buses. Parking within TOD is typically reduced and managed within the district as a whole to reflect the benefit of nearby transit access.

It is important to note TOD is not a one-size-fits-all solution. Rather, TOD can be accomplished in a wide range of scale and intensity depending on station area context. Across the country, TOD has become the preferred land use form around existing and proposed transit stations. TOD is also a consideration for federal funding, and the federal rating criteria relies heavily upon land use patterns (both existing and anticipated) around proposed stations and along transit corridors.

Ridership rises

In the first three months of 2008, 2.6 billion trips were taken on public transportation, a 3 percent increase over the first quarter of 2007.

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<th>Estimated passenger trips by mode of travel, in millions</th>
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Transit ridership nationwide has been trending upward. (Source: Palm Beach Post)

Some Tri-Rail and FEC corridors may require land use revisions and focused redevelopment efforts to create a transit-supportive to achieve the maximum ridership potential.
Overview of Station Typology

The 85-mile segment of FEC corridor under consideration in the SFECC Study includes a varied array of land use patterns, densities, development conditions, and destinations. The corridor includes internationally prominent downtowns such as Miami, Fort Lauderdale, and West Palm Beach; international ports of call; three international airports; major sports stadiums; and several universities. Many hospitals, business parks, lifestyle centers, multi-story residential buildings, and shopping venues are located along the segment. In addition, the FEC transverses quaint historic downtowns, small-scale residential communities, parks, nature preserves, and a few undeveloped properties. Accordingly, with the variety of station area conditions, eight different station types have been identified for the FEC Corridor: City Center, Town Center, Neighborhood, Employment Center, Local Park-n-Ride, Regional Park-n-Ride, Airport/Seaport, and Special Event Venue.

Station Typologies

City Center Station

The city center station is located close to the core of a downtown. These stations should be signature or iconic symbols of the community. A city center station will be considered in Miami, Fort Lauderdale, and West Palm Beach. Heavy pedestrian activity and commuter conveniences should be accommodated and the surrounding area should incorporate spillover retail and restaurants; however, very little parking is necessary in these dense, urban settings.

Town Center Station

Smaller than the city center station, the town center station should also be an iconic symbol of the city. Town center stations are appropriate for the scale and character of smaller downtowns, such as Delray Beach, Boca Raton, and Lake Worth. Consideration should be given to commuter conveniences, such as coffee shops and newsstands, as well as housing and a moderate amount of parking.
BACKGROUND

**Neighborhood Station**

The neighborhood station type is for residential neighborhoods. These stations can be located within a neighborhood or at the conjunction of several neighborhoods. They should reflect the character of the surrounding neighborhoods and be carefully designed to properly integrate with the surrounding scale. Neighborhood stations should be easily accessible by pedestrians and may provide a drop-off area and limited park-and-ride spaces.

**Employment Center Station**

The employment center station can be urban or suburban in form and is located in or near a major employment center (e.g. hospitals, universities). While providing parking for the nearby job source is not required, these stations may offer some parking for local residents, who may also utilize the rail station as a park-and-ride. The quantity and location of parking should be carefully considered to respond to the needs of the specific location.

**Local Park-and-Ride Station**

The local park-and-ride type is a small station providing commuter parking (surface lot or structured garage). It may be located in conjunction with a neighborhood station providing basic facilities (restrooms and seating) or slightly expanded to include retail uses to service riders’ needs.

**Regional Park-and-Ride Station**

The regional park-and-ride station is larger than the local park-and-ride providing a significant amount of parking. These stations are usually located with convenient access to an interstate or major highway to efficiently capture commuter drivers. The circulation design must ensure the surrounding neighborhoods are not overwhelmed by commuter traffic. Some retail and restaurant uses are appropriate, in addition to basic facilities (restrooms and seating).
Airport/Seaport Station

The airport/seaport station is used at the beginning or end of a journey outside of the region. Quick and efficient junctions with other modes of transportation, such as buses and taxis, must be provided, yet walkability should remain a high priority in the design.

Special Event Venue Station

The special event venue stations provide transportation to stadiums and convention centers. The station program requires minimal parking as it is used to offset parking and roadway needs to these destinations. While this station type is designed to move and hold large numbers of people at one time, they also provide access to transit for the surrounding neighborhoods, which can create design challenges.

Recent TOD Studies in the Region

The Treasure Coast Regional Planning Council (TCRPC) has participated in a number of TOD charrette efforts in recent years. Below is a brief description and chronology of TOD activities in the region.

West Palm Beach-2005

The West Palm Beach Transit Village was imagined before the SFECC study began as a City and County initiative. Despite the ongoing and largely successful revitalization efforts in the downtown, the area between Sapodilla Avenue and Tamarind Avenue from Fern Street north to Banyan Boulevard was largely vacant and underutilized in January 2005. One significant hurdle to redevelopment was the significant amount of land in public ownership. The charrette conceived strategies to enable local government landholders to partner with developers to fulfill specific public objectives. Since the completion of the charrette, a new Palm Tran bus transfer station and Department of Health building were constructed following the recommendations of the charrette.
BACKGROUND

Town of Jupiter-2008

The Town of Jupiter TOD charrette was the first process to be related to the SFECC study and its coordinating agencies. TCRPC partnered with the Town of Jupiter, the Palm Beach MPO, FDOT, and the South Florida Regional Transportation Authority (SFRTA). The public charrette process determined the preferred location of a town center station as immediately north of the Jupiter Medical Center on Alternate A1A. Since the completion of the charrette, the town has been implementing necessary land use amendments to accommodate future transit-oriented redevelopment.

Lake Worth-2008

In June of 2008, TCRPC conducted a week-long charrette in the City of Lake Worth. The results recommended two station locations: a local park-and-ride at 10th Avenue North and a town center station at Lake Avenue and US 1. Additionally, the charrette report illustrates redevelopment strategies around the existing Tri-Rail station located at Lake Avenue and the CSX corridor. The charrette also closely reviewed the current economic and retailing strategies of the City of Lake Worth, and made recommendations to improve both the economic position and the sustainability of the community.

Palm Beach Gardens-2009

A week-long charrette took place from March 27, 2009 through April 3, 2009, in the City of Palm Beach Gardens. Palm Beach Gardens is designated to accommodate a regional park-and-ride station, which will serve as a unique and significant “origin” and “destination” station in the region. The charrette determined the preferred station location as Alternate A1A and the Gosman Site and yielded a number of recommendations to establish a multi-modal environment in the area.

Amtrak

In early 2000, Amtrak, FEC, the FDOT and regional authorities agreed to a service concept to reintro-
duce passenger rail along Florida’s east coast on the FEC corridor. Thirteen preliminary station locations, primarily in downtowns, were identified between Jacksonville and West Palm Beach, including Stuart, Fort Pierce, and Vero Beach. The new Amtrak long-distance service was anticipated to utilize existing FEC tracks, with limited additional track sidings as needed. An interconnection in West Palm Beach between the FEC and CSX tracks would be required to extend Amtrak service south to Miami.

This general alignment was included in the FDOT 2006 Florida Rail Plan as a potential “East Coast Route” for long distance and new corridor rail service (carrier unspecified), and illustrated in the map graphic titled “Figure 5.6 Florida Intercity Passenger Rail Service Vision Plan ~ Coastal Route” (shown on page 18).

Negotiations were nearly completed between Amtrak, FDOT, and the FEC in 2002. Then, the Federal government directed Amtrak to suspend negotiations pending revisions to Amtrak’s budget and debt structure. It is TCRPC’s understanding the Federal loan provisions have been satisfied, as Amtrak has begun investigating new service alignments once again. In 2008, Amtrak’s budget was nearly doubled to $13 billion over five years (2009 through 2014), allowing the carrier to better expand its operations.

The cost to carry out the Amtrak/FEC Corridor Project is estimated to be approximately $150 million. It should be noted that an Amtrak project would compete for a different source of Federal funding than either Tri-Rail or the SFECC project (Federal Railroad Administration funding versus Federal Transit Administration funding). Further, a Jacksonville/Miami Amtrak project would likely include an interconnection between the FEC and CSX tracks in Palm Beach County, which could shift this capital expense away from a future SFECC-recommended service, thereby improving the cost/benefit ratio for a Palm Beach/Miami FEC service.
BACKGROUND

Significant Opportunity

Accomplishing the infrastructure improvements necessary to support passenger rail service on the FEC could significantly expand various rail service options in the region. The same infrastructure supports three different service systems:

1. expanded intercity Amtrak service along the east coast of Florida;
2. a new commuter rail service on the FEC, providing a premium service through Palm Beach, Broward, and Miami-Dade counties; and
3. the extension of Tri-Rail service into northern Palm Beach County.

Given the potential benefits and efficiencies of this project, the Florida Department of Transportation is currently advancing passenger rail improvements on the FEC Corridor. Right-of-way assessment and acquisition and track improvements are underway, and funded within the FDOT 5-Year Work Plan.

The Seaboard Train Station in downtown West Palm Beach is one of the most successful multi-modal nodes in the region. The potential for expanded services for local, regional, and interstate destinations presents a significant opportunity for the City.
C R E A T I O N   O F   T H E
M A S T E R   P L A N
Purpose

The charrette process was used to create the West Palm Beach CSX-FEC Connector Master Plan. The charrette process ensures community participation in determining how to best resolve potential impacts, maximize opportunities, and establish a vision for the future. A team of professionals, “the charrette team”, helps record the citizens’ ideas, tests the feasibility of the various proposals, and creates a document to articulate the citizens’ vision.

Steering Committee

The first step of the charrette process was the creation of a Steering Committee to plan the logistics of the charrette. Steering committee members recommended times, locations, and strategies on how to best get the word out to the community about this important effort. Members also provided input on the people and agencies to interview during the pre-charrette interviews.

Pre-Charrette Interviews

The purpose of the pre-charrette interviews is for the charrette team to gain a full understanding of the area’s terrain, local issues, shortcomings, and strengths. Interviewees included elected officials, business leaders, residents, community activists, and utility providers. Each Steering Committee member was also interviewed in this process.

Public Workshop

The public workshop was held January 9, 2010, at the Roosevelt Community Middle School cafeteria and 57 people attended. An opening presentation outlined the intent of the project and issues in the area. Citizens were asked to shape a vision for the city and, specifically, to identify a location for a new connector between the CSX and FEC tracks. After the presentation, they dispersed to gather around tables with an aerial photo of the study area. Each table group debated issues and drew their ideas on the aerial. At the end of the workshop, a representative from each table presented the group’s ideas to the rest of the charrette participants. A summary the suggestions and concerns is contained on the following pages.
Table 1

**Connector:**

- locate the connector along the 25th Street corridor
- do not disturb the two historic cemeteries
- connector at 25th Street will help redevelopment in the 25th Street industrial area
- locate some commercial development in the 25th Street corridor
- city and local businesses collaborate on the development of the station

**Other Stations:**

- northwest corner of Banyan and FEC
- southwest corner of Belvedere and FEC
- southwest corner of Southern Boulevard and collaborate with the federal government with the redevelopment of the housing project located there
- Forest Hill Boulevard at the Palm Lakes Plaza
- redevelop the Forest Hill Boulevard station area as a town center

*Table 1 citizens’ drawing and photos from the public workshop.*
Table 2

**Connector:**
- connector at 25th Street
- existing tracks go north to south so add tracks going south to north making an “X” or “Y” shape
- station east of the FEC tracks
- emphasize the historical significance of the African American cemetery and the 1928 Hurricane mass grave at the station
- do not impact the 1928 Hurricane mass grave

**Other Stations:**
- across the street from St. Mary’s hospital on vacant land
- Banyan Boulevard
- convention center/CityPlace

Table 2 citizens’ drawing and photos from the public workshop.
Table 3

**Connector:**
- “Y” crossover at 25th Street
- do not disturb the two historic cemeteries

**Other Stations:**
- FEC station at St. Mary’s
- FEC station at 15th Street to provide a station for the housing slated for redevelopment with transit-oriented development
- FEC station at Clematis Street
- FEC station at Okeechobee Road to attract more tourists to the Amory
- FEC station at Belvedere Road
- FEC station at Southern Boulevard to connect to the airport
- FEC station at Lake Worth Canal with transit-oriented development
- CSX station at Southern Boulevard
- CSX station at Mercer

Table 3 citizens’ drawing and photos from the public workshop.
Table 4

**Connector:**

- 25th street
- station on the Anchor site
- create an axis with Northwood Road
- redevelop this industrial area
- provide upgraded infrastructure such as sidewalks and lighting
- work with the Community Redevelopment Agency for this area
- use the connector to connect the two north and south neighborhoods

**Other Stations:**

- station at St. Mary’s Hospital
- station at Southern Boulevard that connects to the airport
- station at Belvedere Road
- station midway between Clematis Street and Okeechobee Road

*Table 4 citizens’ drawing and photos from the public workshop.*
Table 5

Connector:

- connector at 25th Street
- do not rezone the industrial area - this area one of the few within the city that allows these types of uses
- put pathway of the connector through part of the FPL property and along the existing roadway
- relocate the existing Lainhart & Potter Building Supply Company and other businesses impacted by the connector rail to vacant land to the south
- put station between 25th Street and Northwood Road

Other Stations:

- station at Palm Beach Lakes Boulevard underneath the overpass
- station immediately south of Clematis Street and close the rail crossing at Datura Street
- station immediately south of Okeechobee Road to service at the convention center and the South Tower
- station at Belvedere Road
- station at Southern Boulevard underneath the overpass
- station for the airport link, location would depend on where Tri-Trail puts its station
- station on the northeast corner of Forest Hill Boulevard
- All stations have supplementary safety zones (quiet zones) from the CSX tracks to 45th Street
Studio

The charrette team listened, recorded, and took notes on the citizens’ requests. They set up a studio at an empty storefront at CityPlace January 10 – 15, 2010. The purpose was to work closely and intensely on the citizens’ ideas and allow the public to observe and offer additional input. Approximately fifty people, including elected officials, interacted with the team at the studio throughout the week.

Work-in-Progress Presentation

The Work-in-Progress presentation was given to the public on January 15, 2010, at city hall. At these presentations, work completed by the charrette team to date was presented to the public, and additional comments and input were gathered. The information gathered throughout the entire charrette process was used to create this report.

Charrette Team

Following are members of the charrette team:

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Urban Designer

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Marcela Camblor & Associates

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A special thanks to the Steering Committee members:

James Drayton, Dr. Karl Foose, Glen Harvie, James Irving, Gail Levine, Phil Materio, Neil Merin, Penny Payne, Nancy Pullum, Jose Rodriguez, Rick Rose, Ulysses Smith, Lillie Wilson

and

City of West Palm Beach
West Palm Beach CRA
West Palm Beach DDA

The studio was at CityPlace where the charrette team worked together on the project for the week.
PRINCIPLES OF URBAN DESIGN
Florida is facing new challenges

The agricultural economy of Florida has been steadily declining over the last decade. The recent housing boom has led to a glut of unattainable units and a crashed construction economy. Growing concerns exist over the availability of drinking water and the potential future effects of sea-level rise. These predicaments have been, in large part, due to an economy built on suburban sprawl. Fortunately, signs suggest Florida may have learned some lessons from its aggressive development history and is correcting its path for the future.

Many coastal cities have emerged from near abandonment during the 1970s and re-cast themselves as viable, sustainable downtowns. The City of West Palm Beach is one of the best examples of this type of revitalization. Local governments are increasingly employing planning strategies and methods that provide predictability, balance land uses, and promote beauty in future growth. For the first time in 40 years, ongoing discussions are engaged about restoring passenger rail service to the FEC corridor. Florida residents are playing a much more active role in planning and urban design decisions. And perhaps most importantly, Floridians in general are recognizing how fragile the state is ecologically and that future growth and redevelopment must be more compact, require less fuel consumption, and promote a legacy of responsibility for both the natural and built environments.

This chapter discusses and describes the principles of good urban design that shape communities into sustainable, multi-modal, healthy, and attractive places.
Two Patterns of Growth

Historically, towns, cities, and individual projects have been developed following one of two general patterns of development: a suburban pattern or a traditional pattern.

The Suburban Pattern

The suburban pattern of development segregates uses by creating single use, disconnected areas. As a result, shopping, housing, schools, and recreation are not organized in an intrinsically connected, compact manner. In order to access each of these disconnected areas, the use of an automobile is typically required. As a result, parking becomes a dominant feature of a sprawling landscape. This sprawling and disconnected development relies upon a limited roadway network that gradually degrades the mobility of a community.

This erosion of mobility is centered around the inevitable result that most vehicular trips must occur on collector or arterial roads. Local roads that are comfortable and safe for pedestrians and cyclists as well as motorists are either disconnected from most destinations or no longer sufficient to handle the vehicular demands of the suburban pattern of settlement. With most of the traffic volume accommodated on fewer and fewer local roads, the connecting thoroughfares become increasingly wide, auto-dominant, and unable to provide a safe or desirable environment for cyclists and pedestrians.

As roadways become less desirable, new development naturally “turns its back” to the road. This common development model further exacerbates the degraded physical environment, making suburban development self-perpetuating and very difficult to reverse. The necessity of an automobile is further reinforced, and the situation worsens. Under the suburban pattern of development, the more an area develops, the worse the traffic congestion becomes.

The degree to which a community is auto-dependent is a result of its development patterns (suburban or traditional) and the network and size of its streets. The effect of the suburban pattern is particularly difficult for children and the elderly who either cannot drive or are losing their ability to drive. Many elderly residents of isolated communities find they must move from their homes and neighbors when they can no longer drive. This is due, in part, to another hallmark of the suburban pattern: low density. Low-density development has made the critical mass needed for a viable transit system almost impossible to achieve, thereby giving the transportation disadvantaged extremely limited options.
The Traditional Pattern

The traditional pattern of development is how cities, towns, and neighborhoods were built prior to World War II. In contrast to the suburban pattern, the traditional pattern mixes and interconnects different uses through a dense network of streets, blocks, and public spaces. This network of streets allows for the dispersion of vehicle trips throughout the community, rather than forcing all cars onto a limited number of through streets.

Dispersing vehicular trips into multiple routes allows roadways to be smaller with fewer lanes. Smaller roadways, unlike collector or arterial roads, easily accommodate bicyclists and pedestrians in a safe and often beautiful environment. One could easily travel from home to work or shopping on local streets without having to engage larger, auto-dominant thoroughfares. Additionally, a system of interconnected neighborhood streets reduces the number of local trips that rely on arterial and collector roads. As a result, the interconnected neighborhood streets also allow the larger, faster moving thoroughfares to remain a civilized size, serve primarily “through” traffic, and maintain efficiency as well.

Many of South Florida’s older coastal downtowns - Stuart, West Palm Beach, Lake Worth, and Delray Beach - are great examples of the traditional pattern of development. Each of these areas has places to live, work, and shop all within very close proximity. Their higher densities are more transit-supportive and the balance of uses lessens the need for vast parking areas and creates livelier places throughout the day.

A Shifting Paradigm

Unfortunately, the majority of the metropolitan areas in south Florida have been built following the suburban model of single-use, disconnected pods that rely almost entirely on limited collector and arterial roadway networks. An interesting experiment is to visit any of the older downtowns listed above, find a major east-west roadway (Kanner Highway, Southern Boulevard, Lake Worth Road, Atlantic Avenue, etc.), and drive west. What one typically discovers is a road that progressively widens while the number of cross-streets diminishes, and a public realm that becomes unattractive and auto-dominant. Having experienced the impacts of the suburban pattern of development for decades, many in South Florida desire a change. In the early 1980s, this dissatisfaction led to a resurgence of interest in areas developed in the traditional pattern. In fact, during the past twenty years, a nation-wide trend to develop and restore urban environments has been evident.
Principles of Urban Design

Every place is different. Each city, town, and neighborhood has unique characteristics and conditions. There are, however, fundamental planning principles that apply to all conditions and have proven over time to establish successful, desirable places. These principles of good urban planning are characterized in the traditional pattern. These strategies have successfully shaped great cities, towns, and neighborhoods for centuries, and still describe successful, sustainable places today. These planning principles guided the designs and recommendations of the West Palm Beach CSX-FEC Citizens’ Master Plan.

History and research have demonstrated that the most successful and livable communities share the same basic, time-tested planning principles. These principles are: Neighborhood Size, Neighborhood Center and Edge, Interconnected Network of Streets, Mix of Uses, Mix of Building Types, Proper Building Placement, Proper Parking Placement, Civic Buildings, and Public Open Space. This chapter describes the characteristics of each principle and their interdependency.

A) Neighborhood Size

The Neighborhood is the basic increment of development of traditional towns and cities. When clustered with other neighborhoods it becomes a town or city; when standing free in the landscape, it is a village.

The Neighborhood is limited in size. Each neighborhood typically ranges in size from 40 to 125 acres. This results in a majority of the population living within a 5-minute walking distance (1/4 mile) of the neighborhood center. This distance represents the average most people will walk to satisfy their daily needs (whether this means reaching an actual destination, or accessing transit that provides transportation to the ultimate destination). When two or more neighborhoods are combined they form towns and cities.

The density of a residential neighborhood typically averages between 6 and 10 units per acre. Such density allows for a wide spectrum of housing options, including houses on a range of lot sizes, townhouses, and multi-family buildings. Downtown cores and the more urban neighborhoods typically have much higher average densities given the larger occurrence of multi-family buildings, and the need to support a diversity of uses. With higher densities, a greater variety of service is possible within close proximity to homes. Neighborhoods mostly dedicated to a specialized use or activity are Special Districts (i.e. industrial, entertainment, etc).
B) Center, Edge and Neighborhood Transition

A traditional neighborhood has a clearly defined Center and Edge. Its elements are generally structured so that a wide range of building types, density, and uses are accommodated in close proximity and arranged by intensity from rural-to-urban. Higher densities and more intense uses such as retail, office, and multi-family residential are concentrated in the center or core. Building scale, density, and intensity of uses gradually decrease moving out from the center. The lowest densities and less intense uses are placed towards the edge of the neighborhood. Neighborhood edges can be natural (i.e. rivers, natural preserves, farmland), or man-made (i.e. wide, high traffic streets).

Transitions between Uses and Scales: Compatibility and Incompatibility

Buildings have fronts and backs. In order to ensure compatibility, buildings of like scale and massing and compatible uses should face each other on a street. Likewise, incompatible uses and buildings significantly different in height and/or massing should not be adjacent to each other (i.e. a heavy industrial use should not be next to a residence). Transition incompatibilities create stress on real estate values and the physical predictability of an area.

The front a building is much more relevant to the public realm than its rear. Ideally, transitions between differing intensities, uses, and scales should occur at the rear of buildings (parking areas or back yards) or along alleys.

The Transect

The "Transect" is a planning term that refers to an "ordering system". This system describes how the physical elements of a Neighborhood are arranged and grouped to compatibly transition from the Neighborhood Center to Edge. Building scale, mass, and the intensity of the uses gradually decrease moving from the Center toward the Edge.
The Transect compatibly arranges diverse building types and uses within an area, in contrast to conventional planning strategies, which isolate and disconnect differing uses and densities.

The diagram below illustrates how an area comprised of tall, attached buildings containing a wide range of uses can quickly transition to one or two-story single family homes within the space of half of a block. Note that similar building types face each other across each street; particular care must be given to residential uses to ensure peaceful coexistence with other uses.

“\(A\)” and “\(B\)” Streets

The diagram also demonstrates the concept of establishing street standards. These standards designate streets as either “\(A\)” or “\(B\)” streets. While care should be evident in the design of all streets, “\(A\)” streets are intended to be the main pedestrian routes and, as such, are lined by the most active uses and held to a higher standard in building design. “\(B\)” streets, while still important, are less restricted and can accommodate parking and other service functions (i.e. parking lots, drive-thrus, gas stations, blank walls).

Illustration of transition of uses, scale, and massing. Note the use of roads and alleys in the transition between varying intensities.
“A” AND “B” STREETS

“A” streets are where the primary pedestrian activity and vehicle traffic occur. They have active ground floor uses, the primary building façade, the main building entrance, and limited or restricted curb cuts.

“B” Streets are the secondary streets and can accommodate service and shipping entrances, driveways, and curb cuts.

C) An Interconnected Network of Streets

Streets are the Center for Human Activity

Streets are centers of human activity. As such, they should be inviting and comfortable places for people, whether driving, walking, or cycling.

Thirty to forty percent of developed areas in a neighborhood are dedicated to streets, which is why the way streets are designed and shaped by adjacent development has significant impacts on the safety, comfort, and quality of life. Street design should be undertaken with the same care given to any other important public or civic space.

The Power of the Grid

The grid is the most efficient system of street planning and circulation. When streets intersect with other streets, a fine network of alternative transportation routes results. Users of the system have many more routes to choose from, improving convenience for all modes of transportation. Another benefit of utilizing a dense network of streets, is intersections can be smaller and safer to cross for both motorists and non-motorists.

The following analysis by Dover, Kohl & Partners illustrates the power of an interconnected street network (see page 36). Given one origin and one destination (points A & B), with two roads connecting them, only one possible route is available. If two additional roads, parallel to each of the original roads are added, then two possible routes exist between points A & B. As the grid or network of streets increases to a six-road grid, the number of potential routes grows exponentially to six possible routes between point A and point B. A grid of nine roads results in 35 routes, and the complete grid represented in these diagrams (a 12 x 16 road grid) results in 12,870 routes. The grid illustrated in the example is, in fact, the streets of the Town of Beaufort, South Carolina, which maintains its beautiful physical character while comfortably hosting millions of visitors every year without major traffic problems.
An analysis of the street grid of Beaufort, South Carolina, by Dover Kohl & Partners
**Block Size**

The “block” is an essential, central element of urban planning. Blocks are areas surrounded by streets containing lots for private or public development. They are the basic unit of neighborhood planning.

Traditional neighborhoods are composed of blocks in a variety of sizes and shapes. In order to establish a walkable environment, a dense grid of interconnected streets is necessary, which ultimately affects block size. To achieve both walkability and a strong network of streets, blocks should have an average perimeter no greater than 1,320 feet (see “General Block Guidelines” in inset).

Suburban blocks are usually irregularly shaped and very large. These large blocks are generally referred to as “superblocks.” Superblocks limit the potential to establish an interconnected network of streets and limit flexibility for modifying the built form over time. The large block sizes are not conducive to a walkable environment, as the pedestrian must traverse long distances in limited directions.

Communities with a grid in place should protect it and its effectiveness by not closing streets to public use. As growth occurs, the opportunity to expand and enhance the grid with new connections must be taken in order to equitably distribute new traffic demands and accommodate a range of transportation options in the community.

**Diversity of Street Types**

Great towns have a hierarchy of streets that are different in size, function, and configuration. Streets in business districts are usually wider with on-street parking lanes and broad sidewalks to accommodate street furniture, formal landscaping, and a large number of pedestrians. Local streets in residential areas are narrower, accommodating slower vehicular speeds with informal on-street parking arrangements, narrower sidewalks, and planting strips between the sidewalk and the travel lanes.
General street types include highways, corridors (boulevards, avenues, etc.), commercial streets (main street), residential streets, and alleys.

**Street to Building Height Ratio**

As stated in Architectural Graphic Standards, published by the American Institute of Architects, a ratio of one-to-three is the minimum to create a sense of spatial enclosure. The smaller ratio is typically more desirable as frequently indicated by higher real estate values. Consequently, recommended building heights will vary in accordance with the width of the street and sidewalks and the building setbacks. Wider streets accommodate taller buildings while narrower streets accommodate smaller buildings. In order to achieve the desired sense of enclosure on very wide streets, like boulevards, tall buildings frame the space, frequently reinforced with formally aligned street trees planted in medians. In lower density neighborhoods where single-family homes set back from the street, the proper enclosure can be provided with a continuous alignment of street trees. A height to width ratio of one-to-three is the minimum height to width ratio if a sense of spatial enclosure is to result. The smaller the ratio, the higher sense of place and generally the higher the property values.
Speed is Key to Safety

In order to have streets conducive to human interaction, they must be and feel safe. Vehicular speed is directly linked to street safety. The chart to the right shows the increase in pedestrian fatalities as vehicles travel faster. Fatality rates increase significantly when vehicles travel at speeds between 20 and 30 miles per hour; fatality rates rise significantly, to about 80%, when vehicular speeds reach 40 miles per hour. The most effective way to keep traffic moving slowly is to design the roads to physically encourage the speed vehicles are intended to travel. Roadways should not be designed for faster speeds (through lane width, number of lanes, etc.), and rely upon posted speeds to control traffic.

The concerns for pedestrian safety on Florida roadways have been recently spotlighted in the published Transportation for America report, “Dangerous by Design”. This report identifies four metropolitan areas located in Florida in the top five of the most dangerous cities in the country for pedestrians and cyclists. The Pedestrian Danger Index assigned to different cities was calculated by dividing the average yearly fatality rate for a metro area (determined by National Highway Traffic Safety Administration crash data and population data) by the percentage of commuters walking to work in that metro area (obtained from US Census data). Florida’s high rankings for pedestrian danger are especially disturbing considering the relatively low percentage of pedestrian activity in most of Florida’s cities compared to other areas in the country due to the difficult pedestrian and cyclist environments.

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Source: Dangerous by Design 2011, Transportation for America. This report and data can be accessed online at t4america.org/resources/dangerousbydesign2011.
Roadway Design Speed & Capacity

The most efficient (capacity-wise) street design is a two-lane road with a dedicated left turn lane at intersections. Two-lane roads, with one lane of travel in each direction, encourage slower speeds. Since vehicles move more slowly on two-lane roads, less separation is needed between vehicles so vehicles can occupy the travel lane in a more compact manner. A network of two-lane parallel routes is the most efficient way to move traffic, and since the streets are narrower, pedestrians and cyclists feel safer, thereby encouraging the use of other modes of transportation.

As lanes are added to a roadway, the incremental gain in capacity per lane mile is reduced. Since speeds generally increase on wider roads, the following distances between vehicles are greater. Longer following distances between vehicles creates less compactness, less capacity, and consequently result in less efficient streets.

As lanes are added, the roadway become less efficient.
Corner Radius

The curb return, or corner radius, impacts the use of the street for both motorists and non-motorists. It affects the length and location of pedestrian crossings. The curb radius also heavily influences the speed of turning vehicles. The larger the curb radius, the faster vehicles can travel while turning. The smaller the radius, the slower the vehicle must drive to negotiate the tighter turn. A small corner radius creates a compact intersection, which results in a shorter distance for motorists, pedestrians, and cyclists to cross. Smaller intersections are easier for the visually or physically impaired to navigate. On lower speed streets with high pedestrian activity, curb extensions or bulb outs can be used to further reduce turning radii and crossing distances.

Traffic Calming Design Elements

The best way to calm traffic is to design streets for the actual speed desired, as opposed to designing for higher speeds and posting slower speeds on the roadway signage.

An array of elements can be used in the design of a street to calm traffic. Care must be given to the design and function of the street for all users when using traffic calming design features. If designed properly, using one or more of the following traffic calming elements will both effectively slow traffic and become small civic embellishments to the city:

- narrow street width
- fewer number of travel lanes
- on-street parking lanes
- street trees and furnishings
- modern roundabouts
- mini roundabouts
- mini circles
- medians
- curb extensions, chokers, and bulb-outs
- raised/textured crosswalks
- raised pedestrian tables
- tight (small) turning radius at intersections
- building placement
Sidewalks and Pathways

In order to safely accommodate cyclists in the streets, motorists’ attitudes and behaviors need to change. The importance of vehicle speed and domination must concede to the safety and comfort of the pedestrian and cyclist. Drivers must understand that they share the street with other users.

Multi-use paths are routes designed for pedestrians, cyclists, skaters, and other non-motorized travel. Multi-use paths provide both transportation and recreational opportunities. On multi-use paths, oftentimes a cycle lane is separated from a pedestrian lane in order to minimize potential conflicts. The type of pathway needed depends upon the character of the street. On busier roads with numerous cyclists and pedestrians, a multi-use path with a separate cycle lane should be provided. On less busy routes, cyclists may not need to be separated from pedestrians but may still need to be separated from fast-moving vehicles. If vehicle speeds are low and drivers’ behaviors are safe, cyclists may share the road with vehicles, leaving the use of the path to walkers and skaters.

Sidewalks are an integral part of the street and should be installed parallel to roadways. Sidewalks along streets create predictable, intuitive pedestrian routes. Installing sidewalks on both sides of the street encourage walking. A dense network of streets with sidewalks and/or multi-use paths offers choices, disperses foot and cycle traffic, and reduces unnecessary and dangerous road crossings.

The widths of sidewalks and multi-uses paths vary according to the location and level of use. Wide sidewalks are important on commercial streets to accommodate a high level of pedestrian activity. The minimum sidewalk width for a commercial street should be no less than 10 feet, but more room may be necessary to accommodate activities such as outdoor dining and merchandise displays. Sidewalks may be up to 30 feet wide where tall
buildings are present. In lower density residential areas, the sidewalks may be narrower. At a minimum, sidewalks must satisfy ADA requirements and should allow two people to comfortably walk beside one another.

Around transit stops, sidewalk and pedestrian areas should be wide enough to accommodate both passers-by and those waiting for the bus or trolley. Sidewalks should not be blocked or partially blocked by vehicle parking or service vehicles.

The location of other elements should be considered in order to best facilitate use of the street by all modes. Streetlights, utility poles, and signage can compromise both the use and the attractiveness of pedestrian environments. Care must be given to arrange these types of elements in such a way that the pedestrian path is unobstructed.

While a diversion in the sidewalk’s path may be necessary to avoid a natural feature (i.e. an existing tree), creating artificially meandering sidewalks is poor design. When the sidewalk does not follow a logical and efficient path, pedestrians take short cuts. People prefer direct paths, and meandering, while intended to be beautiful, increases costs and does not best serve those who are walking for non-recreational purposes.

Street Trees

Properly planted, street trees serve three purposes: beautification, safety, and shelter. The most beautiful streets typically display strong alignments of formal, regularly spaced street trees. Trees planted between the sidewalk and the roadway help shield those using the sidewalk from passing cars. Street trees are also an effective traffic-calming device. The trees create a feeling of enclosure, and drivers tend to slow, becoming more aware of pedestrians. Trees provide shelter from the sun, which encourages walking.

Street trees shield pedestrians from both the sun and moving vehicles.

Beautiful streets are a civic amenity that also accommodates motorists, pedestrians, cyclists, and outdoor diners.
The uses along a street affect the type of street tree that is appropriate. In retail areas, palm trees instead of shade trees, or arcades in lieu of trees at all should be considered. Nothing should obstruct the view of the storefront windows from the street. If using shade trees, trunks should be trimmed of their lower branches a minimum of eight feet from the ground to ensure storefront visibility. On residential streets, tall shade trees should be planted so that the trees canopy covers the sidewalk. Care needs to be taken in the planting of shade trees so the visibility and oversight of the sidewalk is maintained.

**Street Furnishings and Lighting**

Benches, shelters, fountains, and signage should be detailed and designed as furniture to be placed within the outdoor room of the city that constitutes the street. The community should use locally distinctive, durable, and easy to maintain materials for street furniture.

**Seating**

Seating on key pedestrian routes should be provided every 300 to 600 feet to offer rest and afford opportunities for natural surveillance. Seating encourages street activity and offers respite to those who may be physically disadvantaged.

**Signs**

The excessive or insensitive use of traffic signs and other street furniture can also have a negative impact on the street. Too many signs compete for a driver’s attention. Messages on the street should be necessary and not distract the driver. Important messages should not be competing with unnecessary messages.

**Lighting**

Pedestrian-scaled lighting in appropriate places will encourage use by cyclists and pedestrians. Lighting should be pedestrian in scale and full spectrum. Mixed-use and commercial districts are generally active longer than residential neighborhoods and require brighter lighting solutions to ensure safety.

**Cycle Parking**

Cycle parking should be made as convenient as car parking and considered part of the necessary infrastructure. Ideally, bicycle parking areas should be located in a covered area with natural surveillance near the entrances of buildings, but it should not interfere with pedestrian areas. Cycle parking should be mandatory at all commercial, office, and multi-family buildings.
D) A Balanced Mix of Uses

Places that have a sustainable pattern of development tend to have a balanced mix of land uses. A balanced mix of uses means people can live, work, shop, recreate and satisfy their daily needs within their community, without having to travel long distances. Providing easy access to these uses does not mean people will stop traveling outside their community, but it greatly reduces (or even eliminates) the necessity to travel longer distances. A sustainable community with a balanced mix of uses decreases the financial burden of large, spread-out infrastructure for the municipality, lessens the reliance on fossil fuels, allows children and older people to be self-sufficient, and reduces the number of vehicles a household needs to function.

A general desire for cities and neighborhoods to be more sustainable has led to a renewed interest in mixed-use districts. Mixed-use districts combine uses to accommodate diverse functions within an area. The mix can be a combination of residential, commercial, industrial, office, institutional, or other land uses. Allowing a mix of uses contributes to the sustainability of a city by legalizing the close proximity of various destinations. This arrangement in turn allows for easy connections and continuity of all spectrums of community life: employment, healthcare, school, shopping, entertainment, and recreation.

The most successful mixed-use communities are compact, allowing ease of access between uses, and efficiently allocating resources such as water, electricity, roads, lighting, and street furnishings. Land is utilized resourcefully, typically occupied by higher density and intensity buildings. Parking requirements are reduced since a single trip provides access to many destinations. Compactness also supports alternative modes of transportation including walking, cycling, and mass transit.

Mixed-use can occur vertically within a building or horizontally across a parcel. For example, in a vertical arrangement, the ground floor houses retail uses, the second floor office space, and upper sto-
Organizations are dedicated to residential uses. Consideration should be given to the compatibility of uses. Residences are easily accommodated over retail shops or offices; however, compatibility with a loud bar or restaurant can present conflicts.

Retail

People need and desire various shops and services such as clothing, food, hardware, furniture, restaurants, pharmacies, and pet supplies. The closer these items are located to work and home, the more sustainable a community is. In order to establish a successful retail environment that accommodates pedestrians, cyclists, and transit riders in addition to motorists, several elements must be considered.

Retail is generally successful along streets and corners that have higher vehicular trips than typical neighborhood streets. Cars must be accommodated. However, unlike in a sprawling pattern, pedestrian needs for safety and comfort must be prioritized over the needs of motorists and vehicle parking. Wide, shaded sidewalks must be provided. Retail buildings should line the sidewalk in a fairly continuous fashion. Window-shopping is encouraged with a canopy or arcade that invites people towards the store to escape the sun and rain. Arcades should cover the sidewalk so that the pedestrian naturally passes by the storefronts and cannot circumvent the storefront via a parallel sidewalk. The primary entrance to the store should face and be accessible directly from the sidewalk.

Retail Visibility

Retail must attract both pedestrians and drivers' attention. Drivers are more likely to notice merchandise in slow-moving traffic. Ironically, open-air streets without any vehicles, “pedestrian malls”, which were a fad in the 1970s, failed in almost every instance. Visibility from the car is critical, as is a great walking experience.

Buildings should have large, un-tinted, bright, clean windows to call attention to the merchandise for sale. When buildings are pulled up to the side-
walk, large monument signs are no longer necessary. Signage should be clear and easily read from both the street and sidewalk.

A large number of people shop at regional and national chains. When these national stores are combined with local retail districts they function as anchors. These anchors usually spend thousands of dollars per month or more on advertising through flyers, newspapers, radio, and television. They draw in people, which in turn, supports adjacent, smaller local retailers. Local retailers can capture foot traffic that might not otherwise pass by their stores without the presence of national stores. Furthermore, the anchors offer a wide variety of many different types of goods allowing the local retailer to spin-off and specialize in a more thorough selection of a particular type of good. The key is for the national store to physically behave by aiding in shaping a pedestrian-friendly environment, rather than negatively impacting it with vast amounts of parking and blank walls.

Some communities chose not to allow or limit the number or type of regional or national chains. While some of these places have maintained thriving, non-chain retail areas, their success is mainly due to an organized and effective retail strategy and the fact that they are well-established, beautiful areas in their own right. Nevertheless, for most municipalities, a better and more beneficial strategy is to take advantage of the anchor store’s draw while controlling the way the anchor impacts the street. These stores should be pulled up to the street and lined along the exterior with smaller storefronts. The majority of parking should be consolidated behind the building. Prohibiting anchors does not change people’s buying habits. Instead, without them, residents will travel longer distances to access certain goods, which lessens sustainability and increases spending in (and thereby sending valuable tax revenues to) neighboring communities.
E) Appropriate Mix of Housing Types

A sustainable community should offer a palette of building types: single-family homes, townhouses, multi-family buildings, mixed-use buildings, outbuildings, and estate homes. People should have choices that reflect their preferred lifestyle and income level, all of which can vary over time. How the types are arranged is paramount to sustainability. When housing types are separated into large, single-type developments, the result is a segregated community. Housing segregation contributes to road congestion and widening as discussed in the “Patterns of Growth” section of this chapter. A balanced community has all types of individuals, earning a spectrum of incomes with a broad spectrum of housing options.

A mix of housing types allows people to stay in one community all of their lives, if they so choose. For example, a college graduate returns home and gets his first job. He lives in a neighbor’s garage apartment. He marries and moves into a townhouse. As his family grows, he moves to a single-family house. When his children leave home, he and his wife move to a multi-family condominium. His children, in turn, can repeat the cycle. This simple concept allows people to age in place, rather than have to re-retire outside of their community.

F) Proper Building Placement and Alignment

Controlling the building placement and alignment ensures that a predictable public realm is established. Using a “build-to-zone” rather than a minimum setback is a tool that controls the ultimate form a street has. On commercial streets or higher density areas, buildings are generally set close to the sidewalk, aligned in a continuous façade to shape the street and encourage walking. Drivers tend to slow in response to a feeling of enclosure, becoming more aware of both the businesses and pedestrians. Pedestrians and cyclists feel safer in a visually defined street and have a more interesting environment where buildings line the route instead of parking lots and landscape buffers. In lower density, single-family areas, a more generous setback for the front yards is appropriate.
G) Proper Parking Placement and Quantities

Parking is an essential component of development. Sufficient parking should be provided in reasonable proximity to the destination it serves. In a traditional development form, parking opportunities occur in many different instances, including on-site, on-street, shared, or garaged. In a sprawl form, parking lots are a dominant feature of the landscape. Good urban design practice suggests utilizing many parking options to provide choices and to ensure parking supports, rather than detracts from, the desired environment.

On-Street Parking

On-street parking should be provided whenever possible. On-street parking can take two forms: a dedicated lane or an informal arrangement. In commercial, mixed-use, or higher density areas, on-street parking should be accommodated within a dedicated lane. Studies show that on-street parking is directly related to increased sales in commercial streets. In addition, on-street parking physically shields pedestrians from moving cars, allows quick, convenient access to buildings, and acts as an effective traffic calming device.

In lower density areas, on-street parking occurs in informal arrangements. Intermittent parking along the sides of a road in a staggered fashion, results in a yield traffic pattern whereby on-coming drivers must slow and take turns moving around parked vehicles. This type of movement contributes to slowing traffic, resulting in safer neighborhood streets.

Off-Street Parking

Off-street parking should be shielded from the view of the street to ensure an attractive, interesting pedestrian environment. Buildings provide the best screening. Other strategies can be used, including landscape buffers and low walls, but these are most successful if a building facade comprises most of the area along the street.

District-Wide Parking Strategy

Parking requirements should be determined using a district-wide strategy rather than expecting parking to be provided on a parcel-by-parcel basis. For areas intending to become or maintain “park once” environments, reduced individual requirements and district-wide solutions are possible. “Park once” areas are places that easily allow a person to park and then walk between multiple destinations, instead of driving to
and parking at each specific destination. Examples of district-wide strategies include incorporating public on-street parking, municipal lots, and mixing land uses to share spaces. For example, in areas with commercial, office and residential uses, the residents generally vacate parking spaces during working hours, freeing them for use by businesses. Or workers/customers live nearby, lessening the parking demand.

**Retail Parking**

Consider that drivers access stores by foot. This reality reinforces the concept that the pedestrian experience should be superior to ensure successful retail areas. Yet, parking is a necessity that can heavily impact the pedestrian environment. Parking can be accommodated appropriately and in a number of ways to support retail activity.

Parking should be accommodated on street. On-street spaces have dual roles. First, on-street spaces provide a protective physical barrier between pedestrians and moving traffic. Second, on-street spaces slow traffic and encourage impulse stops by drivers who notice a store, sale, or item. Ideally, on-street spaces in front of a store change users many times per day to provide multiple customers convenient access. Metered or time-limited on-street parking spaces ensure the user changes periodically, increasing the store’s visibility.

Other needed parking should be located in the rear of the buildings or within consolidated parking areas serving the district as a whole. Shoppers using rear parking areas should have easy access to retail streets via pass-throughs. Employees should use these off-street parking spaces; an employee parking directly in front of a store reduces visibility and access from shoppers, potentially diminishing sales. These strategies help shape a pleasant walking environment, similar to that of conventional malls, whereby the car is left behind for long periods of time while shoppers stop at multiple stores.
H) Civic Buildings

Public buildings, such as schools, places of worship, and libraries, are important components of a community. These civic buildings help define the identity of a place and foster a sense of community pride. Significant public buildings, such as city halls, libraries, courthouses, and universities, should serve as centerpieces for downtown areas. To reflect their importance in the community and public nature, these buildings should be prominently located. Appropriate sittings for civic buildings include facing a public plaza, occupying a town square, or terminating the view of a street. Diagrams (shown below) by Camillo Sitte demonstrate various organizations celebrating civic buildings within city fabric. These studies are included in the book The American Vitruvius: An Architects’ Handbook of Civic Art, by Hegemann & Peets, first published in 1922, which remains, over 65 years later, an excellent guide for civic building placement and design.

I) Public Open Space

Parks and open space are critical for the success and livability of any community. To ensure the success of public open spaces, they must be properly designed and placed. Parks need to be naturally monitored, without requiring the constant patrol of police or security personnel. By surrounding public open spaces with the fronts of buildings and interconnecting streets, natural surveillance of the space is pro-
PRINCIPLES OF URBAN DESIGN

Regional Parks
Regional parks are usually composed of many acres of preserved land with trails and room for active recreation. This type of open space should ideally coincide with natural land areas.

Multi-Use Play Fields
Multi-Use Play Fields are active parks that provide sports fields. These fields may be incorporated and shared with schools.

Greens
Greens are open spaces generally surrounded on all sides by homes or other building types, with streets along at least two sides. Greens are informally landscaped and are generally for passive use or informal sport activities (i.e. throwing a frisbee).

Plazas
Plazas are open spaces generally surrounded on all sides by buildings, with streets along at least two sides. Plazas are formally landscaped, frequently incorporating hardscape to accommodate both passive use and community gatherings.

Squares
Squares are formally landscaped urban open spaces. Squares provide a setting for civic buildings or monuments. Squares can either be part of a block or surrounded by streets on all sides.
Existing Conditions
**Existing Conditions**

The City of West Palm Beach is Palm Beach County’s oldest, largest, and most populous city. The City has an estimated 99,919 people in approximately 58 square miles. West Palm Beach has a diverse population, a wide array of services and employment, and world-class cultural and entertainment venues. The City serves as the central business district for the county, and with its eastern densities and downtown core, may present the best opportunity for establishing a true, multi-modal, mixed use city in the Treasure Coast region.

**The Study Area**

The Charrette study area is bounded on the north by the Riviera Beach-West Palm Beach municipal line and on the south by the C51 Canal, and extends one half mile both east and west of the FEC corridor. The FEC rail line runs through the center of the study area. The Lake Worth Lagoon lies to the east.

**History**

The City of West Palm Beach is the oldest municipality in South Florida, and its origins are intertwined with the history of the FEC railroad. The City of West Palm Beach was originally settled as part of the extension of the Flagler Railroad into Palm Beach County in 1894. This extension was a continuation of Henry Flagler’s strategy to develop winter resort hotel facilities to entice northern tourists to Florida. In order to successfully establish Palm Beach as one of these winter resorts, Flagler constructed both the Royal Poinciana Hotel overlooking the Lake Worth Lagoon and the Breakers Hotel on the ocean side in Palm Beach. The City of West Palm Beach was founded as a settlement for the workers who constructed Henry Flagler’s Royal Poinciana Hotel, located on the shore of the Lake Worth Lagoon, was destroyed by a fire in 1925.
and serviced the resorts. During the 1920s, the City grew rapidly and during this time many of the historic structures and districts of the City were built. West Palm Beach grew and evolved over time into a thriving center for the region.

Settlement Pattern

The City is bifurcated by the I-95 interstate corridor. The older areas of West Palm Beach are generally located east of I-95, along the shore of the Lake Worth Lagoon. These settlements are dense, have a fine-grain network of streets and house the city’s historic resources. The interconnected block and grid structure of the older part of the city provides multiple vehicular routes, which allows for narrow roads, which are pedestrian and bicycle-friendly. The areas west of the interstate was developed later than the eastern portion and consequently follow a suburban, auto-oriented settlement pattern, characterized by developments of low density residential uses, connected by collectors and arterial thoroughfares (i.e. Okeechobee Boulevard) lined with various commercial uses.

The City has sixteen local historic districts and several structures on the national register. Within the study area, structures of historical significance include the Seaboard Train Station, the recently renovated County Court House, the Storm of 1928 Memorial and Mass Burial Site, the Evergreen Cemetery, and a collection of Quonset huts in the

EXISTING CONDITIONS
EXISTING CONDITIONS

industrial district that are considered structures of interest. State and Federal guidelines recognize the historical value of these properties and limit the degree to which transportation projects can impact them.

Community Redevelopment Areas (CRA)

The City has two Community Redevelopment Areas (CRAs): Downtown and Northwood/Pleasant City. Following a national trend of disinvestment in urban centers in the 1950s, the City’s downtown area declined, and by the early 1980s was largely vacant. Downtown West Palm Beach has been the focus of revitalization efforts for over 15 years, and its successful transformation and revitalization has received national attention. With projects including CityPlace, Palm Beach County Convention Center, City Center, a new waterfront, and numerous new mixed use buildings, the downtown has become a place to work, live and play. The Northwood/Pleasant City CRA was established in 1993 to revitalize Northwood Village, identified as a blighted area. It’s boundaries were expanded in 1999 to include the Pleasant City Neighborhood. This CRA is comprised of five unique districts:

- Broadway/US1 District
- Currie Corridor
- Industrial Park
- Northwood Village
- Pleasant City CRA
EXISTING CONDITIONS

Ongoing redevelopment efforts are evident throughout this CRA. Numerous streetscape improvements and the Northwood Village commercial area emerging as a festive collection of small businesses are examples of this CRA’s achievements. Within the Pleasant City section, Merry Place - a mixed income, residential community with a mix of condominium apartments, townhouses, and single-family houses - is under construction. Future plans include improvements to the Blum Park area.

Employment Centers

The City has several employment centers and attractors and its downtown serves as a central business district for the region. It is also the County seat, and home to several government facilities: City Center (West Palm Beach’s City Hall/library complex), the Palm Beach County Courthouse, and the Paul G. Rogers Federal Building and U.S. Courthouse. Downtown has two entertainment/shopping districts: CityPlace and Clematis Street district. The City also has many cultural amenities located in and around the downtown core, including the Kravis Center, the Palm Beach County Convention Center, Norton Museum of Art, Ann Norton Sculpture Garden, Armory Art Center, Palm Beach Maritime Museum, and the South Florida Science Museum. Major employment centers include Good Samaritan Hospital located downtown on Flagler Drive and St. Mary’s Medical Center on 45th Street.
Transportation

West Palm Beach is fortunate to have many types of transportation service. The city has easy vehicular access to I-95, which follows a ridgeline fairly close to the eastern portion of the city. The Palm Beach International Airport (PBIA) is located on the west side of I-95, and is easily accessible from local corridors and the interstate. Both the CSX and FEC rail lines traverse most of the city. While the FEC is still limited to freight transport, the CSX currently has Tri-Rail and Amtrak service in operation. The historic Seaboard Train Station serves as a multi-modal hub for Tri-Rail, Amtrack, Greyhound, Palm Tran, and a downtown shuttle. The downtown has a trolley system that provides free circulation to visitors and residents, including a stop at two assisted living facilities. Two trolleys run at a time, carrying about 50,000 riders per month. The route includes many downtown destinations, including the grocery store, the Kravis Center, CityPlace, City Center, and Clematis Street.

Pedestrian and Bicycle Infrastructure

Pedestrian and bicycle infrastructure refers to the system of sidewalks, multi-use paths, street crossings, landscaping, and street furnishings supporting walking and cycling as modes of transportation. The City should be commend-

The street network varies significantly between the eastern and western neighborhoods of Palm Beach County. For example, the eastern section of Forest Hill Boulevard, between I-95 and the Lake Worth Lagoon is 1.3 miles long. Within this distance, there are 26 north/south lanes, resulting in 20 lanes per mile. In contrast, the section between SR 441 and I-95 is 8.3 miles long and has 36 north/south lanes, resulting in only 4 lanes per mile. The difference in the settlement pattern affects the viability of all modes of transportation.
EXISTING CONDITIONS

ed for having an extensive network of sidewalks along the vast majority of its streets. By and large, the pedestrian community is well treated throughout most of the study area. Some exceptions to this generally high level of service were identified (where the standards of the Americans with Disabilities Act (ADA) are not met); these will be highlighted in the context of each specific station location. However, it must be noted in most instances of ADA non-compliance, the conditions were in the process of being corrected during the charrette.

Similarly, bicyclists have good conditions throughout most of the study area. Most of the streets outside of the major arterials have relatively slow-moving traffic, such that cyclists can ride comfortably and safely in the road. East of US 1, Olive Avenue has a multi-use path/designated bike route, extending from about ¾ mile south of Forest Hill Boulevard to north to Okeechobee Boulevard. Traffic calming in the installation of medians, speed humps, a mini-roundabout, and narrow lane widths is used within this section. 8-foot wide multi-use paths are located on both sides of the road, from ¾ of a mile south of Forest Hill Boulevard to Southern Boulevard. At Southern Boulevard, on-street, designated bike lanes start and continue north to Greymon Drive. At that point, cyclists share the roadway (though no designation alerts drivers to this condition). With the speed limit of 25 mph and the use of traffic calming treatments to help maintain the 25 mph speed limit, sharing the lanes is acceptable at this location. In addition, Avila Road provides access to the multi-use path that runs along Flagler Drive adjacent to the Lake Worth Lagoon, providing a scenic route north to 23rd Street.

There are many types of bicyclists with different levels of comfort biking on roads. Some bicyclists comfortably share streets with traffic; generally these streets should have low auto speeds (under 25 mph). Bike lanes should be provided on the busier and faster streets (those with posted speeds higher than 25 mph). Bike routes and trails should be options provided to those who find riding alongside vehicles on the busier roads uncomfortable. The community may want to consider forming a bicycle advisory committee to gather detailed input on enhancing routes and trails, encouraging cycling, and exploring strategies to make cycling safer. The MPO’s Bicycle/ Pedestrian /Greenways Advisory Committee is a good resource in this area.
CSX-FEC Connector Master Plan
THE
WEST PALM BEACH
CSX ~ FEC CONNECTOR
CHARRETTE MASTER PLAN
Introduction

The focus of the CSX-FEC Connector Charrette was to engage the public to resolve three issues: first, identify the best location to establish a new connection between the CSX and the FEC railroads; second, determine future transit station locations along the FEC corridor, and; third, identify opportunities and strategies to ensure the land use patterns at the station locations enhance the long-range viability of mass transit. The CSX-FEC Connector Charrette Master Plan addresses and resolves each of these three issues along the rail corridors for the length of the City. The recommendations within this plan are the result of considering the initial public input from a series of one-on-one stakeholder interviews, a seven-day public design charrette, and additional study. The suggested strategies were tested and the most feasible, beneficial strategy for the City of West Palm Beach was determined. Each proposed intervention is described both by text and graphics to clearly demonstrate the impact involved and the opportunities presented by establishing a new viable passenger rail option in the City of West Palm Beach.

Location of the Connector

Connecting the CSX and FEC rail lines is a fundamental component of the overall effort of re-introducing passenger rail service on the FEC corridor between Jacksonville and West Palm Beach. This connection is the key to diversifying transportation choices along the eastern seaboard of the United States, to re-establishing passenger rail service to Florida cities that have not had service for over four decades, and to facilitating the expansion of local rail transit to the cities north of West Palm Beach within the Treasure Coast region. Providing the physical connection simultaneously provides both Amtrak and Tri-Rail with significantly expanded service options.

Charrette Focus

1. Identify Best Location to Connect the FEC & CSX Rail Corridors;
2. Recommend Future Transit Station Locations along the FEC Corridor;
3. Identify Strategies to Ensure the Surrounding Land Use Pattern at Each Station Enhances Transit Viability.
While the conceptual importance of this link is simple to understand, laying new track in established areas is not an easy undertaking. The City of West Palm Beach is the best place for the connector within the overall rail system due to the geographical proximity between the CSX and FEC rail lines within its boundaries. Initially, the full length of the City was studied for potential connection locations as the adjacency between the lines is fairly consistent until 45th Street. North of this street the CSX line begins to shift westward.

One potential location considered in the original study was the southern edge of the West Palm Beach Municipal Golf Course. The golf course was an attractive location as it is under public ownership, lessening potential impact to private properties. Difficulties bridging the canal and necessary adjustments to recent I-95 improvements were issues, but the ultimate problem was a negative impact to the transit system itself. Analyzing the effect on transit system functions revealed a significant consequence: existing Tri-Rail stations located on the CSX line, north of the cross-over would be rendered obsolete. Locating the cross-over south of the existing downtown West Palm Beach station, also known as the “Seaboard Train Station”, would not only remove the most successful station in the current system, but also the one with the greatest potential in the expanded system.

The Seaboard Train Station is located on the west side of Tamarind Avenue, between Clematis and Evernia Streets. Tri-Rail, Amtrak, Greyhound, Palm Tran, and the downtown shuttle provide service from this location. The Tri-Rail stop is heavily used by students attending the Dreyfoos School of the Arts High School. A Palm Tran transfer station was completed in 2009 at this location, further integrating the various transportation modes. The Seaboard Train Station is the most successful multi-modal station in the Treasure Coast region, providing access to local, intra-state, and national destinations.

In addition to the numerous diverse transportation systems operating in and around this station, the actual station building is architecturally significant. It was designed by Harvey and Clark and constructed in 1924 as one of the flagship stops for Henry Flagler’s railway. The original building is listed both in the local and National Register of Historic Places.

The historic Seaboard Train Station is the most successful multi-modal node in the region.
Banyan Boulevard

In order to maintain the Seaboard Train Station operating in the system, the focus for the location of the CSX-FEC connection shifted northward to three other potential areas: Banyan Boulevard, Northwood (25th Street), and 45th Street.

Banyan Boulevard initially appeared promising. The road is located just north of the Seaboard Train Station, and has an existing, unused rail spur running along the north side of the road. Unfortunately, upon more in depth study, this option was determined to be undesirable because:

a) Banyan Boulevard is one of only two gateway thoroughfares into the downtown (the other is Okeechobee Blvd.). Incorporating new connector tracks into the Banyan Boulevard and Tamarind Avenue intersection would necessitate substantial engineering solutions (i.e. utilizing a raised intersection) that would negatively impact the entryway into the downtown, both visually and functionally.

b) The dimensional criteria necessary to curve the connector tracks to join both railways is such that the recently expanded parking garage for the Palm Beach County Judicial Center would have to be “clipped”;

c) Locating tracks paralleling Banyan Boulevard would result in neighborhood street closures. These closures would disconnect neighborhoods and prevent the City from extending new links between the historic Northwest Neighborhood and the rest of the downtown area. Reconnecting the community has been an ongoing effort for the City.
45th Street

The second location north of the Seaboard Train Station evaluated for the connection between the CSX and FEC rail lines was the 45th Street corridor. In this area, the CSX railroad begins a westward shift towards stations in Tampa and Orlando. Connecting the two lines north of 45th Street is not logical. The various uses in the 45th Street area support a station, but are not conducive to accommodating the connector tracks. The south side of 45th Street is platted with mostly single family lots, while the north side is largely given over to St. Mary’s Medical Center. Several alignments were considered, but all versions significantly impact the St. Mary’s Medical Center campus. Hospital representatives, while excited by the potential for a station, were not supportive of accommodating the connector tracks, which would necessitate major alterations to the approved site plan. Additionally, in any location, new tracks create additional at-grade rail crossings. In this location, additional at-grade rail crossings are a significant concern given the resulting potential delay in emergency access to the hospital. The Master Plan recommends including a new station in this area to serve the hospital, which is a major employment center, but connecting the rail lines further south.

The St. Mary’s Medical Center is located on the north side of 45th Street. Emergency access is from 45th Street and Greenwood Avenue. Two at-grade rail crossings are located in this area.
During the charrette, the 15th Street corridor was raised as another possible location for the connector. The opportunities and constraints presented by this location were tested during the week-long public process. The intention was to locate the crossing south of Northwood Road to enable a station further north on the FEC, adjacent to the Northwood business district. A station at the business district would allow it to capture the economic benefits of the rail system in the initial Tri-Rail service expansion phase. The challenge of this scenario was that the 15th Street corridor does not have many options conducive to accommodating the train tracks. The south side of 15th Street is within the Northwest Historic District and is occupied largely by single-family residential property. Installing new rail tracks here would negatively impact historic, residential properties. This was deemed neither desirable nor consistent with State and Federal funding guidelines.

Along the north side of the street are: a) the old Roosevelt Elementary School, now the Roosevelt Community School, owned and operated by the school district; b) Dunbar Village, a West Palm Beach Housing Authority project currently planned for redevelopment, and; c) an FEC switching station used mostly by Rinker Materials Corporation through an agreement with the FEC rail road. Rinker Materials
Corporation produces and transports aggregate, concrete, cement and other materials. As a result, dust and noise occurring at this switching station have been an ongoing problem for the nearby residents.

The design analysis revealed that the connector physically fits in this area, but the realistic challenge is the willing and expeditious participation of the affected property owners. For enough land to be available to accommodate the dimensional criteria for curving the connector tracks, the Palm Beach County School District would have to approve rebuilding or relocating the Roosevelt Community School. In order to ensure compatibility with the historic district to the south, the housing authority property would have to agree to build low-rise courtyard apartments along the north side of 15th Street, with the rail line accommodated in the rear, between alleyways. Finally, the Rinker/FEC switching area would be significantly impacted and reduced in size, with the lower third of the property bifurcated by the new connector rail tracks. In this case, if the impact were acceptable to all parties, an opportunity is presented to better shield the switching station from the adjacent neighborhood.

Unfortunately, while the affected parcels are under the control of only four entities, this solution is not an easy one to implement. The coordinated participation of both the public organizations and large private corporations is required. Given these challenges and the potential impacts to the Northwest Neighborhood, the 15th Street corridor is not a recommended location.

The train tracks are proposed between new apartment buildings, with new streets providing both access and buffer. This arrangement impacts school board, housing authority, and FEC properties. The location offers an opportunity to better shield the existing switching station from the neighborhood.

**Key Design Features**

1. Connector located north of 15th Street;
2. Townhouses, Live/Work units, and new medians shield the switching station along Division Ave.;
3. Courtyard apartments face both 15th Street and the station, then transition into single-family houses;
4. Street and block structure re-connected.
Northwood

25th Street

The 25th Street area is the connector location with the most community consensus. This area is comprised of mostly older, industrial uses and presents no direct impacts to residents. It is located within the Northwood/Pleasant City CRA, between the Coleman Park neighborhood, which was recently targeted for focused infill redevelopment by the City, and the Northwood Hills historic district.

When studying the challenges and opportunities of this area, great care and consideration was given to two sacred sites: the Evergreen Cemetery and the Storm of ’28 Memorial Park. Protecting and enhancing these two sites is a top priority for the community. Special attention was also given to all potentially affected properties. One of the affected parcels in this proposed scenario is owned by Florida Power & Light Company (FPL) (corner of 25th St. and Windsor Ave.). This parcel houses a small substation, which may expand over time to accommodate future demand. A small impact to FPL parcel could be accommodated without impacting the ultimate use as an expanded substation. FPL representatives expressed willingness to participate in a solution serving both the electrical service and transit needs of the community.

The 25th Street area is unique for a number of reasons. Physically, it is distinct in that the street grid is shifted in a diagonal pattern, aligning with a seldom-used rail spur. This spur unfortunately connects the FEC and CSX lines in the opposite direction to that needed for the intended passenger rail service expansion. The area also hosts a concentration of Quonset huts, which have been identified in previous studies.
LEFT: Master Plan for the Connector generated during the Charrette.

BELOW: The final Citizens’ Master Plan for the Connector, reflecting post-charrette input and further analysis:

1. Train Station
2. Station Parking
3. New Street (Mandatory)
4. New Street (Optional)
5. Relocated Business

- New development
- Existing Development

6. Historic Quonza Huts
7. Public Green Lined with Parking
8. Train Station Plaza
as historically significant. In general, the area could be described as a “district of in-town industry”. This is rare from a land use perspective since industry has generally been zoned out over time in many cities. While the area’s zoning is both rare and valuable, many buildings within the district are obsolete or approaching obsolescence. Most buildings are haphazardly arranged, generally housing small users, often poorly screened or landscaped, and seldomly addressing the street in a manner that creates an environment that is attractive or safe for pedestrians. One of the longest running businesses in the County, Lainhart & Potter, has run a successful operation from this district for decades. Overtime, even their exemplary operations have incorporated the use of non-contiguous lots and buildings, resulting in an arrangement that could be improved through parcel consolidation. Finally, this area is within the Northwood/Pleasant City CRA, which by its very inclusion suggests extensive redevelopment is anticipated. This expectation, however, must be balanced with the financing strategies already in use through bonding to ensure the CRA remains solvent.

One of the primary considerations in this effort is to maximize transit infrastructure investment to trigger the greatest amount of redevelopment possible. The design solution proposed for the connector and accompanying station recognizes industrial uses are intended to remain, and shows how resolving transportation impacts of the new rail line helps create larger, consolidated and more efficient parcels for industry. Another important goal pursued is to increase the attractiveness and walkability of the district by disciplining the placement of new buildings and improving landscaping along streets. Improving the pedestrian experience supports both the transit option and the link into the Northwood Business District.

The Recommended Alignment

The recommended alignment of the new connector rail is along the north side of 25th Street. This location was chosen after testing several options. The proposed layout affects the least number of properties in the district and preserves the two sacred sites intact.

As is true to all the locations analyzed, some private properties will be impacted to varying degrees by the incorporation of the crossover. The proposed trajectory is a 50-ft. wide right-of-way, which clips the western corner of the FPL property, travels along the north side of 25th Street, and then curves north to complete the connection to the FEC through the block currently occupied by Lainhart & Potter.

The FPL property can accommodate the proposed impact without jeopardizing the ultimate use of the property. Lainhart & Potter is significantly affected and must relocate. Fortunately, Lainhart & Potter owns a vacant block on the south side of 25th Street and anticipated the potential impact of this project to their current facilities for some time. The design team worked with representatives from Lainhart & Potter to develop a plan for their vacant property that accommodates their relocated business as part of the overall redevelopment strategy for the area. Several other small businesses affected would need to be re-located as well, and these re-locations are contemplated in the Master Plan. One option for business relocation emerged as part of the plan for the new Lainhart & Potter location. As the design team tested their programmatic needs on their vacant parcel, a surplus of land became evident. This land could be developed to accommodate additional businesses. Under this proposed alignment, Liberty Recycling & Scrap, another business in the area, is also impacted, but it could potentially remain in its current site.
Existing Condition showing (red shade) parcels that would be affected/impacted by the crossover.
Phase I: New crossover, station, and minimum infrastructure improvements necessary to maintain circulation.

Phase II: Infrastructure improvements that enhance circulation and maximize redevelopment potential by re-claiming land from un-used rail connections (green shade).
Ultimate Build-Out: Change over time.

Ultimate Build-Out showing (red shade) parcels that affected/impacted by the crossover.
Co-location of Existing Rail Spur

An important choice is available to the City: keep two separate rail connections or co-locate them.

Co-locating the connection means the straight, east-west portion of the rail line would be shared. Co-locating would include curved infrastructure at both ends that would allow transfer between the CSX and FEC in any direction. Co-location presents several benefits, as it:

• removes an east-west rail line from the district;
• reclaims rail ROW to create larger, more regularly shaped industrial parcels;
• reclaims rail ROW to augment the street network; and,
• allows future passenger rail service traveling in all directions to use one station.

The main constraint to co-locating the two connector rail lines into one transfer area is the number of impacted properties as shown in the diagrams on the preceding pages.

The Northwood Station

The ultimate plan calls for a neighborhood-type train station in this area. The station also includes a surface parking lot to satisfy its demands, plus provide surplus parking for the district. Locating the station on the connector has the benefit of positioning the district to provide access to future passenger service traveling in both directions on both the CSX and the FEC, which would be a significant asset to the area in long run. Additionally, this location potentially advances the timeframe for building a station in the area since Tri-Rail extending north is likely to occur before local service is provided on the FEC.

In addition to the engineering criteria for determining the station location, the proposed site responds to the unique character of the area:

• The Storm of ’28 Memorial is the organizing element of the overall plan. The station building is located directly across this memorial, on the north side of the tracks. A hardscaped plaza directly north of the station provides a civic space both for passengers accessing and leaving the area, as well as a stage to honor the area’s history. The Citizens’ Master Plan recommends that information and images about the 1928 hurricane and its aftermath be included in the plaza and station building.
• A new street and rail crossing is proposed where 25th St. intersects 25th Ct. This street and crossing are key to providing access to the station and the industrial district north of it.
• Rosemary Ave. and Tamarind Ave. are interrupted by the crossover and station, but Division Ave. remains open, and a new, formalized route enhanced by civic monuments is proposed to access the cemetery.
• The Quonset huts lining 25th Ct. are protected. Only one of the huts is relocated to a vacant parcel within the existing agglomeration to give room to the new crossing.

A design proposal for the Storm of ’28 Memorial.
• Parks are created from unused, leftover land
• Developable lots result from new geometries such as the intersection of the two spurs on the east side of the connector. Parcels get consolidated and expand to take over right of way that was previously dedicated to the seldomly used spur along 27th St. Most importantly, the majority of the district remains un-affected.

Impacts to the CRA

The proposed location for the connector has another added benefit: the site is within a CRA. The CRA has a number of important tools that could help facilitate the implementation of this effort, at both a district and individual property level. Executing some of the ideas illustrated in the master plan, such as improving circulation and handling parking at a district-wide level to strengthen the area as a whole will require the coordination capabilities of the City and CRA staff to ensure successful implementation. The CRA also has tools to assist individual businesses impacted by the proposed rail infrastructure and to maximize the potential for properties located adjacent to new developable lands.
**FEC Station Locations**

The SFTEC Study identifies potential stations, specifies the types, and suggests general locations. Stations are determined based on analysis of expected ridership demand, the physical characteristics of surrounding areas, and the existing transportation system. Proposed stations will provide the opportunity for the community to gain access to a new SFTEC transit system, extending rail access beyond the existing West Palm Beach Intermodal station (the Seaboard Train Station) and the Mangonia Park and Ride station, located north of 45th Street.

The study identifies up to eight potential stations for the City of West Palm Beach. The desirable station area character is “Urban Transit-Oriented”, which is described as having a mix of uses, buildings oriented along streets, parking shielded from view, wide sidewalks, and an interconnected street network.

The charrette focused on creating a specific, detailed design for each potential station location. Each station plan addresses three main goals:

- resolve how the station criteria can best be accommodated on the site;
- demonstrate a transit-supportive development pattern to maximize viability of rail transit; and,
- identify redevelopment opportunities for the city afforded by the new rail access.

Each design resolves how the station program can best be accommodated on the site. Station criteria includes standard elements, such as the 500-ft. long

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**SFECC Core Concepts**

1. Restore Passenger Transit Service to the FEC Corridor (Flagler’s Old Line);
2. Extend Existing Tri-Rail Service North to Jupiter (on the FEC Corridor).
platform(s) for passenger queuing, ticket access, and route information. Other needs such as parking, are called for by the designated station type.

In order to ensure the surrounding environment of each station is as transit supportive as possible, the existing public infrastructure at each site was evaluated in terms of the street network and pedestrian and cycle infrastructure. Since every transit rider starts and ends his/her trip as a pedestrian, recommendations to enhance walking conditions consistent with the strategies described in the Principles of Urban Design section of this report are included for each station location.

Various studies indicate that access to transit improves property values. The station plans in this report demonstrate how to incorporate redevelopment opportunities compatibly with the proposed stations and consistently with the character of the surrounding areas. The designs utilize transit-supportive development patterns to maximize each site’s potential and to support the viability of rail transit. By resolving each station location and type with a high level of specificity, the City will be equipped with design solutions appropriate for each area as the project progresses.

### Key Factors

**Determining Station Location**
- Character of the Surrounding Area
- Population, Employment, Residential Densities
- Availability of Land
- Vehicular Access
- Transit Connectivity
- Consistency with Existing Plans and Policies
- Potential Environmental Impacts

### Station Types

- City Center
- Town Center
- Neighborhood Center
- Employment Center
- Local Park and Ride
- Regional Park and Ride
- Airport/Seaport
- Special Event Venue

TOP: An example of a neighborhood station type, which is essentially a platform. Neighborhood stations require limited parking as most users access it by foot or public transit. BOTTOM: An example of an airport station type. Airport stations are generally used at the beginning or end of journeys longer than daily commutes.
Forest Hill Station

The proposed Forest Hill Station is the southernmost station proposed in the City of West Palm Beach. The SFECC Study recommends a park and ride station type in this location. As such, this location will serve the surrounding population including Lake Worth residents to the south and residents of western communities who are afforded access to the train via Forest Hill Boulevard, a significant east-west connection. This station location also has easy access to I-95. In order to accommodate the station’s needs and to maximize potential supporting spin-off redevelopment in the area, the station is proposed in close proximity to the intersection of the FEC rail line and Gregory Road.

The site is bounded by the C-51 Canal to the south, which is the boundary between the cities of West Palm Beach and Lake Worth, Dixie Highway to the east, and the West Palm Beach Municipal Golf Course to the west. This site is of particular importance since it acts a gateway into the City of West Palm Beach.

The convergence of several factors supports transforming this area from a currently un-memorable place into a signature address within the City. The site is approximately 28 acres, which allows ample room to accommodate the station’s needs plus a significant redevelopment program. Adding a train station to the overall program for the area will increase the redevelopment appeal of adjacent parcels currently either vacant, or housing an obsolete under-utilized strip center.

A number of physical attributes of the area are currently not being capitalized upon. One example is the attractive view of the city golf course across Georgia Avenue, an amenity that would ultimately yield increased property values and a significant marketing tool. Most importantly, this station area was found to have the largest potential for spin-off redevelopment of all of those explored during the charrette.

The retail analysis conducted during the charrette...
by Gibbs Planning Group (GPG) suggests an existing demand for various goods and services that is presently not available in the City’s southern neighborhoods. Once the current economic climate stabilizes, the study indicates the demand exists to support a walkable town center at this location.

**Station Program**

The retail analysis conducted during the charrette considered the current retail available, the demographics of the area, and neighboring areas to the south and the east-west connectors. The findings indicate the site could support a town center, also called a “lifestyle center”, which includes a mix of retail, commercial, and residential uses. Between 250,000 and 400,000 square feet of retail may be supportable at this location, specifically focused in the following categories: apparel, books, crafts, home improvement, office supply, pets, restaurants, sporting goods, and department stores.

Developing this area following a transit-oriented pattern of development is crucial not only to maximize the transportation benefits of the station but also to capture the maximum market share in the area. The Master Plan developed during the public charrette process depicts a redevelopment plan for the Forest Hill Station and its surrounding area that transforms the site into a mixed-use village. The supportable retail program is provided in different building types intermingled with different uses and various densities.

The Master Plan for the area proposes a cohesive block structure that seamlessly interconnects new development to the surrounding area providing easy access to the station and drawing people into this new destination. Low-scale buildings of various sizes and heights are arranged within a fine-grained network of streets that provide multiple, narrow routes to ensure safe, easy circulation by foot, cycle, or vehicle. Beautiful public open
spaces are interspersed throughout the site establishing a pedestrian-friendly environment and attractive residential address. The result is a transit-supportive land use pattern that maximizes the site’s redevelopment potential.

The proposed design also incorporates the station infrastructure into the redevelopment plan. Public plazas are located in conjunction with rider drop-off areas to provide room for queuing cars and pleasant spaces for people to wait. In addition to parking serving the mixed-use program, 600 parking spaces are provided in conjunction with the station. The design suggests two garage locations. On-street parking is plentiful both to support the stores and to provide important traffic calming measures.

Street Network

Most riders will approach the station from Dixie Highway or Georgia Avenue via Gregory Road. The primary access from the west is Forest Hill Boulevard that crosses the FEC Railroad tracks and connects to Dixie Highway, which is the main north-south corridor bordering the site. Both Dixie Highway and Georgia Avenue provide access from the north. The most direct east-west connection is from Gregory Road, which links Olive Avenue through to Dixie Highway and Georgia Avenue. The recommended redevelopment strategy maximizes accessibility to the site from these existing roads and also extends existing streets including Norton Avenue through the site.

Pedestrian and Cycle Infrastructure

Sidewalks are generally provided throughout the adjacent community. Minor augmentations are recommended for this area. The sidewalk along the eastern side of Georgia Avenue is complete, but no sidewalk is provided on the west side of Georgia Avenue in the vicinity of Mary Brandon Park. Along Gregory Road to the south of the station, a sidewalk is needed on the north edge of the parcel. A pedestrian/cycle link to Forest Hill High School is recommended along the edge of the golf course.
Cyclists who ride in the street will have a greater challenge accessing the station since Forest Hill Boulevard and Dixie Highway do not have bike lanes. For those located west of Dixie Highway, the best opportunity for north-south trips is to use Lake Avenue, which is recommended as the north-south bike route. Since the southern portion of Lake Avenue is not wide enough for designated bike lanes, the use of a sharrow in the travel lanes is recommended to remind automobile drivers that the lane is to be shared with cyclists.

For those located east of Dixie Highway, Olive Avenue is the recommended north-south route. Olive Avenue has a multi-use path on both sides to use for north-south travel. Gregory Road provides access to the station from the south. Travel along Gregory Road should be comfortable for cyclists since it is a traffic-calmed residential street. Those traveling from the north will best be served by Wilks Road. The future redevelopment of the Palm Coast Plaza site will augment the pedestrian and bicycle network and provide additional amenities, if the site plan is developed consistently with the pattern of development and the recommendation suggested by the Master Plan.
Comparison with Zoning

Rather than a conventional shopping center with expansive surface lots, the Master Plan proposes the creation of new city fabric comprised of walkable streets, public open spaces, and low-scale buildings (3 to 4 stories high) containing stores, offices and residences. A test of the existing zoning instructions and the land use pattern needed to create a TOD was conducted during the charrette; diagrams depicting the analysis are shown on the following page. The current General Commercial zoning regulates development using a Floor-Area-Ratio (FAR) of .75 with the height limited based on the building setbacks. Under the current regulations, the maximum development scenario for approximately 28.2 acres is approximately 921,294 square feet with little direction regarding the form of the structure. A worst-case test of the code yields a 36-story building with a footprint of 25,000 square feet (appropriate for offices). This form reflects an auto-dominated solution since walking through the expansive parking lot would be undesirable. More important is the building is not consistent with the scale of the surrounding neighborhoods.

The City has leverage to encourage a transit-supportive physical environment. In order to encourage the recommended village scenario, sufficient incentive must be offered to offset the increased infrastructure cost of building structured parking. By structuring the parking, expansive surface lots are eliminated as the predominant feature of the development, and land becomes available for other uses. This plan builds out FAR of 2.1, which is over 2.5 times what is allowed today. However, a computer model demonstrates that the scale of the development is far more compatible with the adjacent community than the potential building allowed under the current zoning. Significant investment in transit is anticipated; the park and ride station infrastructure could help advance the desired redevelopment form. The City should explore its leverage to encourage redevelopment that is interesting, transit-supportive, and financially feasible.
MASTER PLAN

BUILD-OUT ANALYSIS

Existing Condition

Potential build-out under current zoning

Proposed Program:
350,000 sf retail
450,000 sf office
300-350 residential units

Proposed build-out under the citizens’ Master Plan
Different views of the proposed development around the Forest Hill Station. Figures 1 and 2 depict a pedestrian-scale plaza lined with mixed-use buildings that creates a recognizable address for the station. A park-and-ride garage is shown in Figure 2 within the core of the block, within walking distance of the station. Figure 3 shows two big-box retail stores. While both have uninterrupted visibility from Dixie Highway via a strategically designed streets and open spaces, the one to the left (in Figure 3) is set back from the main corridor and lined with office space and neighborhood retail. These two big box retailers plus the park-and-ride garage in the background near the station anchor a street that effectively functions as a main street terminating at the train station.
Southern Boulevard Station

Southern Boulevard is a key east-west corridor, traveling from the Town of Palm Beach, through the City, and continuing across the County as SR 80. It is also one of two east-west connectors in the City that are bridged over the railroad tracks. In this instance, both Georgia Avenue and the rail line are under the over-pass. In terms of the train station, the absence of an at-grade crossing presents certain challenges in terms of access and visibility. Little land is available for redevelopment and the existing slip streets and one way movements further limit access to the rail road. As a result of these physical characteristics, this location is designated as a Neighborhood Station with limited parking and is not a priority station.

Ridership demand is expected in this location due to the density and uses in the surrounding area. Georgia Avenue is a healthy light industrial corridor that serves numerous small businesses. The area northwest of Georgia Avenue and Southern Boulevard is home to two users with demographics very supportive of transit ridership: a Housing Authority project for the elderly and Conniston Middle School. In addition, the Southdale Shopping Center, located on the south side of Southern Boulevard, has a grocery, a pharmacy, a post office and other neighborhood retail uses.

The station for this area is proposed in a fairly straightforward manner: both the station and platform are accommodated within the existing FEC right-of-way. The station building is proposed facing Nottingham Boulevard with the platform extending northward. This configuration provides easy access to the station from the surrounding neighborhood via car, bicycle, or foot.

The station building is proposed as a simple, elegant masonry building with a metal roof, consistent with the character of the surrounding area. The platform design allows for clear views through both sides for easy oversight of the station. No existing streets are impacted and the station type requires very little parking, though a small parking
Station Program

The recommended program for the Southern Boulevard station is minimal. The station is designated as a Neighborhood Station type. The station program could accommodate standard transit elements and 200-500 square feet of quick service food and sundries businesses. No additional parking is necessary in conjunction with the station as riders will mostly walk to the station; however, incorporating on-street parking wherever possible, or acquiring a small, adjacent lot to provide a few additional parking spaces should be considered.

Street Network

Access to the Southern Boulevard Station is challenged by the grade separation between Southern Boulevard and the FEC Railroad. To the west, the roadway approach to the bridge begins at the intersection with Lake Avenue. The eastern approach begins just west of Dixie Highway. This grade separation makes a connection from Southern Boulevard to the station very difficult, limiting easy accessibility to the surrounding area. At the same time, Miller Avenue, Malverne Road and the frontage road adjacent to Southern Boulevard are
narrow and could provide a challenge to future transit access. The most direct east-west access to the station is provided by Nottingham Boulevard and north-south from Georgia Avenue, which connects under the Southern Boulevard over-pass. Most transit users will walk or bike to this station.

**Pedestrian and Bicycle Infrastructure**

Sidewalk access is very complete in the neighborhoods around the station. The primary issue identified was related to instances of non-compliance with the ADA (Americans with Disabilities Act); however, activity observed north of the site along Lake Avenue indicates the City is in the process of correcting those inadequacies.

The area immediately around the station, extending to the north and south is predominantly surrounded by light industrial uses. These buildings and uses have present varying levels of quality along the street, and frequently lack fenestration resulting in limited overview or “eyes on the street”. The pedestrian environment is not very attractive and shade is lacking in many areas.

Bicycle access to this station has similar limitations as that for pedestrians and motorists. The best opportunity for north-south trips for those located west of Dixie Highway is to use Lake Avenue,
which has adequate width to include designated bike lanes north of Southern Blvd. Olive Avenue is the best north-south route for those located east of Dixie Highway.

Georgia Avenue provides another north-south route and is adjacent to the station; however, the route north of the station serves cyclists better than the southern portion. The ride north passes through residential neighborhoods while the character south of the proposed station is light industrial, which may be uncomfortable for some riders.

Nottingham Boulevard provides the best east-west connection to the north-south routes. Nottingham Boulevard has an at-grade crossing with the CSX railroad line to the west and a signalized intersection with Dixie Highway, providing simple connections for cyclists to neighborhoods in both directions.

Elevation of the proposed station located within the FEC right-of-way with the Southern Boulevard overpass in the background.
Belvedere Road

Belvedere Road is a neighborhood commercial street, extending from Olive Avenue westward to the airport, and then continuing across the county to SR7. Given the direct route from the FEC to the airport via Belvedere Road, the initial SFECC study identifies this location as an Airport Station. In this initial analysis, the Airport Station is proposed as a Neighborhood Station also served by dedicated shuttles to the Palm Beach International Airport (PBIA).

The Citizens’ Master Plan takes a slightly different approach than that of the SFECC, and identifies two separate stations fulfilling different roles:

- The first, a small scale Neighborhood Station at Belvedere Road
- The second, an Airport Station where Southern Boulevard intersects the CSX rail road.

Ridership models indicate that either the Southern Boulevard Station or the Belvedere Road station will be slated for construction in later phases, after a certain amount of ridership has been established.

The area surrounding the proposed Neighborhood Station is identified as having significant redevelopment potential for transit-supportive uses and land use patterns, given the size of the parcels and the current vacancies. It is the bounded by Belvedere Road to the north, Hampton Road to the South, Georgia Avenue to the west, and Dixie Highway to the east. The Belmart Plaza, an older strip commercial center located just west of the train tracks currently houses a vacant grocery store. The Palm Beach Post’s headquarters, which are located on the east side of the railroad, are also located within the area. At the time of the charrette, the Palm Beach Post had recently retracted its operations, stopping on-site printing functions. This change resulted in vacated printing areas (a large portion of the building) and reduced loading area use. These two large, consolidated parcels provide significant redevelopment potential around the proposed station.
Within the station study area, the Dixie Highway and Belvedere Road corridors have the potential to redevelop as extensions of the surrounding historic neighborhoods. As such, they should be held to a higher, more pedestrian-friendly standard and form. In recent years, redevelopment along Belvedere Road has occurred on a parcel-by-parcel basis, at the individual building scale. While the uses in these buildings (bank, small restaurants) are compatible with the surrounding neighborhoods, unfortunately, the physical form emerging along the road is more consistent with the western, vehicle-oriented suburban areas of the City than with character of surrounding historic neighborhoods.

Belvedere Road originates in El Cid, and traverses along the Sunshine Park, Flamingo Park, and Pineapple Park neighborhoods. Dixie Highway traverses the City from the downtown core, through Mango Promenade, El Cid, Central Park, and Prospect/Southland Park neighborhoods. All of these neighborhoods are pedestrian and bicycle-friendly areas, with a dense network of narrow streets with shaded sidewalks. Pedestrian and bicycle trips to Howard Park, Palm Beach Atlantic College, Flagler Drive, and the downtown area are common and easy to navigate.

Given the large redevelopment potential adjacent to the future station, the City has an opportunity to ensure redevelopment occurs in a form similar in character to the Antique Row area on Dixie Highway, while accommodating a range of neighborhood uses. Buildings should line the streets with wide, shaded sidewalks. Surface parking lots should not become the predominant feature along the sidewalk. Parking should be oriented to the side and rear of buildings, with coordinated/shared access points to reduce potential vehicular-pedestrian conflict points. These recommendations will not only improve the aesthetics of the corridors, but also help establish the desired multi-modal land use pattern.

Station Program

The analysis by GPG determined a retail program for the Belvedere Station and its adjacent area. Within the station, demand is anticipated to support 500 – 1,200 square feet of retail, comprised of a café/coffee shop and the sale of sundries. This type of retail can be located within the station building or within the proposed liner building facing Belvedere Road and shielding the parking garage.

The area around the station is anticipated to support redevelopment in a manner that is transit supportive and pedestrian oriented. GPG suggests that a program of 80,000 – 90,000 sf in a neighborhood town center format could replace the Belmart Plaza. Potential tenant types include cafés, a grocery, a pharmacy, restaurants, and neighborhood

New development should expand the walkability of the adjacent historic neighborhoods rather than create a smaller version of a suburban thoroughfare.

View of the Belmart Plaza with the Palm Beach Post offices. Several retailers remain in the shopping center, which recently lost its main anchor store (Winn Dixie).
services. Using the town center format, the retail uses are mixed with residential development in buildings consistent with the scale and character of the surrounding historic neighborhoods.

In order to achieve an environment conducive to pedestrian activity around the proposed station, the Master Plan proposes to redevelop the Belmart Plaza strip shopping center over time. The proposal suggests a mixed use program around a formal plaza, creating an authentic civic space for the area. The plaza anchors the train station and serves both to create a special and distinctive address and to accommodate queuing, drop-off, and access to parking.

The suggested site configuration accomplishes a number of objectives. First, the station is accommodated as a civic amenity. Second, a new grocery store (located east of the old one) anchors the center served by visible, easily accessed parking areas and convenient transit access within an attractive, pedestrian-friendly environment. Third, buses or shuttles can drop-off riders at the station or in front of the proposed grocery, then loop past a block of mixed use buildings to re-engage Belvedere Road using the signalized intersection of Belvedere Road and Georgia Avenue. The plan accommodates development, facilitates transit options, and creates a superior pedestrian environment, while maintaining a scale compatible with the surrounding neighborhoods.

The reduction in operations at the Palm Beach Post resulted in empty buildings. Given the large parcels along Dixie Highway that extend to the south, (including Rich’s Ice Cream & 311 Prospect Place), a potential long-term plan for the area was developed. The
TOP: Diagrammatic view of the proposed ultimate build out looking south west at the proposed station and redevelopment around it.

RIGHT: Perspective view showing proposed scale and character of redevelopment, consistent with the surrounding neighborhood's character and scale.
Master Plan suggests redevelopment scenarios that could occur together or on individual parcels over time that would not only support transit but also allow for a more resilient and varied program, if redevelopment is contemplated in the future. Parking uses for both the station and businesses are consolidated into a structure, making the cost of building the garage a possible public-private shared venture. Consolidating parking allows more land to develop as office and mixed use buildings, rather than asphalt surface lots. Public open space is formalized into plazas to create a more attractive business address and increase visibility from Dixie Highway. Residential uses also become viable when the environment is transformed into a beautiful place. Introducing a full range of uses creates opportunities to diversify redevelopment program in response to market demands, share parking, and create compatible transitions to the neighborhoods.

**Street Network**

Access to the Belvedere Road station is restricted to the south by “superblocks” resulting from the configuration of the Belmart Plaza, the Palm Beach Post buildings, an office complex, and the associated surface parking lots serving these facilities. The Belmart Plaza faces Belvedere Road, which terminates to the east at Olive Avenue, but extends westward connecting to the interchange with I-95 and bordering the northern edge of the Palm Beach International Airport. The primary north-south routes serving the station include Olive Avenue, Dixie Highway, Florida Avenue, Georgia Avenue and Lake Avenue.

The Master Plan reflects the intent to improve access to the station through redevelopment. The plan reconnects Florida Avenue through the study area and suggests utilizing the existing at-grade crossing at the Palm Beach Post property to establish an east-west link to Dixie Highway. The proposal improves circulation to the station and knits new fabric into the surrounding areas to facilitate access to both transit and retail uses for pedestrians, cyclists, and drivers.

**Pedestrian and Bicycle Infrastructure**

Like much of West Palm Beach, the sidewalk infrastructure in and around the proposed station is quite complete. The biggest challenge to the pedestrian is the quality of the pedestrian environment through
which the sidewalks traverse. Properties fronting sidewalks house either light industrial uses or display development patterns that are suburban in character, with buildings set back from the street with surface parking lots lining the sidewalks. These conditions are not conducive to establishing a pleasant pedestrian experience. Another challenge to pedestrians is the high vehicular travel speed along Belvedere Road.

Bicycles and pedestrians have similar limitations regarding access to this station. Currently, the best opportunity for north-south bicycle trips west of Dixie Highway is via Lake Avenue. This route has adequate width for designated bike lanes. Georgia Avenue is another option and is residential in character both north and south of Belvedere Road. Olive Avenue is the best bicycle route for those east of Dixie Highway. Florida Avenue also runs north-south and is directly across from the potential station, but some riders may be less comfortable using Florida Avenue north of the station where it passes through a light industrial area.

The best east-west connection to the western north-south routes is Avon Road. Experienced cyclists who want to access Olive Avenue to the east will likely use Belvedere Road for the short distance from the potential station. Less experienced cyclists will likely be uncomfortable riding “in the road.” Since the intersection at Dixie Highway and Belvedere Road has the only signal for 0.4 miles in both directions, inexperienced cyclists will likely ride on the sidewalks.

The potential to improve the pedestrian experience along Belvedere Road is strong and in conjunction with the City’s plans to create a gateway entrance along this corridor. As property along Belvedere Road redevelops, buildings should be placed along the backs of sidewalks. Additionally, on-street parking should be inset into the edges, street shade trees added, and planted medians installed where adequate width exists. These treatments should help calm the vehicular travel speed through the corridor and improve the pedestrian experience.

Transit

Existing transit service is provided to the station area by Palm Tran Routes 1 and 45. Route 1 extends north from Mizner Park in Boca Raton and continues on Dixie Highway past the station site to the transfer center at the Palm Beach Gardens Mall. Additional north-south service is provided just west of the station along Lake Avenue by Route 45, which originates to the south in Lake Worth at Waterside Plaza and terminates to the north at the West Palm Intermodal Center.
**Airport Station**

The initial SFECC study identifies the need for an Airport Station and suggests Belvedere Road as the appropriate location. This location was chosen due to its direct route to the airport. As the sole designated Airport Station, concern has been raised that unnecessary traffic could impact the area. During the charrette, an alternate location for the Airport Station was identified.

The Citizens’ Master Plan recommends the Airport Station locate on the CSX railroad at Southern Boulevard. A station at this location would serve the airport and provide Tri-Rail access to commuters via Southern Boulevard. The site currently has vacant County offices and a hotel. A station would support the hotel and encourage redevelopment as an employment center. The site is largely under public control and has plenty of room for parking.

The Master Plan proposes keeping the existing buildings and infrastructure. New buildings infill vacant parcels along the northern portion of Gem Lake Drive to form an authentic street. The street is designed to create a signature address for the station and the new businesses.

In April, 2010, Kimely Horn and Associates completed the Site Location Alternatives Analysis on behalf of the RTA. The study also recommends this parcel as the preferred site for an Airport Station. Focusing primary airport access at this location has several benefits and minimizes potential impacts to the Belvedere Road.

**TOP:** Aerial view of the proposed site for the Airport Station.

**BOTTOM:** The Citizens’ Master Plan:

1. Train Station,
2. Structured parking,
3. Bridge over canal connecting parking to station,
4. Authentic street and main access to station,
5. Surface parking,
6. Infill development.
Downtown Stations

The downtown area is a strong transit-supportive environment. The high residential densities and wide range of uses, including employment centers, educational establishments, and entertainment destinations yield significant ridership projections. Physically, the downtown is characterized by a strong block structure, pedestrian-friendly streets, urban buildings, and beautiful parks. Transit is an established, successful component of downtown as evidenced by the ridership using the Tri-Rail station and the local trolley system. The addition of service on the FEC rail road is expected to both augment and draw from the current transit ridership.

In the initial SFECC study, one station was proposed for the downtown area. Further analysis during the charrette suggested support for two stations. The downtown contains numerous regional draws, which, when considered together, generate high ridership demand. In both recommended locations, access to multiple destinations is provided.

Downtown City Place Station

Okeechobee Boulevard is one of two major east-west gateway thoroughfares into the downtown. A magnificent median with formally aligned Royal Palm trees provides both a signature entry to the downtown and a generous area of refuge for pedestrians between the travel lanes. The first downtown station is proposed on the north side of Okeechobee Boulevard, between the City Place garages and Quadrille Boulevard. This location provides access to many downtown destinations including City Place, Alexander W. Dreyfoos Jr. School of the Arts, the Raymond F. Kravis Center, Palm Beach Atlantic University, and the Palm Beach County Convention Center.
The Downtown City Place Station is designated as a Town Center station and provides direct access into the center of City Place. The station building is designed to provide a strong civic presence facing Hibiscus Avenue, with platforms extending southward along Quadrille Boulevard. This location integrates the station building into the city fabric in a manner that strengthens the public realm in one of the few spots in the area in need of improvement. As a result, part of the existing City Place parking garage will be shielded from view, improving the aesthetics of the elevation facing Quadrille Boulevard. Placing the station in this location has the added benefit of establishing an active use along Quadrille Boulevard, introducing a level of natural surveillance of the street that is currently not accomplished by the parking garage structure.

**Station Program**

The recommended program for the Downtown City Place station is minimal as the surrounding environment easily meets the needs of trans-
sit riders. The station building program should accommodate standard transit elements and 200-500 square feet of incidental retail uses. No additional parking is proposed in conjunction with the station as riders will mostly walk to the station or utilize the downtown trolley and buses. Parking options, if needed, are plentiful both in City Place and several municipal garages and lots.

**Street Network**

The Downtown City Place station is sited within an area comprised of larger than optimal block sizes. Generally, a strong multi-modal environment has street intersections spaced every 300-400 feet, and no further than 600 feet apart. Access to the station from the north is via Quadrille Boulevard, which is adjacent to the potential station. To the west of the station, Rosemary Avenue and Sapodilla Avenue, spaced 650 feet and then 450 feet respectively, both provide access northward. These north-south corridors are interlinked by east-west streets regularly spaced approximately every 350 feet.

The main access routes from the south are Dixie Highway, which is located approximately 500 feet to the east and Tamarind/Parker Avenue, located about 1,500 feet to the west. The east-west street network south of the station consists primarily of Okeechobee Boulevard, a regional connector extending to I-95 and the Florida Turnpike. The local east-west street network is interrupted by the historic Woodlawn Cemetery, located between the FEC railroad tracks and Dixie Highway, the...
Convention Center, and Howard Park, which extends from Okeechobee Boulevard south along Parker Avenue. These disconnects limit access from the Grandview Heights neighborhood, which is directly south of the convention center. However, given the neighborhood’s proximity and the surrounding condition, recommended improvements focus on the pedestrian and cycle infrastructure.

Okeechobee and Quadrille Boulevards

A minor adjustment is recommended at the intersection of Laneview Avenue and Quadrille Boulevard. Currently, on the east side of the intersection, the far right westbound travel lane allows a right only movement. However, the west side of the intersection has a lane available to receive through traffic movements. In several instances, drivers were observed making a through movement, despite the current “right only” signage. Since most peak afternoon travel flows westward, restricting the movement to “turn only” does not seem necessary. In order to ensure predictable vehicular patterns, allowing a through/right movement is recommended.

Pedestrian and Cycle Infrastructure

The downtown has a complete network of sidewalks and crosswalks to support the pedestrian activity in the area. Generally, in areas with high levels of pedestrian activity, the City has provided sidewalks adequately sized to support the additional foot traffic. The streets in City Place are very well executed. Streets are shaded with trees or arcades, on-street parking is provided, and a comfortable spatial enclosure is achieved. Consequently, motorists travel at low speeds, generally around 15 mph. The city streets outside of City Place on the north side of Okeechobee Boulevard are also designed to comfortably accommodate both pedestrians and motorists; streets are mostly two-lane with on-street parking, adequate sidewalks, shade trees, and good spatial enclosure.

Some exceptions to the generally strong multimodal environment exist. Quadrille Boulevard

![Image](image1)

Allowing a through/right movement in the far right lane is recommended at the intersection of Okeechobee and Quadrille Boulevards.

![Image](image2)

Downtown streets are designed to comfortably accommodate both pedestrians and motorists. In areas attracting high amounts of pedestrian activity, the City has provided wider sidewalks and shaded environments.
seems too wide for the traffic volumes that were present during the week of the charrette. In areas without on-street parking, vehicles consequently travel too fast given the surrounding urban conditions. Some of the one-way streets also have travel speeds higher than desirable due to multiple lanes of traffic headed in one direction without the provision of on-street parking.

**Okeechobee Boulevard and Rosemary Avenue**

Improving the intersection of Okeechobee Boulevard and Rosemary Avenue is particularly important. The pedestrian crosswalks span four lanes in each direction, vehicles tend to block the crosswalks, and the vehicular travel speeds tend to be quite fast outside of peak travel times. The intersection area is larger than necessary, resulting in excess asphalt, which engenders faster vehicular speeds, requires longer signal cycles, and creates long distances for pedestrians to navigate.

In order to improve the intersection, a slight physical alteration is recommended to the center median at Rosemary Avenue, which leads directly into the heart of City Place. The curb line of the median should be adjusted to reduce corner radii and, thus, the amount of asphalt, as shown in the diagram on the following page. By defining vehicular lanes using curb, rather than utilizing painted striping, the turning movements into and out of City Place will be slightly slowed. These changes will reduce the distance and time needed for pedestrians to cross the road and improve the pedestrian experience.

Another recommended adjustment is to improve the signalization cycles. Currently, the traffic signals are timed in favor of automobile travel. The pedestrian crossing lights have long intervals between cycles and, though the countdown signals are useful, the time allotted for pedestrians to crossings is too short. 15 seconds is barely sufficient for fully ambulatory adults stepping off the curb immediately upon receiving the right of way. Groups, children, and elderly people need more time to comfortably cross. The crossing lights should be adjusted to provide a little more time and should be programmed to respond to pedestrian demand.
The proposed changes to the Okeechobee Boulevard median at the intersection with Rosemary Avenue retain the current travel and turn lanes, maintain the flow of traffic, calm vehicular speeds during turning movements, and reduce the distance and time necessary for pedestrians to cross the road:

1. Corner curb radius reduced to 20 feet, which reduces the pedestrian crossing by 26 feet and 5.9 seconds.
2. Corner curb radius reduced to 20 feet, which reduces the pedestrian crossing by 14 feet and 3.2 seconds.
3. Corner curb radius reduced to 20 feet, which reduces the pedestrian crossing by 23 feet and 5.3 seconds.
faster, at least during off-peak travel hours. The signals should be timed to easily accommodate, both in frequency and duration, groups of people crossing from the convention center into City Place. These changes will both increase safety and support the city’s goal of attracting visitors into the downtown.

Howard Park Multi-Use Path

Bike circulation is problematic in this area. As previously discussed, the east-west street network to the south is limited and bike lanes are not provided along Okeechobee Boulevard. Hibiscus Street provides an east-west connection from the potential station on the north side of the station to both Sapodilla Avenue and Olive Avenue. Olive and Sapodilla Avenues have the potential to serve as bike routes north of Okeechobee Boulevard as both streets are designed for slow vehicular speeds, allowing cycles to share the road within the more urban area.

Improving the pedestrian and bicycle connection into the Grandview Heights neighborhood to the south is important. Accession northward into downtown are limited by the road closures associated with the Palm Beach Convention Center (including Rosemary/Florida Avenue). A pedestrian connection exists at Florida Avenue via a mid-building pass through, linking Grandview Heights to Rosemary/Florida Avenue and into the downtown. Currently, way finding signage alerting pedestrians and cyclists to the connection is not provided. Establishing a second option is recommended via a multi-use path through Howard Park, next to the retaining wall on the west edge of the Convention Center. Fortunately, the sidewalk in front of the Convention Center is adequate to serve as a multi-use path to link both areas.
**Transit**

This station has additional transit services including the Downtown Trolley service, which provides service along the route shown below, and access to the West Palm Beach Intermodal Center, which links to many Palm Tran routes, Tri-Rail, Greyhound, and Amtrak service. These options will provide travelers with multiple options to travel in the area.

*TOP: West palm beach Trolley. CENTER & BOTTOM: Intense bicycle activity within the downtown area.*
Government Center Station

The second location for a downtown station is, as its name clearly depicts, proposed in close proximity to the City’s largest concentration of government offices. Identified as “Government Center Station” it is proposed on the north side of Banyan Boulevard.

The Government Center Station is considered a City Center station. This location serves the County Courthouse, the surrounding businesses, City Center (the city hall/library complex), and the shops and restaurants on Clematis Street. The station and platforms can be accommodated without the need to permanently close streets. The design for this station establishes a drop off route using 2nd Street and the existing Palm Beach County parking garage access point to Banyan Boulevard. In order to increase interconnectivity to the area to the north, Railroad Avenue is proposed to connect to Quadrille Boulevard.

Looking south along the FEC rail road, toward the future train station site.

Bicycle access analysis.
Station Program

The station program for the Government Center Station is quite modest. GPG suggests that only square feet of coffee and sundry offerings should be included in the station. Parking is not necessary to include, given the large amount of parking offered in both public and private garges and lots in the area.

Street Network

The street network in the area around Government Center Station is essentially consistent with the downtown core: a grid of inter-connected blocks that accommodates pedestrians and motorists. The main east-west access to the station is Banyan Boulevard, one of the primary east-west thoroughfares providing access into the downtown core. Though the east-west network is generally well established south of the station site, the railroad interrupts east-west travel north of 3rd Street to 15th Street. Quadrille Boulevard turns to the east just north of the station, connecting to Dixie Highway, Olive Avenue, and continuing over the Flagler Memorial Bridge into the Town of Palm Beach. To the west, Rosemary and Sapodilla Avenues offer north-south routes throughout the downtown, linking into the Northwest Neighborhood.

The key issue to address in this station is maintaining the existing street grid in the downtown. The site studied in the charrete can accommodate the station and platforms without necessitating the permanent closure of a city street. The downtown core has been able to recast itself in the last 20 years as a pedestrian-friendly, livable place in part due to the City’s focus on civilizing and enhancing it’s street designs. The intact grid is an important component of that effort.

Pedestrian and Bicycle Infrastructure

As previously discussed, the downtown area has a complete network of sidewalks and crosswalks to support the pedestrian activity. Generally, in areas
with a high amount of pedestrian activity, the City has provided sidewalks which are adequately sized for the additional pedestrian traffic. The City streets are built with pedestrian needs in mind, consisting mostly of two-lane streets with on-street parking, shaded sidewalks and good spatial enclosure. As described in the Downtown City Place Station, Quadrille Boulevard is too wide for the traffic volumes that were observed during the week of the charrette, and does not have on-street parking. This area has a sizable number of surface parking lots and empty parcels, all of which detract from a pleasant pedestrian environment. Substantial opportunity exists for redevelopment to complete these streets by infilling vacant parcels with properly placing buildings, and replacing parking lots with structured parking garages over time. All structured parking should be lined at the street level with retail or commercial uses, as demonstrated by the new municipal garage at Clematis Street and the FEC rail road. Access to the station for bicyclists is generally easy. The grid provides options to use streets with slower speed traffic. The recommended route for Bicyclists is to use Sapodilla Avenue and Olive Avenue for north-south routes to connect to 3rd Street.

**Transit**

This station has additional transit services including the Downtown Trolley service, which provides service along the route shown below, and access to the West Palm Beach Intermodal Center, which links to many Palm Tran routes, Tri-Rail, Greyhound, and Amtrak service. These options will provide travelers with multiple options to travel in the area.
Palm Beach Lakes
Good Samaritan Hospital

Palm Beach Lakes Boulevard is the second location within the City were an east-west road bridges over the FEC corridor. In this case, the bridge is quite high, so pedestrians are accommodated on sidewalks primarily along the parallel, at-grade slip streets. Pedestrians cross over the FEC railroad tracks on the north side of the road using stairway structures linked by a sidewalk in the center of the overpass.

Good Samaritan Hospital is located east of the FEC railroad. The hospital’s helipad and parking structure are located on the west side of Dixie Highway, while the majority of the hospital functions are located on the east side of Dixie Highway, facing Flagler Drive. An elevated walkway links the garage over Dixie Highway into the hospital. A pharmacy is located at the northwest corner of the intersection of Dixie Highway and Palm Beach Lakes Boulevard. Much of the remaining land is vacant, and under hospital ownership.

A station is proposed in this area to serve Good Samaritan Hospital, which is a significant downtown employment center. The station is proposed.
at the terminus of 13th Street in a small, elegant building, with a formal plaza provided for pedestrian access. Between the street and FEC rights-of-way, both the station and platforms can be accommodated within existing public property. A pedestrian, at-grade crossing should be provided at the end of the platform, terminating the northernmost slip-street. If this at-grade crossing to access both platforms is not possible, a single, central platform should replace the dual platform design.

In order for a station to function effectively, the pedestrian environment between the station and the hospital must be improved. New development is needed to provide interest and security for pedestrians. The uses within the buildings could be commercial, office, and/or residential. The plan for the area demonstrates how to incorporate the form of the buildings and circulation to create a transit-supportive environment.

TOP: Plan and elevation view of the proposed station, designed as a simple, tower-like structure at the end of 13th Street. BOTTOM: The Citizens’ Master Plan for the Good Samaritan Hospital station area.
TRANSIT

Existing transit service is provided along US 1 by Palm Tran Route 1. Route 1 extends north from Mizner Park in Boca Raton and continues past the station site to the transfer center at the Palm Beach Gardens Mall. Route 31 parallels Route 1 to the west of the rail corridor along Tamarind Ave beginning to the south at the West Palm Beach Intermodal Center and ending to the north at the Veterans Administration Medical Center in Riviera Beach.

Street Network

This potential station is located in an area that is intended to serve the Good Samaritan Hospital and the surrounding neighborhoods. The area is a mix of residential neighborhoods, numerous vacant parcels, and light industrial properties. Tamarind Avenue and Dixie Highway are the primary north-south corridors. The east-west street network is very limited. The first east-west corridor to the north is 15th Street and then another connection is not available until 23rd Street. 3rd Street to the south is the first east-west crossing south of 15th Street.

Pedestrian and Bicycle Infrastructure

A larger percentage of gaps in the sidewalk network exist in this area than typical of the downtown. The most significant missing link is the lack of sidewalks on the Palm Beach Lakes Boulevard bridge.

Bicyclists face similar problems on the local street network as pedestrians. No bike lanes exist on Palm Beach Lake Boulevard or on Dixie Highway. Sapodilla Avenue, which has traffic calming in place, serves as a north-south bike route on the west side of the station. Olive Avenue on the east side provides a north-south bike route. Olive Avenue ends at Palm Beach Lakes Boulevard so at that point, bicyclists are best served by moving over to Spruce Avenue, which has been traffic calmed and passes through residential neighborhoods, providing for a comfortable ride than along the commercial or industrial corridors.
Northwood Station

In recent years, great care has been given to nurture the business district in the Northwood Road area. The addition of a passenger rail station to the area would support the business district and provide access to Pleasant City, located south of Northwood Road. At the time of the charrette, the CRA staff advocated to collocate the station with anticipated redevelopment on the “anchor site”. The anchor site is a CRA-owned parcel bounded by Northwood Road on the south, Broadway on the east, 24th Street on the north, and Pinewood Avenue to the west. Its location at the base of Northwood Road offers an opportunity to interject significant activity into the business district.

A passenger rail station on the anchor site would increase the visibility and accessibility of the Northwood Business District. These potential positive impacts were the key reason for exploring options for the cross-over tracks further south in the study area. If the connection between the CSX and FEC rail lines occurs south of the business district, both local and regional commuter trains would be running on the FEC when they reach Northwood Road, increasing the access and visibility of the business district. Page 64 contains the study of putting the cross-over tracks in the 15th Street area. Ultimately, the 15th Street location is not viable due to the impacts to residential properties and a historic district, as well as the complicated ownership patterns.

The recommended location for the CSX-FEC connector is along the north side of 25th Street in the Industrial District. Once the recommended location for the tracks was determined, the anchor site was no longer a viable location for the station. The combination of avoiding impacts to the two sacred sites in the area, the necessary turning radii of the tracks, and the required length of the passenger platform(s) influenced the decision to place the Northwood Station on the new connector tracks. See page 68 of this report for the detailed plan for the area. In order to maximize the link to the Northwood business district, establishing a safe, pleasant pedestrian and cycle route between the station and the district must be a priority.
As part of the evaluation of the area, GPG conducted a retail evaluation of the Northwood area. The station is planned to have approximately 1,000 square feet of retail development, comprised of coffee and sundry establishments. As part of a larger evaluation of the Northwood area, a general overview of the demand for retail uses was conducted. Given the surrounding demographics, uses such as Lawn and Garden Supply stores and Limited-Service restaurants had a strong demand at the time of the study. These uses would be compatible additions to the improvements and establishments fostered by the CRA.
Street Network

The potential 25th Street station is co-located with the connection between the CSX railroad and the FEC railroad and is also intended to provide transit access to the surrounding neighborhoods. The station area is primarily comprised of light industrial properties, which are bounded by residential neighborhoods to the south, north and east. Australian Avenue is the first primary north-south corridor to the west of the station and Federal Highway is the main north-south corridor to the east. The east-west street network is very limited both to the south and north. The first east-west corridor to the south is 15th Street and no east-west streets provide rail crossings to the north until 30th Street.

Pedestrian and Bicycle Infrastructure

The network of sidewalks is fairly complete in this area with a relatively small number of segments missing sidewalks. However, empty parcels negatively impact the pedestrian experience. If a station is placed in this location, the vacant parcels will likely be redeveloped and the pedestrian experience will improve. In order to facilitate access to the area, as the light industrial uses around the station redevelop and the associated street network is improved, sidewalks should be included on both sides of the streets.

Bike access runs north and south along Windsor, Tamarind, and Pinewood Avenues. The connection linking those corridors should be 25th Street since no other east-west segments can serve this purpose in the area and access to the Northwood Village should be facilitated. Bike lanes should be installed along 25th Street as part of the corridor redevelopment to allow cyclists to make the connections north and south of 25th Street.
45th Street ~ St. Mary’s Hospital Station

St. Mary’s Medical Center is identified as a Neighborhood Center/Employment Center Station type. While a station at this location is expected to be heavily used by the medical campus, the necessary infrastructure is smaller in scale due to existing parking and facilities already in place in the hospital campus.

While the hospital is a significant employment center, its current pattern of development and plan for growth and ultimate build out is not that of a transit supportive, pedestrian friendly environment. As the hospital grows, the opportunity exists to improve the character of the campus by adding and diversifying the ultimate development program, without impacting the size or location of future medical buildings.

The Citizens’ Master Plan:
1. Train Station;
2. Structured parking,
3. New development/medical expansion;
4. Access boulevard and formal plaza;
5. Hospital.
RIGHT & CENTER: Elevations of the proposed St. Mary’s Station.

BOTTOM: The Mediterranean architecture draws on elements from the chapel at St. Mary’s Medical Center. The building is embellished with emblematic bronze angel sculptures, reflecting the spirit and character of St. Mary’s hospital, the major destination in this area.
By consolidating parking into structures, land becomes available for buildings that house hospital expansion uses and even doctor and medical offices. These buildings are proposed lining the garages and fronting 45th Street Greenwood Avenue. At the same time, a regular system of blocks and streets is established within the hospital’s campus. This network of streets will ultimately result in a great address and an environment that is conducive for pedestrian activity, making access to the hospital by train a pleasant experience and the preferred choice.

**Street Network**

This potential station is located in an area that is intended to serve St. Mary’s Hospital and the surrounding neighborhood. The proposed station is in an area that is occupied primarily by residential neighborhoods with the hospital occupying a large land area to the northwest of the station site. Greenwood Avenue is a primary north-south corridor that runs in front of the station area.

Australian Avenue is to the west of the station and Federal Highway is to the east. Due to the location of the CSX and FEC railroads, the east-west street network is very limited to the south and north. The first east-west corridor to the south is 36th Street and there is no crossing to the north until Martin Luther King Blvd in Riviera Beach.

**Pedestrian and Bicycle Infrastructure**

Similar to the segment just to the south, the network of sidewalks is pretty complete in this area with a relatively small number of segments missing sidewalks. As in the area just to the south, there are empty parcels that take away from the pedestrian experience. If a station is located here, as vacant parcels redevelop, the pedestrian experience should be improved and enhanced, and a complete network of streets should be created along with the associated sidewalks.

Bike access runs north and south along Spruce and Pinewood Avenues. The connection between those corridors should be along 46th Street. If a connection west to Windsor is needed, the only access to Windsor is 45th Street. Bike lanes would need to be installed on both sides of 45th Street to provide that access.
Bicycle access analysis.
The West Palm Beach CSX-FEC Connector Charrette Master Plan provides many recommendations for enhancing the City along the FEC corridor to maximize both the viability of transit and the potential spin-off redevelopment. The Implementation chapter of this report provides a step-by-step framework for policy decisions and staff actions. For the charrette recommendations to be realized, the coordination and cooperation of local governments and various agencies will be necessary. It is imperative that the City confirm the results of this public design process are representative of the desired future for passenger rail service in the City by adopting the Charrette Master Plan as the vision for future improvements. In order to achieve these recommendations, the following actions should occur:

### IMMEDIATE ACTION ITEMS

(2011-2012)

I. **Adopt the CSX-FEC Connector Charrette Master Plan, and its main recommendations.**
   a. Recognize the Northwood Industrial area at 25th Street as the preferred cross-over location.
   b. Recognize the following eight locations as potential FEC rail road stations:
      1. Forest Hill Station/Palm Coast Plaza
      2. Southern Boulevard
      3. Belvedere Road
      4. CityPlace (Hibiscus Avenue)
      5. Banyan Boulevard
      6. Palm Beach Lakes Boulevard
      7. 25th Street
      8. St. Mary’s Medical Center (Greenwood Avenue)
   c. Recognize the preferred Airport Station location as the CSX rail road at Southern Boulevard.
   d. Support new passenger service on the FEC provided the infrastructure to establish “quiet zones” along the corridor is installed.

II. **Establish a City Task Force to focus on the implementation of the plan.**
   a. The Task Force should be comprised of City Planning, Zoning & Building, Engineering, and CRA staff, at a minimum;
   b. The Task Force should meet regularly to define specific priority projects in the study area (using this Implementation Chapter as a guide) and craft strategies to implement the projects;
   c. The Task Force should serve as a conduit for information to and from the West Palm Beach community and businesses and as a formal liason to the relevant agencies, including FDOT, FEC, SFRTA, Palm Beach County and the Palm Beach MPO.

III. **25th Street Analysis**
   a. Confirm existing entitlements and parcel ownership.
   b. Decide whether or not to consolidate the existing rail spur with the future rail spur; if consolidation is preferred, initiate discussions with the FEC and FDOT to ensure the removal of the obsolete spur and the acquisition of the surplus right-of-way resulting from the abandonment.
   c. Evaluate ownership pattern and roadway locations, and then consider reconfiguration to maximize the redevelopment potential of the district.
d. Initiate discussions with FDOT regarding property/business impact and acquisition endeavors for the new connector and station.
e. Prepare to aid impacted businesses with relocation by identifying new potential locations within the City and streamlining any necessary approvals.
f. Study options with the FDOT and the CRA for financial assistance for business relocation.

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<th>INTERMEDIATE ACTION ITEMS</th>
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I. Pedestrian/Bicycle Improvements
   a. Coordinate with the Palm Beach County Bicycle, Pedestrian, Greenways Advisory Committee to enhance routes and trails, encourage cycling, and improve safety.
   b. Forest Hill Station Area
      1. Install a sidewalk along the west side of Georgia Avenue, near Mary Brandon Park.
      2. Install a sidewalk along the north side of Gregory Road, near the proposed station.
      3. Establish a bike/ped link to Forest Hill High School along the edge of the West Palm Beach Municipal Golf Course.
      4. Demarcate Lake Avenue with a “sharrow” on the roadway to remind drivers to share the road with cyclists.
   c. Southern Boulevard Station
      1. Correct ADA non-compliance issues on Lake Avenue, south of Southern Boulevard, where utility poles compromise the sidewalk width and the crosswalk needs ramps.
      2. Install a bicycle lane on Lake Avenue, north of Southern Boulevard.
   d. Belvedere Station
      1. When redevelopment occurs, require Florida Avenue re-connect through the Belmart Plaza.
      2. Install bicycle lanes or demarcate Lake Avenue with a “sharrow”.
   e. CityPlace Station
      1. Improve the pedestrian crossing environment at Rosemary Avenue and Okeechobee by improving the signalization and intersection configuration as discussed on page 103.
      2. Study Quadrille Boulevard to determine if on-street parking can be installed.
      3. Establish a bike/ped path between the tennis center and the convention center in Howard Park.
   f. Government Center
      1. Study the possibility of connecting Railroad Avenue through to Quadrille Boulevard.
   g. Good Samaritan Hospital Station
      1. Initiate study with Palm Beach County and the Palm Beach MPO to install pedestrian/bicycle infrastructure on the Palm Beach Lakes/FEC overpass.
      2. Identify and fix gaps in the sidewalk network throughout the area.
   h. Northwood Station
      1. Prioritize improving the pedestrian/bicycle experience between the Industrial District and Northwood Village along 25th Street.
   i. 45th Street
IMPLEMENTATION

1. Study whether a bicycle link is needed between Pinewood Avenue and Windsor Avenue; if so, bicycle lanes should be installed on 45th Street on both sides of the road to provide the connection.

II. Forest Hill Station/ Palm Coast Plaza
   a. Confirm existing entitlements and parcel ownership.
   b. Initiate discussions with the property owners about the potential of an adjacent train station.
   c. Schedule a public workshop focusing on the recommendations for this specific area to confirm public support for the vision illustrated in this plan.
   d. Establish an incentive mechanism in the land development regulations allowing increased development capacity to accommodate the station, existing development rights, and additional uses and development provided redevelopment follows a transit-supportive pattern similar to the type and scale illustrated in the master plan.

III. Belvedere Road/ Belmart Plaza
   a. Confirm existing entitlements and parcel ownership.
   b. Initiate discussions with the property owners about the potential of an adjacent train station.
   c. Schedule a public workshop focusing on the recommendations for this specific area to confirm public support for the vision illustrated in this plan.
   d. Establish an incentive mechanism in the land development regulations allowing increased development capacity to accommodate the station, existing development rights, and additional uses and development provided redevelopment follows a transit-supportive pattern similar to the type and scale illustrated in the master plan.

LONG-RANGE ACTION ITEMS
(2012-2020)

I. Land Development Code along Commercial Corridors, East of I-95
   a. Identify the current zoning along commercial corridors in the study area, focusing on those traversing through or between historic neighborhood districts.
   b. Evaluate the land development regulations in terms of the potential built form, building and parking location, pedestrian and bicycle environment, and mix of uses.
   c. Amend necessary regulations to ensure that, over time, a pedestrian-friendly form results that extends the walkability of adjoining neighborhoods by requiring new buildings to face and line sidewalks, controlling parking location and access to minimize potential automobile-pedestrian conflicts, and improving streetscapes. Code elements should include the following:
      i. Minimum and maximum building setbacks
      ii. Appropriate mix of uses
      iii. Minimum percentage of façade openings on building walls facing streets
      iv. Parking areas located to the side or rear of buildings, not in front
      v. Shade trees lining pedestrian paths and sidewalks (installed along the curbside, if possible)
      vi. Interconnected vehicular and pedestrian access between adjoining businesses
II. Zoning Incentives
   a. Develop Zoning Incentive Program available for projects that meet the following criteria:
      i. Located within ½ mile radius of station locations
      ii. Designed consistently with the Principles of Urban Design outlined in this report
      iii. Further the goals of connectivity and balanced land uses as presented in this report
   b. Possible Incentives
      i. Increased building height
      ii. Increased density
      iii. Flexibility in uses
      iv. Flexibility/assistance with parking
      v. Administrative approval (limited or no public hearings for “pre-approved” projects)

Elevation of the Downtown CityPlace station.
arcade a covered, unglazed portion of a building extending over the sidewalk, open to the street forming an archway or passageway. Arcades are typically appropriate in front of shops.

attainable housing dwelling units whose total housing costs are deemed "affordable" to a group of people within a specified income range.

berm a bank of earth or raised barrier separating two areas.

bond A certificate of debt that is issued by a government or corporation in order to raise money with a promise to pay a specified sum of money at a fixed time in the future and carrying interest at a fixed rate. Generally, a bond is a promise to repay the principal along with interest on a specified date of maturity.

build-out within a defined plan and/or area, the point that all allowable and potential development has been completed.

bulb-outs a traffic-calming device on streets whereby a portion of the curb extends to the outside edge of a travel lane, typically capturing the end of an on-street parking lane. Bulb-outs narrow the width of roadways, decreasing crossing distances for pedestrians and expanding streetscape areas to accommodate wider sidewalks, landscaping, benches, and/or transit shelters.

Burt Harris Act a Florida Statute that provides in part that when a specific action of a governmental entity has inordinately burdened an existing use of real property or a vested right to a specific use of real property, the property owner of that real property is entitled to relief that may include compensation for the actual loss to the fair market value of the property caused by the action of government.

circulator a road or bus system to distribute traffic or people through an area

civic anchor a place that serves to attract people to a particular neighborhood or area i.e. church, theatre, shopping district.

civic realm public place in a community where people can freely gather usually associated with a civic or public use building such as a post office or courthouse.

colonnade series of columns set at regular intervals, usually supporting a roof or series of arches.

community retail shops and services providing for the daily needs of the surrounding area.
connectivity the ability to travel from one destination to another with many choices of routes and/or modes of travel i.e. bicycle, foot, bus, and train, automobile.

Community Redevelopment Agency (CRA) Florida statutes permit local governments to create a CRA, which focus tax revenue and other efforts on the purpose of eliminating slum and blighted in a specific area or for the provision of affordable housing in areas in need of redevelopment.

curb cut any opening of the concrete curb that surrounds a street; most often refers to driveways and access points to parking lots

density number of units per given parcel size, most often measured in number of dwellings per acre

Enterprise Zone an area in which businesses are exempt from certain taxes and are given other incentives as an inducement to locate there and employ residents

façade the wall of a building that faces the street

Floor Area Ratio a planning method regulating development in an area or parcel based upon the ratio between the floor area of a building and the lot size.

General Obligation Bond A municipal bond secured by the taxing and borrowing power of the municipality issuing it, used to raise capital for local government day-to-day activities and for specific projects (usually pertaining to development of local infrastructure such as roads, sewerage, hospitals etc.)

green a public open space, such as a park, usually designed for passive uses consisting of lawn with either formally or informally arranged landscaping

Industrial Revenue Bond Bond used to finance the construction of manufacturing or commercial facilities for a private user

infill building upon or utilizing a vacant or under-used parcel or parcels, usually in redevelopment areas

lending consortium a group of lenders working collaboratively with a municipality offering specialized terms to facilitate priority community projects.

market absorption rate at which a market can absorb additional units of supply without causing market saturation and severe price distortions
<table>
<thead>
<tr>
<th>Glossary Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>median</td>
<td>1. term used in statistics to describe the middle number in a series of numbers. 2. strip of land that divides opposing lanes of traffic</td>
</tr>
<tr>
<td>mixed-use</td>
<td>more than one use in an area or building, the uses which compliment each other i.e. grocery store next to residential uses</td>
</tr>
<tr>
<td>neighborhood electric</td>
<td>speed-limited battery electric vehicle used as an alternative to fossil fueled vehicles</td>
</tr>
<tr>
<td>neighborhood retail</td>
<td>shops and services providing for the daily needs of the surrounding neighborhood.</td>
</tr>
<tr>
<td>neighborhood station</td>
<td>a small transit station located within a residential neighborhood or at the conjunction of several neighborhoods, easily accessible by pedestrians and occasionally offering limited parking</td>
</tr>
<tr>
<td>Palm Tran</td>
<td>public bus transportation provider for Palm Beach County</td>
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<tr>
<td>parcel</td>
<td>a piece of land</td>
</tr>
<tr>
<td>park and ride</td>
<td>a facility collocating public parking spaces with transit access</td>
</tr>
<tr>
<td>park-once</td>
<td>an urban pattern whereby a driver can park in a district and walk to several destinations without needing to drive the car</td>
</tr>
<tr>
<td>passive cooling</td>
<td>in pedestrian and public areas, ways to protect pedestrians from the sun and heat without air conditioning i.e. trees, colonnades, transit shelters</td>
</tr>
<tr>
<td>plaza</td>
<td>a public open space for gathering, usually paved and landscaped in a formal way</td>
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<tr>
<td>pocket parks</td>
<td>a lot or small parcel of land used as a public park either for passive or playground uses.</td>
</tr>
<tr>
<td>power center</td>
<td>an unenclosed shopping centre with 250,000 square feet to 750,000 square feet of gross leasable area that usually contains three or more big box retailers and various smaller retailers with a common parking area shared among the retailers. It is also known as a retail park.</td>
</tr>
<tr>
<td>primary arterial roads</td>
<td>highways designed for through traffic, usually on a continuous route</td>
</tr>
<tr>
<td>promenade</td>
<td>a broad public walking route; a boardwalk or esplanade.</td>
</tr>
<tr>
<td><strong>Glossary</strong></td>
<td></td>
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<td>--------------</td>
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<tr>
<td><strong>public realm</strong></td>
<td>The spaces used freely on a day-to-day basis by the general public, such as streets, parks, squares, verges and public infrastructure</td>
</tr>
<tr>
<td><strong>public spaces</strong></td>
<td>places the general public has a right to occupy, without paying a fee</td>
</tr>
<tr>
<td><strong>redevelopment area</strong></td>
<td>an area (usually older and developed) designated by a local government to focus efforts to eliminate blight and achieve desired development, reconstruction, and rehabilitation.</td>
</tr>
<tr>
<td><strong>redevelopment</strong></td>
<td>Building in an area that has previously been developed; improving by renewing and restoring</td>
</tr>
<tr>
<td><strong>retail anchor</strong></td>
<td>A store (usually a national chain store or department store) in a shopping area or mall whose presence attracts shoppers to the center.</td>
</tr>
<tr>
<td><strong>retail leakage</strong></td>
<td>when residents within a certain area are unable to obtain needed or desired goods or services so they shop at another area to obtain them.</td>
</tr>
<tr>
<td><strong>Request for Proposals</strong></td>
<td>formal procedure whereby an organization asks for proposals for a specific task or project.</td>
</tr>
<tr>
<td><strong>roundabout</strong></td>
<td>traffic safety control device that forces drivers to slow and navigate through the roundabout. Optimum speeds for roundabouts are between fifteen and twenty-three miles per hour. Roundabouts can be circular or oval.</td>
</tr>
<tr>
<td><strong>Right-of-Way (ROW)</strong></td>
<td>land reserved for public use or benefit such as a road or electrical transmission</td>
</tr>
<tr>
<td><strong>Special Assessment</strong></td>
<td>source of funding for certain capital improvement projects that will benefit a specific designated area</td>
</tr>
<tr>
<td><strong>suburban pattern</strong></td>
<td>land use pattern characterized by predominantly low-density residential uses, which are physically separated from limited commercial and civic uses</td>
</tr>
<tr>
<td><strong>synergy</strong></td>
<td>combined effort of two or more entities that produce a benefit</td>
</tr>
<tr>
<td><strong>Tax Increment</strong></td>
<td>Method of financing used by local governments to encourage redevelopment and stimulate the local economy. Taxes derived from increases in assessed values of property within a specified district, typically a Community Redevelopment Area, are used to fund and leverage projects.</td>
</tr>
<tr>
<td><strong>terminus</strong></td>
<td>the end of a marked route, as in the terminus of a road, rail, etc.</td>
</tr>
<tr>
<td><strong>traffic calming</strong></td>
<td>the use of certain devices or techniques, such as narrow lanes, trees lining the...</td>
</tr>
</tbody>
</table>
street, and bulb-outs to slow or restrict traffic, especially in residential areas

**Transit-Adjacent** land use pattern that is next to a transit station. The function of the transit station does not integrate or enhance transit, hence the term "adjacent"

**transition area** the place between two different areas with distinct characteristics used to create a smooth change from one to the other, usually by mixing some of the less intense characteristics from both areas

**Transit-Oriented** land use pattern and built form of development that supports and enhances the access and use of mass transportation options

**urban pattern** a land use pattern integrating medium or high density residential uses with commercial and civic uses within a concentrated area, i.e. a neighborhood, village or city.
<table>
<thead>
<tr>
<th>ACRONYMS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARRA</td>
<td>American Recovery and Reinvestment Act</td>
</tr>
<tr>
<td>CRA</td>
<td>Community Redevelopment Agency</td>
</tr>
<tr>
<td>CSX</td>
<td>Chessie and Seaboard (Railroad)</td>
</tr>
<tr>
<td>DMV</td>
<td>Department of Motor Vehicles</td>
</tr>
<tr>
<td>FDOT</td>
<td>Florida Department of Transportation</td>
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<tr>
<td>FEC</td>
<td>Florida East Coast (Railroad)</td>
</tr>
<tr>
<td>FTA</td>
<td>Federal Transit Administration</td>
</tr>
<tr>
<td>GDC</td>
<td>General Development Corporation</td>
</tr>
<tr>
<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
</tr>
<tr>
<td>MHI</td>
<td>Median Household Income</td>
</tr>
<tr>
<td>MPO</td>
<td>Metropolitan Planning Organization</td>
</tr>
<tr>
<td>PBCC</td>
<td>Palm Beach Community College</td>
</tr>
<tr>
<td>PBIA</td>
<td>Palm Beach International Airport</td>
</tr>
<tr>
<td>PUD</td>
<td>Planned Unit Development</td>
</tr>
<tr>
<td>SBA</td>
<td>Small Business Administration</td>
</tr>
<tr>
<td>SFECC</td>
<td>South Florida East Coast Corridor Study</td>
</tr>
<tr>
<td>SFRTA</td>
<td>South Florida Regional Transportation Authority</td>
</tr>
<tr>
<td>TAD</td>
<td>Transit Adjacent Development</td>
</tr>
<tr>
<td>TCRPC</td>
<td>Treasure Coast Regional Planning Council</td>
</tr>
<tr>
<td>TIF</td>
<td>Tax Increment Financing</td>
</tr>
<tr>
<td>TOD</td>
<td>Transit Oriented Development</td>
</tr>
<tr>
<td>VMT</td>
<td>Vehicle miles traveled</td>
</tr>
</tbody>
</table>