



warwick

WARWICK STATION DEVELOPMENT DISTRICT MASTER PLAN
A TRANSIT-ORIENTED DEVELOPMENT

PREPARED FOR THE **CITY OF WARWICK**

GOODY CLANCY | JANUARY 2012

THE CITY OF WARWICK
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

PLANNING AND DEVELOPMENT

No.....0-12-4..... Date...1/19/12.....
Approved.....*[Signature]*..... Mayor

**AN ORDINANCE RELATIVE TO AMENDMENT OF THE
WARWICK COMPREHENSIVE PLAN;
WARWICK STATION DEVELOPMENT DISTRICT MASTER PLAN:
A Transit Oriented Development**

Be it ordained by the City of Warwick:

SECTION I.

WHEREAS, the City of Warwick is required to adopt a comprehensive plan and update the same from time-to-time.

NOW, THEREFORE, BE IT ORDAINED, that the City Council of the City of Warwick hereby amends the Comprehensive Plan as it has heretofore been adopted and amended, by adopting this amendment thereto entitled "Warwick Station Development District Master Plan, A Transit Oriented Development, dated June 2011" as a functional element of the said Warwick Comprehensive Plan creating the framework and guiding commercial and residential development within the Warwick Station Development District, so-called.

The Warwick Station Development District Master Plan is attached hereto as Exhibit A and incorporated herein by reference in its entirety as if set forth fully herein.

SECTION II.

This Ordinance shall take effect upon passage and publication as prescribed by law.

SPONSORED BY: COUNCILMAN COLANTUONO
AND COUNCILWOMAN VELLA-WILKINSON
ON BEHALF OF MAYOR AVEDISIAN

COMMITTEE: ORDINANCE

Warwick Station Development District Master Plan

prepared for:

City of Warwick

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ADOPTION

Warwick Station Redevelopment Agency (former)	August 23, 2011
Warwick Planning Board	September 14, 2011
Warwick City Council , first passage	December 19, 2011
Warwick City Council , second passage	January 18, 2012
Mayor of Warwick	January 19, 2012

ACKNOWLEDGEMENTS

The **United States Department of Transportation, Federal Highway Administration**, provided funding for this study through a Transportation and Community and System Preservation Grant.

Warwick Station Redevelopment Agency (former)

Michael A. Grande, *Chair*

Rob Tingle, *Vice-Chair*

Betty Confreda-Smith, *Secretary*

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State of Rhode Island and Providence Plantations

Rhode Island Department of Transportation

Rhode Island Economic Development Corporation

Rhode Island Airport Corporation

Goody, Clancy & Associates, *planning and urban design*

BETA Group, Inc., *transportation engineering*

New England Economic Development Services, *economic analysis*

Gates, Leighton & Associates, *landscape design*

The **United States Department of Transportation, Federal Highway Administration**, provided funding for this study through a Transportation and Community and System Preservation Grant.

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EXECUTIVE SUMMARY

PROJECT PURPOSE

This Master Plan defines a vision and development strategy to advance redevelopment of the Warwick Station Development District (the District), comprising approximately 95 acres of land within the City of Warwick. The Master Plan's primary focus is development of land at the heart of the District as a new public destination and center of economic activity. With the opening of the Warwick commuter rail station, this area has the potential to attract transit-served development and serve as a catalyst for long-term improvements in the larger area.

The District forms the gateway to T.F. Green Airport, one of Rhode Island's most important economic engines. As T.F. Green has grown, a mix of airport-

related uses and commercial strip development has come to characterize the airport's front door. In establishing the Warwick Station Redevelopment District (WSRD) in 1998, the City of Warwick recognized the underutilized character of the land between the station and the airport and its potential for redevelopment to advance several public goals:

- Create a place of identity and pride for Warwick and Rhode Island.
- Provide economic benefits for Warwick and the state.
- Capitalize on intermodal transportation resources to foster high-value, high-quality, mixed-use growth.
- Create a sustainable, livable community by introducing a variety of housing choices connected to an economic growth center and established neighborhoods and by improving access to transportation, housing, and new jobs.



New development along Post Road can become a highly visible gateway to a mixed-use center along Fullerton Road.



Existing development, with the skywalk and parking structure of the Warwick InterLink visible beyond, does not capture the site's true potential for the City of Warwick or the region.

USING THE MASTER PLAN

This plan is intended to capture broadly the goals and aspirations of the City of Warwick in a clear vision and to present a series of recommendations and design guidelines that can help it achieve that vision. While the physical plan embodies specific urban design attitudes toward configuration of future development, its relationship to streets, open space, and transportation, the plan preserves great flexibility for specific uses on each parcel. While the market and



individual development opportunities will shape the way the district evolves, the Warwick Station Development Plan should provide the framework within which that growth occurs.

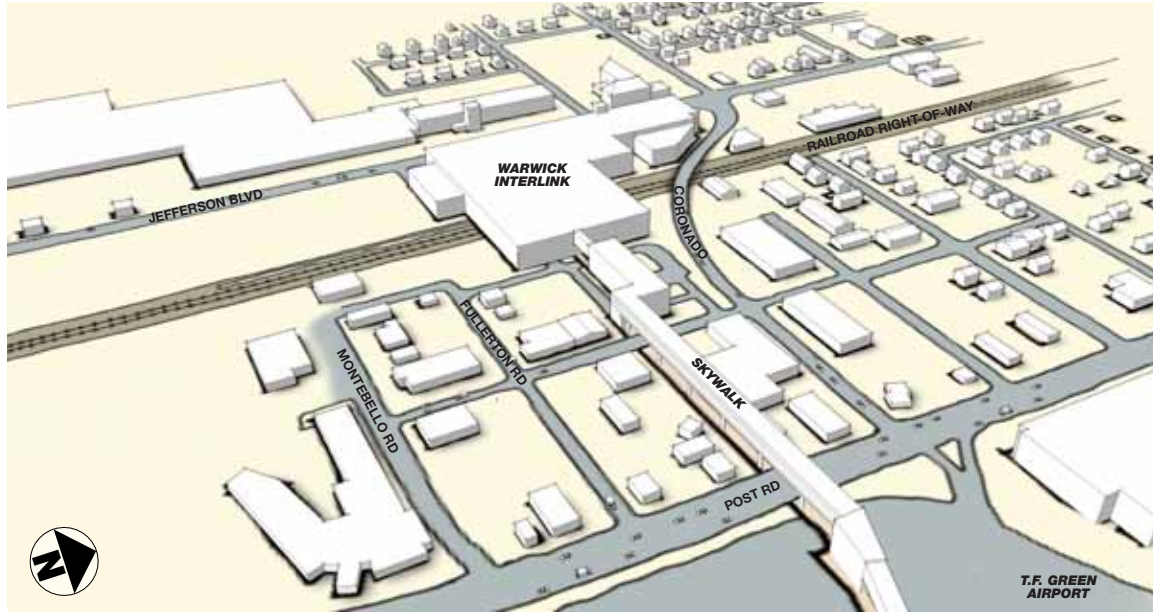
Mixed-use development can help support attractive and vibrant public spaces.



Master Plan context

This Master Plan provides a framework for the development of up to 1.5 million square feet of office, retail, hotel and residential development in the core of the Intermodal Area, with 1 to 2 million square feet of additional development possible over the long term in surrounding areas within convenient walking

distance. The Master Plan is shaped by the City's goals, an assessment of the site's market potential, consideration of the context of uses and buildings, and an evaluation of the capacity of the local roadway and utility infrastructure.



EXISTING CONDITIONS

The area that is the focus of the Development District currently includes a variety of light industrial uses and auto-oriented retail development.



VISION

Overall development of up to 1.5 million square feet (gross) of new uses between the rail corridor and Post Road will form an attractive, walkable neighborhood center with sensitive transitions to the Hillsgrove residential neighborhood. Another 1 to 2 million square feet of mixed-use development is possible in surrounding areas.

DEVELOPMENT APPROACH

The level of development in the Intermodal District has some flexibility, subject to specific location and threshold recommendations. One controlling factor will be the approach to parking, with structured-parking scenarios yielding much larger development capacity within the District. In order to achieve the optimal build-out of the District, this Master Plan recommends encouraging a coordinated approach to site development and parking through land use and economic development policy tools. If the District is able to follow this approach, recommended development magnitude for the Intermodal District core would be approximately 1.5 million gross square feet (gsf), using 75–90% structured parking and some sharing of parking spaces with different peak-demand times.

An additional 1 million to 2 million gsf of new development is possible along Jefferson Boulevard between the Airport Connector and Coronado Road, within the Intermodal District and in additional area recommended for inclusion within the District. This yields a total development opportunity of about 2.5 to 3.5 million gsf.

A second development scenario features independent redevelopment of individual parcels, with each parcel providing its own surface parking.

Recommended minimum redevelopment magnitude is approximately 500,000 gsf for the individual-parcel development approach. The master plan illustrates development opportunity for both these scenarios.

The two scenarios share similar assumptions about architectural and urban design objectives. Both seek to create a pedestrian-friendly area with active ground-floor uses, safe and attractive streetscapes, and building massing and site design that support a well-scaled and well-defined public realm. Due to parking capacity needs and the need to approach development on a parcel-by-parcel basis, the lower-density alternative would typically consist of commercial buildings 2 to 3 stories tall and residential buildings as much as 5 to 6 stories tall. These building heights fall within the existing zoning maximum of 75'. The districtwide coordinated alternative would typically consist of commercial buildings that average 4 to 5 stories tall and residential buildings 5 to 6 stories tall. Actual build-out may vary, and additional height in some locations, such as corners, may be desirable but should maintain the principles and goals outlined in the Framework Plan and other portions of the plan.

PLANNING AND SITE CONTEXT

The *Warwick Station Redevelopment District Master Plan* completed in 1998 by the Warwick Planning Department, in cooperation with a group of state and federal agencies, identified the strategic potential of creating a rail station in Warwick to serve T.F. Green Airport and the larger Warwick community, in turn fostering new high-value development in the surrounding area. To help achieve this potential, the City established the Warwick Station Redevelopment District boundary, over which it has jurisdiction.

After establishing the District boundary, the City of Warwick created the Warwick Station Redevelopment Agency (WRSA) to review and accept or reject all development proposals. More recently, the City elected to shift this redevelopment authority to the Planning Board and City Council.

SITE OVERVIEW

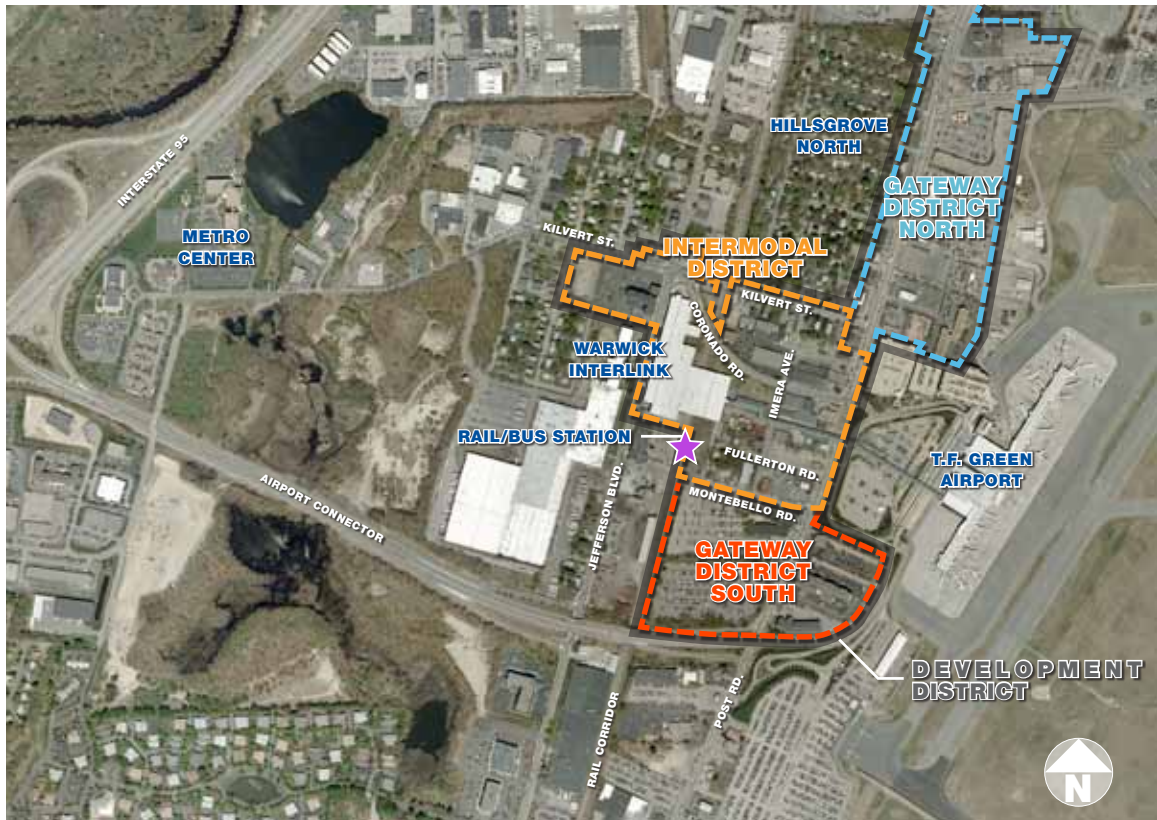
A series of distinct historical development stages that gave the District its great transportation potential has also left a disparate variety of poorly-coordinated land uses. Residential, industrial, auto-oriented commercial and airport-related uses abut one another throughout the Development District and adjacent neighborhoods. Despite some organizational patterns stemming from infrastructure and zoning, transitions between uses are generally poor, placing incompatible uses adjacent to one another and separating uses that could benefit from proximity. Homes on Jefferson Boulevard endure four lanes of commercial and commuter traffic. Homes in Hillsgrove North give way abruptly to restaurants and drive-in banks along Post Road, whose inhospitable



The new rail station will improve T.F. Green Airport's already excellent highway access from southeastern New England.

pedestrian environment makes these services harder for residents to get to. The successful transformation of the Development District into a mixed-use, pedestrian-friendly, transit-oriented area will require

forging good relationships with these existing uses. The following sections describe a short history of the existing conditions to provide a basis for recommended Master Plan improvements.



DISTRICT CONTEXT

This aerial photo reveals the major land use patterns of the Development District. Interstate 95 is in the upper left corner, with the Airport Connector branching off toward T.F. Green Airport at bottom right. The Post Road, Northeast Rail Corridor, and Jefferson Boulevard corridor can be seen in succession moving west from the airport. The fine grain of residential development in Hillsgrove north and west of the Redevelopment District contrasts dramatically with the large scale of industrial buildings and the InterLink along Jefferson Boulevard.



SITE CONTEXT: AERIAL PHOTO

This closer view (rotated relative to the photo on the facing page) shows the Intermodal and Gateway Districts in greater detail. Large industrial sites, the airport and its large runway and parking areas, and mid-size hotel and commercial development along Post Road contrast with the scale of residential blocks. The Warwick InterLink and skywalk link to T.F. Green bisect the Intermodal Area.

SITE DEFINITION

The Warwick Station Development District encompasses more than 95 acres of land in Warwick's Hillsgrove neighborhood, around T.F. Green Airport and the Northeast Corridor rail right-of-way. The Development District includes three subsidiary areas as defined in the Warwick Zoning Ordinance:

1. The **Intermodal District** contains approximately 37 acres immediately adjacent to the airport

and Warwick InterLink. The Intermodal District includes most of the area east of the rail corridor bounded by Post Road on the east, Montebello Road on the south, and Kilvert Street on the north. It also includes land west of the rail corridor on all four corners of the intersection of Jefferson Boulevard, Kilvert Street and Coronado Road. The recommendations and Design Guidelines included in this report focus particular attention on the Intermodal District as the most suitable area for mixed-use development within walking



View from T.F. Green Airport across short-term parking lot and Post Road toward Intermodal District. Franchise gas stations, restaurants, and car rental firms dominate the visitor's first impression of Warwick.

distance of the rail station and InterLink. This plan recommends that the City expand the Intermodal District to include property on both sides of Jefferson Boulevard between InterLink and the Airport Connector, to include sites with important redevelopment potential within walking distance of the rail station and InterLink. Program, design, access infrastructure, and identity of redevelopment in this area should be coordinated with other Intermodal District redevelopment to optimize the potential of the whole area. In addition, an approved redevelopment proposal for the portion of this area east of Jefferson, submitted by owner D'Ambra Industries, incorporates a density, mix of uses, and internal connection to InterLink that are fully consistent with the goals of this master plan.

2. **Gateway District South**, covering about 24 acres, is one of two gateway districts intended as transitional areas between the Intermodal District and surrounding portions of Warwick. Gateway District South borders the Intermodal District along Montebello Road, is bounded on the west by the railroad, and extends south and east as far as the Airport Connector. In the long term, Gateway District South has potential to support expansion of the dense redevelopment in the Intermodal Core Area.



The Hillsgrove Station, pictured in this historic photo, once served residential and industrial uses around today's Redevelopment District.

3. **Gateway District North** is the second transitional Gateway District and includes commercial parcels immediately east and west of Post Road from Alhambra Road and Kilvert Street north to Airport Road, covering about 34.3 acres.

The Master Plan refers to existing residential blocks around the Development District as Hillsgrove. In particular, the area north of Coronado Road and east of the railroad is referred to as Hillsgrove North, as distinct from the residential blocks known as Hillsgrove South (in Gateway District South) that were sold for commercial redevelopment in the late 1990s.

HISTORY

The New York, Providence and Boston Railroad built its tracks through the District and began service between Providence and Stonington, Connecticut, in 1837. Service soon extended to New York and Boston, and rail traffic in turn spurred development of residential and industrial facilities during the second half of the 19th century. Industrialist Thomas Jefferson Hill developed textile and iron factories in the area at the turn of the 20th century, and then created a village for his workers around them. He also lent his name both to the neighborhood, Hillsgrove, and to Jefferson Boulevard. The New York, New Haven and Hartford railroad established the Hillsgrove Station to serve the area.



The departures entrance of the Bruce Sundlun Terminal at T.F. Green.



New parking structures with space for nearly 2,100 vehicles were built to serve the Bruce Sundlun terminal.

Interstate 95, just one mile west of Post Road, has had a strong influence on land use in Warwick in the decades since its opening in 1968. Multiple access points via the Airport Connector, Jefferson Boulevard, Route 113, and Route 37 gave the District easy connections to the Interstate. Road improvements enabled easier travel by auto as well, contributing to the suspension of local rail passenger service to Hillsgrove by the 1950s. Construction of the Interstate also diverted through traffic from Route 1, changing its development patterns. Development on Route 1 began to serve local traffic more than regional travelers.

Air travel came to the site in 1931 with completion of the first runway at T.F. Green, first named Hillsgrove State Airport. Since then, and particularly since 1995, T.F. Green has evolved into a major regional airport serving Rhode Island as well as metropolitan Boston, southeastern Massachusetts and eastern Connecticut.

The airport's growing popularity attracted new supporting uses concentrated along Post Road. Several hotels offer a large number of rooms within a quarter mile of the airport. Restaurants, gas stations, and retail outlets also cluster near the airport.

The Hillsgrove South residential neighborhood changed to a commercial area in the late 1990s with the support of its former residents. Increasing neighborhood industrial use and Post Road traffic, resulting from airport- and highway-related development, had made neighborhood access so difficult that residents increasingly wished to move elsewhere. Residents collectively sold their land to a developer with the cooperation of the City, which rezoned the area for commercial use. A private airport parking facility has taken the place of the former streets and homes, and higher-value use is ultimately anticipated.

This development history has resulted in a disorganized, placeless landscape. The airport and InterLink bring a renewed identity and level of activity to the area. Even though the District has become a primary gateway to Rhode Island and metropolitan Providence, the surrounding environment fails to provide a "front door" of commensurate dignity for travelers. Visitors' first views of the state consist of a collection of franchise gas stations, hotels, restaurants, and car rental agencies indistinguishable from what might be found in virtually any city in the United States.

The following sections discuss in greater detail airport growth; airport-generated land use; industrial use; residential use; land use and scale changes; road and rail infrastructure; and the Warwick InterLink.

AIRPORT GROWTH

T.F. Green Airport has evolved over the past 30 years into a major regional airport, spurring associated local growth and supportive uses along the Post Road corridor—particularly hotels, car rental facilities, and restaurants—as well as regional economic development. With improved air service and access, the airport no longer serves just the Providence region, but Greater Boston as well, becoming an attractive alternative to Boston’s Logan Airport. Significant infrastructure improvements have been made with the construction of the Warwick InterLink, which provides a direct physical connection to the airport terminal and houses 1,800 parking spaces for rental car operators, 800 spaces for commuter parking, and new rail service.

In an effort to improve airport efficiency and safety and to expand T.F. Green’s use, plans have been drawn up to lengthen the primary runways and erect additional buildings to support operations. Impacts on natural resources, existing businesses and homes, and roadway configuration are all being investigated and reviewed in public forums.

AIRPORT-GENERATED LAND USE



The airport’s success has encouraged the development of hotels and conference facilities.

retail development lines both sides of Post Road north and south of the airport in the Intermodal and Gateway districts. Development includes a number of service stations and restaurants, as well as banks, hotels, and small businesses. Hotels have been



One-story industrial buildings sit immediately adjacent to the InterLink’s skywalk.

successful in the area, serving both the Providence-area market and business travel associated with the airport. The car rental facilities that occupied a large portion of land within the Intermodal District are now consolidated within the Warwick InterLink.

INDUSTRIAL USE

Industrial activities have dominated the Hillsgrove area since its initial development by Thomas Jefferson Hill. Leviton’s Elizabeth Mill Building is the most prominent evidence of this manufacturing heritage, its historic tower an important local landmark visible from the airport. Its sprawling

single-story rear addition is more typical of modern industrial buildings. The Elizabeth Mill should be preserved both for its significance as a historic and memorable landmark for the area, and for its potential to be reoccupied with housing, offices, or other

uses the complement the intended mix of uses in the Intermodal District. The remainder of the Leviton site represents one of the most significant opportunities for new high-value, walkable, mixed-use development that takes advantage of the district’s excellent access options. Redevelopment there should be based around new streets that provide inviting pedestrian



Historic Elizabeth Mill

connections to the InterLink and adjacent residential streets, and attractive addresses for mixed-use transit-oriented development. The D'Ambra asphalt plant, located between Jefferson Boulevard and the railroad, is subject to replacement by an approved mixed-use development proposal, as described above. Distribution centers for Federal Express and UPS are among other major industrial uses near the development district.

RESIDENTIAL USE

The residential blocks of Hillsgrove directly north and west of the Intermodal District form an important part of the redevelopment planning context.

Over the past century, industrial development in the area has both sustained the residential neighborhood economically and eroded it physically. Heavy traffic on the Airport Connector, Post Road, Jefferson Boulevard, the railroad, and commercial development on all sides have worsened living conditions on some parcels. Most dramatically, the 23 homeowners of Hillsgrove South, a small pocket of blocks isolated by the Airport Connector between Post Road and the railroad, collectively sold their neighborhood to a commercial developer in the late 1990s as noise and difficult traffic access made that area increasingly unsuitable for housing. The City supported the homeowners' decision, and the area, now occupied by a private airport parking facility, represents a valuable future growth opportunity for the Intermodal District.

The remaining residential areas in Hillsgrove North and west of Jefferson Boulevard, however, remain good places to live and should be further protected and enhanced through adjacent redevelopment. Just as factories and the original rail station formed the initial anchor for residential development, a new cluster of office, retail, hotel and housing development around the rail station can form a walkable center that serves the surrounding neighborhoods. Convenient pedestrian connections and architecture that makes a careful transition in scale between existing housing



Residential meets the strip: Kilvert Street looking toward Post Road.

and new development will be essential to melding the commercial and residential areas of Hillsgrove into a cohesive neighborhood.

New housing in the District should include a wide spectrum of unit types, sizes, and prices in order to serve today's diverse housing market and to offer people more housing choices for the different stages of their lives than are available in nearby neighborhoods today. Locating new housing within a convenient walk of transit will also help households economically by reducing their need to bear the added costs of automobile ownership.

LAND USE AND SCALE CHANGES

Inconsistency of scale and use detracts from the appearance and identity of public streets throughout the District. It creates awkward combinations of uses that don't belong together and separates others that should be adjacent. This inconsistency compromises quality of life for Hillsgrove residents and makes pedestrian access among uses inconvenient at best, encouraging further automobile use and automobile-oriented development.

In general, existing residential areas give way abruptly to adjacent industrial and retail areas at their edges. In Hillsgrove North, commercial and residential uses face each other along the section of Kilvert Street east



The strip meets the airport: one-story Bertucci's beside six-level Red Beam Garage.

of the railroad. While some commercial uses occupy buildings of residential scale and generate modest amounts of traffic, other uses have busy parking lots and service drive-throughs that make poor neighbors to homes. West of Jefferson Boulevard, homes in Hillsgrove along Kilvert and Cottage streets face unused industrial land. Multifamily housing or hotels developed on this land, if designed at a scale sensitive to the existing context, could substantially improve the area's residential character.

Major scale changes among buildings and landscape elements clutter the District visually and leave streets without spatial definition, making orientation difficult and walking unpleasant. Today's Intermodal Core Area contains a diverse mix of light industrial buildings ranging in size from kiosks to warehouses, open parking lots, and even a few residential structures that have not succumbed to industrial redevelopment. Narrow street widths, an absence of sidewalks, and a lack of continuity from one parcel to another make streets appear as little more than driveways. In some cases, homes face much larger warehouses with blank façades, such as along Alhambra Road near Imera Avenue. Most dramatically, the six-story Red Beam garage on Post Road across from Alhambra Road looms over a one-story Bertucci's restaurant to the north. The installation of attractive, consistent light standards along Post Road has lent some spatial coherence to the ragged commercial strip. However, Post Road will remain an inhospitable pedestrian environment without construction of taller

buildings that offer pedestrian-oriented uses, a consistent edge of building façades, more street trees and plantings separating pedestrians from traffic, and shorter crosswalks.

Successful transit-oriented districts have well-defined streets and public spaces that make walking convenient and pleasant, and a compact mix of carefully chosen and configured compatible uses. Their coherence in building scale and character further contributes to an appealing visual environment and distinct sense of place. Realizing the District's potential will depend on correcting current deficiencies with new streets, buildings, and landscapes that pay careful attention to interactions of scale and use.

ROAD AND RAIL INFRASTRUCTURE

The Warwick Station Development District contains an extensive system of surface transportation infrastructure, with automobile, bus, and rail options all coming together at the InterLink.

Roads

Post Road (U.S. Route 1) is the main surface arterial in the area, providing major north-south movement east of the railroad corridor. Post Road handles local traffic and a significant amount of airport-related traffic. A \$3.5 million improvement project along a three-quarter-mile stretch of the road in front of the airport, begun in 1998, substantially improved both traffic flow, with the addition of new turning lanes, signals and sidewalks, and aesthetics, with new light poles and landscaping. These improvements provide a valuable foundation for further improvements in traffic capacity, aesthetics, pedestrian accessibility and land uses associated with redevelopment.

A secondary arterial, Jefferson Boulevard provides major north-south access west of the rail corridor, extending south to the town center and north to I-95. Although two lanes in each direction provide ample traffic capacity today, narrow lane widths and lack of intersection improvements could limit future capacity. Improving Jefferson's intersections with the Airport

Connector and Kilvert/Coronado is vital to handling anticipated traffic increases from District redevelopment. Jefferson will need an upgrade, which might include an additional turning lane in certain locations to support build-out and redevelopment of adjacent properties and increased ridership of the commuter rail. Any new turning lanes, however, should be accompanied by measures that maintain safe, convenient pedestrian crossings at intersections.

The Airport Connector provides a valuable link to I-95, with direct access to Jefferson Boulevard, Post Road, and the airport. It is particularly valuable as one of the few east-west connecting roads that cross the railroad corridor. Intermodal District traffic will be able to reach the Connector heading west with minimal impact upon local traffic.

Route 37 provides another limited-access connector between the Post Road and I-95 about one mile north of the airport. Access to Route 37 from the Post Road should be improved to help accommodate redevelopment traffic and existing congestion.

Jefferson Boulevard, Post Road and smaller-scale streets throughout the District have been designed primarily to serve vehicles, with pedestrian accommodations typically limited or absent. In order to achieve the benefits of economic development, as well as the public health advantages and sense of community associated with walkable places, redevelopment actions must include a concerted



Post Road looking north in front of the airport showing new lighting, sidewalks, trees, and travel lanes.

effort to establish an inviting and safe network of sidewalks, crosswalks, and public spaces that run throughout the District and connect seamlessly to adjacent neighborhoods and the area's rail, bus, and air transportation infrastructure.

Based on this assessment, it was determined that the approximately 1.5 million square feet of development anticipated within the Intermodal Core Area could be supported by existing roadways, with modest improvements to key site access roadways and slip ramp improvements to and from the airport connector. Existing roadways can support additional development outside of the Core Area along Jefferson Boulevard and Kilvert Street but would require intermediate and long-term transportation infrastructure improvements along Jefferson Boulevard that will support the full “build out” of the Leviton and D’Ambra properties with a design that supports multimodal travel. Encourage development of an access management plan for the WSDD including exploring the feasibility of creating another east-west connection over the AMTRAK rail line between the district and the airport connector.

Immediate and desirable improvements include incorporating turning lanes at key entrances to the development and upgrading signals and adding pedestrian crosswalks throughout the district and in the areas immediately adjacent to the property.

Rail

The rail station in the InterLink began receiving commuter rail service in 2011 as described below. The Rhode Island Department of Transportation (RIDOT) and the Massachusetts Bay Transportation Authority (MBTA) have also studied the possibility of developing a South County Commuter Rail service to communities as far south as Westerly. This service could be very important to transit-oriented development in the Intermodal and Gateway districts, supporting commuting to new workplaces in the District from



Warwick Station will be served initially by an extension of the MBTA Boston–Providence commuter rail service. South County Commuter Rail service to other Rhode Island points, including Wickford Junction, Kingston and Westerly, is anticipated in the future.

surrounding communities, and from the District's current and future residential development to jobs in other communities.

Existing RIPTA bus services that connect the airport with Kingston, Providence, and intermediate points will serve the new rail station as well. Bus and rail service alike will become more attractive transit modes with the new intermodal connections.

The rail station will also serve private interstate bus services, further enhancing intermodal connection options.

WARWICK INTERLINK

The Warwick InterLink sits in the heart of the District. The facility, completed in 2010, contains a new rail station, 1,800 parking spaces for rental car operators, 800 spaces for commuters, a local and regional bus hub, and a customer-service building with car rental service counters. It connects directly to T.F. Green via a 1,200-foot enclosed moving skywalk. The facility began receiving MBTA commuter rail service from Boston and Providence in 2011, and a service expansion to Wickford Junction is scheduled to begin in 2012.

A vital component of the entire Warwick Station Development District, realization of the InterLink has already begun to have an impact on redevelopment. The opening of a nearby Hilton Garden Inn and the adjacent Ironworks Tavern suggest that the market has begun to respond to the area's great potential for growth and success.

Immediately adjacent to the InterLink, a development concept proposed for the D'Ambra property would include office and hotel uses. The City of Warwick should consider a zoning change and Comprehensive Plan amendment to include this significant property within the Intermodal District boundary.

The City of Warwick should coordinate with RIAC to ensure that streets and other public spaces around the facility support aspirations for the District. A coordinated approach to landscaping, materials, lighting, and complementary development around the facility and its urban context can help the facility live up to its potential as a centerpiece of the new transit-oriented district.

Future development should respond to the views from the elevated skywalk, which will form the first impression of Warwick every day for many people. Immediately west of Post Road, buildings on both sides of the skywalk will be able to connect to the structure. Encourage direct connections to the Interlink from the Jefferson Boulevard corridor as part of the D'Ambra development and with safe, convenient crossings of Jefferson that tie to existing and future development to the west, including potential adaptive reuse of the Elizabeth Mill. Such crossings should include crosswalks; a pedestrian skywalk may also be considered if it would function as a safe and attractive aid to pedestrians and an asset to development.

MARKET OPPORTUNITY

Market indicators at the time this plan was written reflect a challenging development climate across Rhode Island, with generally limited near-term demand across a variety of commercial and residential markets. Nevertheless, the District can attract significant development investment over time through strategic planning, design, marketing and other implementation steps that nurture and highlight its unique assets. Even in very challenging markets, opportunities exist. Responding to them requires identifying submarket opportunities and devising strategies to capitalize on those opportunities. This is the essence of product differentiation and a market-segmentation approach.

The presence of the airport, the people-mover, parking garage, and the proposed commuter rail service create an opportunity to develop a transit-oriented, walkable, mixed-use district unique in the Northeast. Mixed-use districts increasingly draw a variety of commercial and residential activities because they offer a whole that is greater than the sum of its parts. They offer a sustained level of energy throughout weekdays, weeknights and weekends; a strong sense of identity; and efficient use of public infrastructure that single-use environments typically lack.¹ A committed long-term effort to make this transit-oriented, walkable, mixed-use vision a reality will enable Warwick to brand the District as an ideal investment and location opportunity. Specifically, the combination of multiple land uses demands close attention to ensure that short-term, transaction-driven interests don't erode their synergy, but nurture it.

¹ This translates into economic value: between 2000 and 2007, mixed-use districts saw rent growth in the 35% range, while traditional single-use office parks typically saw no real rent growth. (Chris Lienberger, Brookings Institution)

Success in advancing a product-differentiation/market-segmentation approach for the District depends on refining and applying several strategies:

- Implementing a **comprehensive, flexible transit plan** to and from downtown Providence is necessary to fully realize the District's market potential. Such a plan will also offer economic benefits to downtown Providence and its hospitality infrastructure
- The long-term nature of District implementation may demand a **project management structure** that could be privatized. The management plan should (1) build organizational capacity to manage, brand, and market the District; (2) create a land-use regulatory and design-review process that is managed outside Warwick's institutionalized subdivision and zoning process; and (3) establish a district-management program, preferably under the new organization and charged with the funding and coordinating retail tenancing, landscaping, snow removal, maintenance of public areas including sidewalks, lighting, and signage, and trash removal
- Seeking a **complementary mix of land uses that respond to the site's unique assets** will make the most of its value. A survey conducted for this plan indicated the site offers excellent location characteristics for multifamily housing, hospitality, and small-format offices. Pedestrian-oriented retail would add an amenity that supports these primary opportunities. A mix of land uses also enables new development in the district to respond flexibly to market opportunities as they arise.

Because the District holds development opportunities that will likely unfold over more than a decade, long-term focus and commitment by organizational and political leadership is a prerequisite for turning the vision into reality. Of particular importance is the need to establish quickly the land-use and design controls to protect against near-term development that is inconsistent with the District vision. Also of fundamental importance is the task of creating the organizational capacity to manage the project.

INFRASTRUCTURE CAPACITY ASSESSMENT

Utility infrastructure does not appear to pose a barrier to additional development, but it may need significant upgrades before it can support the proposed density of development.

Based on this assessment, it was determined that the approximate 1.5 million square feet of development anticipated within the Intermodal Core Area could be supported by existing roadways, with modest improvements at key site-access roadways and slip ramp improvements to and from the Airport Connector. Existing roadways can support additional development outside of the Core Area along Jefferson Boulevard and Kilvert Street, but they would require transportation infrastructure improvements along Jefferson Boulevard capable of supporting the full “build out” of the Leviton and D’Ambra properties with a design that supports multimodal travel options. An access-management plan shall be developed for the WSDD, including exploration of the feasibility of creating another east/west connection over the AMTRAK rail line between the District and the Airport Connector.

Immediate and desirable improvements include incorporating turning lanes at key entrances to the development, upgrading signals, and adding pedestrian crosswalks throughout the District and in the areas immediately adjacent to the property.

COORDINATION OF DEVELOPMENT WITH STATE INITIATIVES

In 2002, the Governor’s Growth Planning Council outlined a series of recommendations for the establishment of “Growth Centers” in order to encourage new development in “economically and environmentally sound locations.” The goal of defining growth centers was to assist communities in planning where new development will occur and what it will look like, maximize the impact of

available funding resources, and remove barriers to investment. Growth Centers are defined as places that are “dynamic and efficient centers for development that have a core of commercial and community services, residential development, and natural and built landmarks and boundaries which provide a sense of place.” Eight distinct criteria were established to provide the basis for evaluating whether an area could be classified as a growth center and receive the benefits such a designation brings. Those criteria include:

- Strengthen and encourage growth in existing centers.
- Scale new infrastructure to support compact growth.
- Include mixed uses.
- Create a range of housing opportunities and choices.
- Protect and enhance critical environmental resources.
- Provide a variety of transportation choices.
- Promote community design that contributes to a sense of place.
- Encourage growth in appropriately scaled centers.

The Warwick Station Development District meets or exceeds all the criteria for designation as a growth center. This Master Plan recommends that the City of Warwick take necessary regulatory steps to have the District officially classified as such. Additional discussion of growth center designation appears in the Implementation Chapter.

The City of Warwick will continue to coordinate with the Rhode Island Airport Corporation (RIAC) and the Rhode Island Department of Transportation (RIDOT), and the Rhode Island Economic Development Corporation (RIEDC) as redevelopment opportunities in the District move forward.

MASTER PLAN

MASTER PLAN HIGHLIGHTS

The Master Plan provides a guiding framework for development of office, hotel, residential, and complementary retail and restaurant uses. It describes standards for establishing a high-quality public environment, including pedestrian-oriented streets and public spaces centered around the InterLink, that will help create an environment to attract private development investment and establish a memorable, high-quality gateway to Warwick and Rhode Island. The overall configuration of uses, streets and buildings will create an environment that attracts new economic activity to the site and enhances quality of life for area residents and workers.

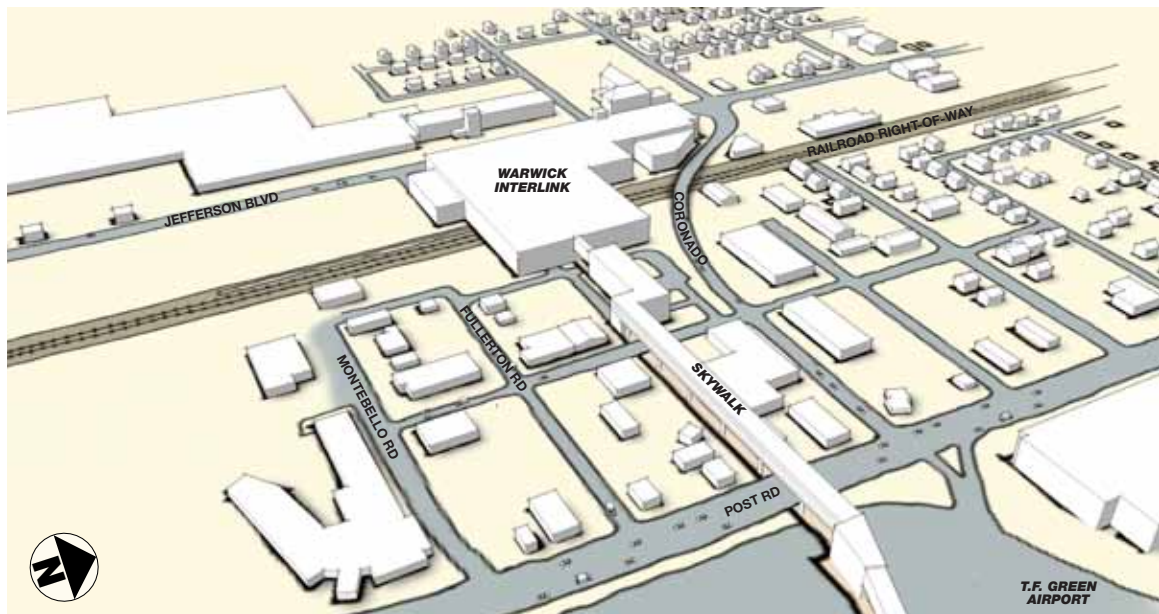
The Master Plan defines the following:

- priority locations for high-value development
- desirable locations for specific land uses
- anticipated development magnitude
- characteristics of future streets and open space within the area
- design guidelines for the District
- preferred location of parking
- vehicular access

MASTER PLAN BENEFITS

Implementing the Master Plan will bring major design and fiscal advantages to Warwick as compared to present land use and development patterns. Major benefits include:

- An attractive pedestrian-oriented district that attracts and is energized by a mix of office, conference hotel, entertainment, retail and/or residential uses.
- Regional job growth and economic development with potential for new onsite jobs.
- Increased transit use for regional trips, as both origin and destination, thereby reducing the traffic impact of growth.
- An increase in tax revenue on redeveloped property. A portion of this increase may be used to fund public infrastructure investments supporting redevelopment. The ultimate fiscal benefits depend on variables in financing, market conditions, and economic cycles.
- Enhanced quality of life for residents and workers through expanded choices, a stronger sense of community, and the public health benefits associated with walkable environments



EXISTING CONDITIONS

VISION AND PLANNING PRINCIPLES

The Vision

Development should meet four primary objectives to best take advantage of the District's great potential for Warwick and the region.

1 BUILD A PLACE OF IDENTITY AND PRIDE FOR WARWICK AND RHODE ISLAND.

Development should create a walkable, livable, mixed-use, and pedestrian-oriented district that forms an attractive gateway to Rhode Island for regional air and rail travelers and a center of activity for Warwick. Public spaces and architecture should

call attention to the District and attest to its high quality of development. Services sought by travelers new to the area, such as hotels, conference facilities and dining, should be centrally and intuitively located to give them the greatest possible choice and access with little or no need for additional transportation. Existing clashes of land use and scale that detract from the character of the area should be corrected.

2 PROVIDE ECONOMIC BENEFITS FOR WARWICK AND THE REGION.

Development should produce substantial long-term net revenue for the City. Overall benefits from increased tax revenues in the District and secondary benefits should exceed anticipated development costs to the City for streetscape improvements and other public infrastructure.

3 CAPITALIZE ON INTERMODAL TRANSPORTATION RESOURCES TO FOSTER HIGH-VALUE AND HIGH-QUALITY MIXED-USE GROWTH.

Development should take specific advantage of the Redevelopment District's unique combination of air, rail and highway infrastructure to capture market potential and gain a distinct place identity. A mix of uses should be included to capitalize on the site's accessibility to both regional and local transportation and to make it both a destination and an origin point for travel.

4 CREATE A SUSTAINABLE, LIVABLE COMMUNITY.

Offer households and workers choices that enhance quality of life: a variety of housing options serving all income ranges and lifestyles; diverse employment options; transportation alternatives to the automobile that are convenient, economical, and healthy; an expanded range of retail and services; and access to public park and recreation facilities. Promote environmental sustainability by including compact, high-density development that prevents impacts on undeveloped areas; transit-oriented development that minimizes energy, land, and funds consumed by transportation; district-scale approaches to energy use and stormwater management that minimize net flows in and out of the District; and plantings and materials that minimize local heat gain.



VISION

Planning Principles

The following six planning principles represent the key redevelopment strategies that will most effectively achieve the three objectives in the Vision.

1. Create Transit-Oriented Development.

Development should be carried out as a transit-oriented district (TOD), designed specifically to facilitate convenient connections among all land uses and the variety of transit modes available, thereby reducing dependence on automobile transportation to the maximum extent feasible. Typical TOD characteristics include relatively high development density that places a critical mass of transit users near transit stops and reaches levels of development value that help support quality infrastructure, and a pedestrian-friendly environment to facilitate and encourage walking and bicycling among the land uses and transit modes. Development should engage adjacent existing residential and commercial areas so they can also benefit from and contribute to the TOD. Choose and locate land uses to maintain activity in key public areas during evening and daytime hours in order to keep streets and pedestrian areas active, attractive and thereby safe, and to take greater advantage of underused parking facilities and transit services at off-peak hours.

2. Create a flexible framework for accommodating development.

Some flexibility in the type, location, and magnitude of new land uses is necessary so development can respond to future market and site opportunity. However, as development occurs in the District, flexibility should not be accommodated at the cost of reducing adherence to other planning principles or displacing higher-priority uses from selected sites in ways that would compromise the District's longer-term economic potential.

3. Coordinate development magnitude with infrastructure capacity.

Development buildout should be coordinated with thresholds of infrastructure capacity, to generate

maximum development potential and fiscal return for a given level of infrastructure investment. For instance, the recommended 1.5 million-square-foot development level tested in the Intermodal Core Area represents a maximum amount of economic return for a relatively modest public investment in recommended street infrastructure improvements. Strategically determine magnitude and location of development to make the most of available capacity and to accommodate future improvements that may be needed to support additional development within and around the District, such as the possible extension of Imera Avenue into Gateway District South.

4. Design redevelopment to have a positive impact upon its neighbors.

Support existing uses around the District, including residential areas, long-term goals for T.F. Green Airport, and existing businesses that may be relocated from the District. Minimize negative short- and long-term development impacts on neighbors, including traffic and noise. Design and execute new development and infrastructure to benefit adjacent and relocated uses as much as possible by, for example, providing established neighborhoods and businesses a convenient walk to shopping and transit. Accommodate relocated businesses in appropriate locations.

5. Leverage the presence of the InterLink.

Potential future development in the District should fully explore and capitalize on the benefits and value created by the InterLink. Projects should recognize the significant physical presence of the garage and Skywalk by carefully coordinating building entrances and connections to vertical circulation, and by making access from the airport terminal to future housing, commercial space, or retail areas as attractive, convenient, and efficient as possible.

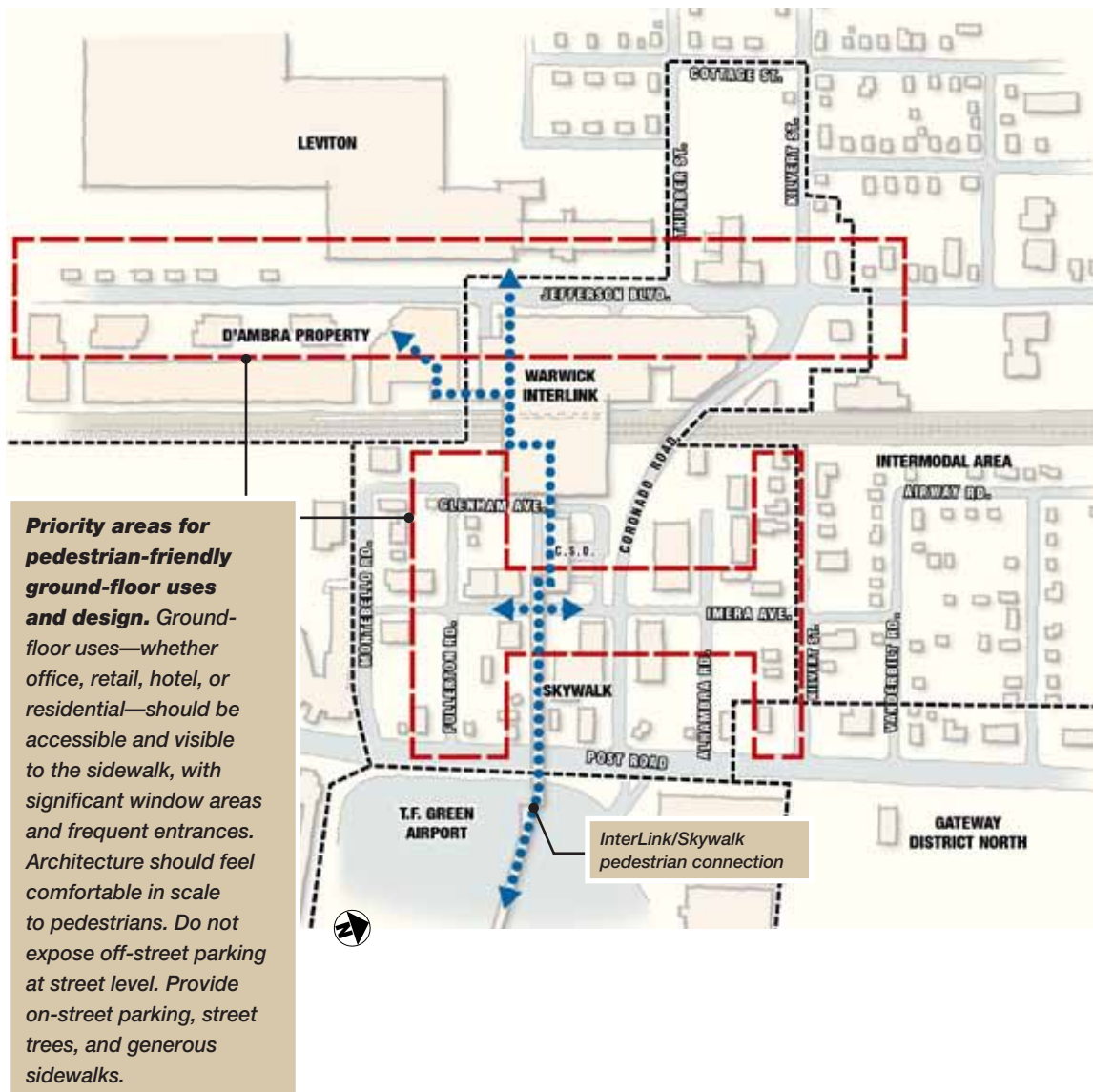
6. Maintain dialogue among stakeholders.

A broad range of government and private stakeholders will be directly affected by, and need to have important input into, the development of the

District. Successful development of this complex area will depend on engaging all stakeholders in an ongoing discussion structured to further define development goals; supporting strategic parcel aggregation; developing infrastructure; reviewing development prospects for congruence with Master Plan goals; resolving potential conflicts; and accomplishing other key tasks.

WALKABLE DEVELOPMENT FOCUS AREAS

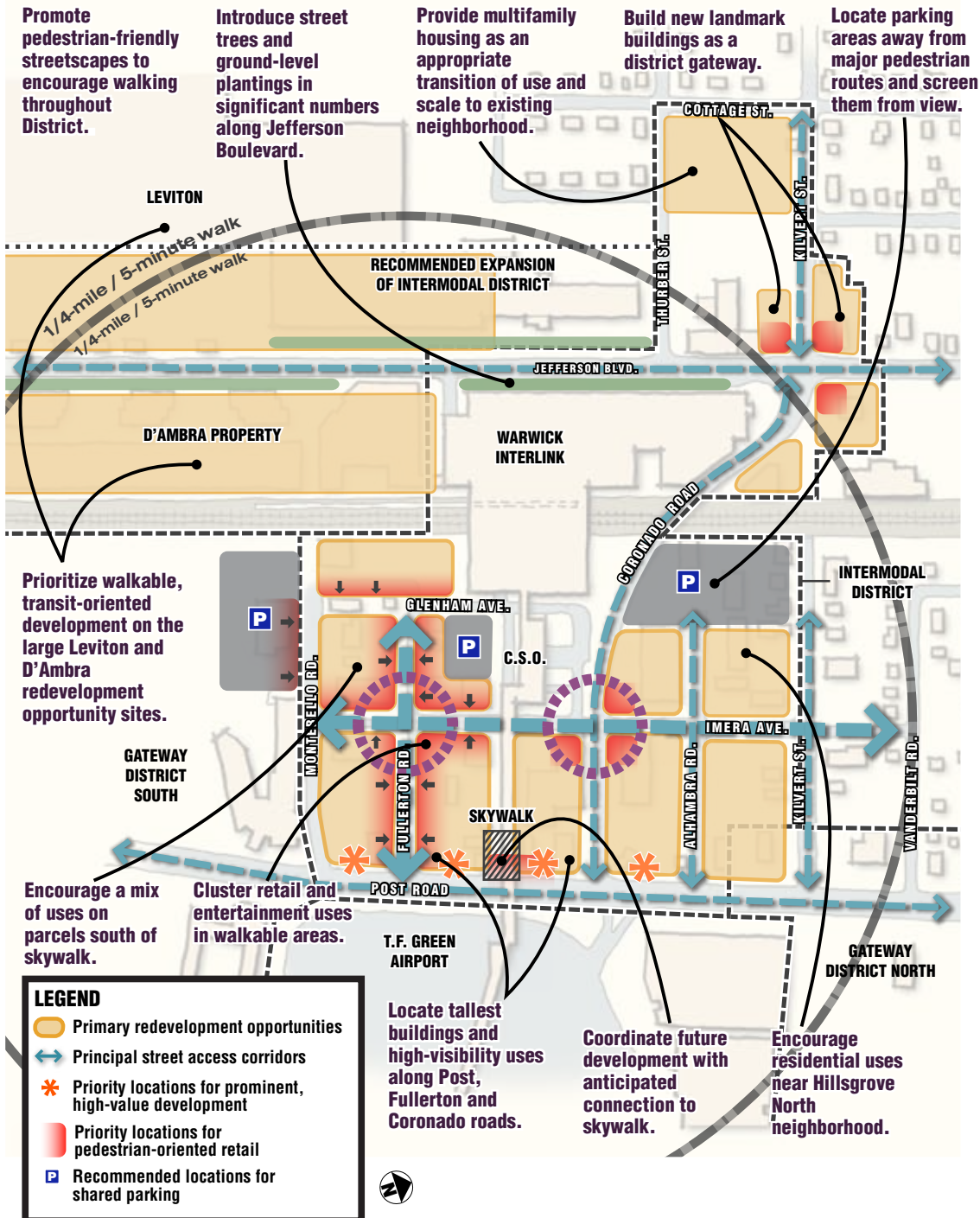
New development should support a network of inviting and safe streets, seamlessly connected to each other, to the InterLink, and to T.F. Green Airport. Such “walkable development” will expand market interest, maximize the benefit of the District’s transit and airport connections, enhance flexibility of development over time, improve livability, and help foster a strong sense of identity and community.



FRAMEWORK PLAN

This conceptual framework indicates the approaches to new development and infrastructure investments that will maximize opportunity in the District. Central to the plan is focusing high-visibility, high-value new development and streetscape improvements along Fullerton from Post Road toward the InterLink, with emphasis on concentrating retail and other uses

at all four corners at the intersection with Imera Avenue. Another priority area for high-visibility, high-value development is the section of Coronado Road between Imera and Post Road. To improve walkability, parking lots and structures should be screened from view from major streets, and streetscape elements such as sidewalks and street trees should be improved throughout the District.



DEVELOPMENT APPROACH

Two approaches to long-term development

This Master Plan illustrates two possible scenarios for redevelopment within the district. The first model promotes a district-wide approach in which coordinated development of multiple parcels and structured parking enables much higher densities of development throughout the area. The second is an approach in which individual parcels, as defined by the existing street grid, are developed one by one and fulfill all parking requirements within the boundaries of the parcel on surface lots.

Development magnitude

The level of development in the Intermodal District has some flexibility, subject to specific location and threshold recommendations. One controlling factor will be the approach to parking, with structured-parking scenarios yielding much larger development capacity within the District. In order to achieve the District's potential, this Master Plan recommends making every possible effort to provide a coordinated approach to site development and structured parking. If the District is able to follow this approach, recommended development magnitude for the portion of the Intermodal District east of the rail corridor is approximately 1.5 million gross square feet (gsf), using 75–90% structured parking and some shared parking. Recommended minimum redevelopment magnitude in this area is approximately 500,000 gsf for the individual-parcel development approach, which relies on providing all parking on site in surface lots. There is additional redevelopment opportunity for roughly 1 to 2 million gsf in the District west of the rail corridor, for a total range of 2.5 to 3.5 million gsf.

Sample build-out

The sample development scenarios on the following pages share similar assumptions about architectural and urban design objectives. Both seek to create a pedestrian-friendly area with active ground-floor uses, safe and attractive streetscapes, and building massing and site design that support a well-scaled and well-defined public realm. Due to the need to approach development on parcel-by-parcel basis, providing parking for each use on its own site, the lower-density alternative would produce commercial buildings 2 to 3 stories tall and residential buildings of up to 5 to 6 stories. These building heights fall within the existing zoning maximum of 75'. The alternative of coordinated districtwide development would require commercial buildings that average 4 to 5 stories and residential buildings 5 to 6 stories tall. Actual build-out may vary, and additional height in some locations, such as corners, may be desirable, but it should maintain the principles and goals outlined in the Framework Plan and other portions of the plan.

Steering development to the District

City and state planning policy should actively encourage appropriate new development to locate in the District rather than outlying locations, as the District's marketability and success as a walkable mixed-use setting will increase with the amount of development it contains. The District meets state criteria for priority "Growth Centers" (see page 43) and should be promoted as such.

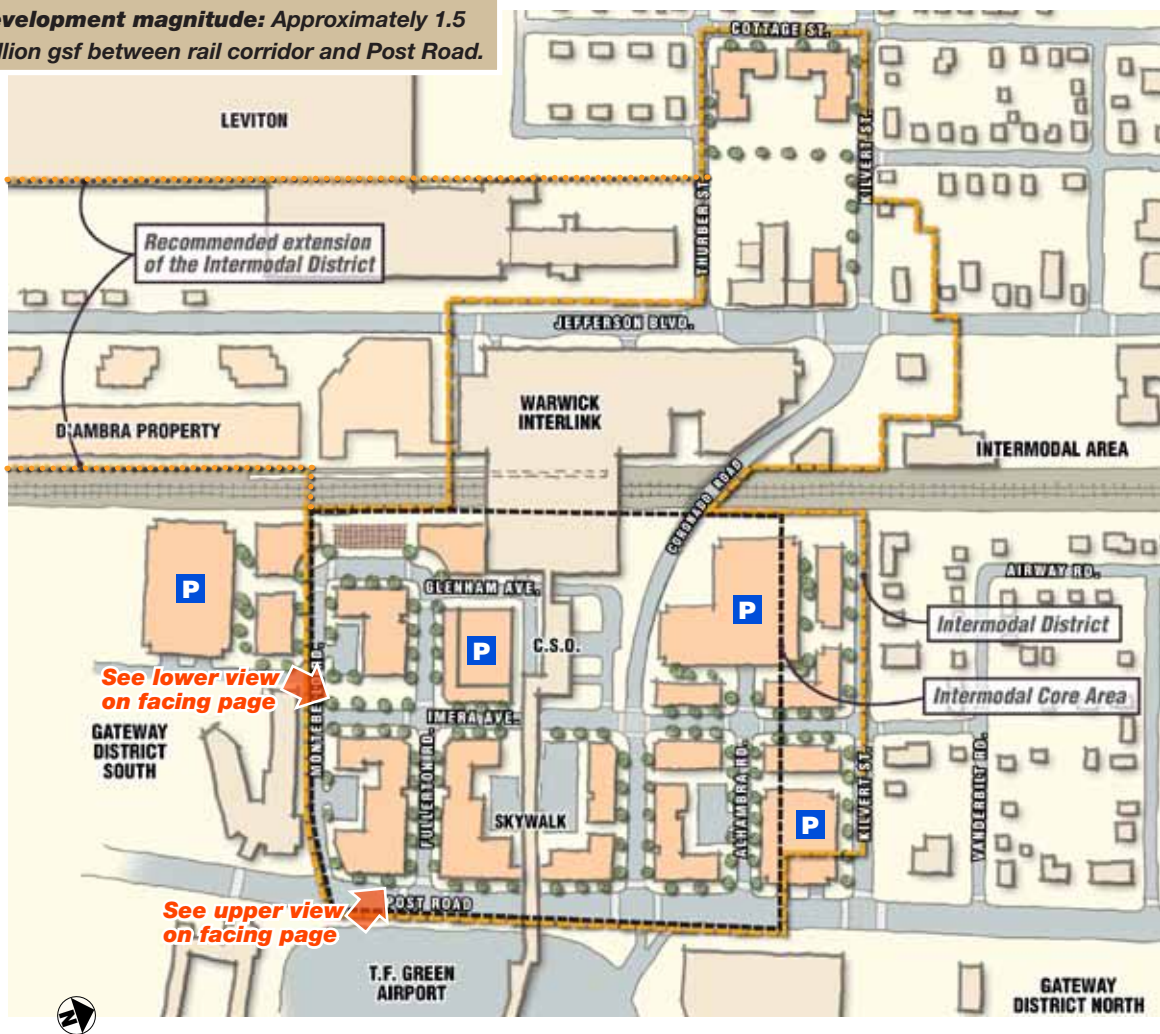
Creating a highly visible first phase of development that feels complete in itself—such as developing both sides of Fullerton along one or two blocks between Post Road and the station—would be especially valuable in demonstrating the level of opportunity in the District and inviting further investment. This would in turn help maximize the economic benefits and other community benefits the district can provide to Warwick and Rhode Island.

ILLUSTRATIVE VISION SCENARIO 1 COORDINATED HIGH-VALUE REDEVELOPMENT

Illustrative Vision Scenario 1 depicts the potential benefit to the city if multiple sites are developed under a coordinated model. A coordinated-development approach can locate and mix uses and their parking to optimize development value and quality and makes most efficient use of infrastructure. Structured parking increases parking capacity and concentrates it, freeing other sites to accommodate significantly more and higher-value development than they could

if required to provide parking. Introducing a mixture of pedestrian-oriented uses into the district offers several important advantages. It makes the district more marketable for office, retail, and housing development, as each type benefits from the presence of the others. A mixture of uses also provides the important benefit of keeping the district active weekdays, evenings, and weekends alike. Further, mixing commercial and residential activities can reduce overall parking needs by up to one-third because it enables sharing of spaces among uses with different peak demands—saving valuable land and funds for other development and infrastructure.

Development magnitude: Approximately 1.5 million gsf between rail corridor and Post Road.





New development of significant scale at Fullerton and Post Road can capture high value from its visibility, and form the gateway to the active heart of the District along Fullerton.



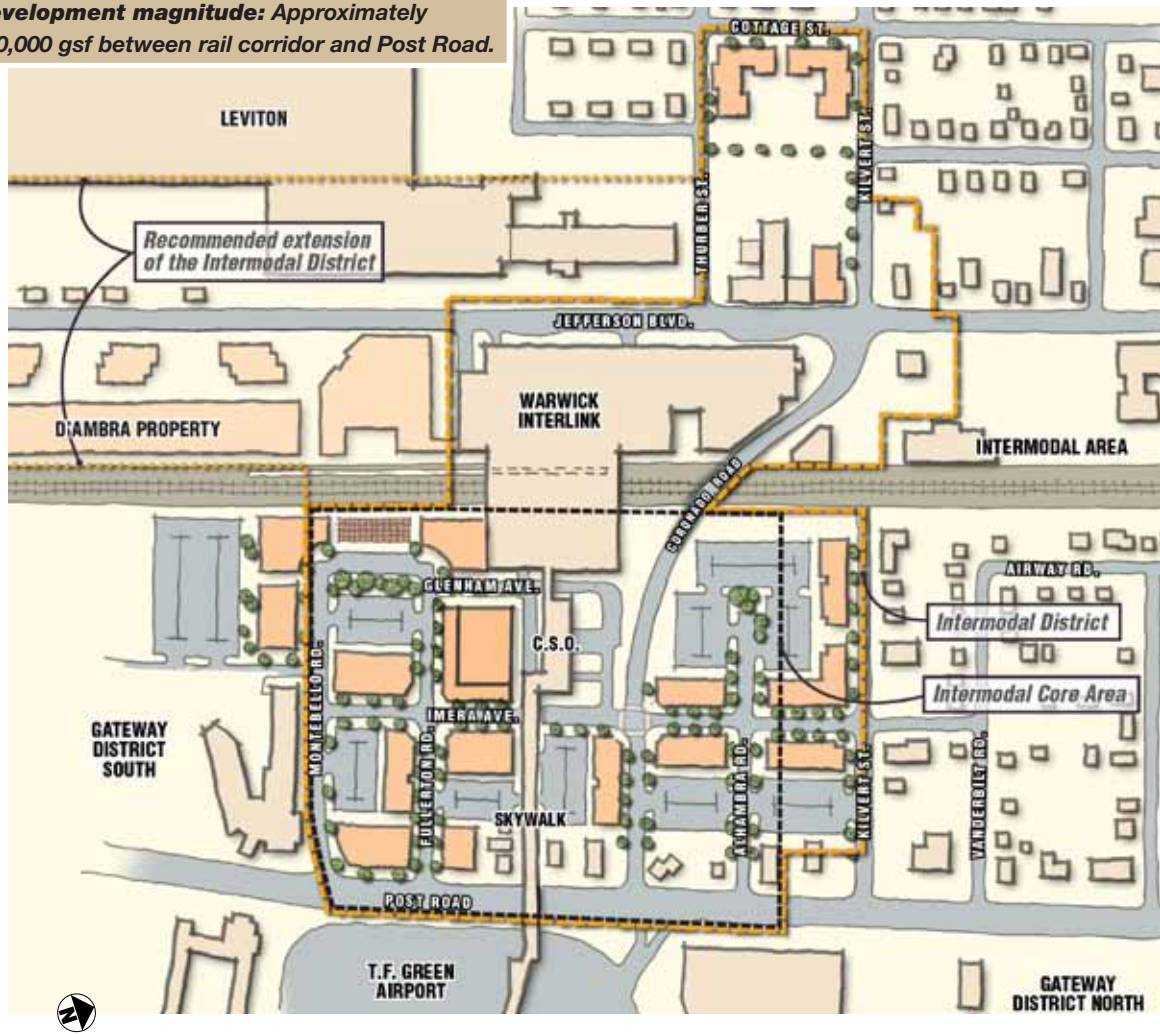
A combination of office, residential, retail, and hotel uses will keep public spaces active throughout the day and week.

ILLUSTRATIVE VISION SCENARIO 2 INDIVIDUAL SITE REDEVELOPMENT

Illustrative Vision Scenario 2 shows the potential build out of the district if each block defined by the existing street network were redeveloped independently with all parking requirements accommodated on-site. Key features are an emphasis on mixed-use development south of the InterLink Skywalk between Post Road and Glenham Avenue, with predominantly

housing located near residential Hillsgrove North. Development and streetscape improvements along Fullerton Road will help create a visible center of identity and activity for the area. Developing sites individually, as described in this scenario, is less desirable than the coordinated high-value redevelopment described in Vision Scenario 1. Should this approach prevail, such individual redevelopment proposals should, to the extent practical, comply with the vision illustrated in the coordinated approach.

Development magnitude: Approximately 500,000 gsf between rail corridor and Post Road.

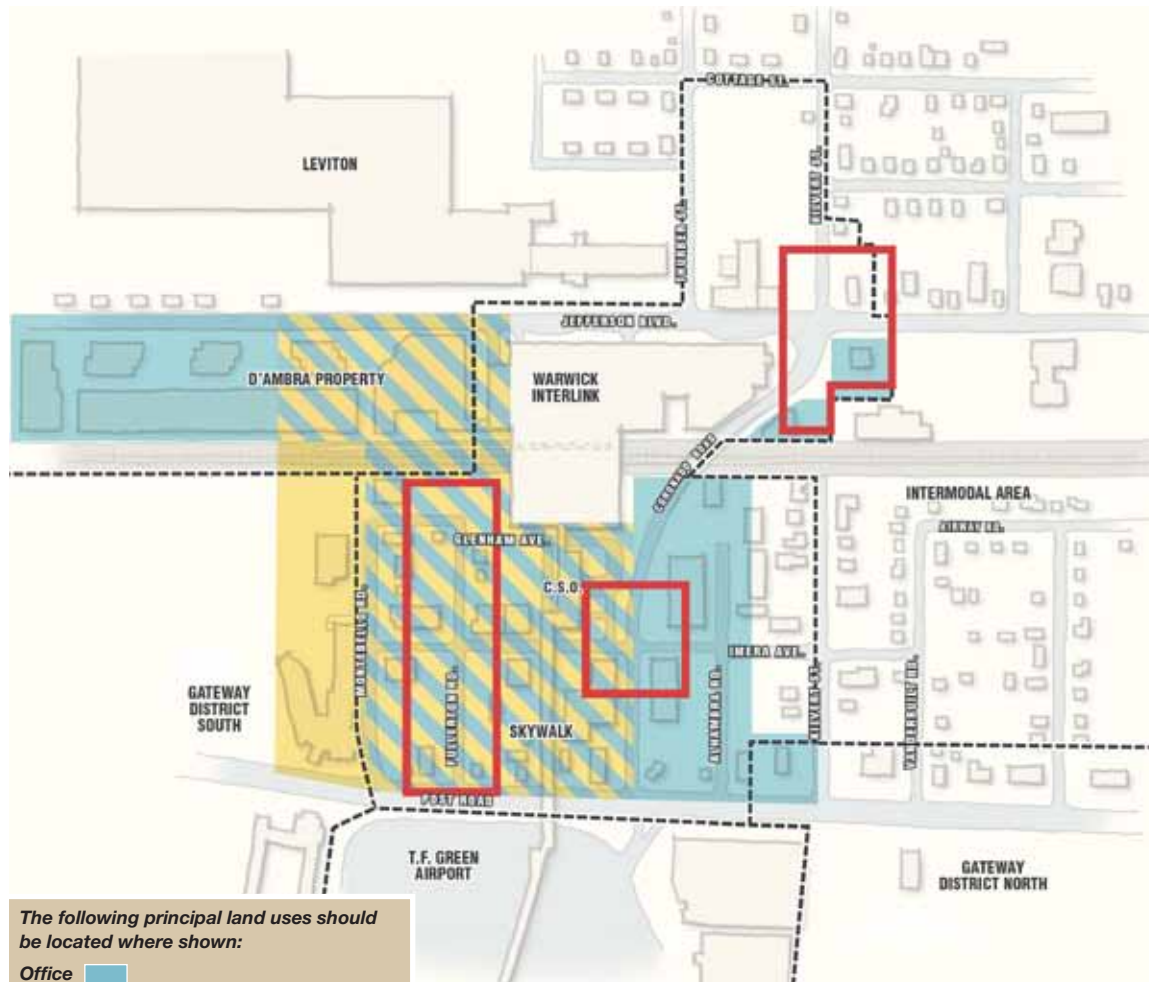


LAND USE GUIDELINES

A balanced mix of land uses will be an important component of successful redevelopment of the area. Mixed-use development will help keep the area active and safe during evening as well as daytime hours, help it serve a wide variety of people, and allow development some flexibility to follow market opportunities. It also will sustain uses that can benefit mutually from each others' presence, such as hotel/conference and office, and retail that can draw customers from among both daytime workers and evening residents. Mixed uses further allow more

efficient use of parking infrastructure. The diagram below shows priority locations for principal land uses.

Overall Balance Of Target Uses For the Intermodal District <i>These percentages may be altered over time to reflect changing macroeconomic and market conditions.</i>	
PORTION OF TOTAL DEVELOPED BUILDING FLOOR AREA	
Office	20–40%
Hotel	10–35%
Retail/Entertainment	10–20%
Housing	30–45%



The following principal land uses should be located where shown:

- Office
- Hotel
- Housing may be anywhere in district
- Priority locations for pedestrian-oriented retail

Open Space

The greatest opportunity for open space within the District lies in the creation of “complete streets” that invite people to walk. As new development occurs throughout the area, care should be taken to design buildings, locate uses, and upgrade street infrastructure to support a vibrant and active streetscape. Special material treatments for sidewalks and inter-



Quality street furnishings, paving materials, and landscaping can help make sidewalks and plazas valuable open spaces for workers, residents and visitors.

sections, as well as significant landscape and street tree improvements, can help make the open space an important part of the character of the area. The landscape plan developed for the InterLink can serve as a foundation for future design opportunities.

A public park or plaza is also strongly encouraged as a focal point of activity and identity, and as an amenity increasing the value of new development. Locating this public space near the intersection of Fullerton and Imera, and lining it with significant office, housing, and/or hotel buildings with ground-floor retail, can make the most of its potential.

Office

Office uses should be part of the overall development mix to capitalize on the District’s transportation assets, retail amenities, and presence of target workforce living in and near the district, whose presence can attract businesses. This will help generate new jobs and revenue for Warwick. Any new office construction in the District would be considered Class A space but may offer a more competitive price point compared to the Providence office market. Priority sites for office development include those with good visibility and auto access from major roadways, and within a convenient walk of the InterLink and parking. Office development opportunity would also benefit



Mixed-use development incorporating office, hotel, or residential use above retail or other active ground-level use is encouraged throughout the Intermodal District to promote active, safe public areas and program synergies. Example from Atlanta, Georgia.

from being within a convenient walk of a hotel with conference facilities, and/or retail and dining.

Strongly consider providing smaller-format office spaces, flexible in size and potentially with shared service facilities such as copying and printing, to address the increasing appeal of such spaces. Buildings with such smaller-format office space will also fit more easily into the smaller parcels and blocks in this district than conventional large-floorplate, single-user buildings. The variety of parcel sizes, configurations, and proximity to the InterLink offers the potential for flexibility, allowing large tenants or multitenant buildings to occupy multiple contiguous parcels or for smaller tenants or buildings to take advantage of more constrained lots. Lobbies and public entrances should face street intersections whenever possible. Internal cafeterias are strongly discouraged; a major part of the market appeal of such a district is the opportunity for workers to take a convenient walk to dining opportunities outside their building. Retail uses and other publicly accessible spaces should be located along the street edge of office buildings wherever feasible to help activate the street and adjacent outdoor spaces.

Hotel/Conference

One or more full-service hotels with conference facilities would be highly desirable to leverage the presence of the airport. Hotels should be primarily oriented to business customers—avoiding luxury or limited-service concepts—to best utilize airport traffic and support District office development. Frequent shuttle and/or transit service to Providence is recommended to help District hotel development complement the greater Providence hotel market. Priority should be given to sites that have high visibility from Post Road and Jefferson Boulevard, and that can offer convenient access to InterLink and the airport via the Skywalk. Hotel/conference uses should also be sited to provide optimal amenity value to office uses in the District to the extent feasible. Public entrances and ground-floor interior uses that are publicly accessible should be oriented toward adjacent streets to help activate the street and



Hotel development should include compact drop-off areas and support attractive, pedestrian-friendly streets, as in this example at University Park, Cambridge, Massachusetts

adjacent outdoor spaces. These specifically include restaurants, cafes, bars, conference spaces, and lobbies associated with hotel use.

Retail/Entertainment/Dining

Retail, entertainment and dining uses should be clustered in walkable areas, both to promote walkability and to build market interest in office, hotel and residential development. Retail, entertainment, and dining should function as amenities for these other higher-value uses, not as primary land uses themselves. Key target areas include Fullerton Road, corners around the intersections of Imera and Coronado, and corners around the intersection of Jefferson and Coronado. Indoor retail atriums should be prohibited, as they detract from the street activity and accessibility that is an objective in the Intermodal District. Rather, all retail and entertainment uses should be visible from adjacent streets via highly transparent façades. Outdoor eating areas are encouraged adjacent to the sidewalk—especially in areas that receive direct sun—and should be highly visible to promote an active edge along the street. They should not be so large, however, that they diminish the presence of building edges that define key intersections. Service and support uses—such as loading docks, waste disposal areas, and mechanical equipment—from view and locate them away from publicly accessible



Active ground-floor uses such as restaurants, as well as other retail uses and office and hotel lobbies, will make public areas of the Intermodal District energetic, attractive, and safe.

spaces. Do not locate parking, except for on-street parallel parking, in front of retail entrances. Instead, orient access to pedestrian routes that connect to parking structures, transit, and the neighborhood street network.

Residential

Multifamily residential uses are encouraged throughout the District. They are the only use recommended for parcels along Kilvert flanking Imera, and Cottage Street in order to create a proper transition to the detached housing that exists around the site today. Housing should include a range of unit types, sizes and price points across the District—and preferably



Multifamily housing, such as this example in downtown St. Paul, should incorporate a range of building forms that relate to both existing residential context and new higher-density development. A range of unit types should be provided to accommodate diverse residents.

within individual buildings and blocks—to expand choices for households, promote a diverse, mixed-income community, and maximize potential market capture and absorption rate.

Entrances should be oriented toward the street; in multi-unit buildings, ground-level flats or townhouses should have individual entrances that face the street, and they should have small front gardens around those entrances wherever possible. Buildings should also be designed to have welcoming lobbies and include a range of unit types and configurations, particularly the smaller units favored by many urban dwellers today. Parking lots should be located away from the streets at the side or the rear of a parcel and have landscaped edges to screen views from streets and residential areas. Keep the number of driveways that connect to parking structures and surface parking to a minimum.

Regional Sports Facilities

Encourage development of a regional sports facility within the target mix of uses within the surrounding area (excluding the Core District) that will be supported by the multimodal transportation options. The design of such facility, if located along a public street, should fully support the architectural guidelines, as defined in the Master Plan and Design Manual. These facilities have been shown to provide a source of positive direct and indirect economic benefits from increasing tax revenues and multipliers



A regional sports facility should provide a pedestrian-oriented façade with significant indoor-outdoor visual connections along any public street it adjoins.

associated with additional spending from increased hotel occupancy, restaurant and retail job growth.

Train Platform

The new train platform for commuter rail service is located within the InterLink garage on the west side of the tracks and extends approximately 500 feet to the south. Riders will reach the platform primarily from the Jefferson Boulevard side of the tracks. A staircase and elevator currently provide access from the east side of the tracks by a pathway through the third floor of the facility and down to the platform. Make every effort to create inviting, convenient, and safe walking access between the platform, development sites east of the tracks, and the Skywalk. This is critical to enabling good walking access between the station and transit-oriented development in the Intermodal Core Area. A parcel on the east side of the tracks along Glenham Avenue has been identified by RIDOT as a potential site for a future rail station building. New development on the D’Ambra property adjacent to the station platform should incorporate walking connections linking the Jefferson Boulevard sidewalk to the train platform and InterLink.

Access to the InterLink from the west side of Jefferson Boulevard must be improved to support redevelopment of the Leviton parcel and provide a safe, walkable path to the InterLink train platform. Safe, inviting crosswalks—and possibly a skywalk if

it can serve as a safe and attractive aid to pedestrians and asset to development—should connect the Intermodal District and Jefferson Boulevard west.

Parking

Provide parking according to the table of parking-generation ratios shown above, or at lower ratios if that can meet demand. These ratios anticipate some sharing of parking facilities among office, retail, and entertainment uses due to different peak hours of use. As patterns of transit use become established, parking ratios could be lowered to reflect a progressive shift away from automobile use toward transit. To help new development achieve the efficiencies possible with shared parking, allow



Portions of parking structures facing public areas should relate well to human scale, complement the character of adjacent buildings, and incorporate visually attractive elements.

Parking Generation Ratios

Wherever possible, parking spaces should be shared among different uses with different demand peaks. As a result, the overall parking ratio for all uses may be lower than the effective ratio for individual use types.

USE	CURRENT ZONING	MASTER PLAN RECOMMENDATION
Office	Bank/medical 1 space / 200 sf GFA ¹	1 space / 300 sf GFA
	Professional 1 space / 300 sf GFA	
Hotel	1 space / bedroom	0.75 space / bedroom
Multifamily residential	2 spaces / DU ²	1.5 spaces / DU
Retail/Entertainment	1 space / 200 sf GFA	1 space / 300 sf GFA

¹ GFA = square feet of gross floor area

² DU = dwelling unit

parking for a given use to be located on a separate block and up to 1,000 feet away if connected by a safe and convenient walking route.

The decrease in required number of spaces for both hotel and residential uses reflects the presence of transit options in the area and the proximity of the airport. For instance, many hotel patrons will arrive and depart via the airport and may not need parking during their stay in the District. The Hilton Garden Inn has experienced high occupancy since its opening, yet it continues to have excess parking capacity, even though it has opened an active successful restaurant next door.

Carefully design parking to enhance the pedestrian experience and respect surrounding residential neighborhoods. Locate any surface lots behind buildings, not between building fronts and the street. Screen parking lots with landscape features that provide a buffer between the parking and surrounding sites, and integrate plantings into the parking field to break up its visual scale.

Parking structure design should contribute to the character of adjacent streets and other public areas. In general, recommended parking structure sites have minimal frontage on public spaces. Any parking structure with frontage on Fullerton, Imera, Coronado or Post Road must include ground-level retail, dining, or entertainment uses and follow the façade design guidelines below. Residential or other uses are strongly encouraged on upper floors to screen parking. Where such upper-story uses are not feasible, façades facing public areas should incorporate a character and hierarchy of scale compatible with adjacent buildings and with human scale. While the structure need not mimic the appearance of a conventional building, materials and composition should relate well to surrounding architecture. Façades facing the rail corridor or service areas may receive a lesser level of investment. Any parking structure along Kilvert Street should be lined with residential space on all floors.

Current construction costs for parking are approximately \$15,000–\$20,000 per space for above-ground structures and \$2,000–\$3,000 per surface-lot space.

DESIGN GUIDELINES

These Design Guidelines are intended to provide residents, property owners, business owners, developers, and City agencies with the tools to understand the desired physical form and character of the Warwick Station Development District.

Who is expected to use these guidelines?

Because these guidelines will be used in evaluating new development projects in the District, the most frequent users of this document will be the people concerned with the development of new buildings and public spaces.

Property Owners/Developers

The guidelines can acquaint property owners and developers with the issues of district character identified in the Master Plan and can give direction on how new development can help address relevant issues and return greater value to developers and owners.

Designers

The guidelines will help architects and others who design buildings and public spaces understand what is expected of their products and what could make their designs more compatible with their surroundings and/or more consistent with the goals of the Master Plan.

Project Neighbors

People who live near the sites of proposed new developments will benefit greatly from these guidelines, as they may give neighbors a better understanding of what they can expect from future projects. Ultimately, the guidelines will work as a tool

that neighbors can use when they want to describe to developers or City representatives what they consider appropriate design for their neighborhood.

City representatives

Staff from the City of Warwick and members of the Planning Board will use these guidelines to provide a clear and comprehensive way to discuss the goals, aspirations, and physical form of the District with property and business owners considering improvements of their sites, as well as to help identify strategies for addressing key sites along the corridor.

Each project will pose unique design issues. In some cases, an effort to follow all of the guidelines could produce conflicts in project design. Give priority to those guidelines that best support the Vision and Planning Principles described on pages 23–25.

Height and Massing

The Master Plan has assumed that the allowable height of 75 feet for the area will enable an appropriate level of development to occur. Maximizing the allowable height at intersections should be encouraged as a way to develop a series of active nodes and visually signify their importance.

Generally, massing that faces a public street should



Façades that wrap corners help strengthen the importance of intersections as nodes of activity.

reflect the bay width and design rhythm of nearby new buildings. Avoid large, continuous massing that overwhelms the pedestrian. Align building façades with the sidewalk in order to form a cohesive street wall; locate parking at the interior of the lot/block. Where new buildings adjoin existing residences in Hillsgrove North, building massing should shift scale, with new buildings within 50 feet of homes rising no more than one story above the homes.

Façade Design

The building façade is perhaps the most influential element in creating an image of a place and defining its character. Buildings should have a clearly expressed base, middle, and top in order to relate to the pedestrian and to traditional mixed-use building types. This may be achieved through changes in material, fenestration, architectural detailing, or other methods.

To enhance the relationship between the interior and exterior of a building, employ transparent materials and interior lighting to maximize the visibility of street-level uses. Ground-floor façades of retail, office, and hotel buildings should be at least 50 percent transparent and allow a clear view from the sidewalk to the interior space of the building, where appropriate. Limit use of security grates to those types that are housed on the interior of a door or window system. Avoid blank walls along any street or pedestrian walkway.

Locate major entrances on primary streets such as Imera Avenue, Fullerton Road, and Coronado Road, and at or near corners wherever possible. Strengthen all four corners of intersections by encouraging buildings to “wrap” around the corner, with primary façades facing both streets. Locate loading areas on side streets or service alleys and away from residential entrances.

Streetscape

Because streets will most likely be the largest public open space in the Development District, they should be treated as the major component of the public realm.

Where possible, widen sidewalks to provide areas for enhanced landscaping, more active pedestrian-oriented uses, and other elements that can enhance the pedestrian experience. Sidewalk materials could combine brick and concrete, with special paving providing an attractive setting for activities such as cafes and restaurants to spill out on to the sidewalk.



Expanding brick areas to include the whole sidewalk helps provide definition to places where outdoor dining or other special use of the sidewalk is encouraged.

Walking Network

Creating an extensive and inviting walking network in the Intermodal District that is integrated well with surrounding areas will improve access, enhance development potential, and make a positive contribution to public health. Coordinate network connections with intersections and traffic signals and make them accessible to people with mobility limitations. Network integration with the InterLink and the Skywalk is especially important to overcome the barriers posed by the rail corridor and Post Road.

Priority Pedestrian Network Connections



- 1** Along Fullerton Road, with active ground-floor retail
- 2** Skywalk connecting to T.F. Green Airport, InterLink, Imera Road, and potentially new development at Post Road
- 3** From the Hillsgrove North neighborhood on each side of Imera Avenue leading south toward Fullerton Road
- 4** Crossing the railroad tracks via the InterLink, with connections to Jefferson Boulevard, Fullerton Road, Imera Avenue, and the D’Ambra site
- 5** Priority pedestrian crossing connecting the InterLink with west side of Jefferson Boulevard to create access to the hotel, residential neighborhoods, and potential future redevelopment of the former Leviton site.
- 6** From the Interlink north and south along Jefferson Boulevard

Street Design

Distinct street design criteria concerning character and dimensions have been established for three street categories: Primary Streets; Secondary and Residential Streets; and Service Streets. Enlarged street sections appear in the Appendix.

Typical recommended street elements and their dimensions appear in the table below. They should be applied to suit the unique goals and conditions

of each street as described below. Given the narrow dimensions of many existing district streets, new development should accommodate the widening of streets such as Fullerton and Imera, through a collaborative effort among property owners and the City, to accommodate inviting sidewalks, street trees, and on-street parking as critically important elements of successful streets supporting walkable development.

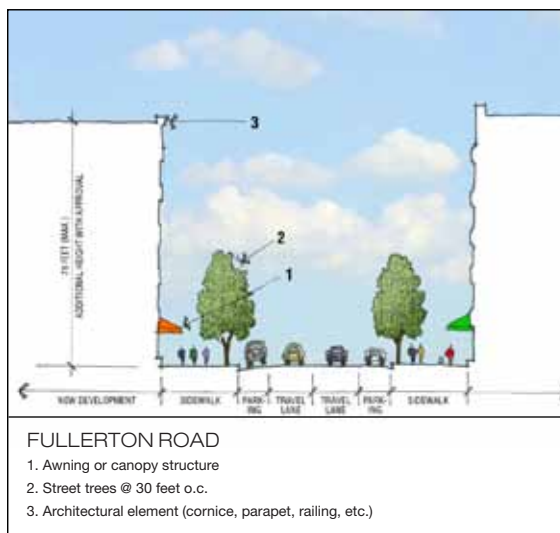
Street Element Dimension Guidelines		
ELEMENT	TYPICAL WIDTH	APPLICATION
Travel lane	Primary streets: 11' Secondary streets: 9' Service streets: minimum needed for adequate service access	Vehicular movement
Parking lane	Primary streets: 7'-6" Secondary streets: 7' Diagonal parking: per typical engineering standards	On-street parallel parking is recommended on all streets where room allows, as a buffer between pedestrians and traffic and to augment public parking supply. On-street parking is vital in front of retail uses. Back-in diagonal parking may be appropriate in priority retail areas along Fullerton and/or Imera.
Bike lane or cycle track	5'	Bike lanes (in-street) or cycle tracks (dedicated bicycle lanes between on-street parking and the sidewalk) are encouraged on streets where space allows and where they tie into a larger bike route network. However, given the narrow dimensions and relatively slow speeds of many district streets, signed "sharrows" accommodating bikes in vehicle travel lanes may be acceptable. Make creation of bike lanes a priority along Coronado Road, as it provides unique opportunity for cyclists to cross the rail corridor. Bike lanes, cycle tracks, or sharrows should also receive priority along Imera to link the District core, Coronado Road, and Hillsgrove North.
Street tree zone/ tree lawn	4' to 6'	This zone should be reserved between the curb and sidewalk passage on all Primary and Secondary streets for street trees as well as street light standards, signage, and other vertical elements. In areas with significant retail, the zone may be surfaced with permeable pavement and tree grates provided to accommodate access to on-street parking as well as outdoor dining and benches. In other areas, a continuous strip of grass or other plantings is encouraged. In either case, provide a continuous trench for healthy growth of tree roots. This zone also provides room for snow storage.
Sidewalk passage	Along priority retail areas and other principal walking streets: 8' Other locations: 5' to 8'	Clear area for walking
Active sidewalk edge	Along priority retail areas and other active ground floor uses: 2' to 10'	Optional additional area along retail, restaurants or other active ground-floor uses for outdoor dining, signage, planters, seating or similar elements associated with active uses.



Primary Streets

Fullerton Road

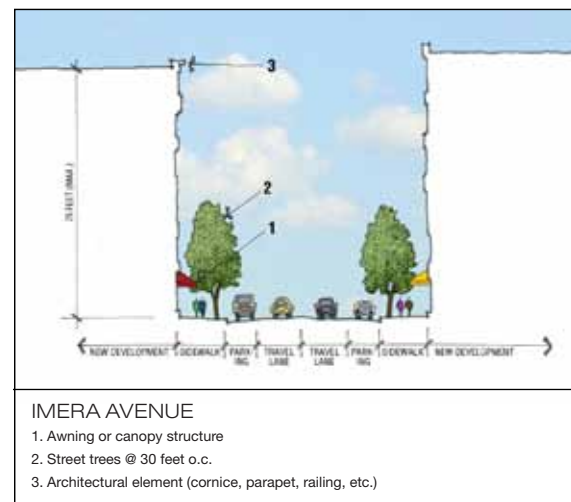
Rebuild Fullerton Road as the primary vehicular and pedestrian access to the core mixed-use area. It should be rebuilt as a two-way, two- or three-lane street with on-street parking on both sides of the road. Provide two to three travel lanes and on-street parking lanes—or possibly diagonal parking. Make sidewalks wide enough to support Fullerton as the prime corridor for pedestrian-oriented activity.



A larger version of this diagram appears on page 54.

Imera Avenue

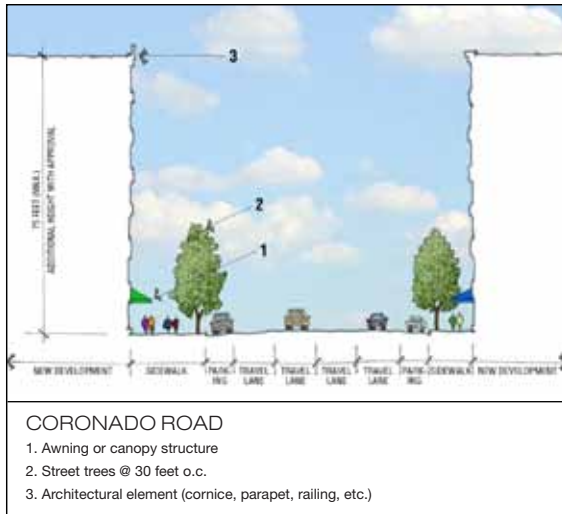
Rebuild Imera Avenue as a corridor for internal movement in the Intermodal Core Area for cars, bikes and pedestrians (see section, below). Development should preserve the option of extending Imera south of Montebello Road as far as the Airport Connector to accommodate possible future redevelopment in the former Hillsgrove South area. Sidewalks—from Montebello Road to Hillsgrove North—should provide ample room for pedestrians, street trees, and other activities. Imera should be rebuilt as a two-way, two- to three-lane street with on-street parking on both sides. A priority bicycle corridor, Imera links new transit-oriented development with Hillsgrove North and Coronado Road; it should include appropriate lanes and signage.



A larger version of this diagram appears on page 55.

Coronado Road

Rebuild Coronado Road as a two-way, four-lane street with on-street parking along both sides of the road east of Imera Avenue (see section at top right). One or both parking lanes may change to turning lanes at intersections as required. Include sidewalks that provide ample room for pedestrians, street trees, and other activities. Include bike lanes between Jefferson Boulevard and Imera Avenue to improve this important bicycle connection across the rail corridor. Consider introducing a landscaped median to reduce the expanse of impervious surface,



A larger version of this diagram appears on page 56.

provide pedestrians with an intermediate stopping point at crosswalks, and celebrate this block as a key district gateway.

Secondary and Residential Streets

These include Imera Avenue north of Coronado Road, Glenham Avenue, and Kilvert, Thurber, and Cottage streets. Secondary and residential streets should be two-lane, two-way roads with on-street parking on both sides (see section, below). One or two additional lanes may be added and parking removed on Imera Avenue south of Alhambra Road and Kilvert Street west of Jefferson Boulevard as necessary to accommodate improvements at the intersections with



A larger version of this diagram appears on page 55.

Coronado Road and Jefferson Boulevard. Provide a landscaped tree lawn next to each curb and provide sidewalks on both sides.

Service Streets

Service streets include Fresno Road (located beneath the InterLink and Skywalk), Montebello Road, and Alhambra Road. Service streets may be one- or two-lane roads, either one- or two-way, with adequate room for service vehicles as required and optional on-street parking. The curb-to-curb dimension should be minimized. Loading docks and other service areas should be located on service streets and away from other streets oriented to pedestrians and through vehicles. Five- to eight-foot-wide sidewalks should line each side of the roadway.

Design Guidelines for Building Edges

Along primary streets, building façades should be located adjacent to the sidewalk or within the build-to line. Building façades and volumes should include a hierarchy of proportions ranging in scale from the individual human to the overall building, as well as variations in massing and bays to create interest and distinction. Awnings and canopy structures are encouraged where possible to provide shelter from the sun, wind, and rain and to promote interchange between interior and exterior uses at the street level.



Buildings on neighboring parcels should complement one another in form and character, particularly at district gateway locations such as along Coronado Road, as in this example of recent development in Texas.

Along secondary streets, buildings should be set back ten feet from the sidewalks to create a front lawn or landscaped area. Awnings and canopy structures are encouraged at entrances to residential uses and at key building entries.

Along service streets, building façades are encouraged to have at least one transparent glazed window or door every 40 feet horizontally to promote informal surveillance. No setback requirements apply. Access to the InterLink should be maintained via Fresno Road.

IMPLEMENTATION

RECOMMENDATIONS

While buildout of the Warwick Station Development District will take years to complete, this plan makes several near-term recommendations to help promote and encourage activity that can build interest and excitement about the District’s future. The recommendations are:

- To achieve the benefits of coordinated site redevelopment, the City and State should apply policies that encourage property owners and/or developers to aggregate parcels into development sites of one or more blocks, preferably flanking both sides of at least one street. The City and State should also encourage coordinated programming and marketing of the District, particularly through the efforts of private-sector owners and developers. Policy tools to consider for encouraging such coordinated development include:
 - > Offering bonus development capacity for larger development parcels, such as those at least one or two blocks in size. The bonus capacity may be offered in the form of additional allowable building height, FAR, hotel rooms, housing units, or other appropriate measure. Larger development parcels offer the opportunity to minimize negative impacts and maximize the benefits of the additional development density through coordinated design and programming.
 - > Executing City takings to expand street rights of way to accommodate improvements such as sidewalks, on-street parking, and street trees that significantly expand potential for high-value, walkable development.
 - > Using tax-increment financing (TIF) and/or tax-abatement policies that enable increased development value, and thus increased job creation and related net fiscal returns to the City and State. TIF can expand development value by financing structured parking and street and/or utility infrastructure improvements that expand development capacity. Tax abatements can help attract businesses that would otherwise choose alternate locations.
- > Allowing lower parking ratios, which reduces the significant construction costs and land area required by parking facilities. Lower ratios can typically be justified in high-density, walkable mixed-use development by its relatively low rates of auto trip-generation and greater utilization of parking spaces (i.e., by sharing spaces among multiple uses—office, retail and housing—through the course of a day).
- > Allowing a more efficient approval process with reduced design review, for projects that meet specific “performance” zoning and design criteria.
- > Creating a design review subcommittee of the planning board to provide design guidance to project proponents efficiently and with predictable outcomes.
- Establish the District as a “Growth Center” as defined by the Governor’s Growth Planning Council in order to potentially receive targeted public investment. The criteria for identifying a Growth Center are outlined below, with discussion of how the proposed plan addresses those criteria.
- Continue to coordinate with city, federal, and state agencies such as the City Council, FHWA, HUD,



Even before development began in the Hamilton Canal District in Lowell, Massachusetts, new lighting and signage helped improve the appearance of the streetscape and signaled to the surrounding community that the district was moving forward.

- USDOT, RIEDC, RIDOT, RIAC, and RI Housing's Keep Space Initiative, as interest in the District grows and development proposals come forward.
- Use the Master Plan as an advocacy document to share the vision of the area with others and generate excitement about the future of the District, particularly among property owners, developers and businesses with potential interest in investing in the District.
 - Continue to make small and near-term improvements in the District to shift the perception of the development community and general public. Items such as signage, lighting, banners and flags, and landscaping can help identify the District as a place where positive change is occurring.
 - Coordinate with RIAC to celebrate the presence of the InterLink, perhaps by establishing the stair tower along Jefferson Boulevard as a landmark with special lighting and signage.
 - Adopt this Master Plan as part of the City of Warwick's Comprehensive Plan.
 - Amend District boundaries as necessary to accommodate adjacent growth that is consistent with the goals and policies of the Master Plan.
 - Reclaim the Elizabeth Mill for mixed-use development that complements the intended mix of uses in the Intermodal District
 - Consider expanding the Intermodal Zone to include the adjacent D'Ambra property, the Elizabeth Mill and the remainder of the Leviton property.

CRITERIA FOR IDENTIFYING GROWTH CENTERS

In 2002, the Governor's Growth Planning Council outlined a series of recommendations for the establishment of "Growth Centers" intended to encourage new development in "economically and environmentally sound locations." The goal of defining Growth Centers was to assist communities in planning where new development will occur and what it will look like, maximizing the impact of available funding resources, and removing barriers to investment. Growth Centers are defined as places that are "dynamic and

efficient centers for development that have a core of commercial and community services, residential development, and natural and built landmarks and boundaries which provide a sense of place."

The Growth Council established eight criteria to provide the basis for evaluating whether an area could be classified as a Growth Center and receive the benefits of that designation. The eight criteria follow, along with an assessment of their compatibility with the District plan.

1. Strengthen and encourage growth in existing centers.

The District lies adjacent to T.F. Green Airport with existing utility and traffic infrastructure that, after a study conducted for this plan, appears sufficient to support the 2.5 to 3.5 million square feet of development envisioned by the plan. Development will build on the presence of the InterLink and take advantage of the existing street grid to guide new construction.

2. Scale new infrastructure to support compact growth.

While the existing infrastructure capacity is sufficient, some modest improvements would be desirable at key site-access roadways into the area. The plan encourages a compact, walkable district and promotes higher densities than the surrounding area to minimize the "land consumed on a per capita, per dwelling, and per job basis." The many underutilized or vacant parcels are envisioned as a vibrant and active place to work, live, and play.

3. Include mixed uses.

The vitality of the Warwick Station Development District will be strengthened by its mix of uses. The Master Plan recommends 20%-40% office, 10%-35% hotel, 30%-45% residential, and 10%-20% retail/entertainment. This mix will bring a range of users to the District throughout the day and evening. Along Fullerton Road, mixed-use buildings with active retail and entertainment ground-floor uses with residential or office space above can form an exciting center for the entire District.

4. Create a range of housing opportunities and choices.

The development plan envisions as much as 675,000 gsf of new multifamily housing built in the District east of the rail corridor. Additional housing is possible to the west. Some units of this housing will be in taller, mixed-use buildings on primary streets with retail and entertainment nearby, while others will be in lower-scale residential-only buildings adjacent to the existing Hillsgrove North neighborhood.

5. Protect and enhance critical environmental resources.

By channeling investment and development opportunities into the District and away from existing undeveloped (“greenfield”) sites, the plan can protect sensitive areas throughout Warwick and the region. Along with enhanced utility infrastructure for stormwater management and runoff, development in the District will bring new landscape elements into an area that has long been dominated by asphalt and surface parking.

6. Provide a variety of transportation choices.

At the heart of the Development District lies the InterLink, home to commuter rail service, multiple car-rental agencies and public parking areas, and RIPTA bus service. All these are linked via the Skywalk to the terminal at T.F. Green Airport. In addition, the plan calls for creation of pedestrian- and bike-friendly streets throughout the District to promote walking and biking as modes of transportation.

7. Promote community design that contributes to a sense of place.

The development plan uses the existing street grid in Hillsgrove as the framework for a series of well-scaled, pedestrian-friendly streets with active ground-floor uses, wide sidewalks, signage, landscaping, and other streetscape furnishings. These streets will help build community by bringing people together around shared destinations and public places. Opportunities for additional height along Post Road can enable the creation of

landmark buildings that give the District a unique identity and sense of place.

8. Encourage growth in appropriately scaled centers.

The Intermodal Core Area falls entirely within a ¼- to ½-mile radius of the geographic center of the Intermodal District—making all its activities conveniently accessible on foot. Moreover, nearly all of the proposed development occurs within ¼ mile of the intersection of Fullerton Road and Imera Avenue, envisioned as the heart of the new district.

APPENDIX

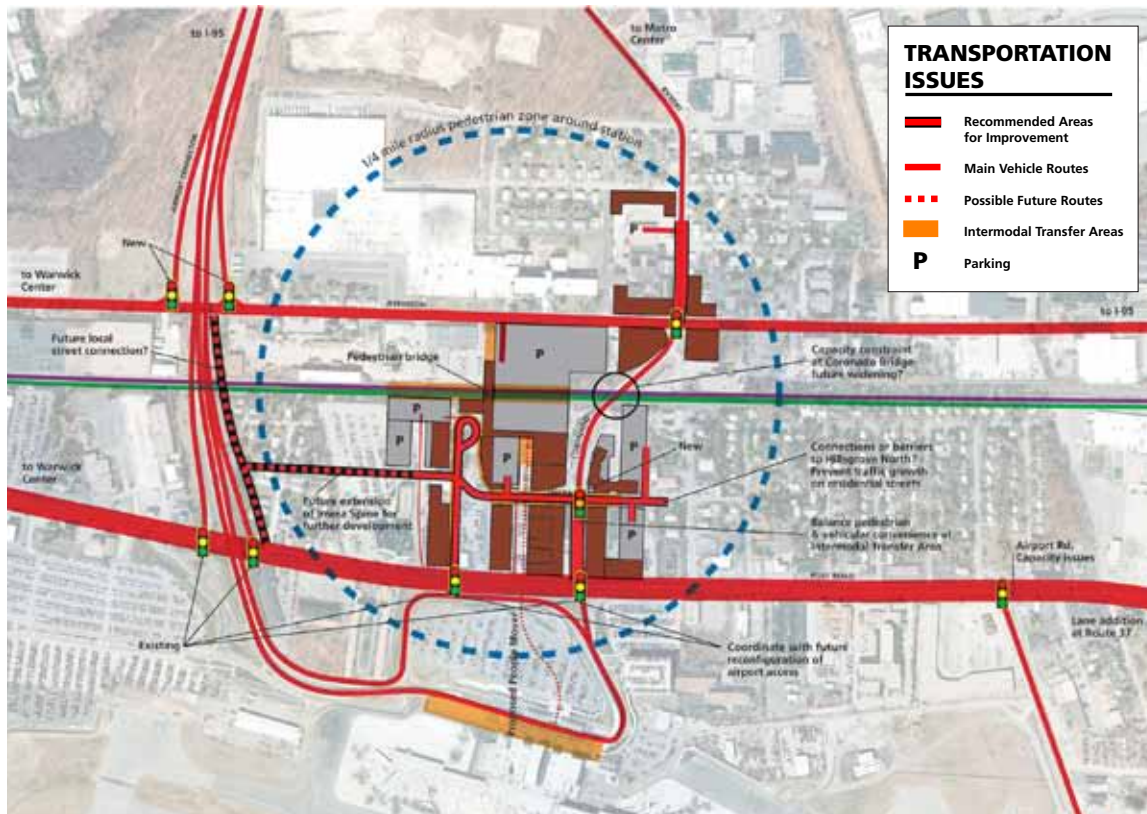
INFRASTRUCTURE CAPACITY ASSESSMENT

BETA Group, Inc., evaluated existing traffic conditions within the Warwick Station Development District study area and prepared a conceptual assessment of the capacity of existing roadways to accommodate proposed new development. The analysis showed that, with modest improvements, the existing roadway network can support both development scenarios described in the Master Plan. “Modest improvements” generally means introducing turning lanes at key intersections; upgrading traffic signals; and incorporating additional travel lanes at selected locations. These improvements must be coordinated with a fully developed on-site roadway system and a strategy for locating major access and egress points to promote use of preferred roadways within the District.

As specific development proposals undergo further definition, the transportation assessment will require reassessment and refinement to reflect any changes.

BETA Group based its assessment on existing traffic-volume data combined with information provided in other studies. New-trip-generation figures reflect the potential development scenarios outlined in the Master Plan. The analysis indicates that the roadway network will require certain improvements to promote and support development within the District.

The major capacity constraint within the existing network is the Coronado Road bridge over the railroad tracks. This bridge serves both as a main access point into the District and as a major pinch point. Increasing bridge capacity from its current two lanes would require expanding the existing structure or building a new one. Either alternative would be major project



with significant costs. Therefore, development in the District should look to design access points that minimize the use of the bridge. Improvements made as part of the train station project have added turn lanes on all approaches to the intersection of Jefferson Boulevard and Kilvert Street, adjacent to the station. To minimize the impact of limited capacity on the railroad bridge, Post Road should be promoted as the primary access for sites east of the tracks and Jefferson Boulevard promoted for sites west of the tracks. Both roadways have good access to Route I-95 via the Airport Connector and Route 37. Incorporation of the improvements outlined below will further enhance this access.

With moderate improvements, the roadway network has the capacity to accommodate anticipated traffic generated by potential development. Long-term development beyond that outlined in the Master Plan, however, may require adding capacity within the network. Expanding the Coronado Road bridge could provide some of that additional capacity. As development begins to remake in the District, the potential of an expanded bridge crossing should be studied for engineering and financial feasibility.

The Post Road, Coronado Road, and Jefferson Boulevard corridors will need several improvements to provide the infrastructure necessary to support the uses identified in the Master Plan (See location diagram on page 53). The study area for developing these improvements extends from the Airport Connector north to Route 37 and from Jefferson Boulevard east to Post Road.

Post Road

1. Add a right turn lane on northbound Post Road at its approach to the Lincoln Avenue intersection. The exclusive right-turn lane will allow two lanes of Post Road traffic to reach the two-lane ramp onto Route 37 westbound. Only a single lane now serves this high-volume movement, causing confusion and congestion as a result of the disproportionate use of the northbound travel lanes. Heavier use of the right

lane, necessitated by the predominant movement to Route 37, yields extensive queuing on the northbound approach. Some drivers try to avoid the queue by using the left lane and then crossing over two lanes to get to the Route 37 ramp, creating a dangerous conflict with vehicles in the right lane that continue straight on Post Road. Adding a second right-turn lane would improve both safety and operational efficiency at both the intersection and along Post Road. Introducing the second lane may require acquisition of a small amount of the parcel in the southeast quadrant of the intersection, which is currently vacant.

2. Add a right-turn lane southbound on Post Road at its intersection with Coronado Road.

Heavy right-turn volume results in queuing along southbound Post Road. Drivers trying to avoid delays at the intersection tend to cut through the Hillsgrove North before reaching Coronado. A right-turn lane will provide additional capacity to accommodate this demand, helping reduce southbound queuing and discouraging cut-through traffic. The improvements will also accommodate future traffic bound for the District. Property acquisition will likely be required to build the turn lane, affecting the gas station on the northwest corner of the intersection.

3. Add an auxiliary lane southbound on Post Road between the westbound Airport Connector ramp and the access to the Redevelopment District.

This right-turn-only lane to the Airport Connector would also improve access to/egress from businesses and parking on this section of Post Road. The lane will accommodate traffic from the development destined for points beyond the city limits and would also promote use of Post Road as a major egress for the District while limiting operational impacts on through traffic along the corridor.

Introduction of this lane could have significant impact on properties on the western side of Post Road. Some of these properties, particularly north

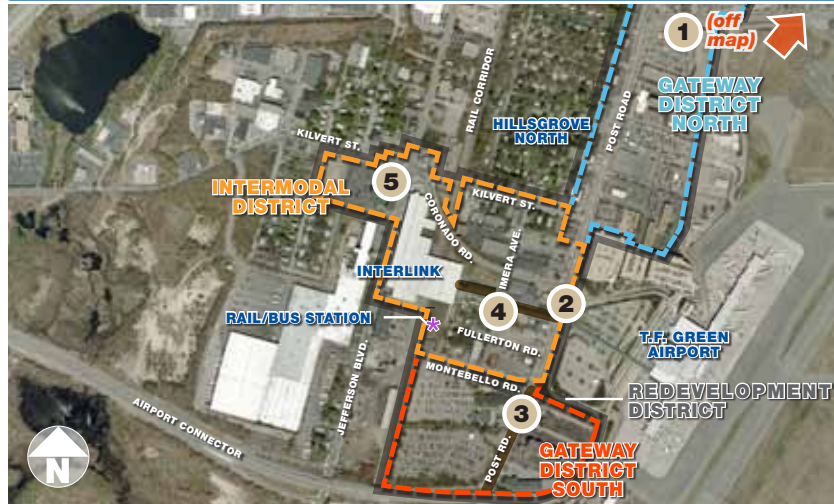
of Montebello Road, may be redeveloped as part of the Master Plan. However, impacts on the Radisson Hotel and 2105 Post Road will need to be carefully coordinated as the improvement is implemented. A smaller build-out scenario of 500,000 square feet with decentralized parking might allow some delay in full implementation of the auxiliary lane. However, even that scenario will require extending a right-turn-only lane from the Airport Connector Road ramp northward for approximately 600 feet to improve operation of the intersection.

Coronado Road/Kilvert Street

4. Reconstruct Coronado Road between Post Road and the railroad bridge to improve operations at signalized intersections and access to the Redevelopment District. Improvements would include widening the roadway to four lanes east of the bridge to allow for turning lanes at intersections. Additional widening could accommodate a boulevard-type roadway as the main route through the District. Providing the necessary corridor for these improvements will require property acquisition.

5. Development of InterLink has already improved access from the west. The project included improvements at the intersection of Jefferson Boulevard, Coronado, and Kilvert—an additional westbound right-turn lane on Coronado and additional left-turn lanes on the eastbound Kilvert Street approach and on both Jefferson Boulevard approaches. These improvements will benefit traffic heading for the District from the west, although the Coronado Road railroad bridge will remain a restriction. Future develop-

Recommended roadway improvements



refers to recommendations listed on pages 52–53.

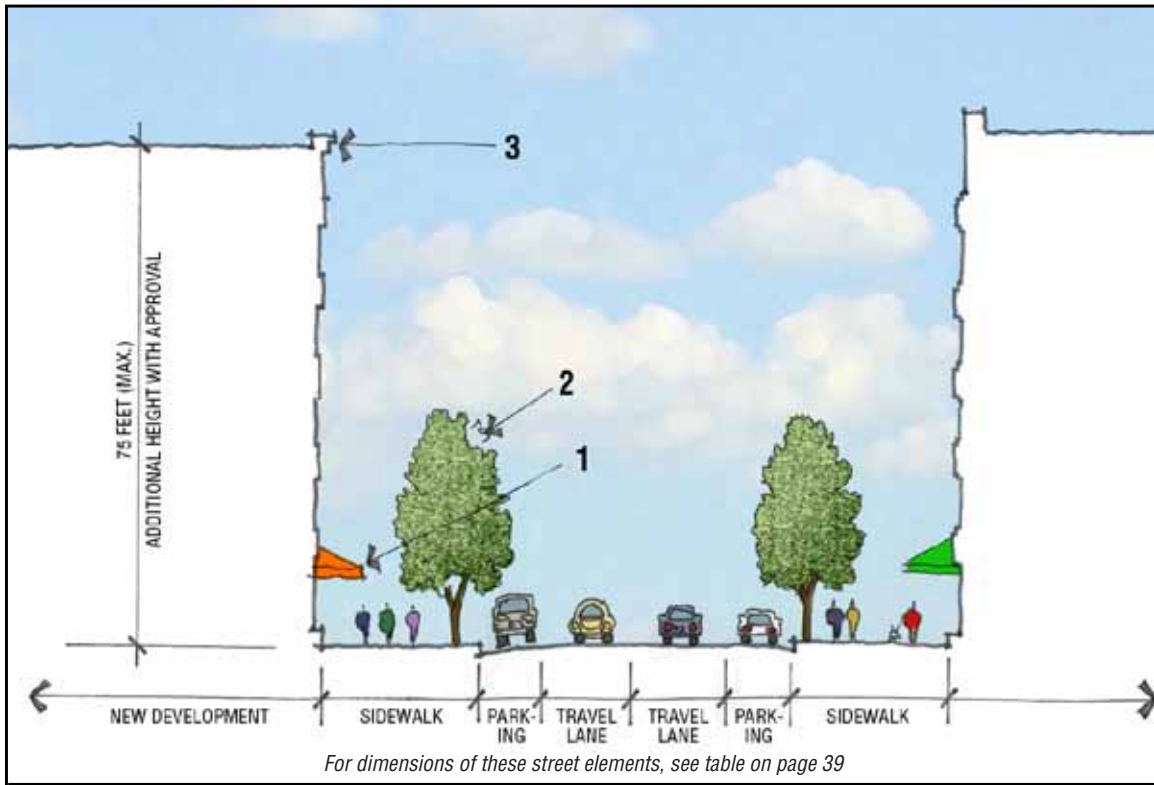
ment along Jefferson Boulevard will also benefit from these improvements, although additional improvements may be needed depending on the size and type of development.

Internal Improvements

In addition to the improvements in the roadway network that serve the District, certain improvements in the District's internal roadway network merit serious consideration. A hierarchy of streets would include major north/south and east/west routes such as Post Road, Coronado Road, and Jefferson Boulevard. Minor roadways would be developed to serve individual parcels within the district and to provide for both vehicular and pedestrian movement within the district. Improvements in the internal roadway network appear likely to follow existing rights of way. Insuring successful functioning of the internal network will require careful attention to the management of access to the development parcels. Consolidation of driveway openings, proper driveway spacing, coordination of driveways with pedestrian pathways, and visibility to pedestrian movements will enhance the mobility for all users of the network.

As discussed previously, Imera Avenue and Fullerton Road would serve as primary corridors within the District. Kilvert, Thurber, and Cottage streets and Imera Avenue north of Coronado Road would serve as secondary streets. Fresno, Montebello, and Alhambra roads would function as service streets.

PRIMARY STREETS | FULLERTON ROAD

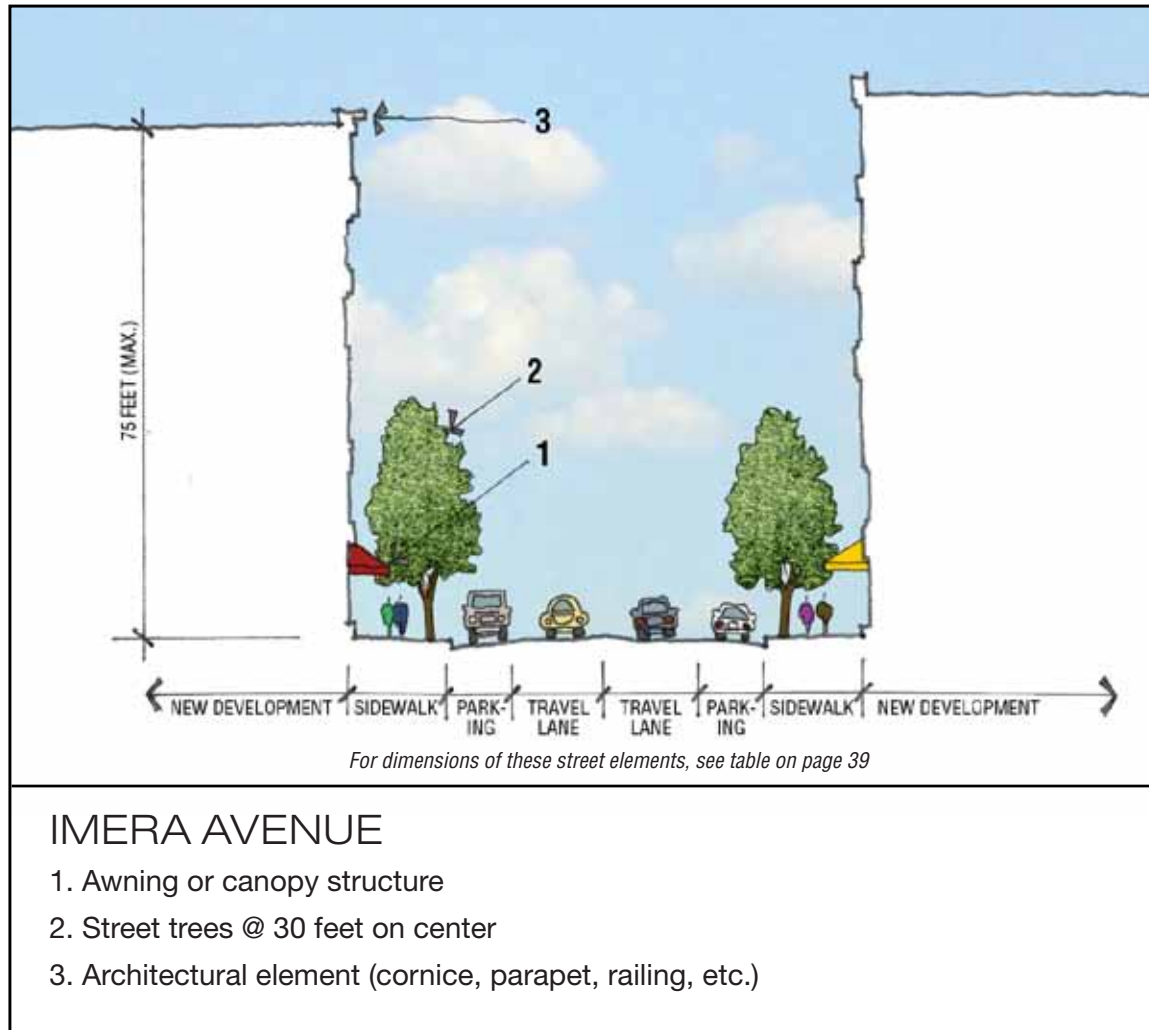


FULLERTON ROAD

- 1. Awning or canopy structure
- 2. Street trees @ 30 feet on center
- 3. Architectural element (cornice, parapet, railing, etc.)

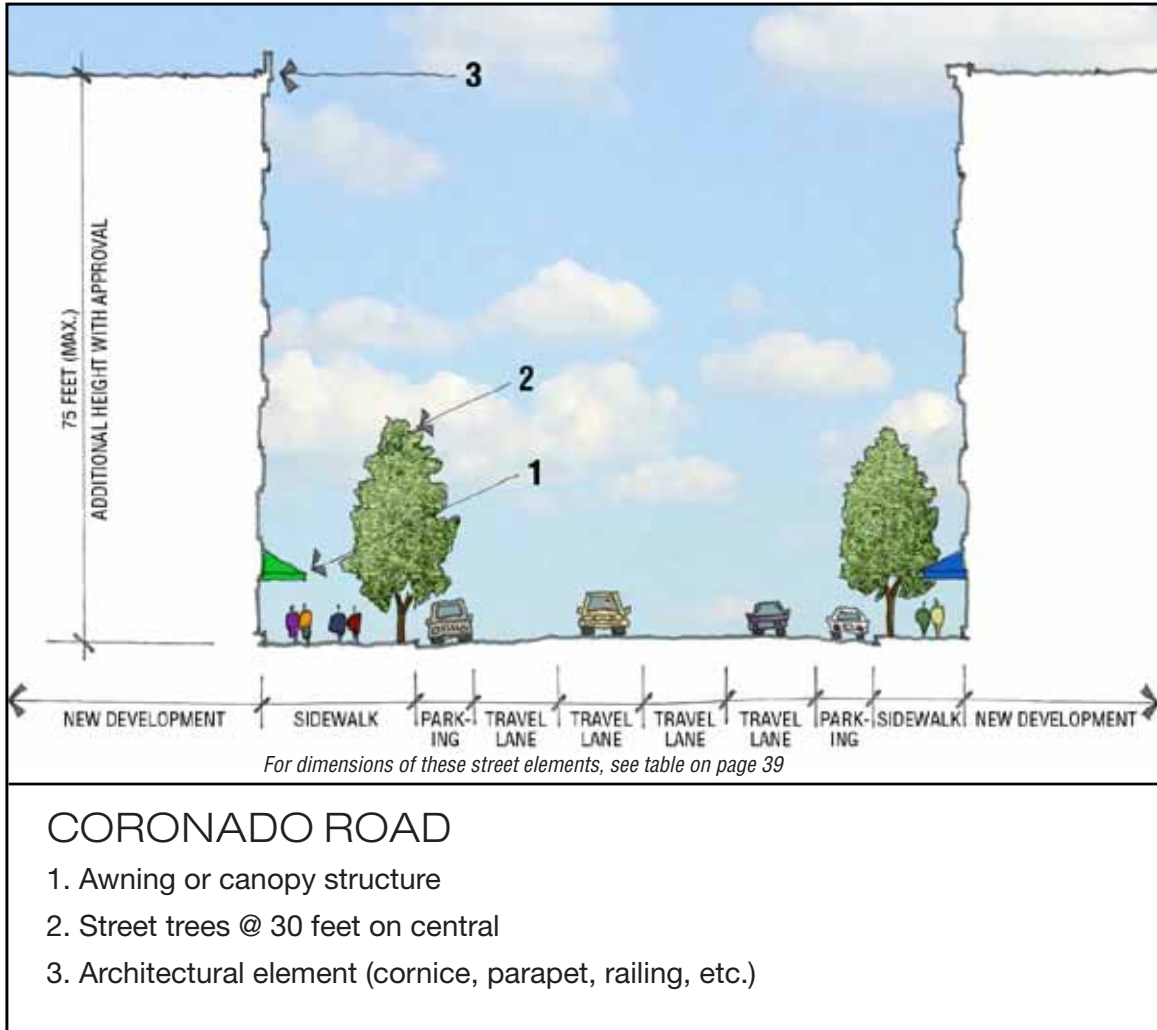
Rebuild Fullerton Road as the primary vehicular and pedestrian access to the core mixed-use area. The new Fullerton should function as a two-way, two- to three-lane street with on-street parking on both sides. Ten- to twenty-foot sidewalks are proposed for each side of the road to help support pedestrian-oriented activity and provide space for landscaping and other furnishings.

PRIMARY STREETS | IMERA AVENUE



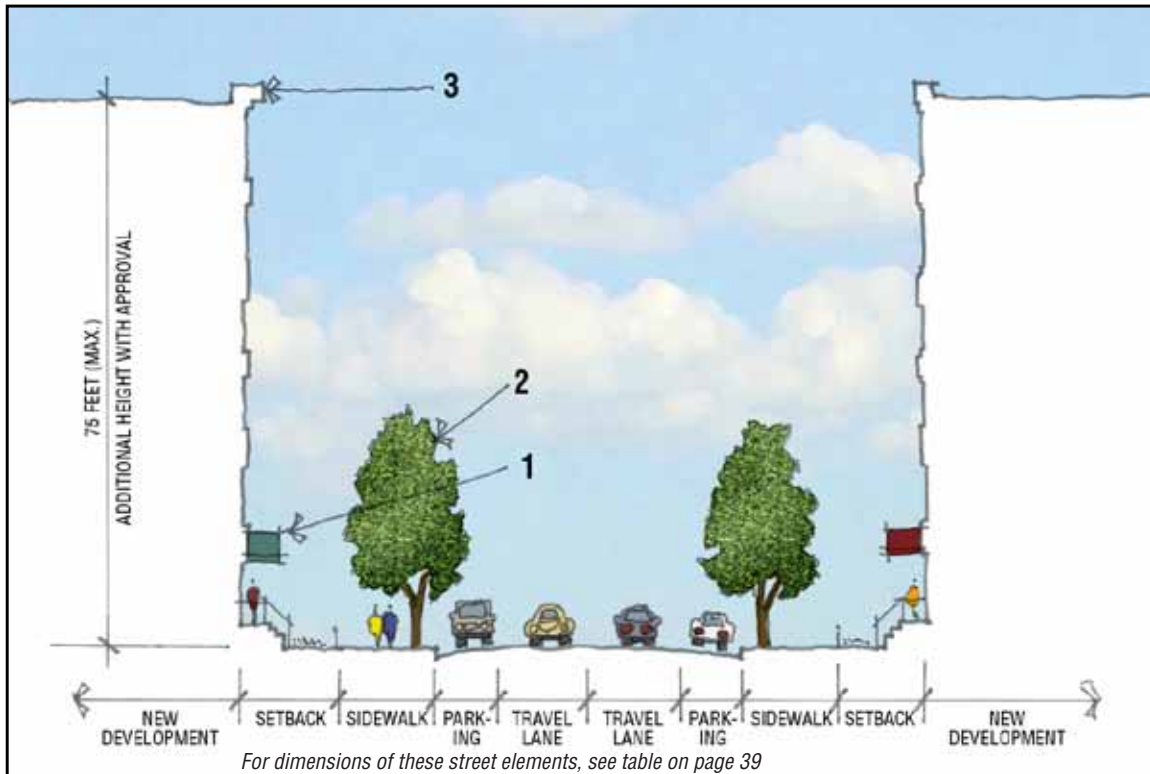
Rebuild Imera Avenue as an internal-movement corridor in the Intermodal Core Area for cars, bikes, and pedestrians. Development should preserve the option of extending Imera south of Montebello Road as far as the Airport Connector to accommodate possible future redevelopment in the former Hillsgrove South area. The new Imera should function as a two-way, two- to three-lane street with on-street parking on each side. Eight- to twelve-foot sidewalks are suggested on both sides of the road from Montebello Road to Coronado in order to provide ample room for pedestrians, street trees, and other activities.

PRIMARY STREETS | CORONADO ROAD



Rebuild Coronado Road as a two-way, four-lane street with on-street parking on each side of the road to the east of Imera Avenue. One or both parking lanes may change to turn lanes at intersections as required. Eight- to twelve-foot sidewalks are recommended on the north side of the road, and ten- to twenty-foot sidewalks on the south side to provide ample room for pedestrians, street trees, and other activities. Add bike lanes between Jefferson Boulevard and Imera Avenue to enhance this important bike connection across the rail corridor. Consider adding a landscaped median to reduce the expanse of impervious surface, provide pedestrians with an intermediate stopping point as they cross, and celebrate this block as a key district gateway.

SECONDARY AND RESIDENTIAL STREETS



SECONDARY AND RESIDENTIAL STREETS

1. Awning or canopy structure
2. Street trees @ 30 feet on center
3. Architectural element (cornice, parapet, railing, etc.)

These include Imera Avenue north of Coronado Road; Kilvert Street; Thurber Street; and Cottage Street. Secondary and Residential Streets should be two-lane, two-way roads with on-street parking on both sides. One or two additional lanes may be added and parking removed on Imera south of Alhambra Road and Kilvert west of Jefferson Boulevard as necessary to accommodate improvements at their respective intersections with Coronado Road and Jefferson Boulevard. Provide a tree lawn alongside each curb, with the sidewalk defining its far edge.