not be affected as this is a road widening project that will not bisect any residential area.

Commercial

Commercial uses comprise the second most predominant land use along the project corridor and are represented by the following types: one-story stores, community shopping centers, one-story office buildings, professional service buildings, restaurants, financial institutions, repair service shops, service stations, wholesale outlet, and a bowling alley. The intersections at Lockwood Boulevard, Reed Avenue, Central Avenue, and Lake Jessup Avenue are the loci of commercial activity. There are several nodes of modest commercial activity throughout the project limits. These areas are comprised of improved commercial and vacant commercial land uses. Improved commercial uses account for 16 percent of the land and 18 percent of the parcels adjacent to SR 426/CR 419, while vacant commercial uses account for 11 percent of the land and 10 percent of parcels along the project roadway.

Node at Lockwood Boulevard

The node at Lockwood Boulevard and CR 419 is characterized by a variety of commercial development that includes the new Riverside Landings Shopping Center, Lockwood Self-Storage, and accessory businesses. Wachovia Bank, Walgreen's, 7-11, and Sprint Gas are located at this intersection. A supermarket anchor, Publix, is also located at Lockwood Boulevard. Figure 4-11 portrays an example of development at this node.

Figure 4-11 Commercial Use at Lockwood Boulevard

Intersection at Lockwood Boulevard and CR 419 showing improved commercial use adjacent to the project roadway.

Node at Reed Avenue

The node at Reed Avenue contains a Texaco and several small offices. An office park is proposed for development on a parcel in this area. This will increase and strengthen the commercial orientation of this node.

Figure 4-12 shows the Oviedo Sports Complex entrance with the vacant commercial and improved commercial use in the distance as the road turns.

Figure 4-12 Oviedo Sports Complex

Oviedo Sports Complex entrance. The vacant commercial and improved commercial land use at Reed Avenue is shown in the distance (right).

Old Downtown Node - Division Street to Lake Jessup Avenue

The major concentration of commercial activity along the project roadway is at the old downtown junction of Central Avenue (SR 434) and SR 426/CR 419. Here, the intersections of Central Avenue, Railroad Avenue, Station Street and SR 426/CR 419 and CR 426 (Geneva Road) create the most active commercial-use area along the project roadway between Division Street and Lake Jessup Avenue. This node is comprised of a mix of improved commercial, vacant commercial, cultural, and public uses. Focal points in this node include Nelson & Co., which is on the National Register of Historic Places, and the large First Baptist Church. Several small offices, including auto repair shops, a restaurant, and specialty businesses are located in the old downtown. A series of outdated small commercial strip retail buildings are minimally setback from the SR 426 path across from the First Baptist Church. Figure 4-13 shows the church (left) and small retail buildings (right).

Figure 4-13 First Baptist Church

Old downtown Oviedo showing SR 426/CR 419 (Broadway Street) improved commercial and institutional uses adjacent to the project roadway. Bus stops (near right) are located throughout this area.

Lake Jessup Avenue to Aulin Avenue

Commercial uses along this road segment include Broadway Plaza, the office suites at Windsor Way, Oviedo Oaks Plaza, and the American Legion Post. The office development at Windsor Way is not reflected on the Existing Land Use map as improved due to its recent construction. Figures 4-14 and 4-15 portray examples of commercial development near Lake Jessup Avenue.

Figure 4-14 Commercial Development between Central Avenue and Lake Jessup Avenue

Commercial use (right) between Central Avenue and Lake Jessup Avenue across from Lawton Elementary School.

Figure 4-15 Commercial Development at Lake Jessup Avenue looking east

Commercial use (left) at Lake Jessup Avenue looking east toward Lawton Elementary School.

Cultural Features

The project roadway abuts several of the community facility types listed in Part 2, Chapter 9 of the PD&E Manual including schools, recreation areas, churches, social service agencies, medical facilities, community centers, and police and fire protection as community facilities and services to be addressed. Figure 4-16 displays the cultural features along the project corridor and provides a table with their physical address. A description of these cultural features is provided in the following paragraphs.

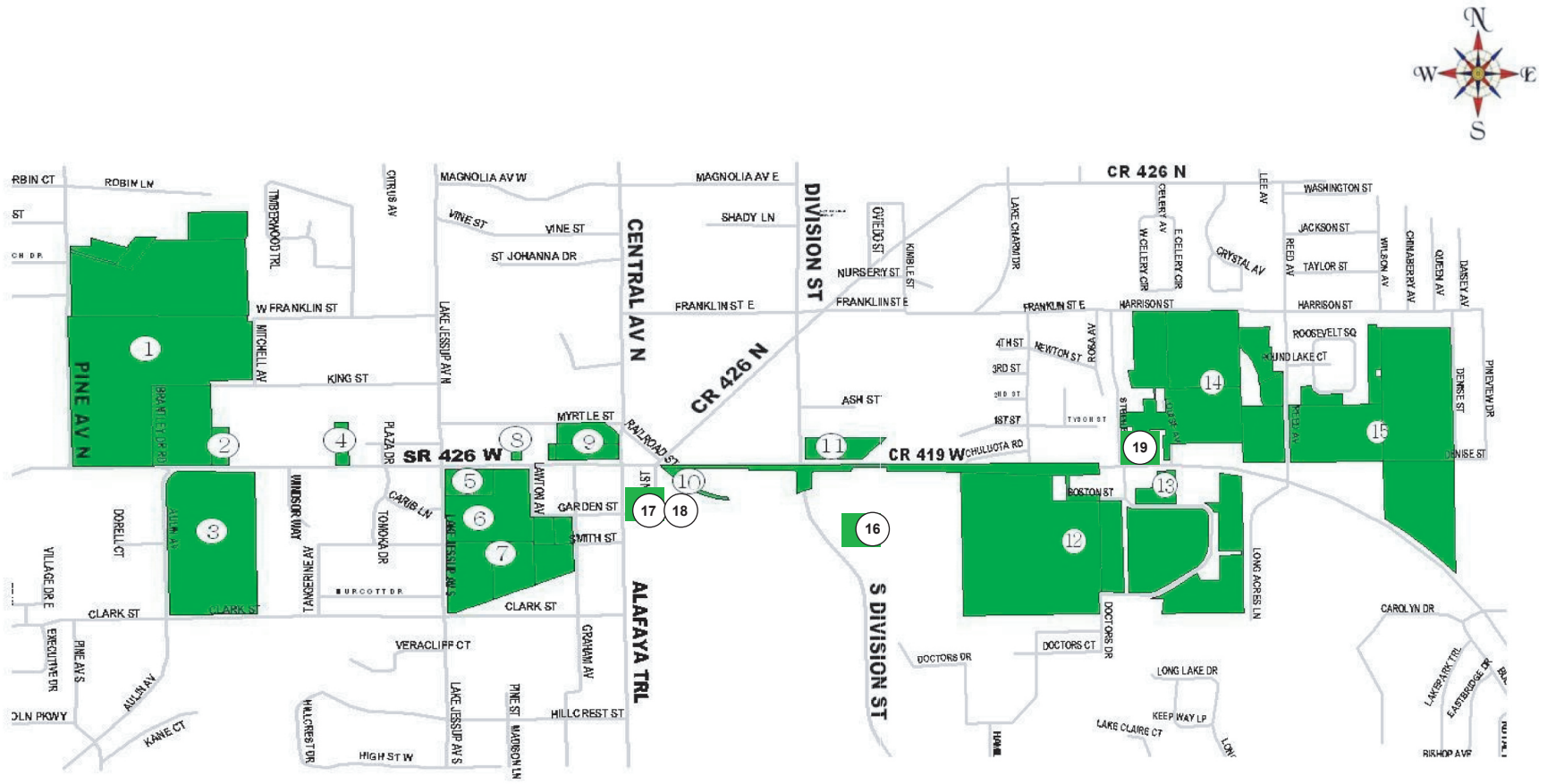
Schools

There are three schools with frontage on the project roadway: Oviedo High School, Lawton Elementary School, and Jackson Heights Middle School. It should be noted that no on-site structures will be impacted.

Recreation Areas

There are three parks that front the project corridor: Friendship Park, Round Lake Park, and Oviedo Sports Complex.

Friendship Park is a 1.8 acre neighborhood park located at the corner of Lake Jessup Avenue and SR 426. Friendship Park is geared toward elementary-age children and has a playground and picnic tables. Access to Friendship Park is from the Lawton Elementary School parking area.

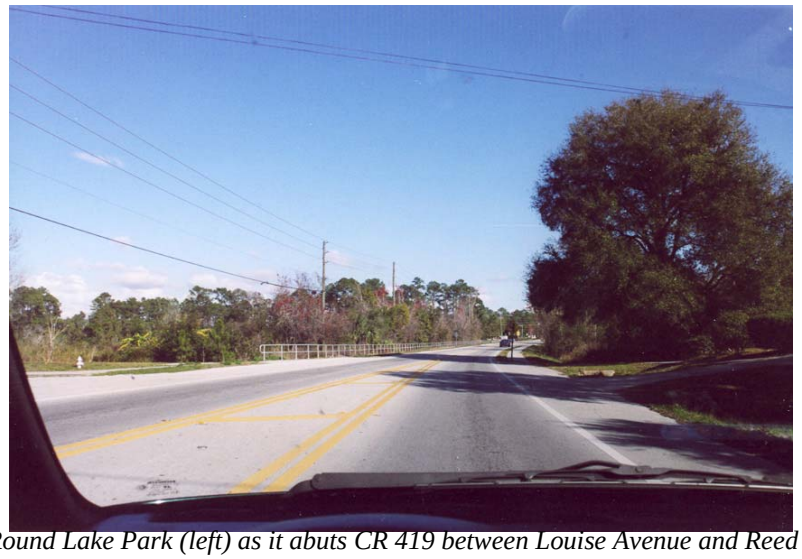


CULTURAL FEATURES		
ID	Name	Street Address
1	Oviedo High	601 King Street
2	Oviedo Memorial Post 243	491 West Broadway Street
3	Oviedo Cemetery	293 Crystal Circle
4	Oviedo Learning Center	387 West Broadway Street
5	Friendship Park	200 West Broadway Street
6	Lawton House	200 West Broadway Street
7	Lawton Elementary	151 Graham Avenue
8	Greater Life Assembly	145 West Broadway Street
9	First Baptist Church	45 West Broadway Street
10	Seminole County Sheriff Substation	110 E. Broadway Street, #8
11	Antioch Baptist Church	311 East Broadway Street
12	Jackson Heights Middle School	141 Academy Drive
13	Abundant Life Church	20 Academy Avenue
14	Round Lake Park	891 East Broadway Street
15	Oviedo Sports Complex	1251 East Broadway Street
16	Aquatic Cntr & Gymnasium	
17	Memorial Building	
18	Oviedo Fire Station #44	
19	Seminole County Sherrif's Annex	

Round Lake Park (Figure 4-17) is a passive park located north of CR 419, just east of Louise Avenue. This park showcases the scenic qualities of Round Lake. The park has numerous picnic areas and trails with benches, grills, and a restroom building. Access to the park is from Louise Avenue.

The Oviedo Sports Complex is a community park located north of CR 419, east of Reed Avenue. The park features five youth baseball fields with Bermuda grass. Access to the park is gained from CR 419.

Figure 4-17 Round Lake Park



Round Lake Park (left) as it abuts CR 419 between Louise Avenue and Reed Avenue. Access to the park is at Louise Avenue. The sidewalk railing (left) indicates the perimeter of Round Lake, which drops quickly from the project roadway.

Other recreation facilities include the Oviedo Aquatic Center & Gymnasium on Division Street, a private bowling center on the south side of CR 419, located near Division Street and courts, fields, and equipment at the Elementary, Middle, and High School, and the Cross Seminole Trail. These areas are not designated as City recreation areas, but serve a cultural purpose along the project roadway.

Churches

There are four churches fronting the project roadway: the Greater Life Church Assembly of God, First Baptist Church of Oviedo, Antioch Missionary Baptist Church and Abundant Life Praise Fellowship.

The First Baptist Church is a cultural focal point for the Central Avenue (SR 434) junction. With the exception of Abundant Life Praise Fellowship, the churches are located on the north side of the corridor.

Social Service Agencies

There are no known social service agencies abutting the project roadway.

Medical Facilities

No major medical facilities such as hospitals abut the project roadway. However, there are several office plazas containing medical offices. These include Oviedo Oaks Plaza, Broadway Plaza, the office suites at Windsor Way, and the small commercial buildings near the Central Avenue junction. These properties appear on the land-use map as commercial or office-related uses.

Community Facilities

Community facilities in the project area include the American Legion Outpost, the Lawton House, the Memorial Building, and the Seminole County Sheriff Office Substation Annex (Figure 4-18).

Figure 4-18 Seminole County Sheriff Office Substation Annex

Intersection of Station Street and SR 426/CR 419 in old downtown Oviedo. The police station (right) is located in a Nelson and Co. historic building and is designated as commercial use.

Other

The Oviedo Cemetery is located at the project roadway near its culmination at Pine Avenue. Mature trees shade stately graves at the south side of SR 426 across from the Oviedo High School.

Potential Section 4(f) Lands

Section 4(f) identifies natural and cultural resources of significance that should be addressed. There are three principal categories:

1) Publicly owned parks, recreation areas, and wildlife and waterfowl refuges
2) Historic and archaeological sites
3) Properties which represent public multiple-use land holdings

Public Parks and Recreation Areas

The SR 426/CR 419 roadway abuts three parks and recreation areas: Friendship Park, Round Lake Park, the Oviedo Aquatic Center & Gymnasium and the Oviedo Sports Complex previously discussed.

Historic and Archaeological Resources

According to the National Register of Historical Places, there is one area of concern along the project roadway. It is the Nelson and Company Historic District (NRHP #01001010) at 110-166 Broadway Street and 30-110 Station Street is also listed on the Register. The Nelson and Company property highlights buildings of significance dating back to 1875 associated with Benjamin Franklin Wheeler, Sr. and the early agriculture and industry commerce of Oviedo. The site is 80 acres in size and has four buildings once comprising a fertilizer plant. The Nelson and Company Historic District is privately owned. The Nelson and Company Historic District is shown in Figure 4-19. Further discussion about existing additional NRHP-eligible locations are discussed in Section 4-6.

Figure 4-19 Nelson and Company Historic District

The Historic District at Old Downtown Oviedo showing the Nelson and Company site at the intersection of Station Street and the Project Roadway.

Public Multiple-Use Land Holdings

St. John's River Water Management District (SJRWMD) and FEMA floodplain areas cover several properties along the project roadway. The conservation areas adjacent to the project roadway are located between Evans Street and Reed Avenue to the south, Reed Avenue and Louise Avenue to the north, Boston Street and Chuluota Road to the south, Chuluota and Division Street to the north, and Division Street and Station Street to the north and south. These areas are not intended for general public use nor are they designated for significant park, recreation, or wildlife and waterfowl purposes, and may not fall under the Section 4(f) designation.

Future Land Use

The Downtown Master Plan: Historically, Oviedo was a place defined by natural and agricultural open spaces. As time passed, the character of the built environment (as opposed to the natural and agricultural environment) defined the City's character more and more. As growth progressed, the shift in how community character was defined created considerable concern among members of the community regarding where the City was headed. The community was facing the reality that Oviedo was "on the road" to "anywhere USA syndrome."

The commercial development that had been attracted to the City by its relatively affluent demographics and rapid growth took form in the shape of generic strip shopping centers and auto-oriented highway commercial buildings. The threat to the City's character was exacerbated by the inability of the public infrastructure system to keep up with the rapid pace of growth in the area, resulting in seemingly ever-increasing peak hour traffic congestion. Over time, more and more residents began to long for what they felt was slipping away – what is described by planners as a sense of "place" or "community." They understood that their deep-seated desire to have social, cultural, recreational, educational, and economic interchange with their neighbors and fellow residents would require a comfortable, attractive, and secure physical place where such interaction could occur. It is in this context that the Oviedo Downtown Master Plan contemplates the creation of a functional downtown that provides the City with the needed "there" — a place where residents and visitors will come as a matter of choice, where they can interact with neighbors and friends, and enjoy shared interests and values.

The Downtown Master Plan represents the culmination of an intensive community effort over a period of more than ten months to establish a sense of place for Oviedo — a focal point in the area of the City's historic downtown (the intersection of Broadway Street and Central Avenue) and a new segment of Division Street between Broadway Street and Mitchell Hammock Road.

The Downtown Master Plan Study Committee (a representative group of approximately 60 members of the Oviedo community) set out intending to design a "place" for social, cultural, and economic interaction. The Committee quickly reached a consensus that the "place" should be multifaceted — a place to assemble, shop, eat, live, work, and play. The design approach that evolved over the course of the endeavor creates *a place within a place within a place*.

Several alternatives for a downtown "anchor" (an attraction that brings sufficient numbers of people to the place on a regular basis to ensure its success) were evaluated. Given the large number and variety of "category-killers" and "big box" retailers in and around Oviedo, a for-profit "anchor" would not likely draw sufficient numbers of people to the downtown to make it a successful "place."

Nor would a for-profit anchor likely reflect the community's desired character for its new focal point.

> The preferred alternative was the creation of a great public space — a civic, cultural, and recreational "anchor," which would:
>
> - Promote the Desired Character for Oviedo's New Downtown and its Environs.
> - Add Vitality and Animation to the New Downtown in a Format Oriented Toward the Community's Demographics, Family-Oriented Lifestyle, and Anticipated Future Growth.
> - Provide Needed Differentiation in the Highly Competitive Marketplace.
> - Provide Cultural Facilities and Programming to the Citizens of Oviedo and its Broader Market Area in a Format that is Scarce in the Region.

The "anchor," to be known as Oviedo Place, is comprised of a beautiful pedestrian-oriented boulevard and passive park surrounding an improved pond, with a fully featured outdoor amphitheater, concert green, tot lot, and gardens at its north end.

Oviedo Place is conceived to function as Oviedo's "central park" — a place that would attract residents and neighbors to the downtown area on a regular and frequent basis. Oviedo Place would be (along with the rest of the New Downtown) a place where the City could host its "Taste of Oviedo" and "A Great Day in the Country" — events that play a key role in the City's regional identity. As such, Oviedo Place would be the anchor (the draw) for the New Downtown, and would position the greater downtown area (including the Old Downtown), as a focal point in the community. Importantly, the value of Oviedo Place is as a "place-making" strategy. Its form and function is contemplated to be synergistically intertwined with retail, office, and residential elements of the New Downtown.

New Downtown

Oviedo Place is the center of a larger "place" — Oviedo's New Downtown. New Downtown will be a mixed-use neighborhood, with at least 85,000 square feet of specialty retail and restaurant uses, office space, and at least 250 residences of various types in its core area, developed and arranged in a manner that reflects traditional town planning principles and the high standards for design and quality that will be exemplified by Oviedo Place.

Old Downtown

The setting of the New Downtown is in a broader "place" (the Study Area), which includes the Old Downtown and surrounding neighborhoods, commercial areas, parks, and conservation areas. The synergy between Oviedo Place and the New Downtown, and between the New Downtown and the Study Area (including the Old Downtown), is expected to create a positive environment for private investment in high quality infill development and redevelopment projects. Indeed, the public investment in Oviedo Place will, over time, have a tremendous catalytic effect in terms of revitalization of the City's declining Old Downtown area.

The Downtown Master Plan recommends that the Old Downtown Oviedo contain a mix of retail, office, and residential uses in various low-scale configurations. Infill development, rehabilitation, and adaptive re-use will incorporate existing uses in a more functional layout. Improvements to SR 426/CR 419 will most likely affect the south side of SR 426/CR 419 at Central Avenue and Station Street due to the minimal setback of the small retail buildings from the project roadway. Redevelopment of this area will reorient existing uses away from the arterial and toward interior roads. The Nelson and Company Historic District will be enhanced in order to preserve its character and will be focused on the trail system, rather than the roadway. Possible restaurant or other destination-oriented uses are recommended for this area.

The area east of Central Avenue at CR 419 toward Division Street is to include such land uses as environmental preservation, recreation, residential infill, and some retail and office use. With the improvements of SR 426/CR 419, Division Street will become a major connector between the project roadway and Mitchell Hammock Road to the south, shifting heavy vehicular traffic away from Central Avenue in order to facilitate a more walkable old downtown area. No major changes are anticipated for the school or park sites east of Central Avenue on CR 419.

The area west of Central Avenue toward Lake Jessup Avenue is to include such future land uses as single and multi-family residential, recreational, institutional, and commercial development. No major changes are anticipated for the school or park sites west of Central Avenue on SR 426.

Implementation — Integrating the Old and the New

The central strategy of the Master Plan is to make the general area between the new Division Street extension, Broadway Street, Mitchell Hammock Road, and Central Avenue a place where residents and visitors will be attracted to a collection of places and experiences — some old and some new. The New Downtown, anchored by a public place which will become a central theme in the City's form and function while the City's new aquatic center and regional trail

system and trail head park, will in turn anchor the revitalization of the Old Downtown.

The Master Plan will be implemented by way of the City's Land Development Code and Comprehensive Plan (modified where necessary to accomplish the objectives of the Master Plan), public investment, and where appropriate, incentives for developers to build projects that promote the goals of the Master Plan (for example, tying planned public investments to quality private development proposals).

Central to the implementation of the Downtown Master Plan is the development and adoption of amendments to the existing City of Oviedo Comprehensive Plan in order to establish the proper policy environment to promote effective redevelopment and development activities within the Downtown Mixed Use District to realize the community ideals that are articulated within the Downtown Master Plan.

Oviedo Comprehensive Plan

The Oviedo Comprehensive Plan was amended to be consistent with the goals, objectives and recommendations of the Oviedo Downtown Master Plan. The amendments were adopted by Ordinance Number 1232 on December 22, 2003, in compliance, pursuant to Sections 163.3184, 163.3187 and 163.3189, F.S. The State of Florida Department of Community Affairs published its Notice of Intent to find the City of Oviedo Comprehensive Plan Amendment in compliance in the Orlando Sentinel on February 13, 2004.

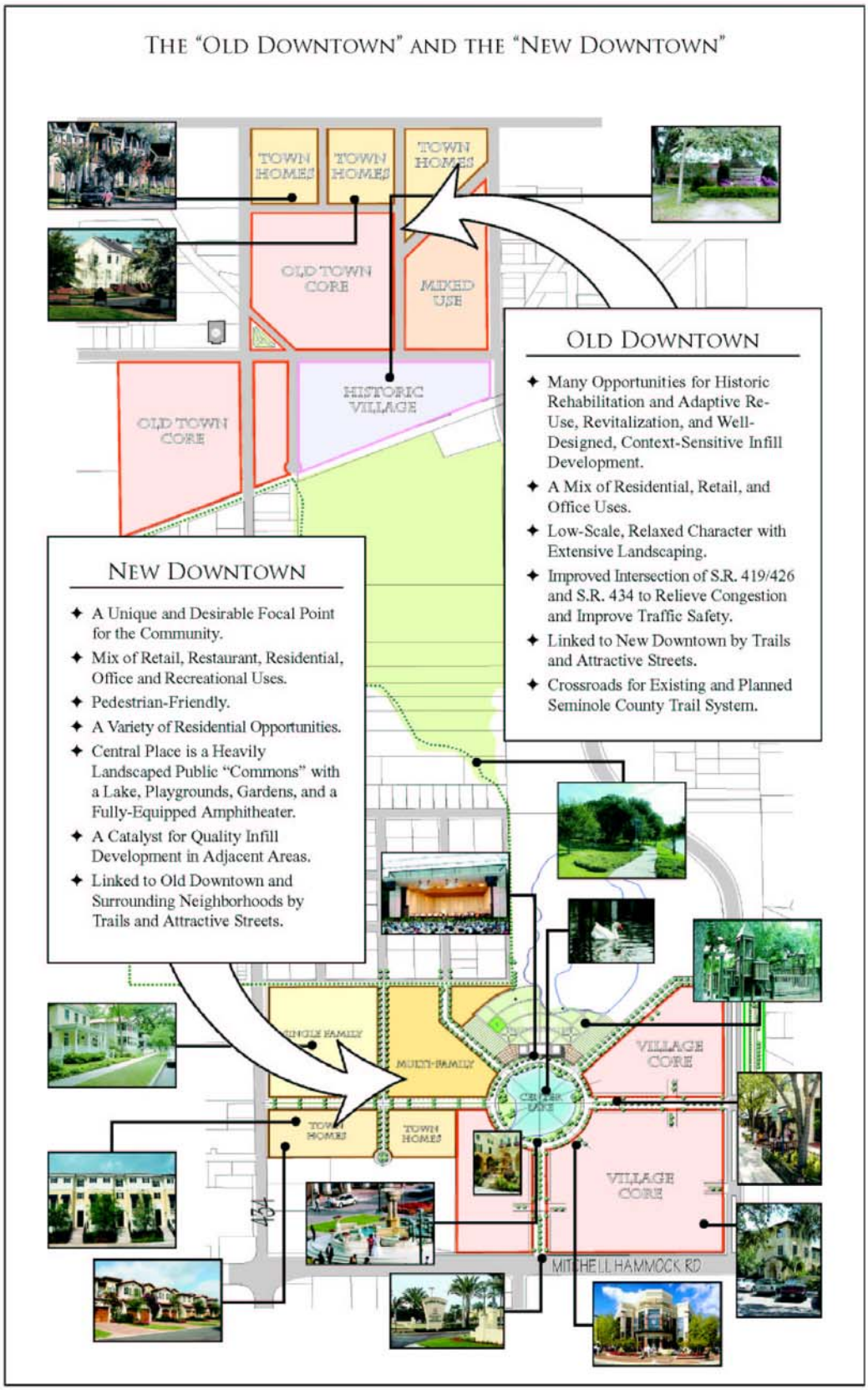
In summary, the boundaries of the Downtown Mixed Use District were modified to reflect the development and redevelopment areas advocated in the Downtown Master Plan. Sub-areas were added to reflect the unique characteristics and specific objectives of each. The Downtown Mixed Use District and its Sub-Areas are shown in Figure 4-20.

The densities and intensities of each Sub-Area are as follows:

<u>Old Downtown Sub-Area:</u>

Single-family*:*	6 dwelling units per acre including ancillary units
Multi-family/Townhomes:	18 dwelling units per acre
Mixed Use:	8 dwelling units per acre for multi-family/townhomes; up to 0.35 FAR for Office and Commercial.

Figure 4-20 New Downtown Concept



New Downtown Sub-Area:

Single-family:	16 dwelling units per acre including ancillary units
Multi-family/Townhomes:	30 dwelling units per acre
Village Core:	50 dwelling units per acre per mixed use structure, up to 1.0 FAR for Office and Commercial. East of Division Street the FAR shall be limited to no greater than 0.35 for Office and Commercial.
Office and Commercial:	East of Division Street the FAR shall be limited to no greater than 0.35 for Office and Commercial.

East of Central Avenue Sub-Area:

Single-family:	6 dwelling units per acre
Multi-family/Townhomes:	16 dwelling units per acre
Office/Commercial:	maximum of 0.35 FAR

West of Central Avenue Sub-Area:

Single-family:	4 dwelling units per acre; 10 dwelling units per acre for properties that front Central Avenue
Multi-family/Townhomes:	16 dwelling units per acre. Multi-family/Townhomes are only permissible on properties with frontage along Central Avenue Office/Commercial: maximum of 0.35 FAR. Office and Commercial uses are only permissible on properties with frontage along Central Avenue and the area bounded by Central Avenue, Clonts Street and Mitchell Hammock Road.

South of Mitchell Hammock Sub-Area:

Single-family:	5.0 dwelling unit per acre
Multi-family/Townhomes:	15.0 dwelling unit per acre
Commercial:	up to 1.0 FAR within 800 feet of SR 434/CR 426 intersection up to 0.75 FAR otherwise

Office: up to 0.50 FAR within 800 feet of SR 434/CR 426 intersection up to 0.30 FAR otherwise

The land use allocation within the Downtown Mixed Use District (Table 4-7), shall adhere to the following ranges for each sub-area on an overall basis:

Table 4-7 Land Use Allocation within the Downtown Mixed Use District

Sub-Area	Acreage			
	Residential		Commercial/ Office	
	Min.	Max.	Min.	Max.
New Downtown	40%	80%	20%	60%
Old Downtown	40%	80%	20%	60%
East of Central	75%	90%	10%	25%
West of Central	80%	95%	5%	20%
South of Mitchell Hammock Road	70%	85%	15%	30%

The anticipated 2010 development estimate for the Downtown Mixed Use District is based on an aggressive development program. It calls for:

1. *200,000 square feet of additional retail and 400 new residential units through 2006;*
2. *60 residential units per year, on average, each year thereafter through the 2010 planning horizon.*

The 2010 development scenario is based on the development potential anticipated in an agreement between the primary property owners within the New Downtown and the City entitled "Agreement for Acquisition, Disposition and Planned Development of Property" dated April 25, 2003, as well as anticipated market demand throughout the entire Downtown Mixed Use District through the year 2010 (the current Comprehensive Plan planning horizon) as analyzed in the adopted Downtown Master Plan.

Natural and Biological Features

Wetlands

The SR 426/CR 419 corridor was investigated through review of published information, review of State database occurrence records, and field reviews to ground truth on-site vegetative communities and approximate wetland boundaries. Field investigations were conducted by representatives of DRMP from October 2002 through November 2002. Maps defining the vegetation associations/land uses, wetland location and threatened and endangered species habitat were developed. The project study area was traversed by a series of pedestrian transects to determine the following:

- On-site vegetation
- Landward extent of jurisdictional wetlands

Using the information obtained from the above data sources as a guide, field surveys were conducted on November 6, 2002 and November 7, 2002 to verify approximated wetland boundaries and to characterize wetland habitat within the project corridor. In addition, a field survey was conducted on September 11, 2002 to observe conditions during the wetter part of the year. Vegetation structural diversity was noted for each wetland, including type, plant composition and stratification, and hydric characteristics. Each wetland site was identified in the field using the delineation methods described in the US Army Corps of Engineers (ACOE) "Federal Manual for Identification and Delineation of Wetlands", dated 1987, and Statewide Unified Methodology and Criteria as adopted by the Florida Department of Environmental Protection (FDEP), and the Water Management Districts.

Wetland classification occurring within the project corridor were determined based on the FDOT's Florida Land Use, Cover and Forms Classification System (FLUCFCS) (January 1999) and the USFWS Cowardin method. FLUCFCS codes were determined to Level III and IV classification for specific identification of wetland and upland habitats occurring with the project corridor. Definitions of Level IV classification that are not specifically described in the FLUCFCS classification system were developed based on field observation of dominant vegetation and hydrology.

Multiple types of wetland systems exist within the project limits (Table 4-8). The existing wetlands within the study area are shown on Figure 4-21. The National Wetlands Inventory (NWI) has documented the presence of a number of varied sized wetlands within the project study area. The character of wetlands within and adjacent to the study corridor varies in response to the historical drainage patterns and intensity of more recent human activities. The wetlands within the project corridor include forested systems (both isolated and connected to Waters of the United States) and herbaceous systems.

All wetland areas within the project corridor have a history of physical and hydrologic alteration resulting from the development of this area and the drainage features installed to reduce flooding concerns within the area. This includes the channelization of the Sweetwater Creek that has altered the hydrology of adjacent wetland systems. Many of the developed portions of the project corridor drain directly into wetland systems with no pre-treatment of the stormwater for pollution control. Some of the more recent development and roadside improvements have installed state-required surface water management ponds. Many of the ponds ultimately discharge into adjacent wetlands, but only after receiving pre-treatment.

Threatened and Endangered Species

A comprehensive literature review was conducted to determine the potential for occurrence of any listed species with known geographic ranges that coincide with the project corridor. Project biologists consulted the Florida Fish and Wildlife Conservation Commission (FFWCC), United States Fish and Wildlife Service species lists, and the Florida Natural Areas Inventory (FNAI). Additionally, a detailed review of project aerial

Table 4-8 Existing Wetlands within the Project Limits

Wetland ID	Wetland Location (Station)	Wetland Size (acres)	USFWS Classification	FLUCFCS Code	Description
1	05+00 – 7+50	4.56	PFO1	610	Wetland Hardwood Forest
2	19+50 – 25+00	3.22	PFO1	615	Stream and Lake Swamp
3	32+20 – 34+50	0.68	PFO1	616	Inland Pond
4	54+30 – 55+50	0.37	PFO1	610	Wetland Hardwood Forest
5	55+50 – 55+60	N/A	R5UB	510	Streams and Waterways
6	61+50 – 69+20	3.06	PFO1	610	Wetland Hardwood Forest
6A	61+60 – 63+00	0.20	PFO1	610	Wetland Hardwood Forest
7	64+20 – 76+80	27.08	PFO6	630	Wetland Mixed Forest
8	69+60 – 72+00	0.71	PFO1	610	Wetland Hardwood Forest
9	72+10 – 83+0	8.96	PFO3	630	Wetland Mixed Forest
10	90+10 – 93+00	0.69	PFO1	610	Wetland Hardwood Forest
11	97+90 – 101+00	1.91	PFO1	630	Wetland Mixed Forest
12	97+50 – 103+10	4.18	PFO6	630	Wetland Mixed Forest
13	97+50 – 104+10	11.10	L2OW	523	Lake (<10 acres, >100 acres)
14	101+50 – 110+60	3.64	PFO2	630	Wetland Mixed Forest
15	102+00 – 113+50	77.02	L2OW	523	Lake (<10 acres, >100 acres)
16	110+80 – 114+90	1.24	PFO2	624	Cypress-Pine-Cabbage Palm
17	125+00 – 126+50	N/A	PFO7	615	Stream and Lake Swamp/Canal
18	138+50 – 143+00	5.04	PFO6	630	Wetland Mixed Forest
19	148+50 – 153+00	3.24	PFO6	617	Wetland Hardwood Mixed

Wetland Location Map

Wetland Locations

Wetland #	Description
1	Wetland Hardwood Forest
2	Stream & Lake Swamp
3	Stream & Waterways
4	Wetland Hardwood Forest
5	Streams & Waterways
6	Wetland Hardwood Forest
6A	Wetland Hardwood Forest
7	Wetland Hardwood Forest
8	Wetland Hardwood Forest
9	Wetland Mixed Forest
10	Wetland Hardwood Forest
11	Wetland Mixed Forest
12	Wetland Mixed Forest
13	Lake (<10 acres)
14	Wetland Mixed Forest
15	Lake (> 10 Acres)
16	Wetland Mixed Forest
17	Stream and Lake Swamp/Canal
18	Wetland Mixed Forest
19	Mixed Wetland Hardwood

Figure 4-21

photographs, and a preliminary field survey were conducted in order to determine the various habitat types within the vicinity of the proposed project.

Pursuant to Section 7(c) of the Endangered Species Act of 1973, the project corridor was evaluated for the potential occurrence of threatened and endangered species. State and federally listed species (endangered, threatened and species of special concern) potentially occur within the project corridor. Based upon the literature review, coordination with environmental agencies, and subsequent field reconnaissance, a list of species that could potentially occur in the project corridor was developed (See Table 4-9).

It is not a conclusive list of species occurrence as extensive site surveys were not conducted as a part of this study.

Non-Protected Wildlife Within the Project Corridor

In addition to Endangered/Threatened species and SSC, the project corridor does support a population of more common wildlife which are more accustomed to human presence and interaction. With the exceptions to the larger forested tracks of land near Long Lake, many of the remnant natural communities have been reduced in habitat value due to adjacent development activities and indirect impacts resulting from the introduction of invasive plant species, access by domestic cats and dogs, human usage and fire suppression. Some of the more common animal species that have potential to inhabit the larger, undeveloped areas within the project corridor include oak toad, box turtle, eastern diamond back rattlesnake, black racer, cotton mouse, cotton rat, cottontail rabbit, opossum, nine-banded armadillo, raccoon, gray fox, cottonmouth snake, and golden mouse. In addition, undeveloped upland and wetland areas provide potential nesting habitat for resident bird and forage habitat for migratory birds.

Contamination Sites

An evaluation of properties within the SR 426/CR 419 (Broadway Street) corridor was conducted to evaluate if hazardous waste or hazardous materials exist that may impact future roadway construction. The study area commences at Pine Avenue and extends to Lockwood Boulevard. The lateral extent of the study area includes the SR 426/CR 419 (Broadway Street) corridor, and corresponding right-of-way areas. These sites are shown on Figure 4-22 and Table 4-10. A full description of the potential contamination sites located within the study area can be found in the SR 426/CR 419 (Broadway Street) *Contamination Screening Evaluation Report* which is located in the project file. Based on observations of the properties within and adjacent to the subject property and review of regulatory records available at the time of review (September 2003), ratings have been assigned to the properties within and adjacent to the project corridor based on the criteria set forth in Part 2 Chapter 22 of FDOT's *Project Development and Environment Manual.*

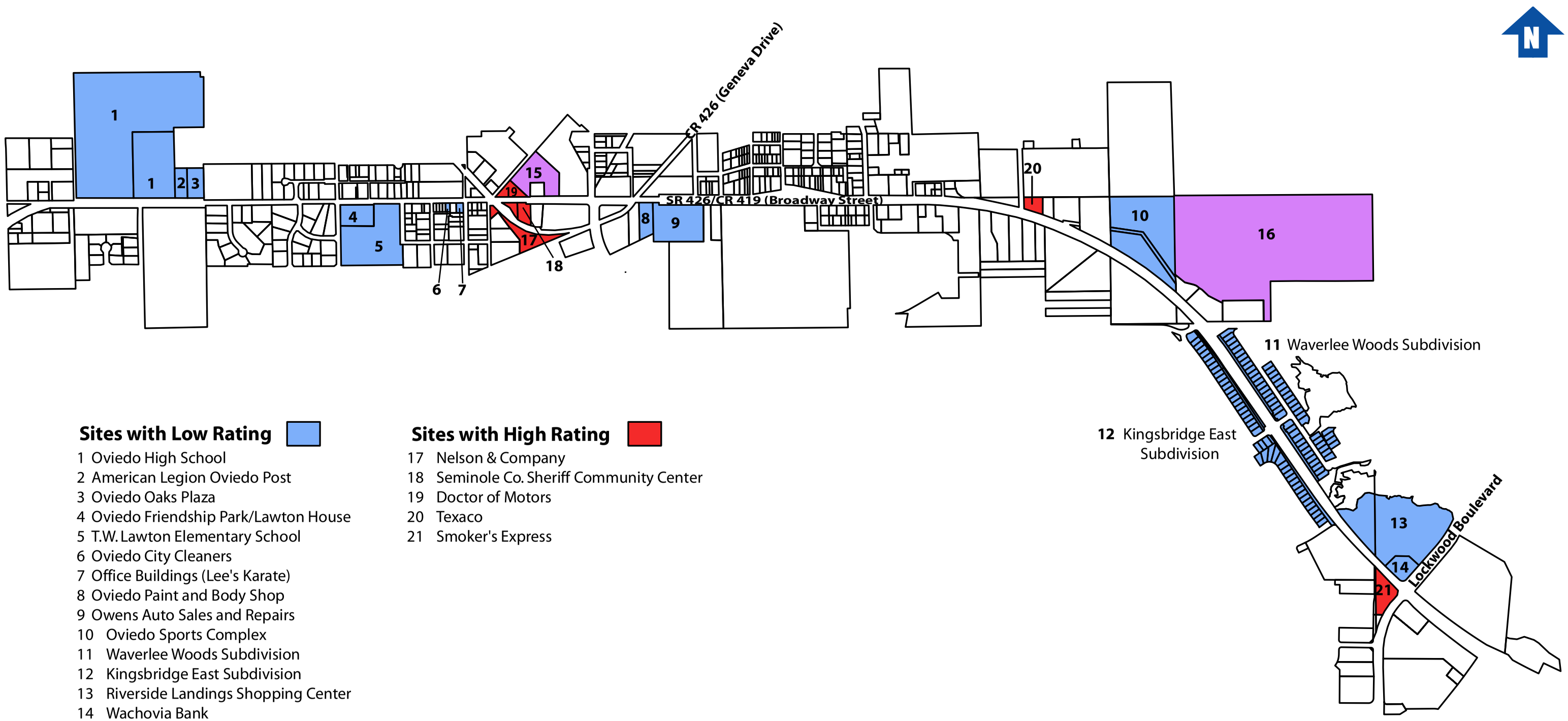
The findings of the Contamination Screening Evaluation Report (CSER) located 23 sites along the project corridor for potential hazardous materials or petroleum contamination. Further findings concluded that four of the sites reside on the two parcels so the number has been condensed to 21 sites. Of the 21 sites, 14 have been assigned a contamination risk potential of Low, 2 were assigned a rating of Medium and 5 were assigned a rating of High.

Table 4-9 State and Federal Listed Threatened and Endangered Flora and Fauna

		Status		Occurrence
Scientific Name	**Common Name**	**State**	**Federal**	
AMPHIBIANS				
Rana areolata aesopus	Florida gopher frog	SSC		Possible
REPTILES				
Alligator mississippiensis	American alligator	SSC	T	Possible
Drymarchon corais couperi	Eastern indigo snake	T	T	Possible
Gopherus polyphemus	Gopher tortoise	SSC		Likely
Pituophis melanoleucus mugitus	Florida pine snake	SSC		Possible
Stilosoma extenuatum	Short-tailed snake	T		Possible
BIRDS				
Aphelocoma coerulescens	Florida scrub jay	T	T	Not likely
Aramus guarauna	Limpkin	SSC		Possible
Egretta caerulea	Little blue heron	SSC		Likely
Egretta thula	Snowy egret	SSC		Likely
Egretta tricolor	Tri-colored heron	SSC		Likely
Eudocimus albus	White ibis	SSC		Likely
Falco pergrinus tundrius	Peregrine falcon	E		Not likely
Falco sparverius paulus	Southeastern American kestrel	T		Not likely
Grus canadensis	Sandhill crane	T		Not likely
Haliaeetus leucocephalus	Bald eagle	T	T	Not likely
Mycteria americana	Wood stork	E	E	Possible
Picoides borealis	Red-cockaded woodpecker	E	E	Not likely
MAMMALS				
Podomys floridanus	Florida mouse	SSC		Possible
Sciurus niger shermani	Sherman's fox squirrel	SSC		Possible
Ursus americanus floridanus	Florida black bear	T		Not likely
PLANTS				
Bonamia grandiflora	Florida bonamia	T		Not likely
Centrosema arenicola	Sand butterfly pea	E		Possible
Dennstaedtia bipinnata	Cuplet fern	E	E	Not likely
Illicium parviflorum	Yellow anise tree	T		Not likely
Lechea divaricata	Pine pinweed	E		Not likely
Nemastylis floridana	Celestial lily	E		Not likely
Ophioglossum palmatum	Hand fern	E		Not likely
Pecluma ptilodon	Swamp plume polypody	E		Possible
Pteroglossaspis ecristata	Giant orchid	T		Not likely
Salix floridana	Florida willow	E		Possible

E = Endangered, T = Threatened, SSC = Species of Special Concern

Potential Contamination Sites



Sites with Low Rating

1 Oviedo High School
2 American Legion Oviedo Post
3 Oviedo Oaks Plaza
4 Oviedo Friendship Park/Lawton House
5 T.W. Lawton Elementary School
6 Oviedo City Cleaners
7 Office Buildings (Lee's Karate)
8 Oviedo Paint and Body Shop
9 Owens Auto Sales and Repairs
10 Oviedo Sports Complex
11 Waverlee Woods Subdivision
12 Kingsbridge East Subdivision
13 Riverside Landings Shopping Center
14 Wachovia Bank

Sites with High Rating

17 Nelson & Company
18 Seminole Co. Sheriff Community Center
19 Doctor of Motors
20 Texaco
21 Smoker's Express

Sites with Medium Rating

15 Oviedo Discount Beverage/Sod King Landscaping
16 Oviedo Materials Landfill

Figure 4-22

Table 4-10 Potential Contamination Sites

	Rank	Name
1	Low	Oviedo High School 601 King Street
2	Low	American Legion Oviedo Post 491 W. Broadway Street
3	Low	Oviedo Oaks Plaza 475 W. Broadway
4	Low	Oviedo Friendship Park/Lawton House 200 W. Broadway Street
5	Low	T.W. Lawton Elementary School 151 Graham Avenue
6	Low	Oviedo City Cleaners 30 W. Broadway Street
7	Low	Office Buildings (Lee's Karate) 10 W. Broadway Street
8	Low	Oviedo Paint and Body Shop 210 E. Broadway Street
9	Low	Owens Auto Sales and Repairs 358 E. Broadway Street
10	Low	Oviedo Sports Complex 1251 E. Broadway Street
11	Low	Waverlee Woods Subdivision
12	Low	Kingsbridge East Subdivision
13	Low	Riverside Landings Shopping Center Corner of CR 419 & Lockwood Blvd.
14	Low	Wachovia Bank 1825 E. Broadway Street
15	Medium	Oviedo Discount Beverage/Sod King Landscaping 110 Geneva Drive
16	Medium	Oviedo Materials C&D Landfill 1451 Evans Street
17	High	Nelson & Company 30 Station Street
18	High	Seminole County Sheriff Community Center 110 E. Broadway Street
19	High	Doctor of Motors (formerly Texaco) 84 Geneva Drive
20	High	Texaco #24-025-0189 (formerly Star Enterprises) 1045 E. Broadway Street
21	High	Smokers Express (formerly Handy Way Food Store #4502) 1000 Lockwood Boulevard

Historical/Archaeological Sites

A total of 55 historic resources (Table 4-11) were identified within the historical Area of Potential Effect (APE). Ten of the 55 historic resources are either listed or considered potentially eligible individually or as a district of the National Register of Historic Places (NRHP). These include the potentially eligible T.W. Lawton House, the First Baptist Church of Oviedo, the Antioch Missionary Baptist Church, the six historic resources in the NRHP-listed Nelson & Company Historic District and the Precooler Building within the NRHP-listed R.W. Estes Celery Company Precooler Historic District.

Table 4-11 Historic Resources Within the Project Area

FMSF NO.	ADDRESS/NAME	STYLE	DATE	NRHP ELIGIBILITY
*8SE68	45 W. Broadway Street/First Baptist Church of Oviedo	Neoclassical Revival	1926	Potentially Eligible
*8SE922	768 Broadway Street	Frame Vernacular	circa 1924	Not Eligible
*8SE960	758 Chuluota Road	Frame Vernacular	circa 1945	Not Eligible
R.W. Estes Celery Company Precooler Historic District (8SE1770) – NRHP-Listed				
*8SE1784	159 N. Central Avenue	Industrial Vernacular	1950	Contributing
Nelson & Company Historic District (8SE1771) – NRHP-Listed				
*8SE1785	30 Station Street/Citrus Packing House	Industrial Vernacular	1886	Contributing
*8SE1789	162 E. Broadway Street/Fertilizer Office Building	Frame Vernacular	circa 1938	Contributing
*8SE1790	166 E. Broadway Street/Fertilizer Manufacturing Plant	Industrial Vernacular	circa1932	Contributing
8SE1829	110 E. Broadway Street/Office Building	Masonry Vernacular	circa 1930	Noncontributing
8SE1839	+/- 160 E. Broadway Street/Water Tower	No Style	1950; moved circa 1962	Noncontributing
8SE1957	60-90 Station Street/Vehicle Shed	Frame Vernacular	circa1940	Contributing
8SE1815	396 W. Broadway Street	Frame Vernacular	circa1920	Not Eligible
8SE1816	231 W. Broadway Street/Estes Residence	Colonial Revival	1942	Not Eligible
8SE1817	201 W. Broadway Street	Frame Vernacular	circa1900	Not Eligible
8SE1818	200W. Broadway Street/T.W. Lawton House	Frame Vernacular	circa1900	Potentially Eligible
8SE1819	169 W. Broadway Street/N.F. Lezette Residence	Frame Vernacular	circa 1912	Not Eligible
8SE1820	128 W. Broadway Street/Zach and Martha Spinks Residence	Craftsman	1913	Not Eligible
8SE1821	98 W. Broadway Street/Leon and Hettie Ragsdale Residence	Masonry Vernacular	1944	Not Eligible
8SE1822	109 W. Broadway Street/C.K. Phillips Residence	Bungalow	circa1929	Not Eligible
8SE1823	78 W. Broadway Street	Frame Vernacular	circa1912	Not Eligible
8SE1824	66 W. Broadway Street	Masonry Vernacular	circa1940	Not Eligible
8SE1825	52A W. Broadway Street	Masonry Vernacular	circa1920	Not Eligible
8SE1826	52B W. Broadway Street	Masonry Vernacular	circa1940	Not Eligible

8SE1827	40 W. Broadway Street	Frame Vernacular	circa1920	Not Eligible
8SE1828	30 W. Broadway Street	Frame Vernacular	circa1920	Not Eligible
8SE1830	20 W. Broadway Street	Masonry Vernacular	circa1949	Not Eligible
8SE1831	10 W. Broadway Street	Masonry Vernacular	circa1915	Not Eligible
8SE1832	6 E. Broadway Street/10 S. Central Avenue	Masonry Vernacular	circa1954	Not Eligible
8SE1833	10 E. Broadway Street	Masonry Vernacular	circa1945	Not Eligible
8SE1834	20-30 E. Broadway Street	Masonry Vernacular	circa1927	Not Eligible
8SE1835	34-38 E. Broadway Street	Masonry Vernacular	circa1927	Not Eligible
8SE1836	311 E. Broadway Street/Antioch Missionary Baptist Church	Masonry Vernacular	1948	Potentially Eligible
8SE1837	550 Chuluota Street	Frame Vernacular	circa1928	Not Eligible
8SE1838	555 1st street	Frame Vernacular	circa1920	Not Eligible
8SE1840	380 Chuluota Street	Frame Vernacular	circa1942	Not Eligible
8SE1841	679 E. Broadway Street	Frame Vernacular	circa1932	Not Eligible
8SE1842	203 Stephen Avenue (841 E. Broadway Street)	Frame Vernacular	circa1945	Not Eligible
8SE1843	901 E. Broadway Street	Masonry Vernacular	circa1950	Not Eligible
8SE1844	293 Crystal Circle/Oviedo Cemetery	No Style	circa1873	Not Eligible
8SE1845	738 E. Broadway Street	Masonry Vernacular	circa1954	Not Eligible
8SE1939	160 S. Central Avenue	Frame Vernacular	circa1945	Not Eligible
8SE1940	101 S. Central Avenue	Mediterranean Revival	circa1920	Not Eligible
8SE1941	88B S. Central Avenue	Masonry Vernacular	circa1946	Not Eligible
8SE1942	86 S. Central Avenue	Masonry Vernacular	circa1948	Not Eligible
8SE1943	88A S. Central Avenue	Masonry Vernacular	circa1946	Not Eligible
8SE1944	71 S. Central Avenue	Contemporary	circa1951	Not Eligible
8SE1945	42 S. Central Avenue/Oviedo Fire Station	Masonry Vernacular	circa1950	Not Eligible
8SE1946	47 S. Central Avenue	Masonry Vernacular	circa1950	Not Eligible
8SE1947	38 S. Central Avenue	Masonry Vernacular	circa1950	Not Eligible
8SE1948	139 N. Central Avenue	Masonry Vernacular	circa1950	Not Eligible
8SE1958	585 Chuluota Road	Frame Vernacular	circa1935	Not Eligible
8SE1959	311 E. Broadway Street/Education Building	Masonry Vernacular	circa1950	Not Eligible
8SE1960	149 E. Broadway Street	Masonry Vernacular	circa1950	Not Eligible
8SE1961	200 Clark Street	Frame Vernacular	circa1930	Not Eligible

*denotes previously recorded resource. Yellow shading denotes NRHP-eligible or listed resource.

T.W. Lawton House

The T.W. Lawton House, located at 200 W. Broadway Street (8SE1818), was originally constructed circa 1890. The T.W. Lawton House is significant at the local level under Criterion A in the area of Community Planning & Development in the early settlement of Oviedo and Criterion B for its association with the Lawton family, who were early pioneers in the community. This one-and-one-half-story Frame Vernacular style house is irregular in plan. Constructed of wood frame, the house is set on a concrete block pier and continuous foundation. The walls were originally clad in wood drop siding but are now sheathed in vinyl siding (circa 1997). A first floor verandah extends across the north, south, and west elevations. Regularly spaced simple wood columns support the hip roof of the verandah. A wood balustrade connects the closed rail. The steeply pitched intersecting gable roof is finished with 5-V crimp metal. On the main façade the roof has

a center gable extension, accentuating the entrance to the house. A gable roof dormer is located in the east slope of the roof. An interior masonry chimney is also located in the east slope of the roof.

First Baptist Church of Oviedo

Located at 45 W. Broadway Street (SR 426), the First Baptist Church of Oviedo was constructed in 1926. The First Baptist Church of Oviedo (8SE68) is significant at the local level under NRHP Criterion A in the areas of Community Planning & Development and Religion, and Criterion C for Architecture. In addition, this property meets Criteria Consideration A which states that a religious property is eligible if it derives its primary significance from architectural or artistic distinction or historical importance

The two-and-one-half story Neoclassical Revival style brick building is defined by a full-height pedimented portico. Three bays wide by five bays long, the form of the church is an "L" as a result of the circa 1946 addition of a perpendicular wing on the northwest corner of the structure to house educational rooms and choir space. The entrance to the church is located in the center bay of the first floor and is accessed by a flight of stairs. The building is set on a continuous masonry foundation finished with stucco, containing a raised basement. The walls are constructed of brick laid in a running bond. Exterior brick chimneys are located in the east slope of the original building and in the south slope of the addition. Secondary entrances are located on the east elevation. There are six additional buildings constructed after 1954 that compose the First Baptist Church of Oviedo campus. Due to their recent construction, they are considered noncontributing buildings and the NRHP boundary was drawn to exclude them.

Antioch Missionary Baptist Church

Located at 311 E. Broadway Street (CR 419), the Antioch Missionary Baptist Church was constructed in 1948. The Antioch Missionary Baptist Church (8SE1836) is significant at the local level under NRHP Criterion A in the areas of Ethnic Heritage (African- American), Religion, and Community Planning & Development. It also meets Criteria Consideration A which states that a religious property is eligible if it derives its primary significance from architectural or artistic distinction or historical importance.

The church is a one-story concrete block building defined by a center-steeple arrangement. Three bays wide by five bays long, the form of the church is a "T-plan" with a center steeple located on the main facade. The entrance to the church is located in the steeple within a round arched portico. A flight of five stairs provides access to the main entrance. The building is set on a continuous concrete block foundation. The walls are constructed of concrete block with a recently applied textured spraycrete finish. Window openings are rectangular with round arched headers, accented by exposed brickwork. The metal frame six-over-six double-hung sash windows feature panes of colored glass and are set beneath two-light transoms.

R.W. Estes Celery Company Precooler Historic District

The R. W. Estes Celery Company Precooler Historic District (8SE1770) is located at 159 N. Central Avenue (SR 434). The NRHP-listed property consists of 6.28 acres bound by

the adjacent properties to the north and south, the railroad tracks to the west and Central Avenue (SR 434) to the east. The district contains five contributing resources constructed in 1950, including the previously recorded R.W. Estes Celery Co. Precooler building (8SE1784), the crate room building, the wash house, the loading dock, and the railroad tracks (Table 4-11). Five non-contributing resources are also located within the district boundaries, which consist of the covered vehicle/equipment shed, the steam locomotive, two refrigerator cars, and a well shed. The resource is significant at the local level under Criterion A for Agriculture and Commerce and Criterion C for Architecture. Listed in the NRHP in 2001, the district retains its historic integrity and continues to convey its significance as the only remaining historic celery precooler facility in Seminole County.

5.0 DESIGN CRITERIA AND STANDARDS

The following publications were used to establish the design criteria for this PD&E Study:

- Roadway and Traffic Design Standards (FDOT, 2006, English)
- Plans Preparation Manual (FDOT, 2006)
- A Policy on Geometric Design of Highways and Streets (AASHTO, 2004) "AASHTO Green Book"
- Manual on Uniform Traffic Control Devices (MUTCD) (FHWA, Washington, DC 2003. Revision 1)
- Roadside Design Guide (AASHTO, 1996)
- Drainage Manual (FDOT, 2003)
- Drainage Handbook Culvert Design (FDOT, 2004)

Table 5-1 summarizes the design criteria used during the conceptual design development and analysis phase. It is anticipated that this Table would be updated as necessary as the project advances into subsequent project development phases.

Table 5-1 Design Criteria and Standards for SR 426/CR 419

Design Element	Value	Source
A. General		
Design Vehicle	WB 50	FDOT
Design Year	2030	FDOT Design Traffic
Design Speed • SR 426 and CR 419	45 mph	Plans Preparation Manual Table 1.9.1
B. Typical Sections		
Lane Widths • SR 426 and CR 419	11 to 12 feet minimum	Plans Preparation Manual Tables 2.1.1 and 2.1.2
Median • SR 426 and CR 419	15.5 feet 22.0 feet desirable	Plans Preparation Manual Table 2.2.1
Minimum Pavement Cross-Slopes • Roadways	0.02	Plans Preparation Manual Figure 2.1.1
Maximum Algebraic Pav't. Crossover	4% to 5%	2004 AASHTO
Maximum Shoulder Cross-Slope Break	7%	2004 FDOT Roadway and Traffic Design Standards, Index 510
Border Widths • SR 426 and CR 419	12 feet from edge of pavement	Plans Preparation Manual Table 2.5.2
Clear Zone From Edge of Travel Lane • SR 426 and CR 419	4 feet from face of curb	Plans Preparation Manual Table 2.11 series
C. Horizontal and Vertical Geometry		
Maximum Super-elevation • SR 426 and CR 419	$E_{max} = 0.05$	Plans Preparation Manual Table 2.9.2
Minimum Stopping Sight Distance • SR 426 and CR 419	360 feet	Plans Preparation Manual
Minimum Crest Vertical Curve • SR 426 and CR 419	3 times design speed	Plans Preparation Manual Table 2.8.5
Minimum Sag Vertical Curve • SR 426 and CR 419	3 times design speed	Plans Preparation Manual Table 2.8.6
D.. Traffic Control		
Design Speed	Existing posted speed (desirable) Existing posted speed minus 10 mph (minimum)	Plans Preparation Manual Chapter 10, MUTCD or 2004 FDOT Roadway and Traffic Design Standards, Index 600 Series
Lane Widths	12 feet desirable 10 feet minimum	Plans Preparation Manual Chapter 10, MUTCD or 2004 FDOT Roadway and Traffic Design Standards, Index 600 Series

6.0 TRAFFIC

The information used in the following sections was extracted from the *SR 426/CR 419 (Broadway Street) Design Traffic Technical Memorandum* and *Design Traffic Report for SR 429/CR 419 From Pine Avenue to Lockwood Boulevard.* Please refer to these reports for more detailed traffic data, traffic analysis, and traffic projections.

6.1 Traffic Count Information

Traffic counts were conducted in June 2002 for the design traffic analysis. Table 6-1 specifies the count location and type of count conducted. All turning movement counts (TMCs) are 8-hour counts from 7:00 am to 9:00 am, 11:00 am to 1:00 pm, and 2:00 pm to 6:00 pm. As part of the traffic count program for this project, two (2) locations (one on SR 426 east of Aulin Avenue and one on CR 419 east of Reed Road) were utilized as vehicle classification count locations.

The traffic count information was used to develop existing traffic characteristics for roadways within the study area. Based on the 24-hour vehicle volume counts and 72-hour vehicle classification counts, peak traffic flow (K measured), peak traffic direction (D), and Medium and Heavy truck percentages (T) were derived. Table 6-2 provides the summary traffic characteristics for the project.

Based on the measured peak traffic flow to daily ratios, an estimated value for K30 was developed. The process adjusts the K Measured factor by a ratio of the median seasonal factor for the highest 13 weeks (peak season) and the median seasonal factor for the lowest 13 weeks (non-peak season) to produce an adjusted K factor. FDOT provided seasonal factors for Seminole County.

The average K30 of 0.0956 as shown in Table 6-2 is in the range of the (FDOT) recommended K30 factors for an urban arterial. The recommended range for an urban arterial from the Design Traffic Handbook is 0.092 to 0.115. While an observed characteristic of increasing traffic volumes in an urban area is the reduction of the peak to daily ratio, we recommend utilizing the larger K30 (estimated, shown in Table 6-3) of 0.0956 for the design factor.

The measured daily truck percentages (T) for Medium and Heavy trucks was 7.3% east of Aulin Avenue and 7.1% east of Reed Road, for an average T of 7.2%. The current truck percentages are not expected to vary between the opening and the design year.

Table 6-3 provides recommended design factors for the development of design traffic and pavement design.

Table 6-1 Traffic Count Locations

Roadway Segment	Type
SR 426 West of Pine Avenue	24 Hour Volume
Pine Avenue North of SR 426	24 Hour Volume
SR 426 West of Aulin Avenue	24 Hour Volume
Aulin Avenue South of SR 426	24 Hour Volume
Aulin Avenue North of SR 426	24 Hour Volume
SR 426 West of Lake Jessup Avenue	24 Hour Volume
Lake Jessup Avenue South of SR 426	24 Hour Volume
Lake Jessup Avenue North of SR 426	24 Hour Volume
SR 426 East of Lake Jessup Avenue	24 Hour Volume
SR 426 West of Central Avenue	24 Hour Volume
Central Avenue South of SR 426	24 Hour Volume
Central Avenue North of SR 426	24 Hour Volume
SR 426 East of Central Avenue	24 Hour Volume
Station Street South of SR 426	24 Hour Volume
CR 419 East of Station Street	24 Hour Volume
SR 426 North of Station Street	24 Hour Volume
Railroad Street North of SR 426	24 Hour Volume
CR 419 East of Division Street	24 Hour Volume
CR 419 West of Division Street	24 Hour Volume
Division Street North of CR 419	24 Hour Volume
CR 419 East of Avenue B	24 Hour Volume
CR 419 West of Avenue B	24 Hour Volume
Avenue B North of CR 419	24 Hour Volume
CR 419 East of Stephan Street	24 Hour Volume
Academy Avenue South of CR 419	24 Hour Volume
CR 419 East of Stephan Street	24 Hour Volume
Stephan Street North of CR 419	24 Hour Volume
Reed Road North of CR 419	24 Hour Volume
Carolyn Drive East of CR 419	24 Hour Volume
CR 419 South of Carolyn	24 Hour Volume
Evans Street East of CR 419	24 Hour Volume
Bishop Avenue West of CR 419	24 Hour Volume
CR 419 South of Bishop Avenue	24 Hour Volume
Waverlee Woods Blvd. East of CR 419	24 Hour Volume
Lockwood Blvd. South of CR 419	24 Hour Volume
CR 419 East of Lockwood Blvd.	24 Hour Volume
CR 419 East of Lockwood Blvd.	24 Hour Volume
Lockwood Blvd. North of CR 419	24 Hour Volume
SR 426 East of Aulin Avenue	72 Hour Classification
CR 419 East of Reed Road	72 Hour Classification
SR 426 and Aulin Avenue	8 Hour TMC
SR 426 and Lake Jessup Avenue	8 Hour TMC

SR 426 and Central Avenue	8 Hour TMC
SR 426 and Station Avenue	8 Hour TMC
CR 419 and Division Street	8 Hour TMC
CR 419 and Avenue B	8 Hour TMC
CR 419 and Stephan Street	8 Hour TMC
CR 419 and Reed Road	8 Hour TMC
CR 419 and Carolyn Drive	8 Hour TMC
CR 419 and Bishop Avenue	8 Hour TMC
CR 419 and Lockwood Boulevard	8 Hour TMC

Table 6-2 Summary of Traffic Characteristics

	Mainline	**Side Streets**
K(measured)	0.0891	0.1023
K30(estimated)	0.0956	0.1097
K30(FDOT)	0.0895	NA
D(measured)	0.5597	0.5654
D(FDOT)	0.5401	NA
T(measured)	7.2%	NA
T(FDOT)	3.02%	NA

Table 6-3 Recommended Design Factors

K30 Mainline	0.0956
D Factor Mainline	0.560
T Factor Mainline (Medium & Heavy)	7.2%
K30 Side streets	0.1097
D Factor Side streets	0.565

6.2 Existing Traffic Conditions

The existing traffic conditions along SR 429/CR 419 from Pine Avenue to Lockwood Boulevard have been previously documented in the "*Design Traffic Report for SR 426/CR 419 From Pine Avenue to Lockwood Boulevard"*. Figure 6-1 provides the existing geometry for all signalized intersections and other relevant cross streets along SR 426/CR 419 between Pine Avenue and Lockwood Boulevard. There were eleven intersections analyzed. Seven of these intersections involve an existing traffic signal. Of these seven, SR 426 at Pine Avenue and CR 419 at Division Street had a new signal added since the start of the study.

6.3 Traffic Operations Assumptions

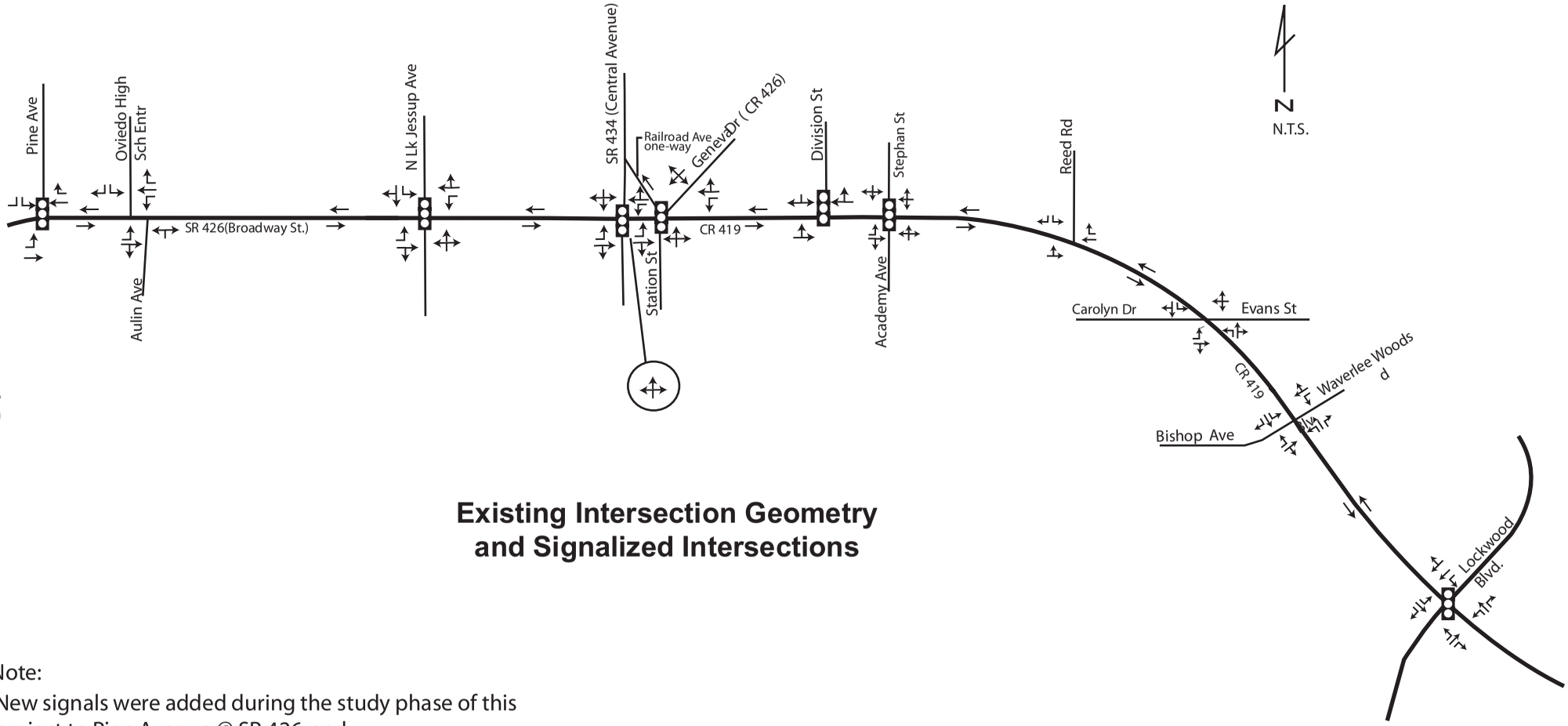
Design traffic volumes were developed for the build and no-build conditions. The no-build condition assumes that SR 426/CR 419 between Pine Avenue and Lockwood Boulevard will remain a two-lane roadway with existing intersection configurations. The build condition for SR 426/CR 419 was evaluated as a four-lane urban facility, with curb & gutter, sidewalks, bike lanes and a raised median.

Information for roadway improvements in the study area was obtained from METROPLAN ORLANDO, the City of Oviedo and the FDOT. Table 6-4 list the programmed roadway improvements near the project compiled from the Fiscal Year 2002/03 – 2006/07 Transportation Improvement Program (TIP). Based on information provided by the City of Oviedo and FDOT, the following years were used to forecast design traffic volumes for the SR 426/CR 419 corridor.

Opening Year - 2010
Mid-Design Year - 2020
Design Year - 2030

Table 6-4 Major Highway Projects Funded for Construction for Fiscal Year 2002/2003 – 2006/2007

Project Name	From	To	Work Description	Estimated Fiscal Year Construction To Begin
Alafaya Trail	McCulloch Road	Mitchell-Hammock Road	Widen to 6 Lanes	2003 / 2004 Underway
Aloma Avenue	SR 417 / GreeneWay	Mitchell-Hammock Road	Widen to 4 Lanes	2002 / 2003 Underway
CR 419	Second Street	Lockwood Boulevard	Widen to 4 Lanes	2003 / 2004 Underway
SR 426	Mitchell-Hammock Road	Pine Street	Add Lanes & Reconstruct	N/A 2007



Existing Intersection Geometry and Signalized Intersections

Note:
New signals were added during the study phase of this project to Pine Avenue @ SR 426, and Division Street @ CR 419

SR 426/ CR 419 Broadway Street
Project Development & Environment (PD&E) Study
From Pine Avenue to Lockwood Boulevard

Figure 6-1

6.4 Multi-Modal Considerations

SR 426/CR 419 is located within the City of Oviedo urban area and serves a variety of commercial, professional office and residential uses. Lynx is the primary transit provider in Oviedo and currently operates a surface transit route known as Lynx 47. Lynx 47 utilizes SR 426 and CR 419 from for most of its route, which begins at the University of Central Florida.

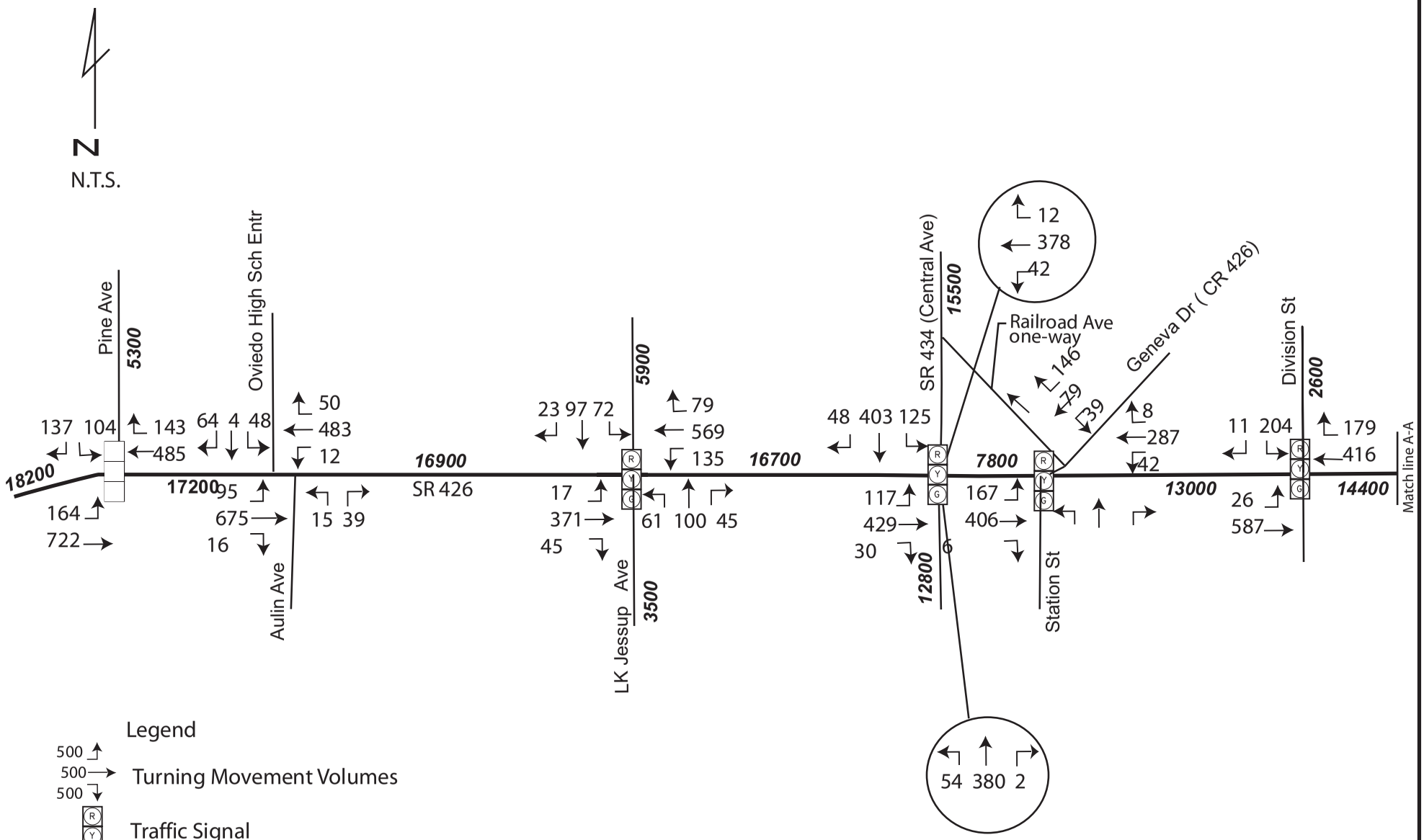
Other multi-modal considerations affecting the SR 426/CR 419 corridor involve bicyclist and pedestrian facilities. Existing bicycle and pedestrian facilities are sparingly provided along the section of SR 429/CR419 from Pine Avenue to Lockwood Boulevard. Because three schools are located within the study limits, consideration of improvements to the existing bicycle and pedestrian facility network was included in this study. These improvements would generally consist of a continuous concrete sidewalk along both sides of the roadway for pedestrians, and improved bicycle facilities including a bike lane adjacent to outside travel lanes along both sides of the roadway.

6.5 Existing Traffic Analysis

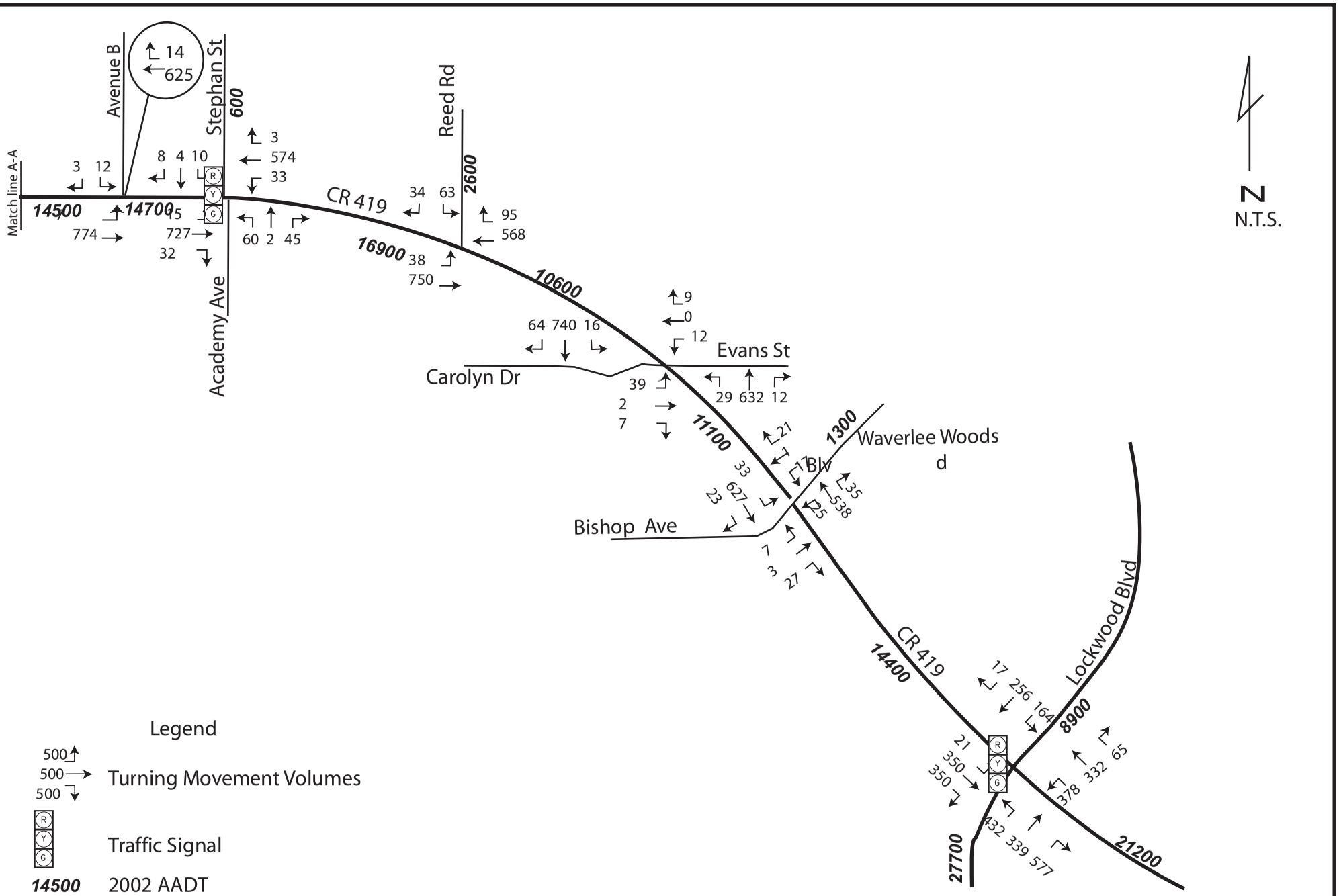
A roadway link level of service (LOS) analysis was performed for the existing traffic volumes using the Generalized LOS Tables provided by the FDOT. Intersection LOS were analyzed using the Highway Capacity Software (HCS) Version 4.1 (2000 HCM) signalized and unsignalized analysis, as appropriate. Figure 6-2 provides the existing PM Peak Hour TMC's and roadway segment volumes. Intersection LOS for the existing condition is shown in Figure 6-3. It should be noted that only one of the intersections analyzed operated at unacceptable LOS standard F, Lockwood Boulevard at CR 419. Of the road segments analyzed, the segment between Pine Avenue and Lake Jessup operates at LOS F while all the others operate at acceptable LOS.

6.6 Traffic Volume Projections

The development of traffic volumes projections for SR 426/CR 419 requires the examination of historical traffic growth, proposed development within the corridor vicinity, and a basic understanding of the traffic circulation patterns and characteristics of the corridor. In arriving at the volume forecasts for SR 426/CR 419 various growth rates and traffic factors were examined. The following sections discuss methodologies, the resulting growth rates and the recommended growth factor used in this analysis.



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Existing PM Peak Hour Turning Movement Counts and 2002 AADT	Figure 6-2



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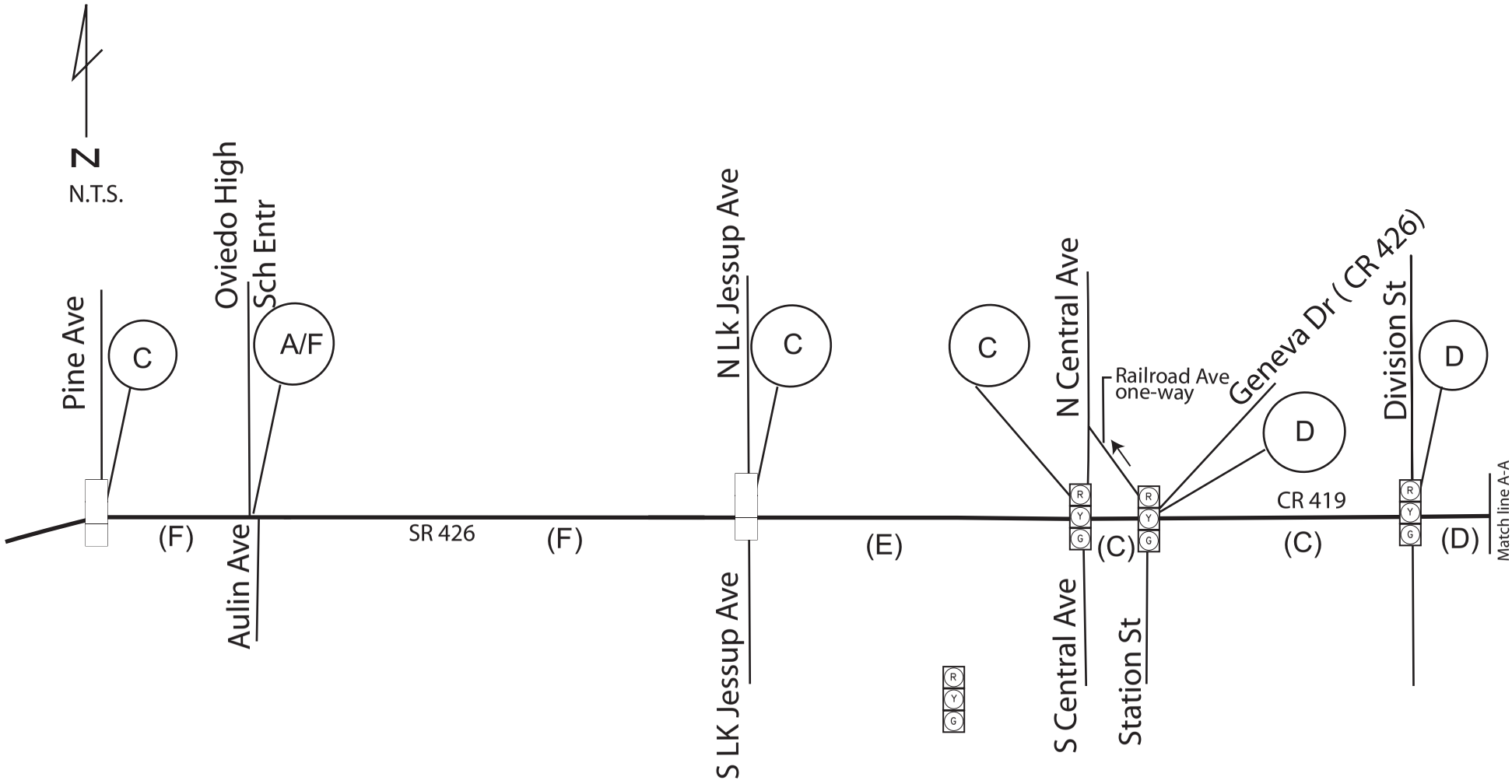
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Existing PM Peak Hour Turning Movement Counts and 2002 AADT	Figure 6-2 con't



Legend

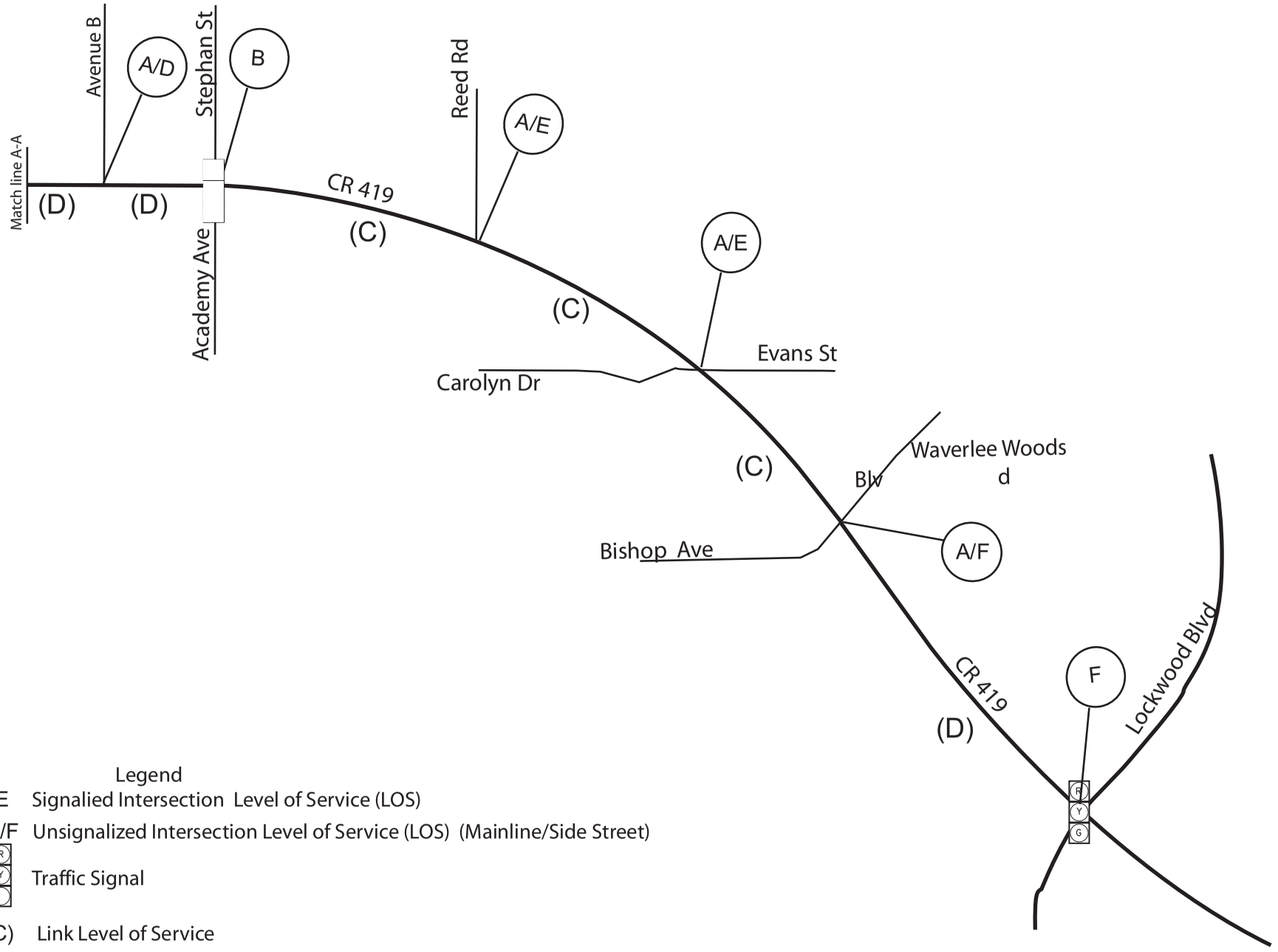
E Signalied Intersection Level of Service (LOS)

B/F Unsignalized Intersection Level of Service (LOS) (Mainline/Side Street)

Traffic Signal

(C) Link Level of Service

	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Existing Segments and Intersections Level Of Service (LOS) (2002)	Figure 6-3



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Existing Segments and Intersections Level Of Service (LOS) (2002)	Figure 6-3 con't

6.7 Methodology

The Central Florida Regional Planning Model (CFRPM) was used to obtain Peak Season Weekday Daily Traffic (PSWDT) volumes for the area. The Model Output Conversion Factor of 0.96 was applied to the model volumes to produce AADTs from the Peak Season Daily Traffic Volumes. A build scenario was evaluated for SR 426/CR 419 as a four-lane facility and a no-build scenario with SR 426/CR 419 as a two-lane facility from Pine Avenue east to Lockwood Boulevard.

The 2010 CFRPM corresponds directly to the anticipated opening year of this project. For comparison purposes, growth rates were developed from existing AADTs to 2010 build and no-build scenarios. For the design year, a growth rate was developed between 2010 and 2025 models for both the build and no-build Scenarios. Growth rates for the following conditions were derived:

- Existing AADTs to 2010 (2-Lane) and 2025 (2-Lane)
- Existing AADTs to 2010 (4-Lane) and 2025 (4-Lane)
- Historical Trends: -0.9% R^2 =0.9%

6.8 Florida Standard Urban Transportation Model Structure (FSUTMS)

A review of the no-build growth rates shows that the FSUTMS model does not accurately project the future traffic volumes for the study area, as the growth rates are negative. The historical growth rate of 9.6 percent is not reasonable for a two-lane undivided roadway. Based on the study area and the future land use within the study area, a 2.0 percent growth rate appears reasonable and is consistent with other areas of this type. The build growth rate varies as shown in Table 6-5. A composite growth rate was developed by averaging the build growth rates. The composite build growth rate is 3.8 percent. Table 6-6 summarizes the 2010-2030 AADTs based on the no-build and build growth rates.

Table 6-5 Transportation Improvements Program, Major Highway Projects Funded For Construction

	Growth Rate	
	Mainline	**Side Street**
Historical	9.6%	NA
2002 Existing to 2010 No-Build	-3.80%	1.40%
2002 Existing to 2010 Build	4.18%	1.73%
2010 to 2025 No-Build	0.68%	0.39%
2010 to 2025 Build	0.62%	0.36%
2002 to 2025 No-Build	-2.86%	3.08%
2002 to 2025 Build	6.60%	2.58%

Table 6-6 Projected Year 2010 – 2030 AADT's

Build Roadway Segment	**2002 AADT**	**Growth Rate**	**2010**	**2020**	**2030**
SR 426 West of Aulin Avenue	17,200	3.80%	22,400	29,000	35,500
SR 426 East of Lake Jessup Avenue	15,700	3.80%	20,500	26,400	32,400
CR 419 East of Station Street	13,000	3.80%	17,000	21,900	26,800
CR 419 West of Reed Road	14,200	3.80%	18,500	23,900	29,300
CR 419 East of Lockwood Blvd.	21,200	3.80%	27,600	35,700	43,800
No-build Roadway Segment	**2002 AADT**	**Growth Rate**	**2010**	**2020**	**2030**
SR 426 West of Aulin Avenue	17,200	2.00%	20,000	23,400	26,800
SR 426 East of Lake Jessup Avenue	15,700	2.00%	18,200	21,400	24,500
CR 419 East of Station Street	13,000	2.00%	15,100	17,700	20,300
CR 419 West of Reed Road	14,200	2.00%	16,500	19,300	22,200
CR 419 East of Lockwood Blvd.	21,200	2.00%	24,600	28,800	33,100

Based on the FSUTMS analysis, historical growth rates and future land use the recommended growth rates are summarized in Table 6-7.

Table 6-7 Recommended Growth Rates

No-build Scenario	**Growth Rate**
Mainline	2.00%
Side streets	1.60%
Build Scenario	
Mainline	3.80%
Side streets	1.60%

6.9 Design Traffic Forecasts

The traffic growth rates discussed above were applied to existing volumes to project AADT for the SR 426/CR 419 corridor. The following sections present the design volume forecasts for the No-Build and Build conditions and the results of their operational analysis.

6.10 No-Build Traffic Forecasts

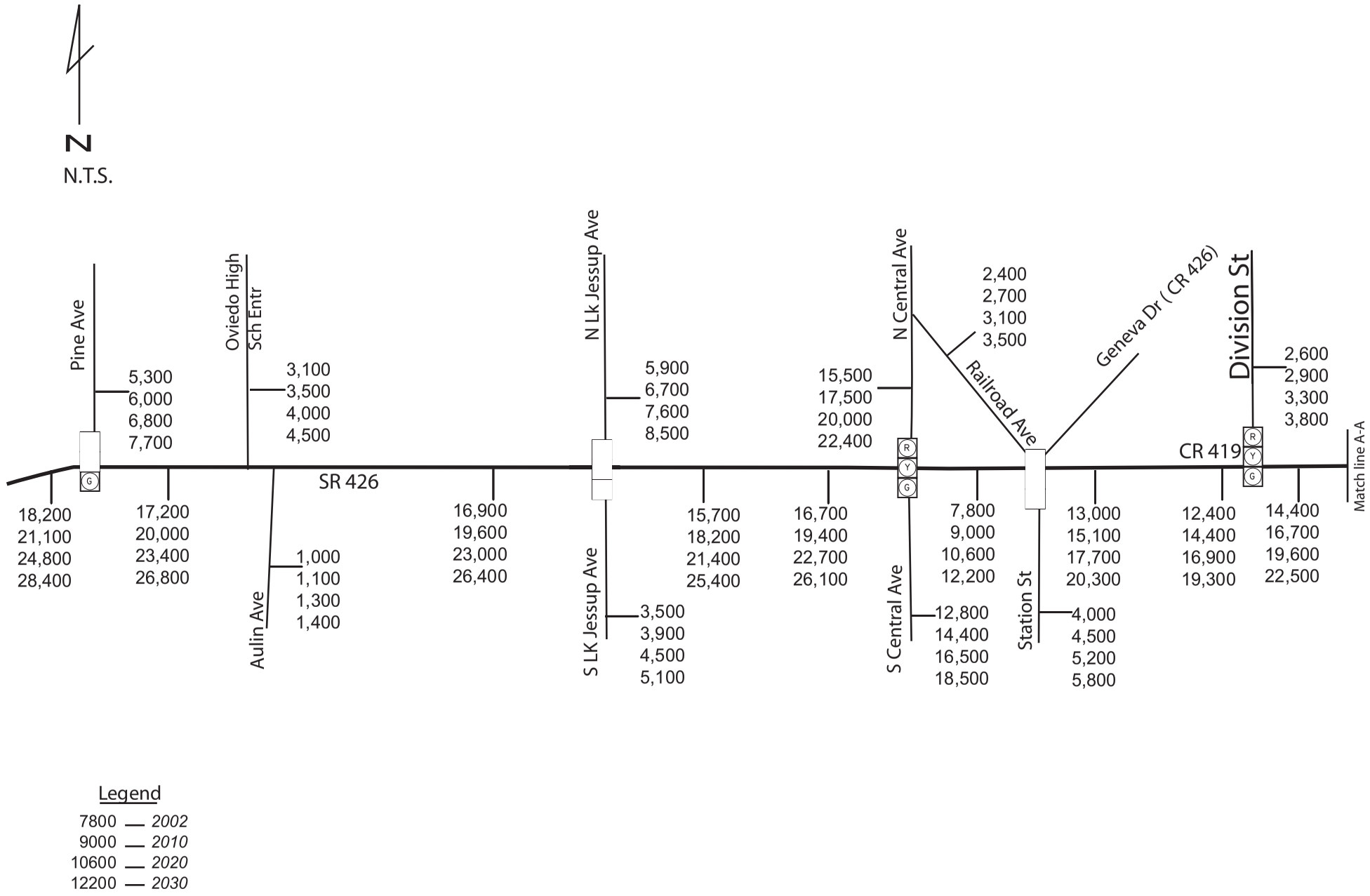
The projected AADT's for the No-Build scenario were derived utilizing the approved growth rates for the roadway segments and conditions noted in the previous Section. The existing 2002 and projected 2010, 2020 and 2030 AADT's are shown in Figure 6-4. The approved K and D design factors were applied to the AADTs to derive the DDHVs. Figure 6-5 shows the DDHVs.

Projected AADTs were input into TURNS5 analysis worksheets to develop future year turning movements for the opening (2010), interim (2020), and design (2030) years. These projected movements are based upon the K and D design factors. Where appropriate, TURNS5 turning movements were manually adjusted based on existing traffic volumes.

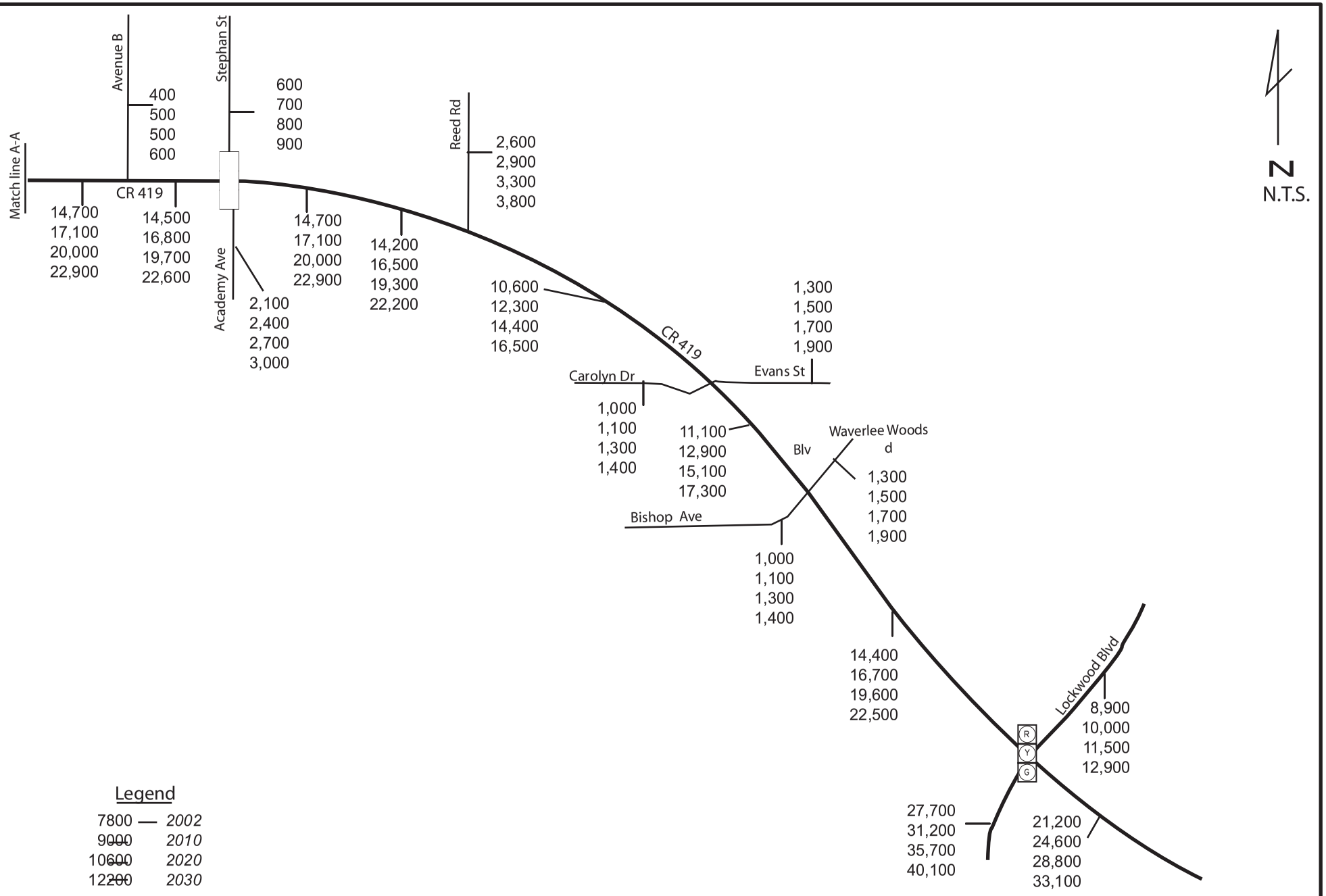
As stated previously, the No-Build scenario shows SR 426/CR 419 as a two-lane facility from Pine Avenue eastward to Lockwood Boulevard. The DDHVs and future year turning movement volume projections were analyzed to determine projected future LOS. Level of service analyses were conducted based on the roadway's existing characteristics using the FDOT Generalized Capacity Tables. Figures 6-6, Figure 6-7 and Figure 6-8 provide the projected design hour turning movement volumes and the LOS for the No-Build scenario for the years 2010, 2020, and 2030 respectively.

6.11 Build Traffic Forecasts

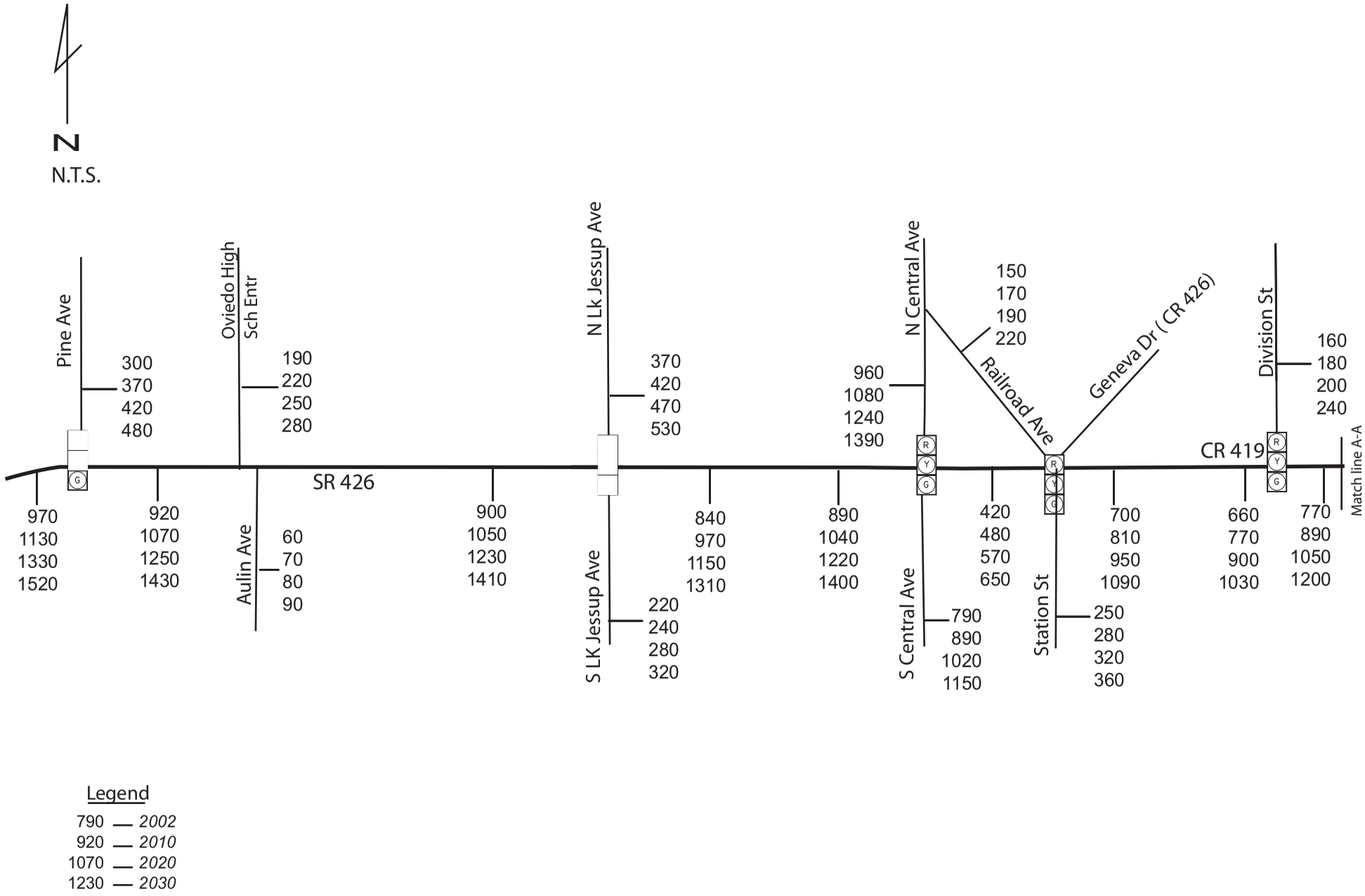
During the study phase of this project, the City of Oviedo and FDOT agreed that a one-way pair system would be designed and implemented as an interim improvement to improve circulation in the downtown roadway system. This one-way pair (which involved a re-striping of existing streets) was developed using SR 434 (Central Avenue), Station Street and Railroad Street. Approaching SR 426 from the north, SR 434 would accommodate southbound traffic one-way from Railroad Street to Garden Street. The complementary part of this one-way pair would be a combination of Garden Street, Station Street and Railroad Street as a one-way northbound along SR 434. It is this one-way pair and the four lane section of SR 426/CR 419 from Pine Street to west of Lockwood Boulevard that was used for one of the build scenarios, namely Scenario 2A.



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	No-Build Annual Average Daily Traffic (AADT)	Figure 6-4

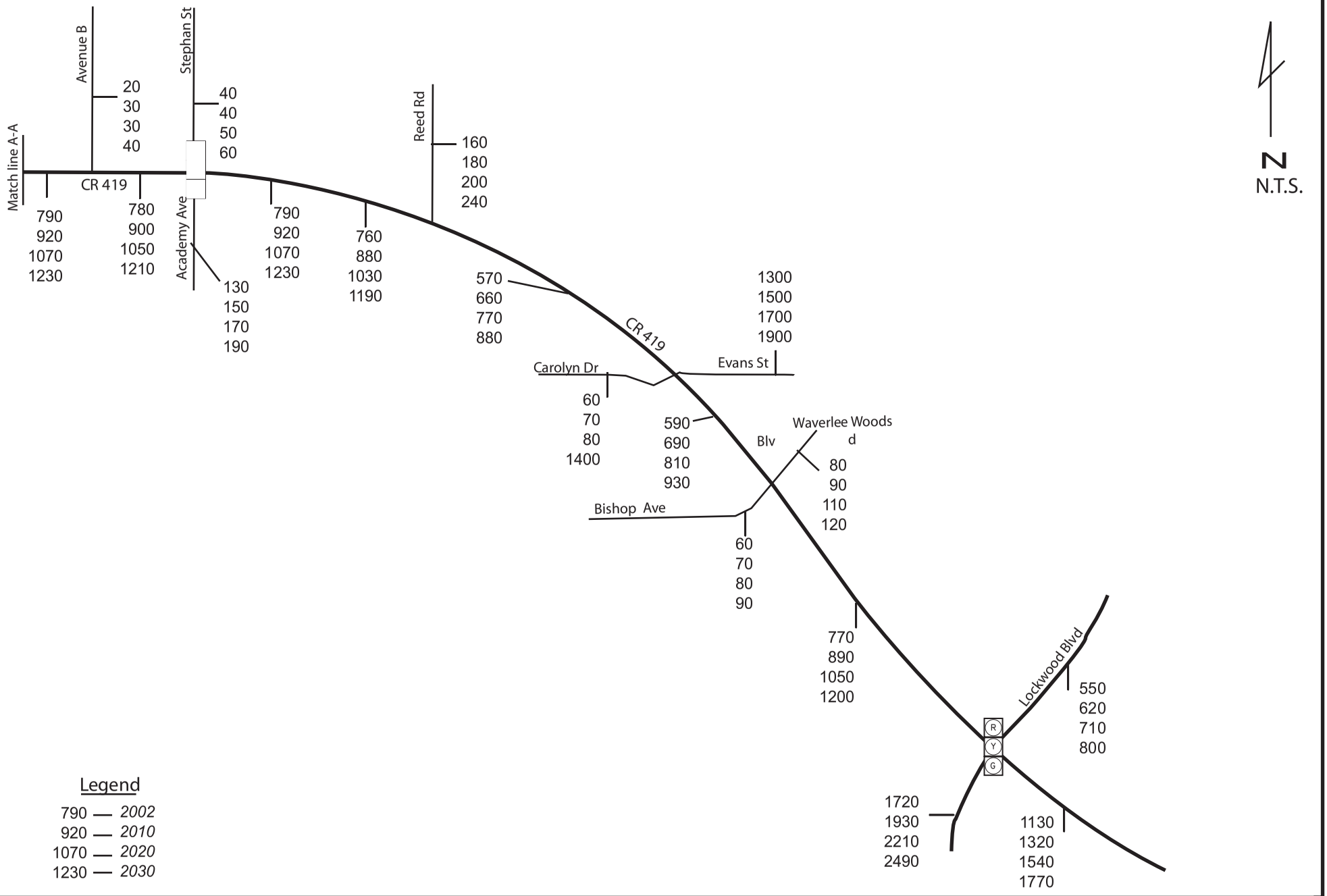


	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	No-Build Annual Average Daily Traffic (AADT)	Figure 6-4 con't

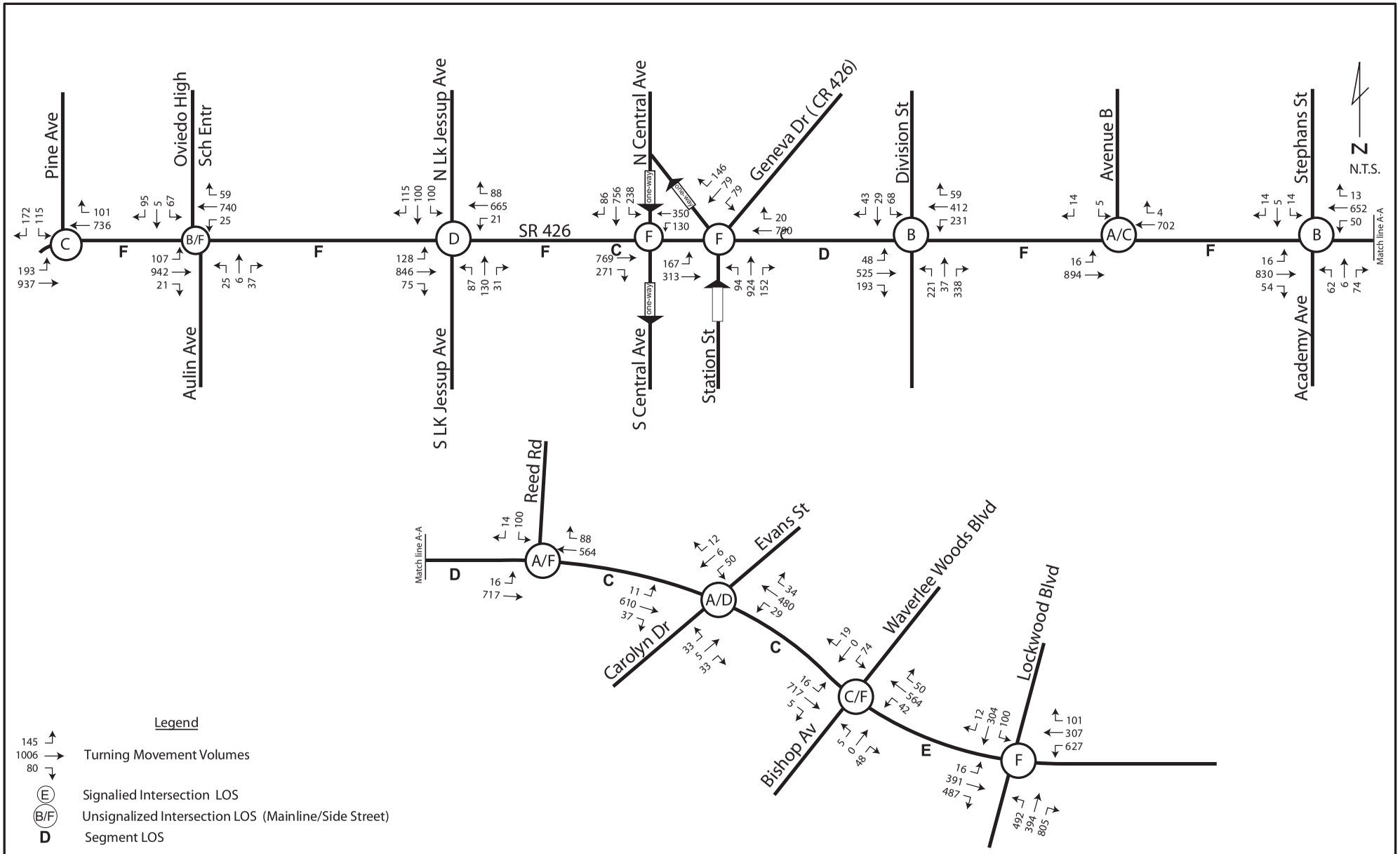


6-16

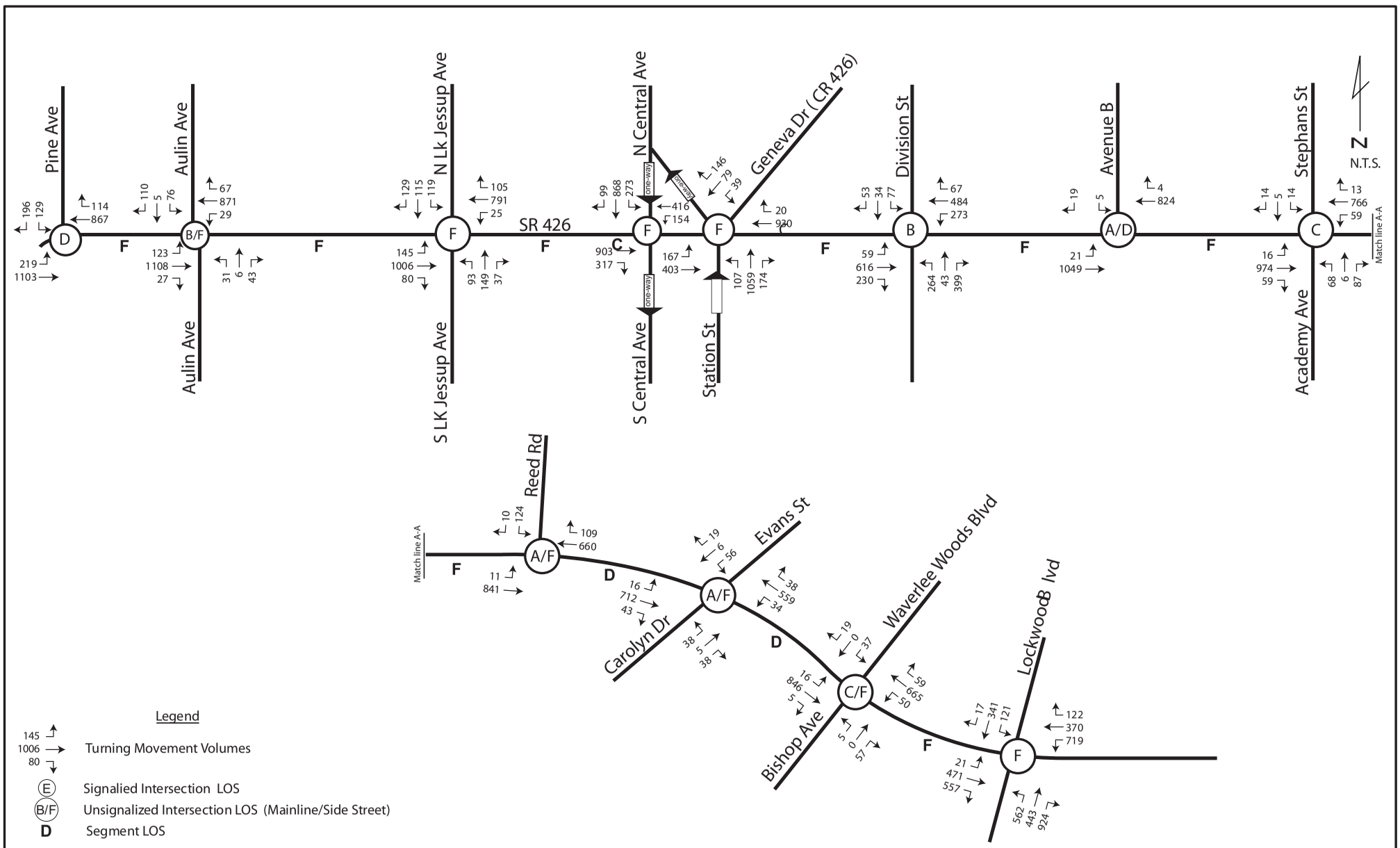
	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	No-Build Directional Design Hour Volumes (DDHV)	Figure 6-5



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	No-Build Directional Design Hour Volumes (DDHV)	Figure 6-5 con't



	Project Development & Environment Study SR 426 /CR 419 From Pine Avenue to Lockwood Boulevard	Year 2010 (No-Build) Design Hour Volumes & Intersection LOS	Figure 6-6



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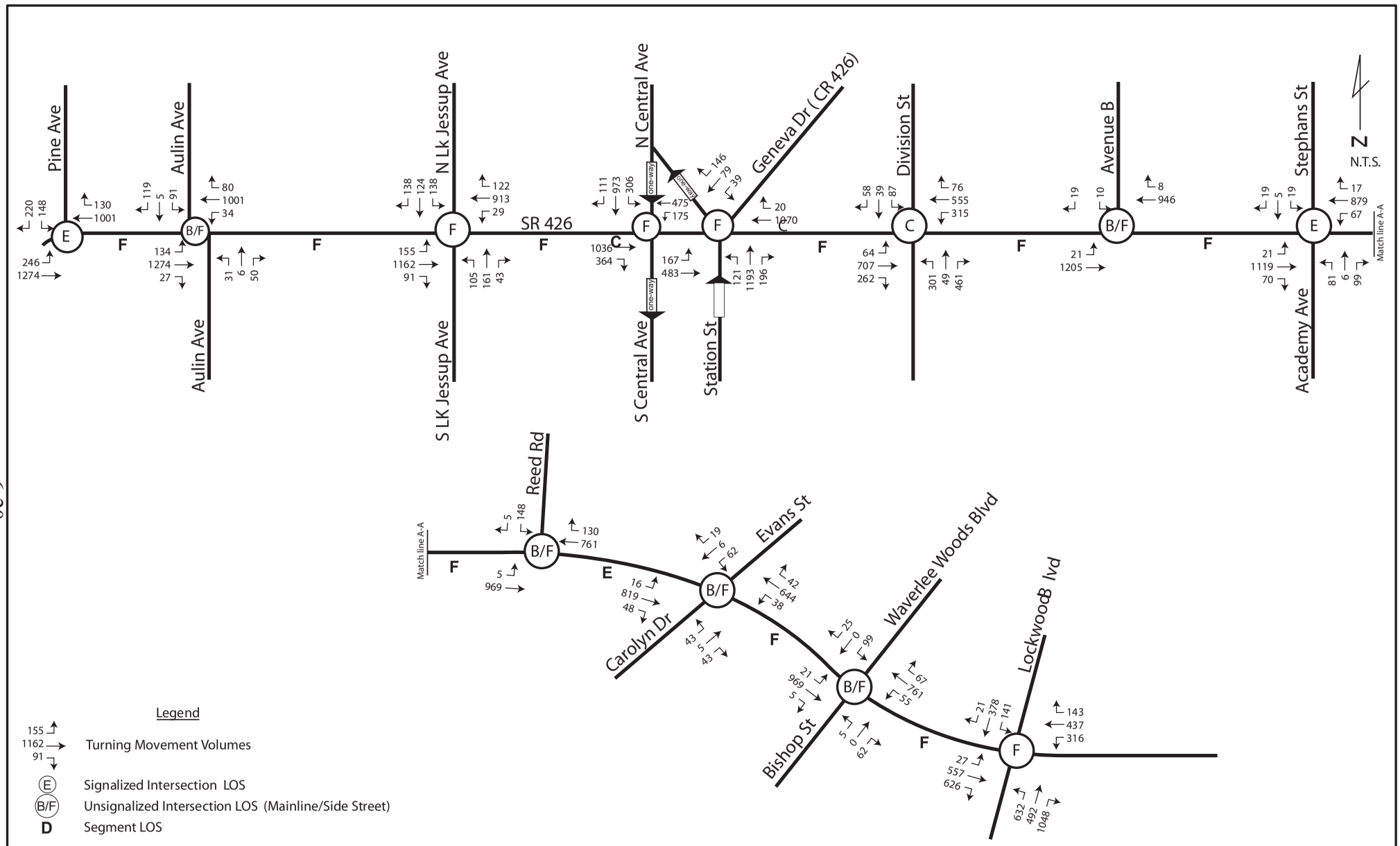
SR 426 /CR 419
From Pine Avenue to Lockwood Boulevard

Year 2020 (No-Build) Design Hour Volumes & Intersection LOS

Figure 6-7



Project Development & Environment Study
SR 426 /CR 419
From Pine Avenue to Lockwood Boulevard

Year 2030 (No-Build) Design Hour Volumes and Intersection LOS

Figure 6-8

The other build scenario, Scenario 2B, leaves SR 434 as a two-lane, two-way road and four lanes on SR 426/CR 419 from Pine Avenue to west of Lockwood Boulevard. Additionally, Station Street would remain as a two-way two lane road with a minor change at its intersection with SR 426/CR 419 where it would be right-in and right-out only. Scenario 2B does not consider Railroad Street. Figure 6-9 shows Scenario 2A and Scenario 2B roadway arrangement.

Existing and projected AADTs for the build scenarios (Scenario 2A and 2B) are presented in Figure 6-10. These volumes were derived utilizing the approved growth rates for the roadway segments and conditions noted in the previous Section. Figure 6-11 provides the existing and projected DDHVs. The approved K and D design factors were applied to the AADTs to derive the DDHVs.

6.12 Level of Service

A level of Service (LOS) analysis was performed for the future Build years 2010, 2020 and 2030 for each of the build scenarios. All conditions using were analyzed using the most current adopted procedures as outlined in the Highway Capacity Manual (HCM).

6.13 Operational Analysis

Projected AADTs were used as input in the TURNS5 analysis worksheets to develop future year turning movements. These projected movements are based upon the K and D design factors previously shown in Table 6-3 and the recommended growth rates previously shown in Table 6-7. Where appropriate, TURNS5 turning movements were manually adjusted based on existing traffic volumes. The projected design hour volumes, intersection LOS and segments LOS for Build Scenarios 2A and 2B, for the years 2010, 2020, and 2030 respectively are shown in Figures 6-12 thru Figure 6-17.

A summary of the LOS from Figures 6-15 thru 6-17 are shown in Tables 6-8 and Table 6-9. Table 6-8 shows that no segment of SR 426/CR 419 falls below LOS E either in Scenario 2A or Scenario 2B through the Design year 2030. Table 6-9 shows the intersection LOS for both scenarios and depicts the Oviedo downtown intersections as those falling below LOS E. Under Scenario 2A, the intersections of Central Avenue at SR 426 and Station Street at CR 419 are at LOS F for the design year 2030. Under Scenario 2B, the intersection of Station Street at CR 419 is at LOS C.

6.14 Conclusions of Operational Analysis

Based on the evaluation of the roadway segment operating conditions for both Build scenarios, SR 426 /CR 419 from Pine Avenue to Lockwood Boulevard will operate at acceptable levels of service.