Roadway Conceptual Analysis Report

DEAN ROAD

Roadway Conceptual Analysis

From University Boulevard to McCulloch Road

Prepared for:

Orange County Public Works Department

Transportation Planning Division

Prepared by:

Luke Transportation Engineering Consultants

January 2014

LTEC № 07-6815

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PROFESSIONAL ENGINEERING CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Luke Transportation Engineering Consultants, a corporation authorized to operate as an engineering business (#EB-0007429), by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for

PROJECT: Dean Road RCA

LOCATION: Dean Road, Orange County, Florida

CLIENT: Orange County

I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

NAME: J. Anthony Luke, P.E.

P.E. NO.: 42642

DATE: January 16, 2014

SIGNATURE:

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List of Acronyms

Abreviation	Name
AADT	Average Annual Daily Traffic
ADA	American's With Disabilities Act
BFE	Base Flood Elevation
CRAS	Cultural Resource Assessment Survey
DDHV	Directional Design Hour Volumes
DUI	Driving Under the Influence
Econ	Little Econlockhatchee River
EPA	Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FSUTMS	Florida Standard Urban Transportation Model System
LOS	Level of Service
mph	Miles per Hour
OCEPD	Orange County Environmental Protection Department
OUATS	Orlando Urban Area Transportation Study
RCA	Roadway Conceptual Analysis
SFHA	Special Flood Hazard Area
SJRWMD	St. John River Water Management District
TSM	Transportation System Management
UMAM	Unified Mitigation Assessment Method
vpd	vehicles per day

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EXECUTIVE SUMMARY

INTRODUCTION

Orange County conducted a Roadway Conceptual Analysis (RCA) Study for widening and other improvements to Dean Road in unincorporated East Orange County. As shown in **Figure 1**, the study area extends from the intersection of University Boulevard north to the intersection of McCulloch Road/Lake Georgia Drive, a distance of approximately 1.04 miles.

The objective of the RCA Study was to document the environmental and engineering analyses to assist Orange County in reaching a decision on the type, location, and conceptual design of the improvements to Dean Road. The County proposes a four-lane divided urban roadway typical section for Dean Road to accommodate the future traffic demand safely and efficiently.

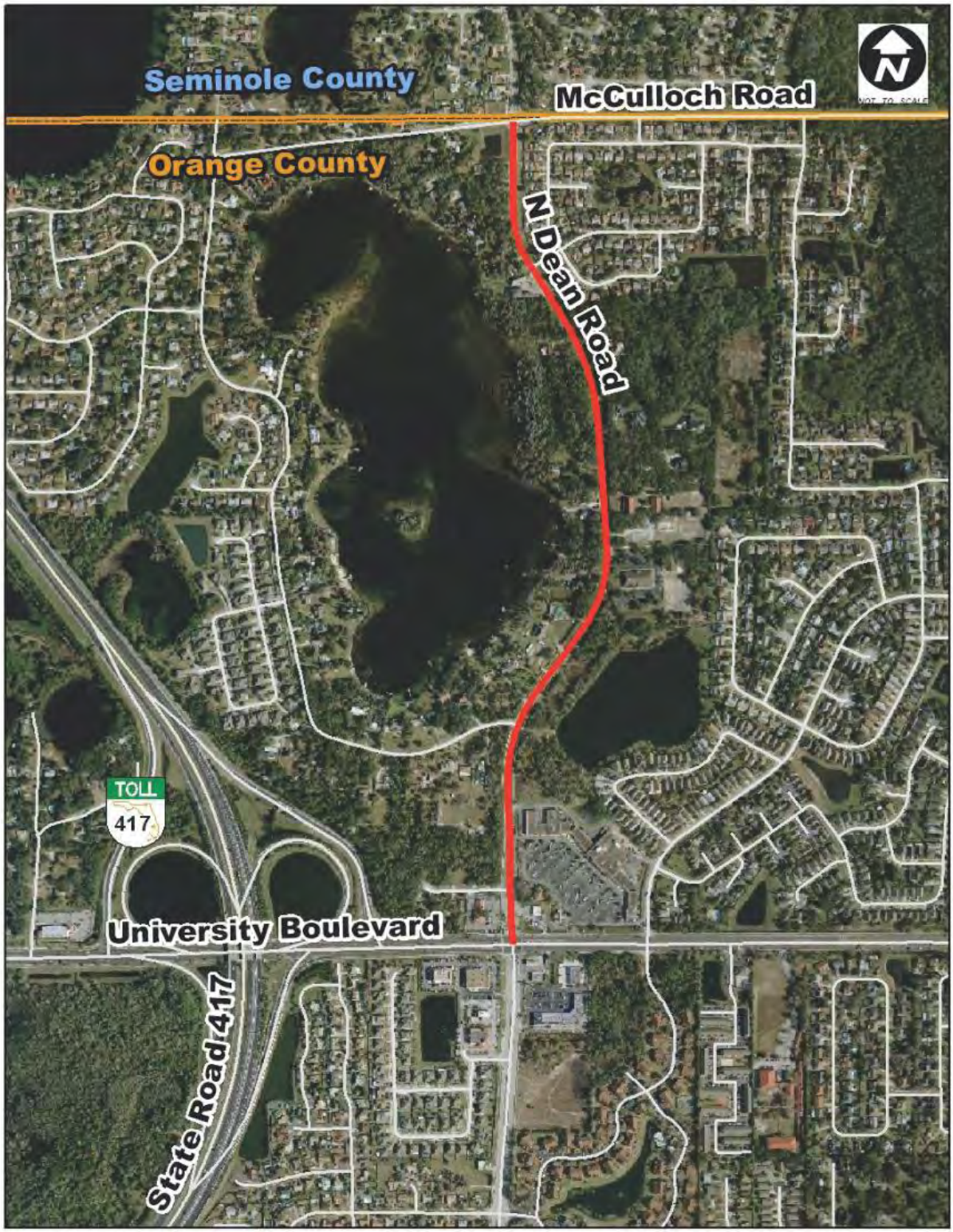
NEED FOR PROJECT

The need for improvements to Dean Road is based on several factors. The project is needed to remedy current capacity deficiencies and offset projected future increases in traffic congestion within the corridor. There is also the need to enhance the safety of the corridor for motorists, pedestrians, and bicyclists, all of whom access business establishments along the corridor, by providing adequate sidewalks, bicycle facilities, and lighting. The proposed improvements to Dean Road will also help meet the social/economic demands of the area. East Orange County, which experienced an annual average growth of over 2.78 percent per year between 2000 and 2010 (2000: 896,344; 2010: 1,145,956), continues to attract new residents and businesses.

The proposed improvements are consistent with the goals, objectives, and policies of the *2010 – 2030 Orange County Comprehensive Policy Plan*.

RECOMMENDED IMPROVEMENTS

This RCA Study included detailed analyses of existing and projected traffic conditions, development of alignment and typical section alternatives, an evaluation of environmental and social impacts, and an extensive public involvement program. The recommended improvement is based on the engineering and environmental findings of the RCA Study. The RCA Study findings include input received through the public involvement process. Study concepts were developed in accordance with the *2010 – 2030 Orange County Comprehensive Policy Plan* (Destination 2030). Orange County recommends that Dean Road be improved to a four-lane divided urban roadway.



Dean Road RCA
Project Location Map

Figure 1

The recommended typical section is constant throughout the entire alignment. The recommended typical section for Dean Road is a 100-foot wide urban section, including a 4-lane divided roadway consisting of two 12-foot travel lanes in each direction separated by a 17.5-foot raised grass median. Four-foot bicycle lanes will be provided in both directions along the outside travel lane. Five-foot wide sidewalks will be provided along both sides of the roadway. The sidewalk will be separated from the curb by a 3-foot grass/utility strip. **Figure 2** illustrates the recommended four-lane divided roadway typical section.

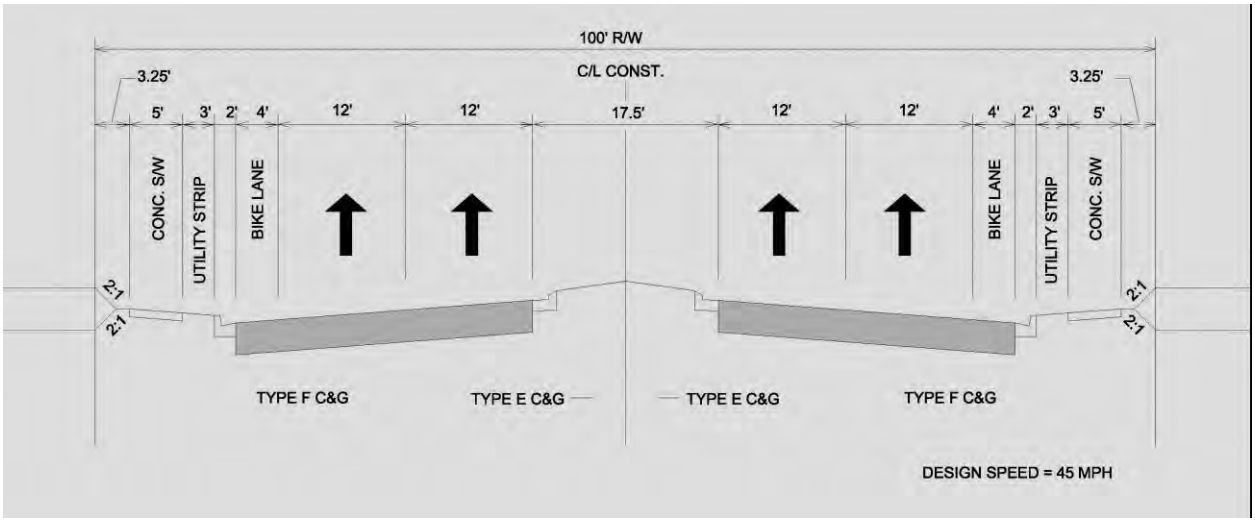


Figure 2 - Recommended Roadway Typical Section

EXISTING CONDITIONS

Dean Road is a north-south, Urban Minor Arterial that links east-central Orange County at Curry Ford Road to south Seminole County at Aloma Avenue (also known as SR 426), a distance of approximately seven miles. The two-lane Dean Road study corridor begins at University Boulevard and ends at the Seminole County Line, which is approximately located at the intersection of Dean Road with McCulloch Road/Lake Georgia Drive. Dean Road runs in the north-south direction parallel to and east of SR 417. The corridor is approximately 1.04 miles in length.

Improvements to Dean Road will ensure that this corridor will provide access with acceptable level of service (LOS) to the residences and businesses, as the quality of service provided by the roadway has a direct social and economic impact on the people who live, work, and attend schools in east Orange County. Drainage for the majority of the existing roadway is collected in roadside ditches that stretch from University Boulevard to McCulloch Road/Lake Georgia Drive, except the portion from University Boulevard to Shadrack Court where it consists of an urban four lane with curb and gutter sections and curb inlets.

The existing right-of-way along Dean Road varies throughout the project from a minimum of 60 feet to a maximum of 125 feet. For the majority of the project, the existing right-of-way along the roadway varies from 60 feet to 90 feet.

The intersection at University Boulevard includes a full range of pedestrian features such as push-button activated pedestrian countdown signals, thermoplastic pavement markings, an all red pedestrian signal phase, handicap accessible ramps connected to a sidewalk network and pedestrian signage. Sidewalks on both sides of Dean Road extend north of the University Boulevard intersection to Lake Georgia Drive on the west side of the road and to the McCulloch Road/Lake Georgia Drive intersection on the east side. The McCulloch Road/Lake Georgia Drive intersection includes push-button activated pedestrian countdown signals, thermoplastic pavement markings, an all red pedestrian signal phase, handicap accessible ramps connected to a sidewalk network and pedestrian signage.

There are no designated bicycle lanes or trails on Dean Road within the study area or along University Boulevard and McCulloch Road/Lake Georgia Drive.

Existing development along Dean Road consists primarily of single-family housing, as well as commercial land uses.

Future land use information was obtained from the Orange County Future Land Use Map (see **Figure 4-7**). The future land use patterns are not expected to change significantly from existing land use patterns due to the level of existing development and general lack of vacant developable parcels. No significant redevelopment efforts are anticipated given the age and condition of existing development in the corridor.

TRAFFIC

Detailed project traffic information is provided in a separate report entitled the *Dean Road from University Boulevard to Seminole County Line Roadway Conceptual Analysis Draft Design Traffic Technical Memorandum (February 2011)*. The memorandum documents the existing traffic conditions and the analysis of the Build and No-Build scenarios. It also includes a detailed discussion of existing traffic conditions, Transportation System Management (TSM) analysis, planned roadway improvements in the area, existing traffic characteristics, development of the projected traffic in the design years, and level of service (LOS) analyses for the design year. The design year 2036 projected Average Annual Daily Traffic (AADT) volumes are expected to range from 26,900 to 35,000 vehicles per day (vpd). These volumes indicate a need for a four-lane roadway.

In addition to roadway improvement alternatives, the "No-Build" or "do nothing" alternative was considered. The No-Build alternative consists of maintaining the existing two-lane roadway. With the No-Build alternative, this facility will not adequately serve the projected traffic demand, and LOS will continue to deteriorate to unacceptable levels. As a result, other area roadways will become more congested as "cut-through" traffic increases and parallel facilities such as Hall Road and Rouse Road become overloaded. Motorists at the signalized intersections will continue to experience significant delays and the roadway will fail to meet the minimum LOS set by Orange County. Additionally, deficiencies in pedestrian and bicycle facilities will not be addressed. Increased congestion on the facility will increase user costs and contribute to deterioration in air quality. Finally, the No-Build alternative is not consistent with the goals and objectives adopted in the *2010 – 2039 Orange County Comprehensive Plan* (*Destination 2030*) and the County's *Capital Improvements Budget and Program.*

ALTERNATIVE ALIGNMENT ANALYSIS

Multiple alignments were evaluated for this corridor for both a 40 miles per hour (mph) design speed and a 45 mph design speed. The alignment alternatives included three typical sections; a 90-foot, a 100-foot, and 120-foot typical sections. For each alternative, a left-side widening alignment, a right-side widening alignment, a centered widening alignment, and a left/right/center widening combination alignment were evaluated for this corridor. The design considerations included horizontal curvature, super-elevation rates, right-of-way width, and access management among other factors.

Public input was an integral criteria in the selection of the preferred alternative, but the cost of the impacts was the key evaluation criteria. Recommended improvements to Dean Road were developed through a comprehensive and proactive public involvement process. Three small group workshop meetings and two public hearings were held during this study. Newsletters were mailed to property owners within the study area prior to each workshop or public hearing, and a project website was maintained providing access to schedules, meeting minutes, and concept plans.

RECOMMENDED ALTERNATIVE

A recommended alternative was selected for the corridor based upon the results of the 90-foot typical section, 100-foot typical section and the 120-foot typicaly section alternative impact analysis, engineering considerations, social and natural environment analysis, and input received from the public.

The recommended alternative for the entire project consists of one urban typical section, as shown in **Figure 2**. The major design elements incorporated into this typical section include the following:

- Four, 12-foot travel lanes,
- Two, 4-foot bicycle lanes,
- Two, 5-foot sidewalks,
- Outside lanes - 2-foot type F curb and gutter,
- A 17.5-foot raised median which includes 2.25-foot type E curb and gutter,
- Two 3-foot utility strips between the type F curb and gutter and the sidewalk, and
- A separation of 3.25 feet between the sidewalk and the right-of-way line.

The total required right-of-way width for the recommended alternative is 100 feet. Where auxiliary lanes are proposed to facilitate right-turn movements, an additional 12 feet of right-of-way will be required to accommodate this need at certain locations. The border area between the outside curb and gutter and the right-of-way line may be reduced during the final design phase if field conditions allow for tie-in to existing ground lines.

The existing signalized intersections at University Boulevard and McCulloch Road/Lake Georgia Drive will remain. Traffic signalization is not recommended at any of the unsignalized intersections.

As part of the preferred alternative, auxiliary right-turn lanes are proposed at the University Boulevard and Dean Road intersection. These are a northbound right-turn lane on Dean Road and a westbound right turn lane on University Boulevard.

Limited additional right-of-way (ROW) will be acquired from the east and west sides of the roadway, based on the recommended alignment. There were also some limited ROW needs identified at corners of intersections to be improved. There are no displacements of residences, businesses or institutions as a result of the recommended alternative. However, 24 residential parcels, 7 vacant parcels, and 48 business parcels will be impacted by the recommended alternative along with two church parcels. Specific ROW requirements will be identified later in the Dean Road design process.

Stormwater management facilities were designed to meet the most stringent requirements of the Orange County Subdivision Regulations and St. John River Water Management District (SJRWMD). Pond 1 is located on the east side of Dean Road (behind the Suncrerst Shopping Center) at Station 121+00 right and encompasses two parcels currently owned by Orange County. Parcel 05-22-31-8475-00-001 was dedicated to Orange County per the Suncrest Unit V subdivision plat. This parcel is

16.10 acres and includes Lake Phillips which encompasses 12.15 acres. There is 1.15 acres of undeveloped land on the southwesterly portion of this parcel that is being proposed for the south segment of the pond. Parcel 05-22-31-0000-00-029 is the second County owned parcel that abuts the aforementioned parcel and would be used for Pond 1. This parcel is 4.34 acres and 1.92 acres would be used for the north segment of the pond.

IMPACTS AND COST

Table 1 identifies the total impacts and costs associated with the recommended alignment.

TABLE 1: Recommended Alternative Impacts

EVALUATION CRITERIA/COSTS	IMPACTS/COST
Social and Community Impacts	
Single Family Homes (Impacted)	24
Businesses Impacted (Roadway + Intersection)	23 + 25 = 48
St. Matthews Episcopal Church (Impacted)	1
The Church of Jesus Christ of Latter-Day Saints (Impacted)	1
Vacant Land Impacts	7
Right-of-way Impacts	
Acres Impacted (Roadway + Pond)	1.47 + 1.01 = 2.47
Natural Environment Impacts	
Wetlands Impacted (acres)	0.65
Estimated Costs (2013 $)	
Design (Roadway & Intersection)	$1,968,000
Right-of-Way (Roadway & Intersection)	$6,760,000
Roadway Construction (Roadway & Intersection)	$9,797,000
Mitigation Banking (Roadway & Intersection)	$ 455,000
Total	**$18,980,000**

SUPPORTING DOCUMENTS

Supporting documents were prepared for this RCA Study to document project need, existing conditions, and alternative evaluation methods and results. These documents include:

- *Design Traffic Technical Memorandum*
- *Design Engineering Traffic Report*
- *Corridor Analysis Technical Memorandum*
- *Geotechnical Investigation Report*
- *Contamination Screening Evaluation Report*
- *Conceptual Drainage Analysis and Pond Siting Report*
- *Alternative Analysis of Impacts Report*
- *Geotechnical Analysis of Impacts Report*
- *Contamination Analysis of Impacts Report*
- *Public Involvement Plan*

Section 1 SUMMARY

1.1 Commitments

The following commitments have been made as part of the Dean Road Roadway Conceptual Analysis (RCA) Study:

- The roadway cross-section will encompass a 100-foot wide urban section, which will include a 4-lane divided roadway consisting of two 12-foot travel lanes in each direction separated by a 17.5-foot raised grass median.
- Within the 100-foot typical section will be four-foot wide, on-road, designated bicycle lanes, and a continuous five-foot sidewalk will be provided on both sides of Dean Road.
- The roadway drainage system will be designed and constructed so as to minimize impacts to both the surrounding community and the environment.
- Construction of the improvements will be performed in accordance with Orange County's standard construction practices, with emphasis on maintaining acceptable driving conditions through the construction zone and maintaining access to all businesses and residences along Dean Road.
- If during construction activities mitigation for contamination sites is found to be necessary, environmentally responsive actions will be taken in accordance with applicable Florida Department of Environmental Protection (FDEP) regulations.
- The roadway drainage system will be designed and constructed with measures taken to minimize impacts to existing utilities.
- Consideration will be given to aesthetics, such as landscaping, during the design phase.
- Coordination will continue in subsequent preslection phases for the adjacent Dean Road improvements within Seminole County.
- Coordination will continue with those homeowners whose property will be affected by this project. This coordination will include ways to minimize impacts or proposals to acquire the affected properties.
- A Public Involvement Program, developed in conjunction with Orange County, will be implemented during the design and construction phases of the project.

1.2 Recommendations

In accordance with the *2010-2030 Orange County Comprehensive Policy Plan (Destination 2030)* and the County's *Capital Improvements Budget and Program*, Orange County recommends upgrading Dean Road between University Boulevard and McCulloch Road/Lake Georgia Drive, a distance of approximately 1.04 miles, from a two-lane rural roadway to a four-lane, divided urban roadway. The conceptual roadway design plans for the preferred alignment are included in **Appendix A**.

The recommended typical section for Dean Road is a 100-foot wide urban section, including a 4-lane divided roadway consisting of two 12-foot travel lanes in each direction separated by a 17.5-foot raised grass median. Four-foot bicycle lanes will be provided in both directions along the outside travel lane. Continious five-foot wide sidewalks will be provided along both sides of the roadway. The sidewalk will be separated from the curb by a 3-foot grass/utility strip.

The median and back of sidewalk will be adequate for future landscape and street lighting. To minimize right-of-way impacts, the proposed drainage system will convey runoff through pipes to a single stormwater pond. **Figure 1-1** illustrates the recommended roadway typical section.

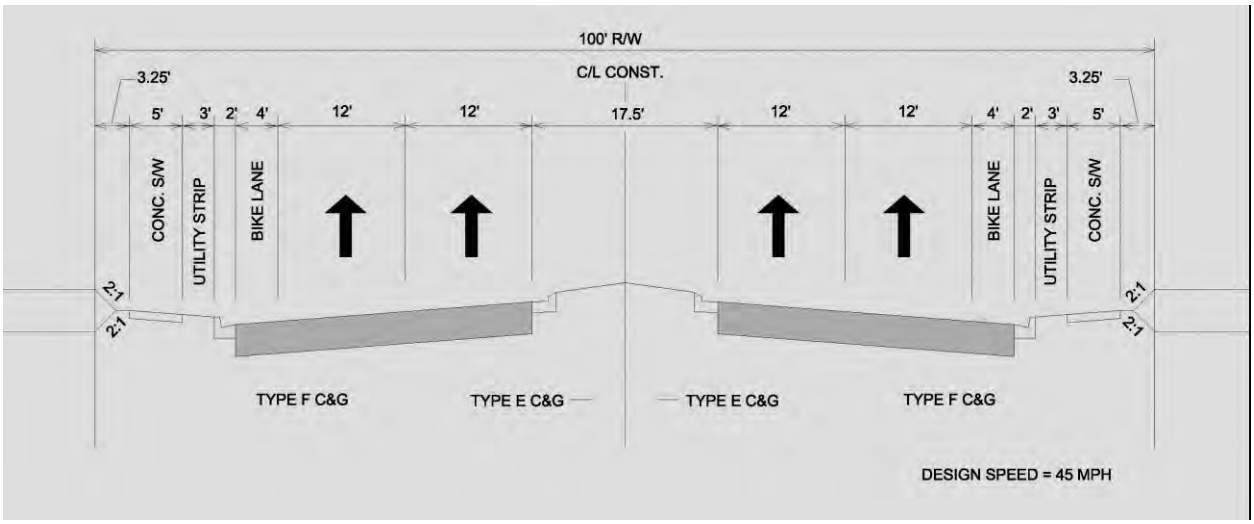


Figure 1 – 1 - Recommended Roadway Typical Section

Limited additional right-of-way (ROW) will be acquired primarily from the east and west sides of the roadway, based on the recommended alignment. There were also some limited ROW needs identified at corners of intersections to be improved. Specific ROW requirements will be identified later in the Dean Road design process.

Section 2 INTRODUCTION

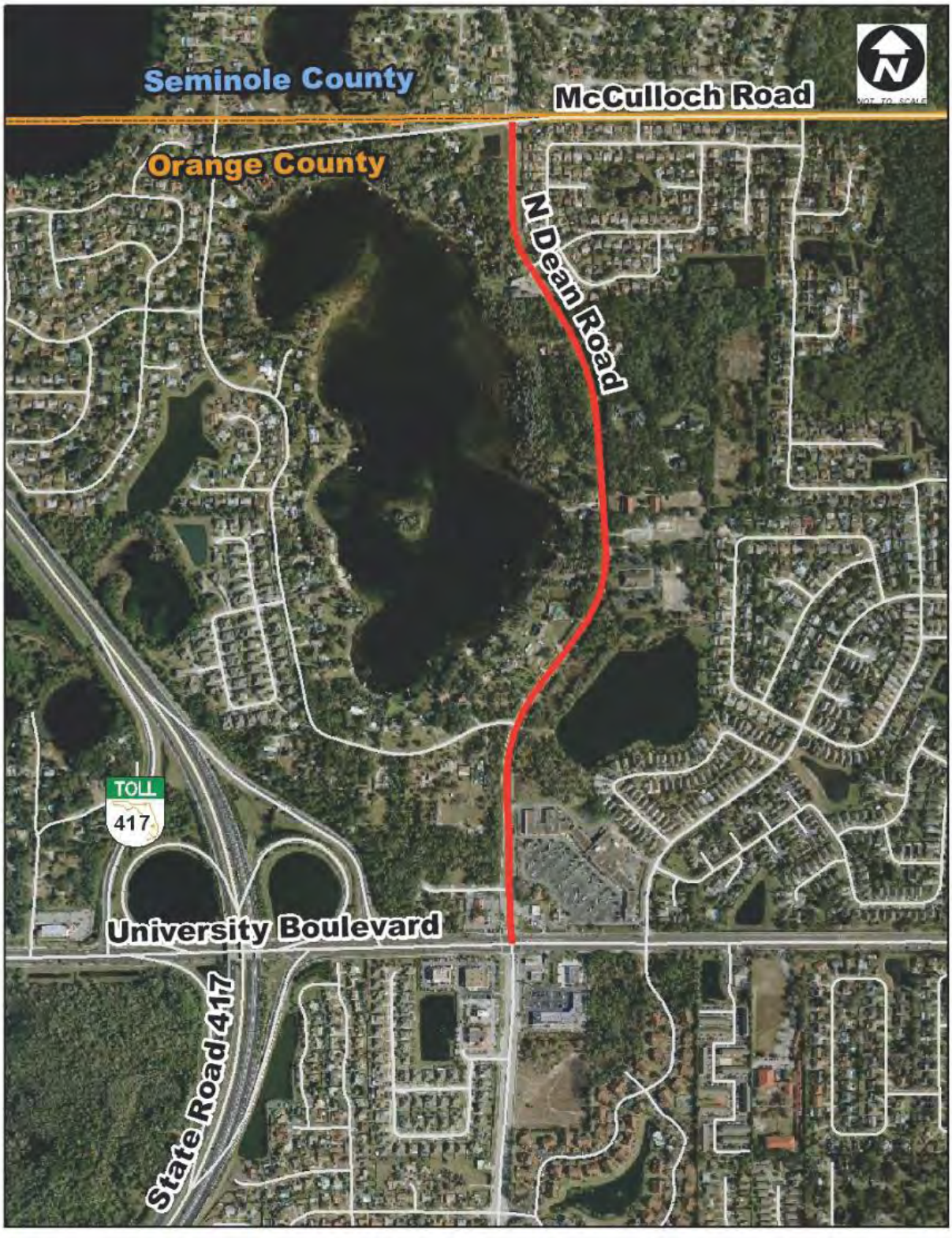
2.1 Purpose

This report documents the process and findings of the Orange County RCA Study for a 1.04-mile segment of Dean Road in East Orange County. The limits of the Dean Road project are from 900 feet south of University Boulevard to 900 feet north of the McCulloch Road/Lake Georgia Drive intersection, generally shown in **Figure 2-1**.

The purpose of this RCA Report is to present an overview of existing conditions, document the findings of the preliminary engineering studies, document the results of the evaluations, and detail the justification for the recommended improvements. This report also describes the identification and evaluation of potential alignments, typical roadway cross sections, a summary of existing and future traffic conditions, and a comparative analysis of improvement alternatives that would satisfy existing and future transportation demands. The report has been prepared to assist Orange County in identifying a recommended design concept alternative and will serve as the document of record for support of subsequent engineering decisions for final design and construction.

Potential alternatives were developed and evaluated with regard to engineering and environmental data, Orange County goals and objectives, input from the public at workshops, and the application of current roadway design standards. These alternatives were evaluated based on impacts resulting from the alignment locations and configurations. Each alternative was evaluated using the evaluation criteria discussed in Section 7. Appropriate location(s) and design configurations were then refined based on a comparative evaluation, and subsequently carried into the detailed environmental analysis.

This RCA Study included detailed analyses of existing and projected traffic conditions, development of alignment and typical section alternatives, an evaluation of environmental and social impacts, and an extensive public involvement program. The recommended improvement is based on the engineering and environmental findings of the RCA Study. The findings include input received through the public involvement process. Concepts developed, were in accordance with the *2010 – 2030 Orange County Comprehensive Plan* (*Destination 2030*). Orange County recommends that Dean Road be improved to a four-lane divided urban roadway. The conceptual roadway plans for the recommended alternative are included in **Appendix A**. These plans supplement information in this report and reflect specific details concerning each area of the project.



Dean Road RCA
Project Location Map

Figure 2-1

2.2 Project Description

The proposed project involves improvements to a 1.04-mile segment of Dean Road in unincorporated East Orange County, from 900 feet south of University Boulevard to 900 feet north of the McCulloch Road/Lake Georgia Drive intersection. Dean Road is a two-lane undivided roadway classified as an urban minor arterial. The proposed improvements will address the increased mobility demands and safety along the corridor, while minimizing impacts to the social and natural environment.

Roadway Design Elements

The major design elements incorporated into the proposed 100-foot typical section include the following:

- Four, 12-foot travel lanes,
- Two, 4-foot bicycle lanes,
- Two, 5-foot sidewalks,
- Outside lanes - 2-foot type F curb and gutter,
- A 17.5-foot raised median which includes 2.25-foot type E curb and gutter,
- Two 3-foot utility strips between the type F curb and gutter and the sidewalk, and
- A separation of 3.25 feet between the sidewalk and the right-of-way line.

Stormwater Pond

The recommended pond location is Pond 1, which is located on County owned property behind the Suncrerst Shopping Center. This option has the least amount of impacts to property owners, floodplains and the environment. As a County owned parcel, it is anticipated that no easements will be needed for this site. There are 0.65 acre of previously impacted and now isolated wetland at the southwesterly portion of the pond that will require mitigation. The mitigation cost is anticipated to be minimal due to the quality of the remaining portion of the wetland. The *Contamination Screening Evaluation Report* indicates that the Contamination Risk Potential is low.

Intersection Improvements

Intersection improvements proposed at the two signalized intersection are as follows:

- Dean Road and University Boulevard
    - Add auxiliary northbound right-turn lane on Dean Road
    - Add auxiliary westbound right turn lane on University Boulevard
- Dean Road and McCulloch Road/Lake Georgia Drive
    - Add northbound through lane and convert northbound right-turn lane to a combination through-right turn lane on Dean Road
    - Add southbound through lane on Dean Road

Sidewalks

A continuous five-foot wide sidewalk will be provided on both sides of Dean Road, running from University Boulevard on the south to McCulloch Road/Lake Georgia Drive on the north. Each sidewalk, will be separated, from the curb by a 3-foot grass/utility strip.

Access Management

As noted above, Dean Road is planned to be a four-lane divided roadway with a grass median and will follow the Florida Department of Transportation (FDOT) Access Class 5 criteria. The FDOT access management spacing standards for Class 5 are:

- 245' connection spacing,
- 660' directional opening spacing, and
- 1320' full opening spacing.

With these standards in mind, three options were evaluated to address future "Build" conditions. The recommended median/access management plan for the Dean Road project is Option 1. **Figure 6-14** depicts the future "build" geometry which is described below:

- Allows left-in access to the shopping center at the south Publix entrance only (a directional left-in median opening),
- Allows right-in/right-out access only at the north Publix entrance,
- Allow a full access connection to Lake Georgia Drive,
- Allows shared full access between the churches, and
- Allow a full access connection to Chestnut Drive.

Pedestrian and Bicycle Facilities

This project will incorporate pedestrian and bicycle facilities as part of the proposed improvements that comply with the Americans with Disabilities Act (ADA). A designated 4-foot bicycle lane will be provided in both directions. The bicycle lanes will be located between the outside travel lanes and the type F curb and gutter as shown in **Figure 1-1**.

Along each side of the roadway, 5-foot wide sidewalks will be provided. A 3-foot utility strip will be utilized between the back of the type F curb and gutter and the 5-foot sidewalk in order to provide additional separation between motorists and pedestrians.

Upgraded Pavement Markings and Signage

Curb cut ramps, pavement markings, signs, traffic signals and pedestrian signals will be incorporated into the recommended alternative improvements in order to make the corridor safer and more "user-friendly" for pedestrians and bicyclists.

Section 3 NEED FOR IMPROVEMENT

The need for improvements to Dean Road is based on several factors:

3.1 Deficiencies – There are existing capacity deficiencies based upon current traffic demands and future capacity deficiencies resulting from projected traffic volumes.

3.2 Safety – Multimodal enhancements are needed along the corridor for motorists, pedestrians, and bicyclists. Provision of adequate sidewalks, bicycle facilities, and roadway lighting are needed to improve safety. Improved access to the Church of Jesus Christ of the Latter-Day Saints, St. Mathews Episcopal Church, and Deans Landing at Sheffield Forests subdivision are needed in the corridor.

3.3 Social/Economic Demands – Improvements are needed to meet the social and economic demand of the area created by the area's residential and non-residential growth patterns.

3.4 Consistency with Transportation Plans – Improvements are consistent with the regional transportation plan to provide enhanced connectivity as well as with the *2010 – 2039 Orange County Comprehensive Plan* (Destination 2030) and the County's *Capital Improvements Budget and Program*.

This section of the report presents findings relative to each of these areas, and a review of the recommendations presented by the local comprehensive planning efforts.

3.1 Deficiencies

The following intersections were studied: University Boulevard, Shadrack Court, Publix (north and south entrances), Lake Georgia Drive, Cheshunt Drive, and McCulloch Road/Lake Georgia Drive. Level of service analyses were conducted for both AM and PM peak hours for these intersections and for the peak hour by direction for the project corridor. Analyses were conducted using the Highway Capacity Manual (HCM) application of the Synchro software.

Existing Intersection Level of Service Analysis

The signalized intersection of Dean Road with University Boulevard currently operates at LOS D during the AM peak hour and LOS E during the PM peak hour. The signalized intersection with McCulloch Road/Lake Georgia Drive currently operates at LOS B during both the AM and PM peak hours. The unsignalized intersection analysis results in separate levels of service for the main street and side street approaches. All

unsignalized intersections currently operate at LOS B or better for the main street (Dean Road) movements during the peak hours. However, the Cheshunt Drive approach is currently failing during both peak hours, as are the Publix driveways during the PM peak hour.

3.1.1 Existing Roadway Segment Level of Service Analysis

Dean Road currently operates under capacity (LOS D or better) during both AM and PM peak hours, except for the northbound approach to the University Boulevard intersection during the PM peak hour, which operates at capacity (LOS E).

3.2 Safety

Crash reports for the three-year time period between January 1, 2007 and December 31, 2009 were obtained and reviewed for the section of Dean Road from University Boulevard to McCulloch Road/Lake Georgia Drive. Forty-nine crashes occurred at intersections over the three year period and eight crashes occurred along segments of Dean Road during the same three year period. Three of these were located at the shopping center driveways.

This Dean Road corridor crash rate (3.40 crashes /Million Vehicle Miles Traveled) exceeds the FDOT District Five average crash rate of 2.276 crashes/MVMT for an urban two lane undivided roadway. However, it is skewed due to the short corridor length and the concentration of crashes at the University Boulevard intersection. The comparison to an average crash rate for a two lane undivided roadway may also be inappropriate for the entire project corridor due to the fact that Dean Road widens to a four lane section between University Boulevard and Shadrack Court. For comparison purposes, the crash rate was recalculated to remove this section from University Boulevard to Shadrack Court and the University Boulevard intersection. With this change, the Dean Road corridor crash rate becomes 1.19 crashes/MVMT. This crash rate may be more representative of the two-lane corridor.

3.3 Social/Economic Demands

East Orange County, which experienced an annual average growth of over 2.78 percent per year between 2000 and 2010 (2000: 896,344; 2010: 1,145,956), continues to attract new residents and businesses. This growth within the region creates an increased demand on the transportation infrastructure and the need for safe, efficient transportation facilities.

The Dean Road corridor contains a mixture of residential, commercial, churches, wetlands, farm land, and open tracts of land. Two census tracts cover the Dean Road corridor. The median age varies between 22.9 and 39 years old while the median

household income ranges from $41,064 to $67,148. There is a total population of 9,672 of which 1,514 (16%) are living in poverty.

Dean Road is an important north-south arterial linking east central Orange County at Curry Ford Road to south Seminole County at Aloma Avenue. Improvements to Dean Road will ensure that this corridor will provide access with acceptable LOS to the residences and businesses, as the quality of service provided by the roadway has a direct social and economic impact on the people who live, work, and attend schools in east Orange County.

3.4 Consistency with Transportation Plans

Improvements recommended for Dean Road are consistent with the goals, objectives, and policies of the adopted *2010 – 2030 Orange County Comprehensive Plan* (Destination 2030). The Orange County Five-Year (2010/2011-2015/2016) Capital Improvements Program (CIP) and the FY 2010/2011 – 2014/2015 MetroPlan Orlando Transportation Improvement Program (TIP) have no construction projects listed for any of the roads in the immediate area, including Dean Road.

Roadways under construction within the north central Orange County area include the following:

- Colonial Drive (SR 50) – Widen to 6-Lane Divided Between SR 417 and Old Cheney Highway,
- Econlockhatchee Trail – Widen to 4-Lane Divided between SR 408 to Colonial Drive (SR 50),
- Rouse Road – Widen to 4-Lane Divided Between Lake Underhill Road and Colonial Drive (SR 50), and
- SR 417 (GreeneWay) - Widen to 6-Lane Divided between Lake Underhill Road and the Beachline Expressway.

Roadways planned within the north central Orange County area include the following:

- Econlockhatchee Trail – Widen to 4-Lane Divided between Colonial Drive (SR 50) and University Boulevard, and
- Richard Crotty Parkway – New 4-Lane Divided roadway between SR 436 and Dean Road.

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Section 4 EXISTING CONDITIONS

4.1 Existing Roadway Features

4.1.1 Functional Classification

Dean Road is a north-south, two-lane undivided Urban Minor Arterial that links east-central Orange County at Curry Ford Road to south Seminole County at Aloma Avenue (also known as SR 426), a distance of approximately seven miles. The Dean Road study corridor begins at University Boulevard and ends at the Seminole County Line, which is approximately located at the intersection of Dean Road with McCulloch Road/Lake Georgia Drive. Dean Road runs in the north-south direction parallel to and east of SR 417. The corridor is approximately 1.04 miles in length. The posted speed limit is 45 mph. Much of the corridor is curved with an advisory speed of 35 mph. North of McCulloch Road/Lake Georgia Drive, into Seminole County, the speed limit reduces to 40 mph. The Dean Road study limits and surrounding study area network is shown in **Figure 2-1**.

The existing transportation network in the vicinity of the study area includes a mixture of public right-of-ways which facilitate local and state roadways, the LYNX transit system, sidewalks and bicycle lanes. There are no airport facilities near this portion of Dean Road. State roads in the vicinity of the study area include Aloma Avenue (SR 426) which connects the cities of Winter Park and Oviedo, Colonial Drive (SR 50) connecting east and west Orange County to the City of Orlando and the Central Florida GreeneWay (SR 417) connecting Orange and Seminole Counties. Local roads near the study area include University Boulevard, Rouse Road, McCulloch Road, Econlockhatchee Trail, Hall Road and numerous roads serving subdivisions. Since Dean Road serves as a key thoroughfare in this area, it is anticipated that future traffic demands will exceed saturation levels and prompt the need for additional travel capacity and roadway widening beyond its current two-lane configuration.

4.1.2 Typical Sections

Dean Road is predominately a two-lane undivided urban area roadway with side ditches from Aloma Avenue (SR 426) south to the Suncrerst Shopping Center where it widens to four lanes just north of University Boulevard for transition to the four-lane divided section, south of University Boulevard. The travel lanes are generally 12 feet in width and constructed of asphalt. The existing roadway elements are located in a public right-of-way that varies in width from 124 feet at the intersection with University Boulevard to 60 feet at various locations along the study corridor.

Dean Road currently contains side ditches that stretch from the Suncrerst Shopping Center to the McCulloch Road/Lake Georgia Drive intersection; the portion from University Boulevard to Shadrack Court consists of a an urban four-lane section and three south bound turning lanes with sidewalks on both sides, curb and gutter sections and curb inlets. The road tapers to a two lane rural portion between Shadrack Court and near the northern entrance of the Suncrerst Shopping Center. Only the sidewalk on the east side of Dean Road continues on the rural portion of the road until Station 157+90 (McCulloch Road/Lake Georgia Drive intersection).

4.1.3 Pedestrian and Bicycle Facilities

The intersection at University Boulevard includes a full range of pedestrian features such as push-button activated pedestrian countdown signals, thermoplastic pavement markings, an all red pedestrian signal phase, handicap accessible ramps connected to a sidewalk network and pedestrian signage. Sidewalks on both sides of Dean Road extend north of the University Boulevard intersection to Lake Georgia Drive on the west side of the road (Station 116+92); and on the east side is continuous to the McCulloch Road/Lake Georgia Drive intersection (Station 157+90). The McCulloch Road/Lake Georgia Drive intersection includes push-button activated pedestrian countdown signals, thermoplastic pavement markings, an all red pedestrian signal phase, handicap accessible ramps connected to a sidewalk network and pedestrian signage.

There are no designated bicycle lanes or trails on Dean Road within the study area or along University Boulevard and McCulloch Road/Lake Georgia Drive.

4.1.4 Right-of-Way

The existing right-of-way along Dean Road varies throughout the project corridor from a minimum of 60 feet to a maximum of 125 feet. For the majority of the project, the existing right-of-way varies from 60 feet to 90 feet. Variations in the widths and the location limits of the existing Dean Road right-of-way, by approximate station, are described in **Table 4-1**. As part of this project, turn lane improvements are required along University Boulevard. The existing right-of-way along University Boulevard in the vicinity of Dean Road is 140 feet.

4.1.5 Horizontal Alignment

The horizontal alignment for this section of Dean Road follows a north-south alignment with multiple curves and tangent sections connecting these curves. Starting at University Boulevard, the alignment is on a tangent with a bearing of N 02° 01' 54" W for a distance of 1,004.38', followed by a curve to the right with a radius of 955.36' and a length of 654.74'. This curve is followed by a tangent at a bearing of N 37° 14' 06" E for a distance of 421.92', which is followed by a curve to the left with a radius of 819.02'

and a length of 588.96'. This curve is followed by a tangent section at a bearing of N 03° 57' 56" W for a distance of 736.00' which is followed by a curve to the left with a radius of 1432.60' and a length of 703.85'. This curve is followed by a tangent with a bearing of N 32° 06' 57" W and a length of 466.62', which is followed by a curve with a radius of 409.30' and a length of 226.40'. This curve is followed by a tangent with a bearing of N 00° 25' 23" W and a length of 647.15' where it connects to the centerline of McCulloch Road which is also the County Line.

Table 4 – 1 Approximate Station Right-of-Way Width and Location

Station	R-O-W Width	Location
104+20 (University Boulevard) to 113+80	121-125 feet	Between University Boulevard & Suncrerst Shopping Center north property boundary
113+80 to 133+40	61 feet	Between Suncrerst Shopping Center north property boundary & Saint Matthews Episcopal Church north property boundary
133+40 to 139+00	90 feet	Between Saint Matthews Episcopal Church north property boundary & 5649 North Dean Road north property boundary
139+00 to 145+40	60-66 feet	Between 5649 North Dean Road north property boundary & Deans Landing at Sheffield Forests subdivision southern property boundary
145+40 to 157+90	90 feet	Between Deans Landing at Sheffield Forests subdivision southern property boundary & McCulloch Road

4.1.6 Vertical Alignment

Overall, the vertical geometry of Dean Road consists of relatively flat grades with gradual grade changes and little variation. The south end of the project at University Boulevard is the highest in elevation at 66.00'. In general, the existing grade declines from south to north with minor “saw-tooth” grades occurring along the way. The grade declines to the end of the project to elevation 62.70'. Of specific importance is the elevation difference at the right-of-way line in front of the St. Mathews Episcopal Church where the elevation difference is approximately 10 feet. It is likely that a retaining wall will be required at this location as part of the roadway widening. Retaining walls or slope easements will likely be required at several other locations along the project due

to the elevation difference at the right-of-way line and super-elevation. This will also depend on the proposed profile grade line for the new roadway. It is noted that the information presented in this section is based on Orange County LIDAR information which utilizes the NAVD88 datum.

4.1.7 Drainage

4.1.7.1 Existing Conditions

The Dean Road project area is located within the Little Econlockhatchee River drainage basin. The Little Econlockhatchee River basin is one of 12 major drainage basins within Orange County. The Little Econlockhatchee River flows northward and is a major tributary of the Econlockhatchee River. The confluence of these two rivers occurs near the intersection of SR 419 and Willingham Road in Seminole County (approximately 4.75 miles northeast of the Dean Road Project). The Econlockhatchee River flows northward and discharges into the St. Johns River.

The surface waters to which this project discharges are designated as Class III surface waters according to Chapter 62-302.400 F.A.C. Water quality classifications are arranged in order of degree of protection required, with Class I surface water having generally the most stringent water quality criteria and Class V the least. Class I, II, and III surface waters share water quality criteria established to protect recreation, and the propagation and maintenance of a healthy well balanced population of fish and wildlife.

Dean Road is a north-south two-lane rural road (see **Photo 4-1**) with side ditches that stretch from the Suncrerst Shopping Center to McCulloch Road, the portion from University Boulevard to Shadrack Court (i.e., from Station 104+00 to Station 107+20) consists of urban four lanes and three south bound turning lanes with sidewalks on both sides, curb and gutter sections and curb inlets. The road tapers to a two lane rural portion between Station 107+20 and Station 112+00 near the northern entrance of the commercial area.

Photo 4-1 Dean Road existing rural section

The centerline of the existing roadway is located on a ridge between Lake Georgia on the west and the Little Econlockhatchee River on the east (see **Figure 4-1**). Runoff from the northwestern two thirds of land located west of Dean Road flows westward toward Lake Georgia. Lake Georgia is a land locked basin of approximately 211 acres. The remaining land located west of Dean Road flows southwesterly towards the stormwater ponds serving SR 417.

On the east side of Dean Road, the northern half of the area flows eastward towards a wetland system. This wetland system flows eastward to the Little Econlockhatchee River. The southern half of the area east of Dean Road flows towards Lake Phillips. Lake Phillips discharges to a series of interconnected detention ponds within the Suncrest development that cascade eastward towards the Little Econlockhatchee River located approximately one mile east of Dean Road. The study area is under the jurisdiction of Orange County and the St. Johns River Water Management District (SJRWMD) and is subject to the rules promulgated for protection of the Econlockhatchee River Basin and the Howell Creek Basin. According to the SJRWMD, these rivers are part of the overall regulatory Econlockhatchee River Hydrologic Basin.

The following is a brief description of the existing drainage systems proceeding from south to north. Existing drainage sub-basin limits are shown on the **Figure 4-2**.

Sub–Basin 1 (Station 104+00 to Station 112+00)

Sub-Basin 1 is located in an urbanized section of Dean Road between Station 104+00 and Station 112+00 at the south end of the project limits. The drainage features include curb and gutter sections, curb inlets, and a storm sewer that connects to the University Boulevard stormwater system (see **Photo 4-2**). The University Boulevard stormwater system outfalls to a detention pond located at the southwest corner of the intersection of Gathering Drive and University Boulevard.

Photo 4-2 Dean Road urban section

Sub – Basin 2 (Station 112+00 to Station 120+50)

Sub-Basin 2 is located in a rural section of Dean Road between Station 112+00 and Station 120+50. Stormwater runoff generated from this basin sheet flows from the pavement to a swale on the east side of the road.

Figure 4-1 Regional Hydraulic Model Map

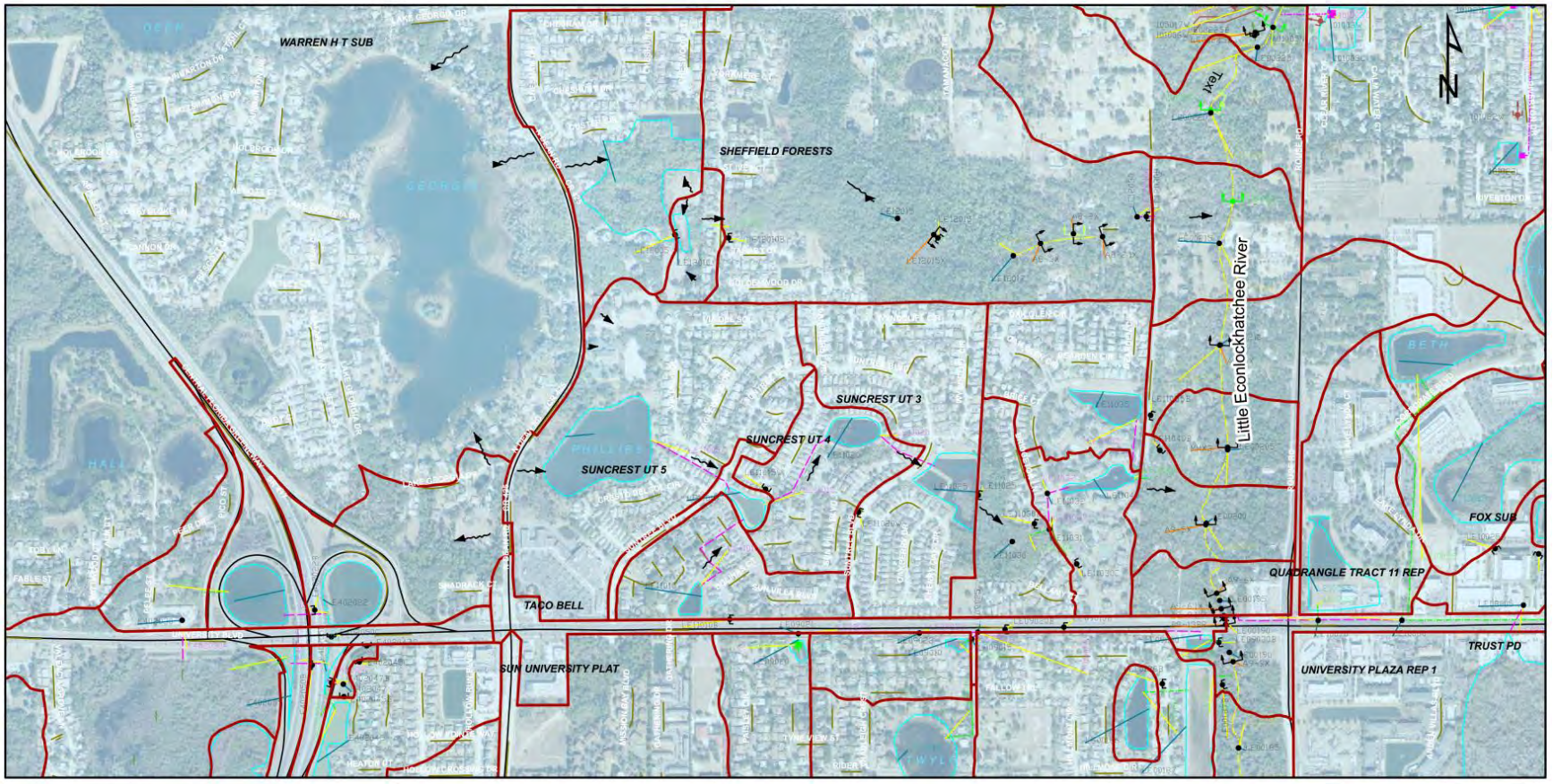


Figure 4-2 Drainage Basin Map

The swale conveys runoff to three ditch bottom inlets that outfall to Lake Phillips. Lake Phillips flows east into a series of interconnected detention ponds in the Suncrest development that ultimately drain to the Little Econlockhatchee River located approximately 0.95 mile east of Dean Road (see **Figure 4-1**).

Sub – Basin 3 (Station 120+50 to Station 146+90)

Sub-Basin 3 is located in a rural portion of Dean Road between Station 120+50 and Station 146+90. Stormwater runoff generated from this basin sheet flows from the pavement to a landlocked ditch (see **Photo 4-3**) on the west side of the road. During extreme rainfall events, the ditch will fill up and overtop its westerly bank and overflow to Lake Georgia. Lake Georgia is a land locked basin and is approximately 211 acres in area.

Photo 4-3 Land locked ditch (west side of Dean Road)

Sub – Basin 4 (Station 146+90 to Station 157+62)

Sub-Basin 4 is located in a rural section of Dean Road between Station 146+90 and Station 157+62. Stormwater runoff generated from Basin 4 sheet flows from the pavement to a swale on the east side of the road. the swale conveys runoff to a ditch bottom inlet at Station 153+31 (see **Photo 4-4**) which discharges eastward to a detention pond located in the Dean's Landing at Sheffield Forest Phase I subdivision. Drainage from this pond outfalls to a wetland system that flows eastward to the Little Econlockhatchee River.

Photo 4-4 Ditch bottom inlet location

The Roads and Drainage Division was contacted for information on drainage problems within the study area. Responses from the Roads and Drainage Division did not indicate significant existing drainage problems.

4.1.7.2 Existing Permits

There has not been any recent permitting activity.

4.1.7.3 Floodplains and Floodways

An evaluation of floodplain impacts is key to the assessment of drainage alternatives for the corridor. Both conveyance and storage impacts must be evaluated. Existing cross drains will require extension or possible replacement to minimize widening impacts. A detailed drainage analysis has been documented in the *Conceptual Drainage Analysis of Alternatives and Pond Siting Report*.

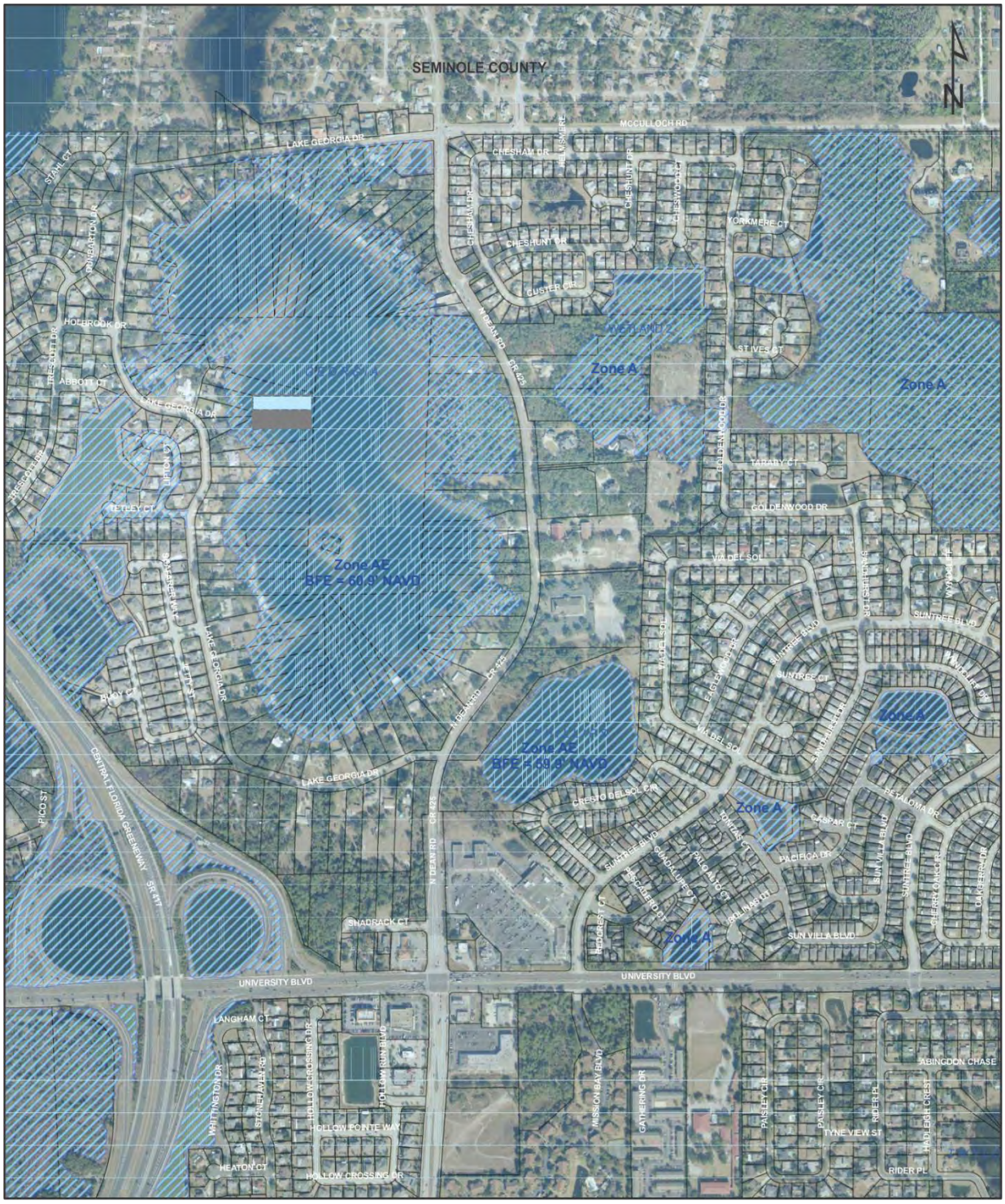
Federal Emergency Management Agency (FEMA) defines a Regulatory Floodway as the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (i.e. 1 foot). Based on the Flood Insurance Rate Map (FIRM), there are no designated regulatory floodways within the project vicinity. **Figure 4-3** provides the Floodplain Map from the *Dean Road Pond Siting Report*. **Figure 4-4** is an illustration of the Floodway Schematic.

The Dean Road project is located within the area depicted in FEMA's FIRM Number 12095C0280 F, dated September 25, 2009. The FIRM delineates the areas of Special Flood Hazard Area (SFHA). There are two SFHA designations within the project vicinity, Zone A and Zone AE (see **Figure 4-3**). A definition of each zone is presented in the **Table 4-2** below.

Table 4 – 2 SFHA Definitions

Zone	Description
A	Areas with a 1% annual chance of flooding. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown.
AE	Areas with a 1% annual chance of flooding where a detailed analysis has been completed. Base flood elevations are provided for Zones AE.

Figure 4-3 Floodplain Map



Source: Pond Siting Report
Dean Road - Roadway Conceptual Analysis

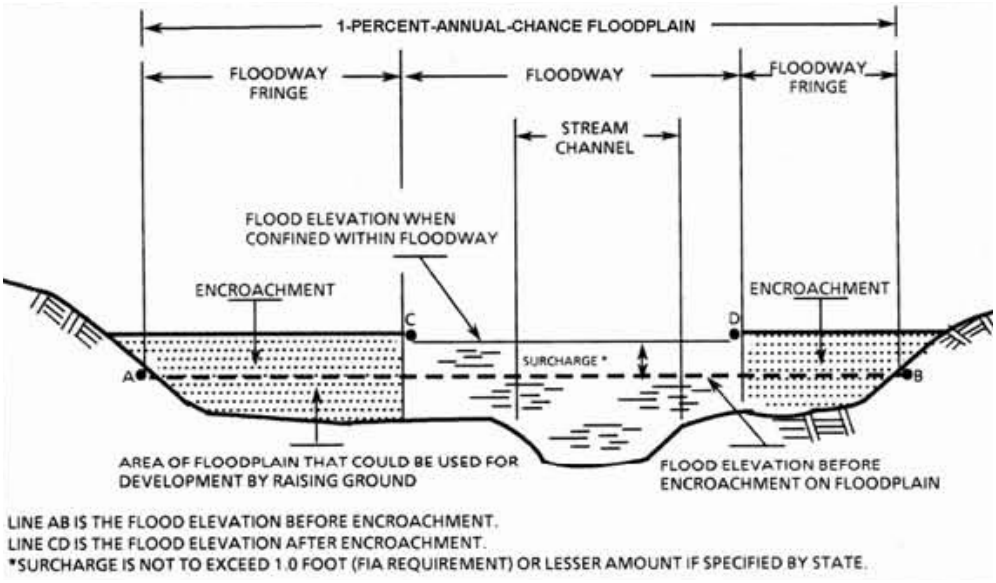


Figure 4 – 4 FEMA Floodway Schematic

The floodplain associated with Lake Georgia is located west of Dean Road. FEMA has studied Lake Georgia in detail and published a Base Flood Elevation (BFE) of 60.9' NAVD. Lake Phillips, which is located on the southern portion of the project area, has a FEMA established BFE of 59.9' NAVD. The unnamed depression area east of Dean Road (i.e. Wetland #2) is designated as a Zone A. **Table 4-3** below summarizes the BFE information.

Table 4 – 3 Base Flood Information

Location	Base Flood Elevation (i.e. 1% annual chance flood event)
Lake Georgia	60.9' NAVD
Lake Phillips (O.C. Pond # 6858)	59.9' NAVD
Wetland #2	Not Determined

4.1.8 Geotechnical Data

4.1.8.1 Area Geology/Hydrology

Due to its prevalent geology referred to as karst, Central Florida is prone to the formation of sinkholes, or large, circular depressions created by local subsidence of the ground surface. Sinkholes are caused by the nature and relationship of the three sedimentary layers typical of Central Florida geology:

1. A massive cavernous limestone formation known as the Floridan Aquifer, overlain by clay,
2. A clayey-sand, phosphate and limestone aquitard, or
3. A flow-retarding layer ranging in thickness from nearly absent to greater than 100 feet (Hawthorn formation), which is in turn overlain by a 40 to 70 feet thick surficial layer of sand, bearing the water table aquifer.

The likelihood of sinkhole occurrence at a given site within the region is determined by the relationship among these three layers, specifically by the water and soil transmitting capacity of the Hawthorn formation at that location.

The water table or sand aquifer is separated from the Floridan limestone aquifer by the Hawthorne clay formation. Since the thickness and consistency of the Hawthorne layer is variable across Central Florida, the likelihood of groundwater flow from the upper to the lower aquifer, known as aquifer recharge, will also vary by geographical location. In areas where the Hawthorn formation is absent, water table groundwater and associated sands can flow downward into cavities within the limestone aquifer, like sand through an hourglass, recharging the Floridan Aquifer, and sometimes causing the formation of surface sinkholes. This process of subsurface erosion associated with recharging the Floridan Aquifer is known as ravelling. Thus, in Central Florida, areas of effective groundwater recharge to the Floridan Aquifer have a higher potential for the formation of surface sinkholes.

No method of geological, geotechnical, or geophysical exploration is known that can accurately predict the occurrence of sinkholes. The current standard of geotechnical practice in Central Florida is to make a qualitative prediction of sinkhole risk on the basis of local geological conditions in the vicinity of a particular site.

Based on a review of the U.S. Geological Survey Map, “Recharge and Discharge Areas of the Floridan Aquifer in the SJRWMD and Vicinity, Florida”, the study area lies in a known area of low to moderate recharge. Therefore, it can be concluded that the risk of sinkhole activity is relatively low when compared to the risk across Central Florida.

4.1.8.2 Soil Survey Review

The Natural Resources Conservation Service (NRCS), f.k.a. Soil Conservation Service, Soil Survey was reviewed for information regarding near surface soil conditions within the project area. The NRCS Soil Survey for Orange County was published in 1989, and reflects data complied during 1983. **Table 4-4** lists soils that are mapped in the NRCS Soil Survey. A brief description of the soils follows. **Figure 4-5** identifies the location of these soils within the project limits.

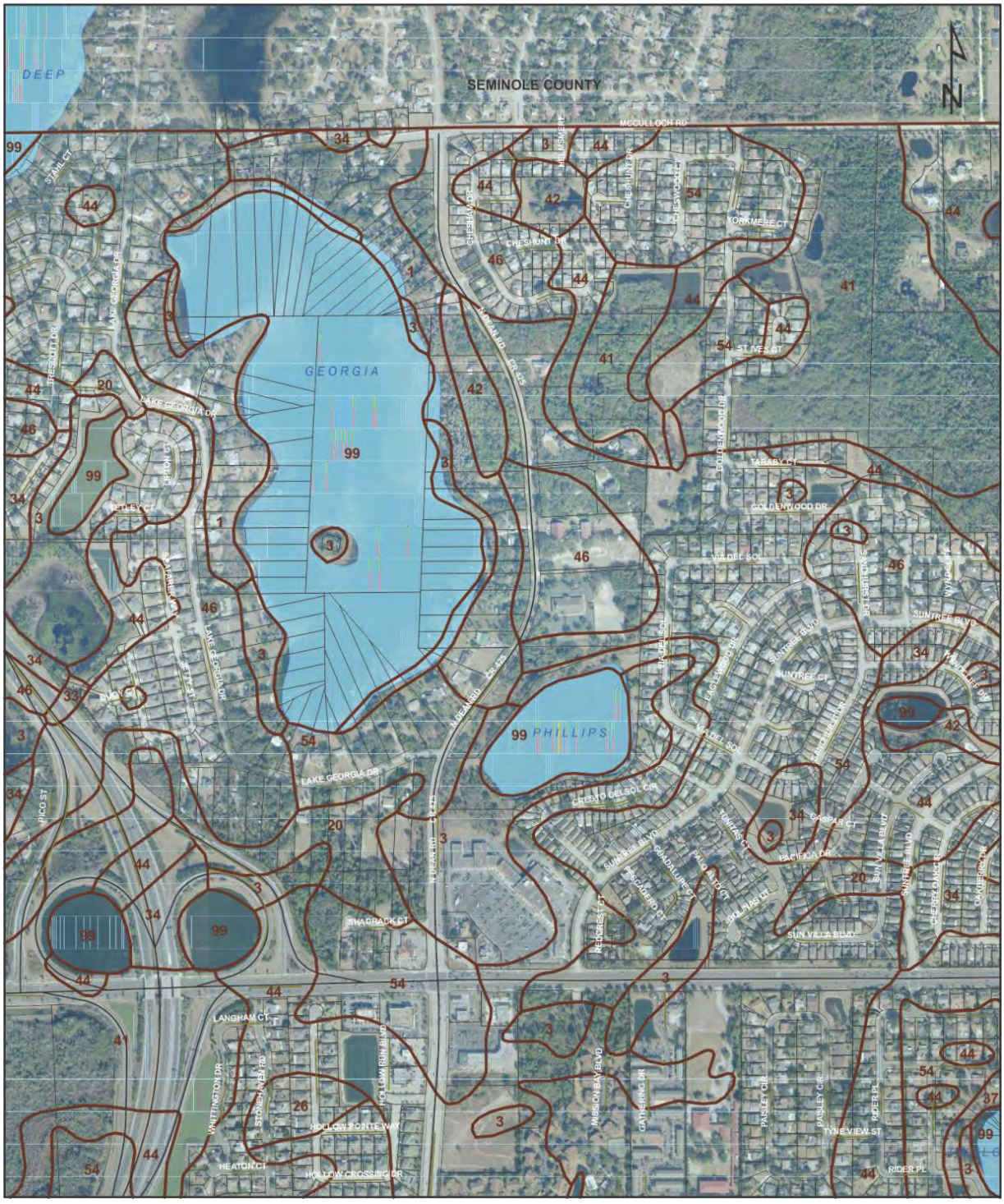
Table 4 – 4 Soil Map Units

Soil Unit/#	Description	Hydrologic Soil Group
Arents (#1)	--	--
Basinger fine sand (#3)	Fine sand, sand	D
Samsula-Hontoon- Basinger association (#41)	Muck, sand, fine sand, loamy sand	B/D – D
Smyrna fine sand (#44)	Fine sand, sand, loamy sand	B/D
Tavares fine sand (#46)	Fine sand, sand	A
Zoflo fine sand (#54)	Fine sand, sand	C

Arents, nearly level (#1): This soil type consists of material dug from several areas that have different kinds of soils. Most of the soil properties are variable. A seasonal high water table varies with the amount of fill material and artificial drainage in any mapped area. In most years, a seasonal high water table is at a depth of 24 to 36 inches for 2 to 4 months. It recedes to a depth of about 60 inches or more during extended dry periods.

Basinger fine sand (#3): This soil type is nearly level and poorly drained. It is in shallow depressions and sloughs and along the edges of freshwater marshes and swamps. Under natural conditions, the water table is above the surface for 6 to 9 months and is within 12 inches of the surface for the rest of the year. The permeability of the soil is rapid throughout.

Figure 4-5 Soils Map



Samsula-Hontoon-Basinger association (#41): This soil type is nearly level and very poorly drained. These soils are in freshwater swamps, depressions, sloughs, and broad, poorly defined drainageways. In most years, a seasonal high water table is ponded 6 to 9 months or more except during extended dry periods. The water table fluctuates between depths of about 10 inches and the surface for the remainder of the year. The permeability is rapid in Samsula and Hontoon soils and very rapid in Basinger soils.

Smyrna fine sand (#44): This soil type is nearly level and poorly drained. It is on broad flatwoods. The seasonal high water table is within 10 inches of the surface for 1 to 4 months. It recedes to a depth of 10 to 40 inches for more than 6 months. The permeability of the soil is rapid in the surface and subsurface layers and is moderate to moderately rapid in the subsoil.

Tavares fine sand (#46): This soil type is nearly level to gently sloping and moderately well drained. It is on low ridges and knolls on the uplands throughout the County. In most years, the seasonal high water table is at a depth of 40 to 80 inches for more than 6 months, and it recedes to a depth of more than 80 inches during extended dry periods. The permeability of the soil is very rapid throughout.

Zolfo fine sand (#54): This soil type is nearly level and somewhat poorly drained. It is in broad, slightly higher position adjacent to the flatwoods. In most years, a seasonal high water table is at a depth of 24 to 40 inches for 2 to 6 months. It is at a depth of 10 to 24 inches during periods of heavy rain. It recedes to a depth of about 60 inches during extended dry periods. The permeability of this soil is rapid in the surface and subsurface layers and is moderate in the subsoil.

Arents, Basinger fine sand, Immokalee fine sand, Samsula-Hontoon-Basinger association, Smyma fine sand, Tavares fine sand, and Zolfo fine sand soil types are found in several areas along the existing alignment. These soil types can be classified as A-3, A-2-4 and A-8 in the AASHTO system. Soils classified as A-3 and A-2-4 are appropriate for use as embankment fill. Soils classified as A-8 are muck and should be treated in accordance with FDOT Standard Specifications and Index Nos. 500 and 505. Estimated seasonal high groundwater levels are shown to range from eight (8) feet above ground surface to 12 feet below ground surface. Complete geotechnical analyses and documentation, including auger boring results at proposed retention pond locations, can be found in the *Report of Preliminary Geotechnical Investigation for Stormwater Pond Report North Dean Road RCA*.

4.1.9 Accident Data

Crash reports for the three-year time period between January 1, 2007 and December 31, 2009 were obtained and reviewed. Intersection crashes, classified as those which occurred within 250 feet of an intersection, are summarized in **Table 4-5**. Segment crashes are summarized in **Table 4-6**.

Both tables include the total number of crashes as well as fatalities and injuries. Crashes are also summarized by crash type and include a tabulation of Driving Under the Influence (DUI) or failure to yield right-of-way crashes as well. Forty-nine crashes occurred at intersections over the three year period. Eight crashes occurred along segments over the three year period. Three of these were located at the shopping center driveways.

An overall corridor crash rate was calculated using the following formula:

Crash Rate =

#Crashes x 1,000,000 ÷ #Years x 365 x weighted avg. AADT x corridor length

= (57 x 1,000,000) ÷ (3 x 365 x 14,700 x 1.04)

= 3.40 Crashes per Million Vehicle Miles Traveled (Crashes/MVMT)

This Dean Road corridor crash rate exceeds the FDOT District Five average crash rate of 2.276 crashes/MVMT for an urban two lane undivided roadway. However, it is skewed due to the short corridor length and the concentration of crashes at the University Boulevard intersection. The comparison to an average crash rate for a two lane undivided roadway may also be inappropriate for the entire project corridor due to the fact that Dean Road widens to a four lane section between University Boulevard and Shadrack Court.

For comparison purposes, the crash rate was recalculated to remove this section from University Boulevard to Shadrack Court and the University Boulevard intersection.

= (18 x 1,000,000) ÷ (3 x 365 x 14,300 x 0.97)

= 1.19 Crashes/MVMT

This crash rate may be more representative of the two-lane corridor.

Crash rates were calculated for each intersection by year. The intersection crash rate was calculated using the following formula:

Crash Rate =

#Crashes x 1,000,000 ÷ #Years x 365 x Entering AADT

= Crashes/Million Entering Vehicles (Crashes/MEV)

Table 4-5[4]
Dean Road RCA
Intersection Crash Summary

Year	Total Crashes	Total Fatalities	Total Injuries	Head On Crash	Rear End Crash	Right Angle Crash	Left Turn Crash	Right Turn Crash	Side-swipe Crash	Ped/Bike Crash	Single Vehicle Crash	DUI	Failure to Yield ROW	Crash Rate
Year 2007														
Dean Rd at University Blvd	14	0	4	1	6	0	2	1	4	0	0	1	3	0.45
Dean Rd at Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr	5	0	4	1	0	2	0	0	2	1	0	2	1	0.95
Dean Rd at Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr/McCulloch Rd	4	0	0	0	2	0	0	0	2	0	0	0	0	0.59
Year 2008														
Dean Rd at University Blvd	20	0	5	0	9	5	3	1	2	0	0	2	4	0.64
Dean Rd at Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr	1	0	0	0	0	0	0	0	0	0	1	0	0	0.19
Dean Rd at Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr/McCulloch Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Year 2009														
Dean Rd at University Blvd	4	0	1	0	1	1	1	0	0	1	0	0	2	0.13
Dean Rd at Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr	1	0	1	0	0	0	0	0	0	0	1	0	0	0.19
Dean Rd at Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr/McCulloch Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Total Years 2007-2009														
Dean Road														
Dean Rd at University Blvd	38	0	10	1	16	6	6	2	6	1	0	3	9	0.40
Dean Rd at Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr	7	0	5	1	0	2	0	0	2	1	2	2	1	0.45
Dean Rd at Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Dean Rd at Lk Georgia Dr/McCulloch Rd	4	0	0	0	2	0	0	0	2	0	0	0	0	0.20

Note: Crash Rate calculated as Crashes/Million Entering Vehicles (Crashes/MEV)

Table 4-6
Dean Rd RCA
Roadway Segment Crash Summary

Year	Total Crashes	Total Fatalities	Total Injuries	Head On Crash	Rear End Crash	Right Angle Crash	Left Turn Crash	Right Turn Crash	Side-swipe Crash	Ped/Bike Crash	Single Vehicle Crash	DUI	Failure to Yield ROW
Year 2007													
Dean Road													
University Blvd to Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0
Shadrack Ct to Lk Georgia Dr	0	0	0	0	0	0	0	0	0	0	0	0	0
Lk Georgia Dr to Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheshunt Dr to Lk Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0
Year 2008													
Dean Road													
University Blvd to Shadrack Ct	1	0	0	0	0	0	0	1	0	0	0	0	0
Shadrack Ct to Lk Georgia Dr	3	0	0	0	2	0	1	0	0	0	0	0	1
Lk Georgia Dr to Cheshunt Dr	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheshunt Dr to Lk Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0
Year 2009													
Dean Road													
University Blvd to Shadrack Ct	0	0	0	0	0	0	0	0	0	0	0	0	0
Shadrack Ct to Lk Georgia Dr	3	0	3	0	2	0	1	0	0	0	0	0	1
Lk Georgia Dr to Cheshunt Dr	1	0	0	0	0	0	0	0	0	0	1	0	0
Cheshunt Dr to Lk Georgia													
Total Years 2007-2009													
Dean Road													
University Blvd to Shadrack Ct	1	0	0	0	0	0	0	1	0	0	0	0	0
Shadrack Ct to Lk Georgia Dr	6	0	3	0	4	0	2	0	0	0	0	0	2
Lk Georgia Dr to Cheshunt Dr	1	0	0	0	0	0	0	0	0	0	1	0	0
Cheshunt Dr to Lk Georgia	0	0	0	0	0	0	0	0	0	0	0	0	0

Dean Road and University Boulevard

Thirty-eight crashes occurred at the intersection of Dean Road and University Boulevard over the three year period with fourteen occurring in 2007, twenty occurring in 2008, and four occurring in 2009. There were ten total injury crashes and no fatalities. Sixteen crashes were rear-end crashes, and there were six each of right angle, left turn, and sideswipe crashes. Two right turn crashes occurred, as well as one head-on crash and one pedestrian/bike crash. The high percentage of rear-end crashes is attributed to the level of congestion at this signalized intersection. The overall crash rate at this intersection from 2007 to 2009 is 0.40 crashes/MEV.

Dean Road and Shadrack Court

No crashes were reported at the intersection of Dean Road and Shadrack Court from 2007 to 2009.

Dean Road and Lake Georgia Drive

Seven crashes occurred at the intersection of Dean Road and Lake Georgia Drive over the three year period with five occurring in 2007, one occurring in 2008, and one occurring in 2009. There were five total injury crashes and no fatalities. One crash was a head-on crash and there were two each of right angle crash, side-swipe, and single vehicle crashes. Both of the side-swipe crashes were related to a DUI and one of the side-swipe crashes involved a bicycle.

This intersection exists along a horizontal curve through a no-passing zone. Side-swipe and head-on crashes are increased when vehicles attempt to pass on a two lane undivided roadway. The overall crash rate at this intersection from 2007 to 2009 is 0.45 crashes/MEV.

Dean Road and Cheshunt Drive

No crashes were reported at the intersection of Dean Road and Cheshunt Drive from 2007 to 2009.

Dean Road and McCulloch Road/Lake Georgia Drive

Four crashes occurred at the intersection of Dean Road and McCulloch Road/Lake Georgia Drive over the three year period with all four occurring in the year 2007. None of these crashes resulted in a fatality or injury. There were two rear-end crashes and two side-swipe crashes. The overall crash rate at this intersection from 2007 to 2009 is 0.20 crashes/MEV.

4.1.10 Intersections and Signalization

There are currently two signalized intersections within the project limits: University Boulevard and McCulloch Road/Lake Georgia Drive. The analysis of these signalized and other unsignalized intersections are summarized in Chapter 6.

4.1.11 Lighting

There are no continuous street lighting systems along Dean Road. Street lighting exists on two intersecting roadways: Dean Road and University Boulevard. Additionally, streetlights are randomly located along the roadway at subdivision entrances.

4.1.12 Utilities

There are numerous overhead and underground utilities located within, or which cross, the Dean Road right-of-way between University Boulevard and McCulloch Road/Lake Georgia Drive Intersection. The companies and municipalities that own or operate these utilities are listed in **Table 4-7**.

Significant utility features within the project limits include: Progress Energy electric transmission lines, South Seminole and North Orange County Wastewater Transmission Authority, Orange County Utilities, Peoples Gas, Comcast Cable, Bright House Cable, Verizon, and Orange County Traffic Engineering.

4.1.13 Pavement Conditions

Orange County has no formal Pavement Management System for inspection of roadway pavements in the County. Visual inspection of the pavement revealed minor areas of deterioration. Conditions observed in a field review included rutting with longitudinal cracking, alligator cracking, potholes, and erosion of pavement edges with or without drop off. The most significant area of concern is located at the intersection of Dean Road and University Boulevard.

4.2 Environmental Characteristics

4.2.1 Land Use

4.2.1.1 Existing Land Use/Zoning

The Dean Road corridor generally is a mixture of residential uses and undeveloped areas (next to Lake Georgia and Lake Phillips) with commercial uses centered on the intersection of Dean Road and University Boulevard. Two churches (the Church of Jesus Christ of the Latter-Day Saints and St. Mathews Episcopal Church) are located on the east side of Dean Road among the residential areas. The existing zoning, shown in **Figure 4-6** is consistent with the existing land use patterns.

Table 4-7 Existing Utility Summary

Utility	Type of Service	General Location
Progress Energy	Overhead Electric Transmission and Distribution	Pole mounted, overhead electric lines runs along the east side of Dean road from beginning of project to McCulloch Road into Seminole County
South Seminole and North Orange County Wastewater Transmission Authority	Wastewater	Runs along east side of Dean Road
Orange County Utilities	Buried Water Distribution	Water mains run the entire length of Dean Road and Force mains in certain areas of project.
Peoples Gas	Underground Steel Line	Runs along West side of Dean Road to back entrance of shopping plaza
Comcast Cable	Aerial CATV-FOC	Runs along the East side of Dean Road, intersection of Dean Road and University Boulevard
	Buried CATV-FOC	Routed under Dean Road to neighborhood streets
Brighthouse Cable	Aerial CATV-FOC	Runs along the East side of Dean Road, from University Boulevard to McCulloch Road
	Buried CATV-FOC	Runs along West side of Dean from Lake George to approximately 200 feet past Carolina Street
Verizon Business	Buried FOC	Located at intersection of Dean Road and McCulloch Road/Lake Georgia Drive
Orange County Traffic Engineering	Buried FOC	Underground fiber optic on SW corner of Dean Road/Lake Georgia Drive and University Boulevard
	Aerial FOC	Located on power poles along north and south sides of University Blvd and East side of Dean Road.

4.2.1.1 Existing Land Use/Zoning

The Dean Road corridor generally is a mixture of residential uses and undeveloped areas (next to Lake Georgia and Lake Phillips) with commercial uses centered on the intersection of Dean Road and University Boulevard. Two churches (the Church of Jesus Christ of the Latter-Day Saints and St. Mathews Episcopal Church) are located on the east side of Dean Road among the residential areas. The existing zoning, shown in **Figure 4-6** is consistent with the existing land use patterns.

4.2.1.2 Future Land Use

The Orange County Future Land Use Map for this area supports the general existing land uses, as presented in **Figure 4-7**. Most of the area is designated as Low Density Residential (LDR) with a Commercial designation along the east side of Dean Road at University Boulevard. Along the west side of Dean Road (from south of University Boulevard to Lake Georgia Drive), the area is designated as Planned Development-Office (PD-O). When comparing the future land uses with those already existing, the only anticipated changes will occur in the area shown as PD-O.

4.2.2 Cultural Features and Community Services

4.2.2.1 Cultural Resource Assessment

An inquiry into the Florida Department of State's Division of Historical Resources, Florida Master Site File (Florida Master Site File) has not been completed to identify archaeological and/or historic resources that may influence the evaluation of and location of alternative improvement concepts. This research will be completed during the project's design phase.

4.2.2.2 Community Services

Cultural and community services inventoried include: community centers, educational facilities, medical facilities, religious institutions, cemeteries, public lands (parks, recreation areas, wildlife refuge, etc.), fire stations/civic buildings/government buildings, and military installations.

Community Centers

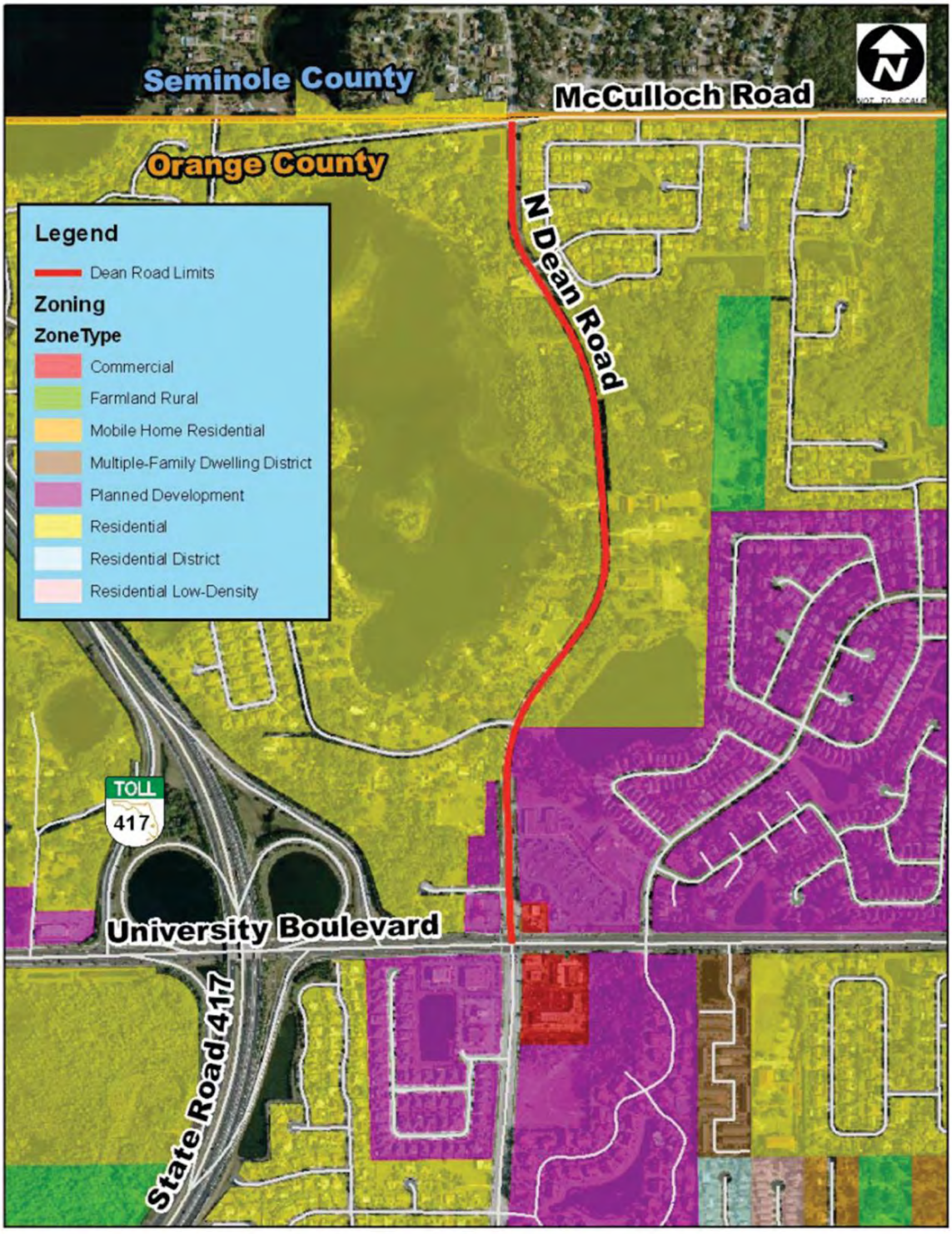
There are no community service facilities located within the Dean Road corridor.

Educational Facilities

There are no educational facilities located within the Dean Road corridor.

Medical Facilities

There are no major hospital or medical facilities located within the Dean Road corridor.



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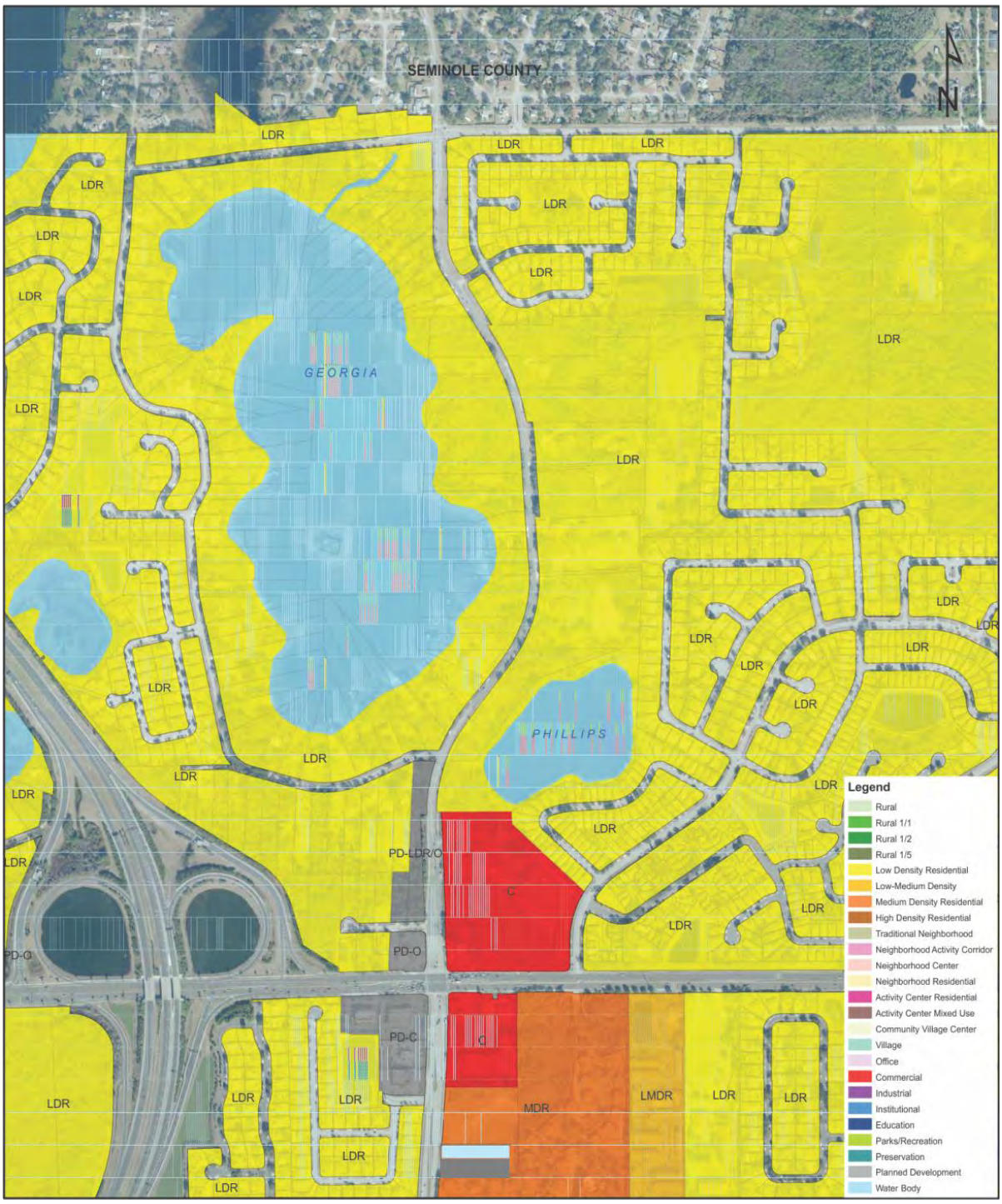
Dean Road RCA
Zoning Map

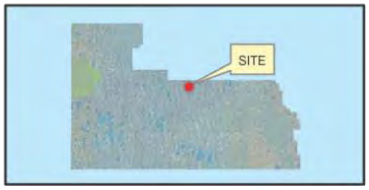
Figure 4-6

Figure 4-7 Future Land Use Map



MAP SCALE

600 300 0 600 Feet



Source: Pond Siting Report
Dean Road - Roadway Conceptual Analysis

Religious Institutions

There are two churches located within the Dean Road corridor, which are: the Church of Jesus Christ of the Latter-Day Saints and St. Mathews Episcopal Church. Both churches are located on the east side of Dean Road, north of Lake Phillips.

Cemeteries

There are no cemeteries located within the Dean Road corridor.

Fire Protection/Government

There are no fire protection/government buildings located within the Dean Road corridor.

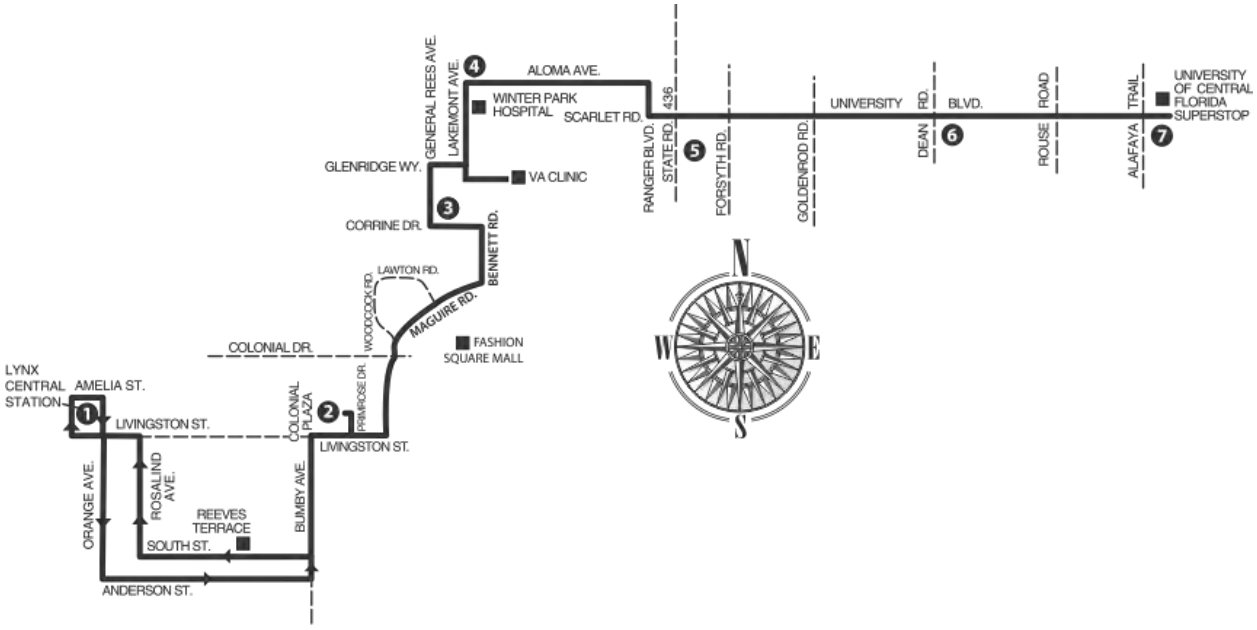
County-owned Properties/Public Lands

The Orange County Board of County Commissioners owns property at two locations within the Dean Road corridor: between Lake Phillips and Dean Road (parcel # 05-22-31-0000-00-029) and Lake Phillips, located at the southeast quadrant of Dean Road and Lake Georgia Drive (parcel # 05-22-31-8475-00-001). The southern property (Lake Phillips) is included within the Suncrest Home Owners Associations (HOA) boundary.

Bus Service

LYNX provides bus service (Link 13) along University Boulevard with a stop at Dean Road, as shown in **Figure 4-8**).

Figure 4 – 8 Lynx Bus Service



4.2.3 Natural and Biological Features

4.2.3.1 General Site Conditions

The study corridor consists largely of residential land use. In addition, there are two churches within the corridor and commercial properties exist at all four corners of Dean Road and University Boulevard. Other undeveloped properties are scattered along both sides of the roadway corridor. Land use and vegetative community types located within and adjacent to the project were identified through aerial photograph interpretation and site reconnaissance. On-site natural land use forms were classified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) as defined by the Florida Department of Transportation (FDOT, 1999) and are listed below.

Florida Land Use Cover and Forms Classification

110 Residential, Low Density

This classification includes single family residential, less than two dwelling units per acre. This category represents the majority of the western side of the corridor. Typically, residential homes adjacent to surface waters in Orange County are required to have a half-acre lot.

120 Fixed Single Family Units, Medium Density

This classification includes single family residential, generally two to five dwelling units per acre. The Watermill Subdivision falls under this classification and is located on the southeast corner of Dean Road and McCulloch Road/Lake Georgia Drive.

140 Retail Sales and Services

This classification includes retail sales and services who are primarily devoted to the sale of products and services such as, shopping centers and office buildings including driveways and parking facilities. On the northeast corner of University Boulevard and Dean Road intersection, there is a shopping center with a grocery store, convenience/gas store, fast food, and other retail sales and services. On the northwest corner of the intersection, there is a bank.

172 Religious

This classification includes all structures than can be associated with a building for public worship. On the east side of Dean Road, there are two churches.

415 Mixed Pines

This classification includes forest communities dominated by upland conifers. The west side of the project adjacent to Lake Georgia is dominated by slash pine.

520 Lakes

This classification includes lakes between 10 and 500 acres. There are two water bodies located adjacent to the project: Lake Phillips (Orange County Pond # 6858) on the east and Lake Georgia on the west.

630 Wetland Forested Mixed

This classification includes mixed wetlands forest communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the canopy composition. There are two wetlands within the project corridor which fall in this classification. (Refer to Section 4.2.3.2 for the wetlands locations.)

814 Roads and Highways

This classification consists of the existing Dean Road and University Boulevard rights-of-way.

Soils

The Natural Resources Conservation Service (NRCS), f.k.a. Soil Conservation Service, Soil Survey was reviewed for information regarding near surface soil conditions within the project area. The NRCS Soil Survey for Orange County was published in 1989, and reflects data complied during 1983. The corridor generally is covered by sandy soils, with muck at Lakes Georgia and Phillips. Details about the soil locations and description are provided in the study's *Pond Siting Report* (September 2011).

Drainage Basin

The Dean Road project area is located within the Little Econlockhatchee River drainage basin.

The Little Econlockhatchee River basin is one of 12 major drainage basins within Orange County. The Little Econlockhatchee River flows northward and is a major tributary of the Econlockhatchee River. The confluence of these two rivers occurs near the intersection of SR 419 and Willingham Road in Seminole County (approximately 4.75 miles northeast of the Dean Road Project). The Econlockhatchee River flows northward and discharges into the St. Johns River. A detailed description of this basin and sub-basins is provided in the study's *Pond Siting Report* (September 2011).

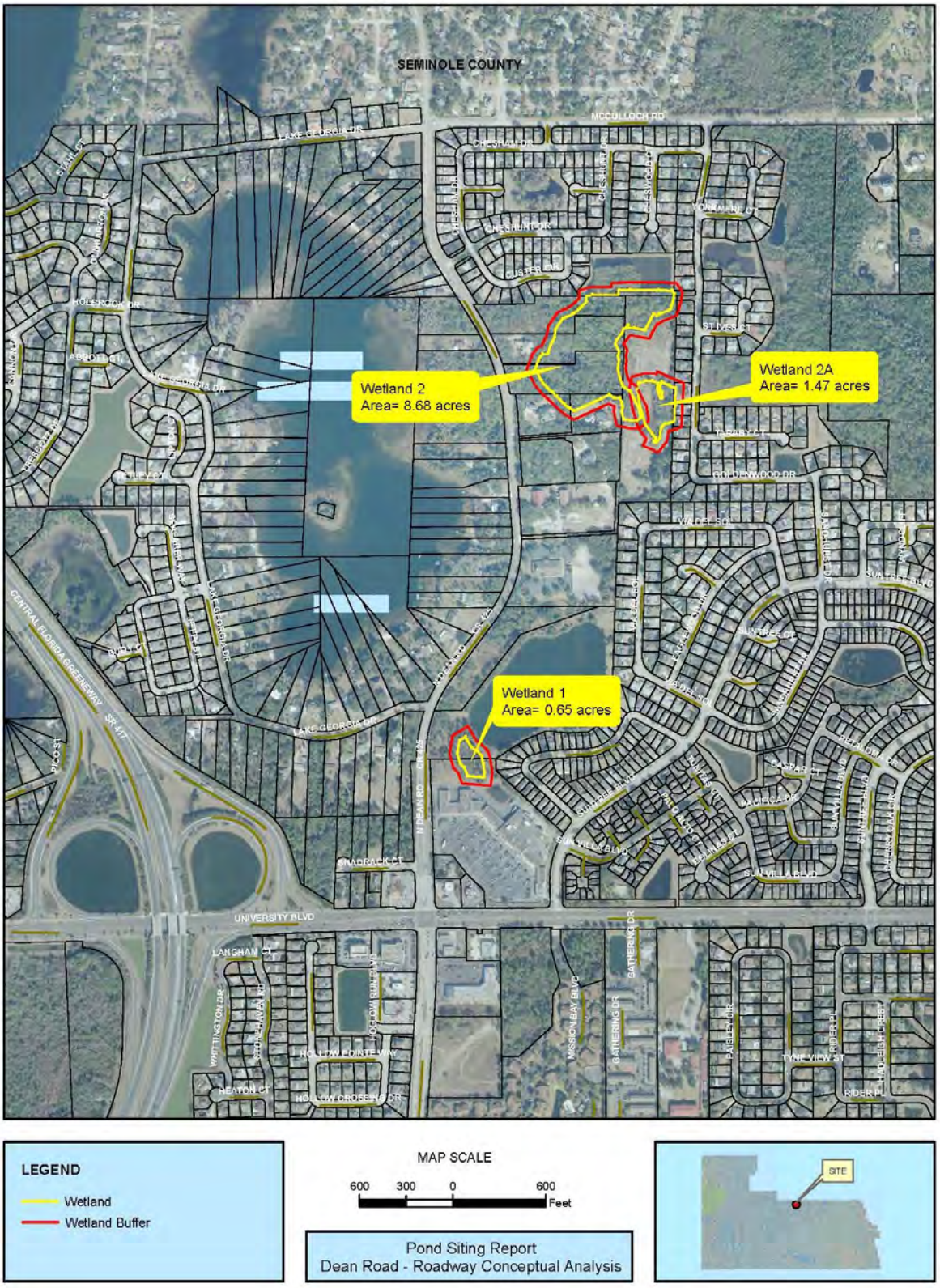
4.2.3.2 Wetlands

The project corridor was reviewed for the presence of wetlands jurisdictional areas. Aerial photograph evaluation, Orange County soil survey, and site reconnaissance concluded that two wetlands are present within the project limits, as shown in **Figure 4-9.** It should be noted that the review area included fifty feet from the edge of pavement on both sides of the existing Dean Road. The likelihood that there are wetlands outside of this area is high. Field staff noted wetlands adjacent to Lake Georgia. If the project area expands, it is recommended that the area adjacent to Lake Georgia be reevaluated. The following is a description of the wetlands including historical impacts and hydrology.

Wetland 1 is located in the southeastern portion of the project directly north of the Suncrerst Shopping Center. This wetland was impacted in the early 1980's by the construction of the Suncrest Subdivision and associated commercial properties at the northeast corner of Dean Road and University Boulevard. Historically, this wetland was part of a large slough system; however, the majority of the system was dredged to make a pond for the subdivision. The remaining portion is isolated and showing signs of degradation. There are no recent signs of hydrologic indicators. Vegetative cover includes, but not limited to, Cypress, Sweetgum, Dahoon Holly (Ilex cassine), and Climbing Fern.

Wetland 2 is located in the northeastern portion of the project. This wetland is connected to the Little Econlockhatchee River through a series of culverts to the east. In the 1960's, agricultural impacts started occurring to the wetland that included bisecting the wetland with a road and filling portions of the wetland, creating an eastern and western lobe. In the 1970's, the eastern lobe of the wetland was dredged to create an open water component. In the 1980's, the northern portion of the western lobe was filled in for the Deans Landing subdivision. The wetland hydrology has been impacted; however, there are hydrologic indicators throughout the wetland to support an overall seasonal high of 54.50 ft NAVD. The wetland receives water from 3 culverts from the Deans Landing subdivision to the north. The water flows to the south and then east through a culvert under the fill road and then through a series of ditches, wetlands, and culverts to the Little Econlockhatchee River. Vegetative cover includes, but not limited to, Cypress, Bay, Dahoon Holly, Maple, Pond Pine, Cinnamon Fern, and Lizard Tail.

Figure 4-9 Wetlands and Wetland Buffers



4.2.3.3 Threatened and Endangered Species/Rare Upland Habitat

No listed species were observed within the project corridor; however it should be noted that an updated threatened and endangered species survey and report should be performed during design. **Figure 4-10** provides the listed species occurrence in Orange County, Florida.

4.2.4 Hazardous Material and Contamination Sites

Based on the "Report of In-house Corridor Environmental Study" dated September 28, 2010 and January 18, 2011, site reconnaissance and online review of the Florida Department of Environmental Protection (FDEP) regulatory database research were completed for the Dean Road corridor. Sixteen sites were identified within a ¼-mile of the roadway and are shown in **Figure 4-11** and listed in **Table 4-8**. Fourteen of the 16 sites are Small Quantity Generators (SQGs), Dry Cleaning Sites or Above Ground Storage Tank (AST) Facilities. Sites 1 – 6G are SQGs, which have had no violations and produce less than 100 kg/month of hazardous waste. Sites 9 and 10 are AST facilities also with no violations. None of these 14 sites are adjoining the roadway; therefore the potential for contamination from these sites to impact the roadway are low.

Site 7 (Circle K #7432) is a LUST facility. A Post Active Remediation Monitoring (PARM) Report, dated February 2, 2010, shows that only one of several wells, MW#2 (closest well to the tanks) was found to have exceedences above both Natural Attenuation Default Source Concentrations (NADSCs) and GCTLs. Impacted groundwater remains within the site boundaries and has not migrated into the current right-of-way. The report also shows that groundwater flow was measured toward the northwest, toward the intersection of University Boulevard and Dean Road. Depth to groundwater was measured at 6.4 to 7.5 feet below land surface. Based on the currently ongoing cleanup of the facility and its close proximity of this facility, the site has a high potential for contamination to impact the roadway. Cleanup could reach into the far future, based on the report's discussion of "…an existing source of contamination…" If construction of the roadway was to impact the shallow groundwater, engineering controls (such as slurry wall, grout curtain, groundwater pump and treat system), would need to be constructed to prevent the migration of contaminants. Acquisition of this property would necessitate tank removal/closure, assessment, remediation and monitoring as regulated by Chapter 62-770, F.A.C. More details are provided in the Report dated September 28, 2010.

Figure 4 – 10 Listed Species Occurrence

Table: Summary table of those federal and state listed species known to be present in Orange County, Florida as documented by the FWS and FWC and their potential for occurrence within the corridor.
Code Key: E = Endangered, T = Threatened, P = Proposed, SSC= Species of Special Concern

	Scientific Name	Common Name	Status	Potential
Amphibians	*Rana capito*	gopher frog	SSC	Low
Reptiles	*Alligator mississippiensis*	American alligator	SSC	Low
	Drymarchon corais couperi	eastern indigo snake	T	Low
	Gopherus polyphemus	gopher tortoise	T	Low
	Neoseps reynoldsi	sand skink	T	Low
	Pituophis melanoleucus mugitus	Florida pine snake	SSC	Low
	Stilosoma extenuatum	short-tailed snake	T	Low
Birds	*Ajaia ajaja*	roseate spoonbill	SSC	Low
	Aramus guarauna	limpkin	SSC	Moderate
	Aphelocoma coerulescens	Florida scrub-jay	T	Low
	Speotyto cunicularia floridana	Florida burrowing	SSC	Low
	Egretta caerulea	little blue heron	SSC	Low
	Egretta thula	snowy egret	SSC	Low
	Egretta tricolor	tricolored heron	SSC	Low
	Eudocimus albus	white ibis N/A	SSC	Low
	Falco peregrinus	peregrine falcon	E	Low
	Falco sparverius paulus	southeastern American kestrel	T	Low
	Grus canadensis pratensis	Florida sandhill crane	T	Low
	Haliaeetus leucocephalus	bald eagle	N/A	Moderate
	Mycteria americana	wood stork	E	Low
	Pandion haliaetus	osprey	SSC	Moderate
	Picoides borealis	red-cockaded woodpecker	E	Low
	Sterna antillarum	least tern	T	Low
Mammals	*Podomys floridanus*	Florida mouse N/A SSC Low	SSC	Low
	Sciurus niger shermani	Sherman's fox squirrel	SSC	Low
	Ursus americanus floridanus	Florida black bear	T	Low

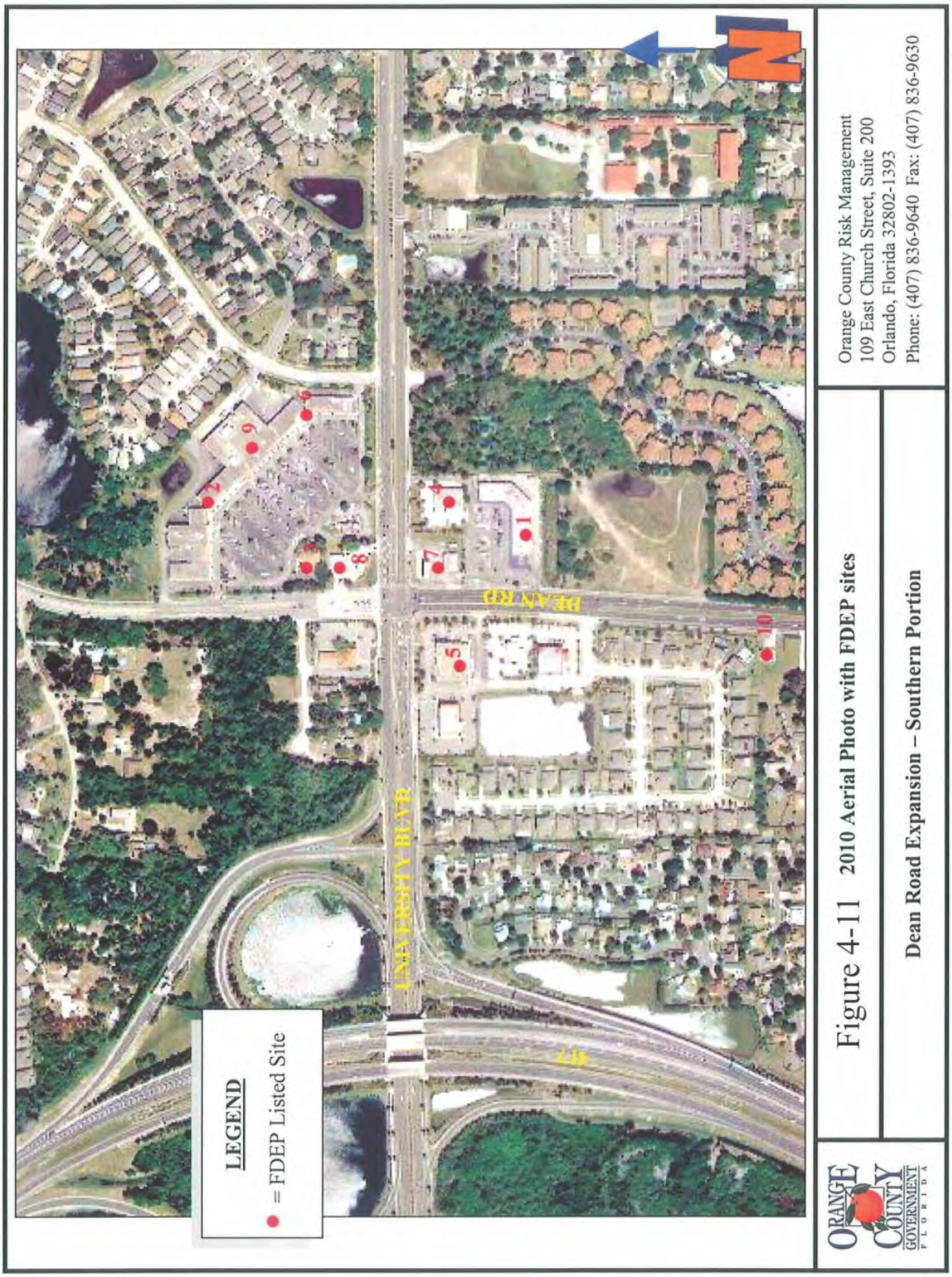

LEGEND
● = FDEP Listed Site
UNIVERSITY BLVD
DEAN RD
417
1
2
3
4
5
6
7
8
9
10
N
Orange County Risk Management
109 East Church Street, Suite 200
Orlando, Florida 32802-1393
Phone: (407) 836-9640 Fax: (407) 836-9630
ORANGE COUNTY GOVERNMENT FLORIDA
Figure 4-11 2010 Aerial Photo with FDEP sites
Dean Road Expansion – Southern Portion

Table 4 – 8 Potential Contaminate Sites

Map Location ID	Facility Name	Address	Type of Site	FDEP ID #s	Comments
1	Liberty Cleaners	10006 University Blvd	SQG	74179	< 100 kg/mo, no violation
			Haz Waste	FLD 984247668	
			Dry Cleaning	489501029	
2	University Family Medical Center	10055 University Blvd	SQG	73390	< 100 kg/mo, no violation
3	University Dental Group	4051 Dean Rd	SQG	74180	< 100 kg/mo, no violation
4	Discount Auto Parts # 610	10060 University Blvd	SQG	76190	< 100 kg/mo, no violation
5	Walgreens # 05240	3950 Dean Rd	SQG	75743	< 100 kg/mo, no violation
			Haz Waste	FLR 000127878	
6A	Etan Photography	10151 University Blvd	SQG	76138	< 100 kg/mo, no violation
6B	Diamonds Sign Repair	10151 University Blvd	SQG	76604	< 100 kg/mo, no violation
6C	UPS Store	10151 University Blvd	SQG	76217	< 100 kg/mo, no violation
6D	University Chiropractic Inc	10157 University Blvd	SQG	10157	< 100 kg/mo, no violation
6E	John M Curry	10151 University Blvd	SQG	76444	< 100 kg/mo, no violation
6F	Dry Clean USA	10173 University Blvd	SQG	75036	< 100 kg/mo, no violation
			Haz Waste	FLD 982162513	
			Dry Cleaning	489502186	
6G	Image Depot	10159 University Blvd	SQG	147183	< 100 kg/mo, no violation
7*	Circle K # 7432 (aka Shell)	10030 University Blvd	Storage Tank	8513396	(LUST) Cleanup Ongoing
			Haz Waste	FLD 984250829	
8*	7-Eleven # 17203	10001 University Blvd	Storage Tank	8521722	(LUST) Cleanup Complete, SRCO
9	Publix # 332	10115 University Blvd	Storage Tank	9809881	AST
10	Goldenrod / Univ Remote Line Switch	3198 Dean Rd	Storage Tank	9804564	AST

SQG = Small Quantity Generator
Haz Waste = Hazardous Waste Facility
AST = Aboveground Storage Tank
LUST = Leaking Underground Storage Tank
SRCO = Site Rehabilitation Completion Report
* 7 - Please see further details in report
* 8 - Please see further details in report

Site 8 (7-Eleven #17203) is a Leaking Underground Storage Tank (LUST) facility. A Natural Attenuation Monitoring (NAM) report, dated December 2, 2009, shows that contaminants of concern were found below groundwater cleanup target levels (CGTLs). The report also shows that groundwater flow is toward the northwest, towards Dean Road. Orange County Environmental Protection Division (OCEPD), on behalf of FDEP, issued a Site Rehabilitation Completion Order (SRCO) on January 14, 2010 and a Well Closure Approval letter on April 12, 2010. At this time, based on the completed clean up status of this facility, there is a low potential for contamination to impact the roadway. However, if a leak/spill were to occur at this site, potential for contamination would increase. More details are provided in the Report dated September 28, 2010.

The FDEP Ethylene Dibromide (EDB) Delineation Map does not show an EDB delineation area at the subject property or in the vicinity.

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Section 5 DESIGN CONTROLS AND STANDARDS

5.1 Roadway Design Criteria

Sources used to determine the design criteria for the Dean Road RCA include the FDOT Plans Preparation Manual, the FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, the FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Florida Greenbook), and the Manual of Uniform Traffic Control Devices (MUTCD). Specific design criteria used for the development of the proposed design are identified below:

- Functional Classification: Urban Minor Arterial,
- Design Speed: 45 mph (Posted: 45 mph),
- Level of Service: LOS of "E" or better,
- Lane Widths: Travel lane - 12 feet,
- Bicycle lane widths: 4 feet (Designated),
- Sidewalk Width: 5 feet,
- Median Width: 17.5 feet (recommended typical section in Figure 4-1), raised Curb Type: Type E (median) Type F (outside),
- Clear Zone: 4 feet from face of curb (outside) 6 feet from edge of median traffic lane,
- Pavement Design: (to be determined), and
- Landscape Budget: (to be determined later in the process).

5.2 Drainage Design Criteria

This project must comply with applicable federal, state, and local government regulations regarding surface waters. The agencies that govern the design include Orange County and SJRWMD. The regulations of Orange County and SJRWMD that apply to this project are outlined below. A portion of the project is within the Little Econlockhatchee River Basin and the Howell Creek Basin, and must adhere to some additional design criteria. This project is located in the jurisdiction of Orange County Subdivision Regulations and must also follow SJRWMD requirements. Specific design criteria for the study area are summarized below:

Roadway Drainage Design:

- Storm sewers: 10-Year Design Frequency
- Roadside ditches: 10-Year Design Frequency
- Cross Drains: 10-Year Design Frequency; Checked for the Mean Annual and 100-Year Design Frequencies

- Detention: 25-Year Design Frequency

Stormwater Management Design:

Water Quality: Wet detention of stormwater equivalent to the greater of the first 1-inch of runoff from the project area or 2.5 inches of runoff from the new impervious area.

Water Quantity: Attenuation of the peak rate of discharge to the predevelopment rate for the mean annual/24-hour design event, and the 25-year/24-hour design event.

5.2.1 Drainage Design & Permitting

Stormwater management systems for new developments should provide:

(1) Pollution Abatement,
(2) Recharge where possible (in A soils), and
(3) Protection from flooding.

The design of stormwater management facilities is governed by Orange County Subdivision regulations and SJRWMD criteria. Detailed drainage, design, and permitting requirements are discussed in the Conceptual Drainage & Ponding Siting Report.

Section 6 TRAFFIC

The information used to develop this chapter was adapted from the *Dean Road Design Traffic Technical* Memorandum (October 2013). The *Design Traffic Technical Memorandum* documents the existing traffic conditions, planned and programmed roadway improvements in the area, development of the existing and future traffic forecasts for the No-Build and Build scenarios, and the Level of Service (LOS) analyses for the future year roadway and traffic conditions.

6.1 Existing Roadway Conditions

6.1.1 Existing Traffic Counts

Traffic Counts were taken at the locations shown on **Figure 6-1**

6.1.2 Existing Conditions

Under existing conditions Dean Road is a two-lane undivided roadway throughout the project corridor, widening to four lanes just north of University Boulevard for transition to the four-lane divided section south of University Boulevard. The posted speed limit is 45 mph. Much of the corridor is curved with an advisory speed of 35 mph. North of McCulloch Road/Lake Georgia Drive, into Seminole County, the speed limit reduces to 40 mph.

The following intersections were evaluated as part of this study:

- Dean Road at University Boulevard (signalized),
- Dean Road at Shadrack Court (unsignalized),
- Dean Road at Publix entrances (unsignalized),
- Dean Road at Lake Georgia Drive (unsignalized),
- Dean Road at Cheshunt Drive (unsignalized), and
- Dean Road at McCulloch Road/Lake Georgia Drive (signalized).

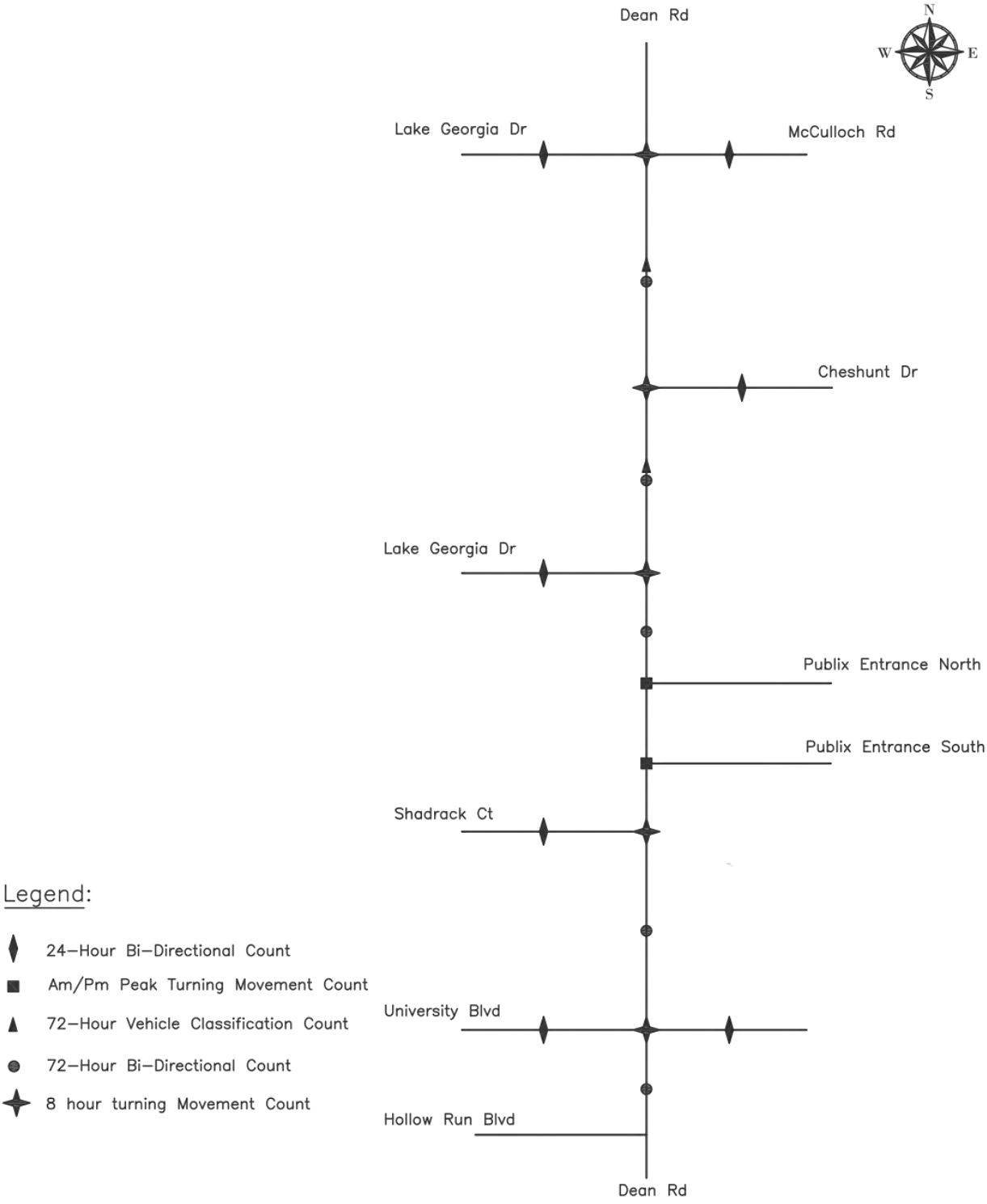
The existing intersection geometry for the listed intersections is provided on **Figure 6-2**.

6.1.3 Existing Traffic Volumes

The existing Average Annual Daily Traffic (AADT) volumes and corresponding Directional Design Hour Volumes (DDHV) for the various roadway segments are shown on **Figure 6-3**.

6.1.4 Existing Level of Service (LOS)

The LOS for both signalized and unsignalized intersections and roadway links along the corridor is presented on **Figure 6-4** (A.M. Peak Hour Intersections), **Figure 6-5** (P.M. Peak Hour Intersections), and **Figure 6-6** (Segments).

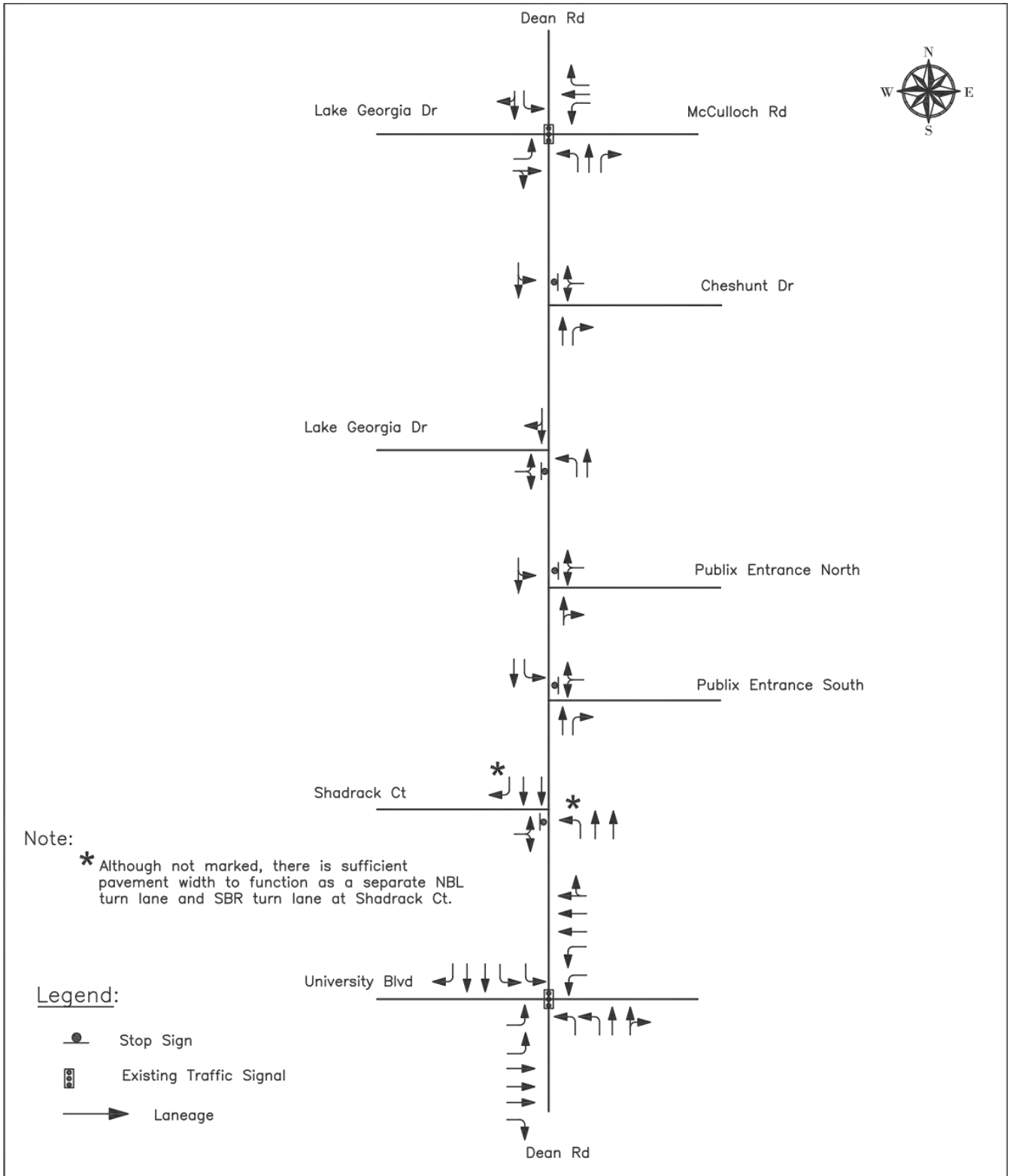


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Traffic Count
Location Type

Figure 6-1

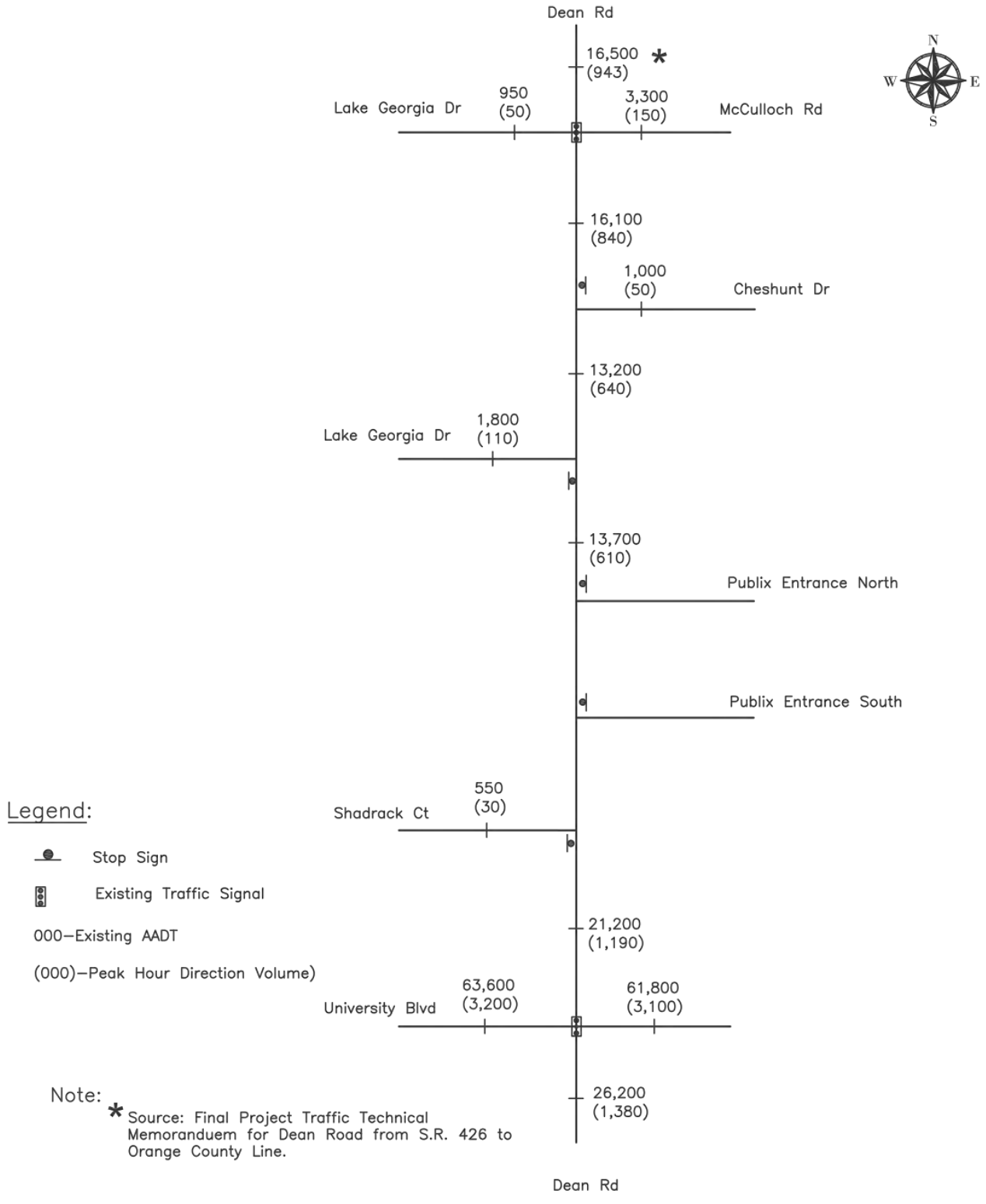


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Existing Intersection Geometry

Figure 6-2

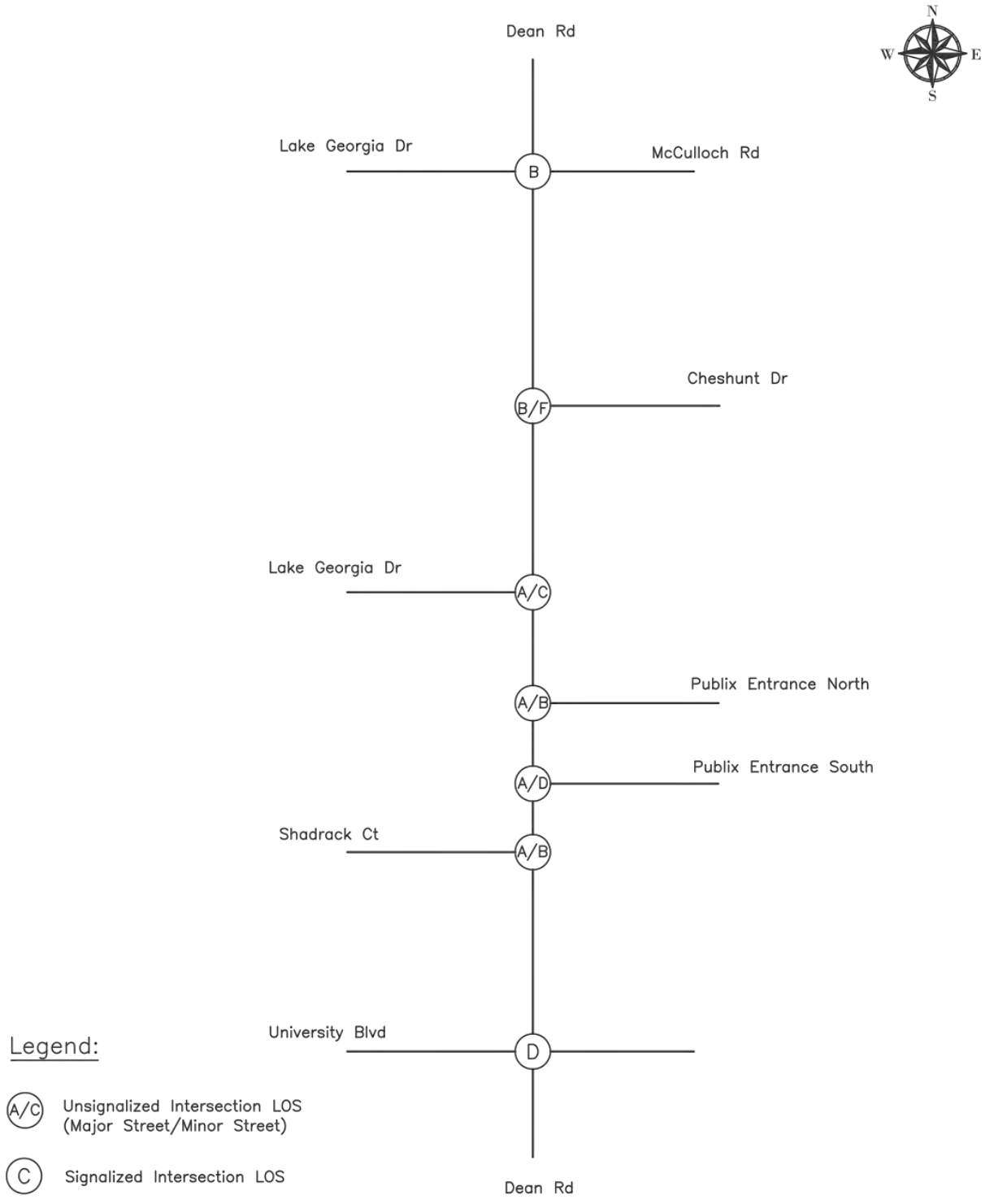


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Existing AADT (Peak Hour Peak Direction Volume)

Figure 6-3

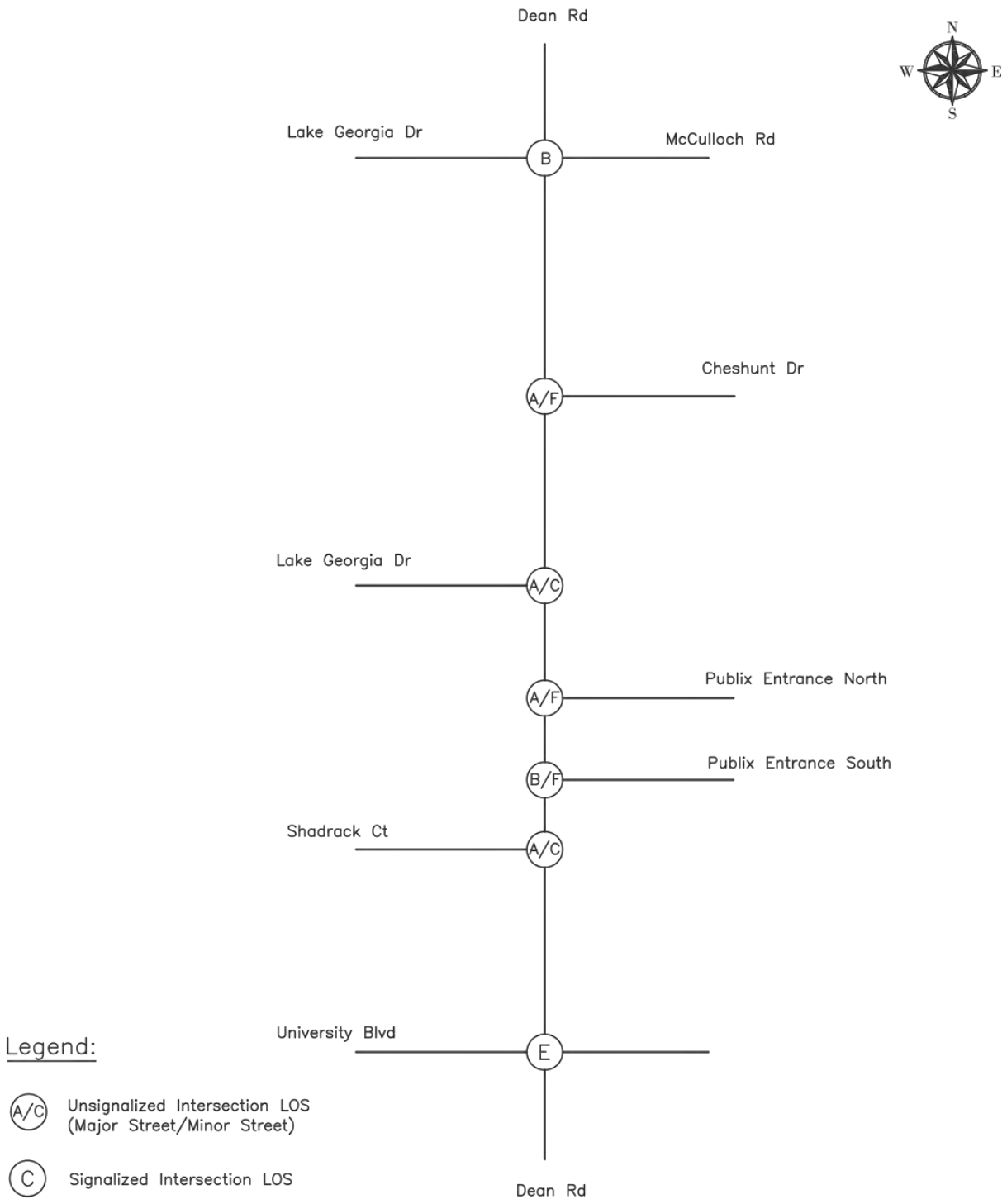


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Existing AM Peak Hour
Intersection Levels of Service

Figure 6-4

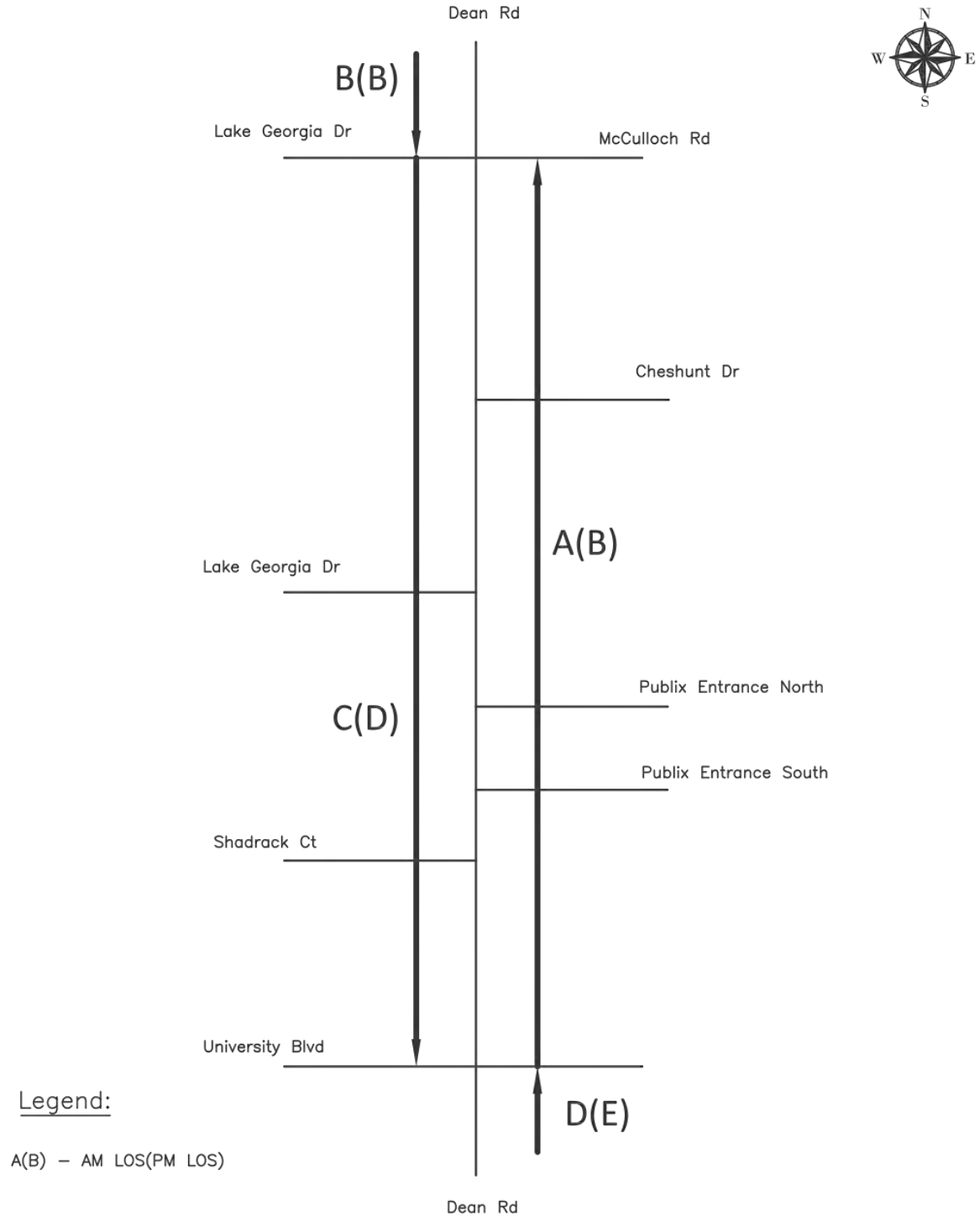


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Existing PM Peak Hour
Intersection Levels of Service

Figure 6-5



ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Existing Peak Hour
Roadway Segment Levels of Service

Figure 6-6

6.1.4.1 Intersections

Intersection analyses were performed using the Highway Capacity Manual (HCM 2000) procedures for signalized and unsignalized intersections and utilizing the Highway Capacity Software (HCS version 4.1c). As shown in **Figure 6-4** and **Figure 6-5**, the signalized intersection of Dean Road with University Boulevard currently operates at LOS D during the AM peak hour and LOS E during the PM peak hour. The signalized intersection with McCulloch Road/Lake Georgia Drive currently operates at LOS B during both the AM and PM peak hours. The unsignalized intersection analysis results in separate levels of service for the main street and side street approaches. All unsignalized intersections currently operate at LOS B or better for the main street (Dean Road) movements during the peak hours. However, the Cheshunt Drive approach is currently failing during both peak hours, as are the Publix driveways during the PM peak hour.

6.1.4.2 Roadway Links

The roadway link LOS for individual roadway segments was obtained by comparing the existing peak hour directional volumes against the capacity thresholds from the FDOT 2002 Quality/LOS Handbook Generalized Tables. **Figure 6-6** depicts the results of the corridor level of service analysis for both the AM and PM peak hours. The roadway currently operates under capacity (LOS D or better) during both hours, except for the northbound approach to the University Boulevard intersection during the PM peak hour, which operates at capacity (LOS E).

6.2 Multimodal Transportation System Considerations

Dean Road, within the RCA study limits, serves primarily residential land uses, with some commercial land uses near University Boulevard. There are no park-and-ride facilities in the area, and the personal automobile is the primary mode of transportation. Transportation modes other than private automobiles are discussed below.

6.2.1 Bus Service

LYNX, the Central Florida Regional Transportation Authority, provides transit service on four routes (Link 13, 29, 30 and 434) in the vicinity of the Dean Road study area which includes one route (Link 13) that crosses Dean Road along University Boulevard. LYNX does not provide transit service along any portion of Dean Road in Orange or Seminole County and does not have future plans to expand service to Dean Road. Link 13 provides service between the LYNX Central Station and the University of Central Florida. Link 13 includes a total of seven stops including one at the intersection of University Boulevard and Dean Road. Headways for Link 13, stop #6 are one hour Monday through Saturday from 5:06 AM to 11:22 PM and one hour on Sunday and Holidays from 6:32 AM to 8:39 PM.

6.3 Traffic Analysis Assumptions

6.3.1 Design Assumptions

The following years are designated as the analysis years:

- Existing Year – 2011,
- Opening Year – 2016,
- Mid-Design Year - 2026, and
- Design Year – 2036.

6.3.2 Analysis Scenarios

Two scenarios were evaluated in the development of design traffic forecasts for the Dean Road corridor. These scenarios include a No-Build condition, which assumes that the Dean Road will maintain the existing lane geometry and intersection configurations. The Build scenario assumes that Dean Road will be widened to a four-lane roadway between University Boulevard and McCulloch Road.

The Build scenario is consistent with the programmed improvements identified in the FY 2010/2011 – 2014/2015 Orlando Urban Area Transportation Improvement Program (TIP) adopted by METROPLAN in July 2010 and the Orlando Urban Area Year 2030 Long Range Cost Feasible Plan.

In addition, alternative intersection improvement scenarios were developed and evaluated. These intersection options included:

- No intersection improvements,
- Utilization of triple-left turn lanes on select approaches,
- A “reverse jug-handle” configuration that involved creating intersection by-pass routes in the northwest and southeast quadrants of the intersection, and
- A “U-turn” or “Michigan Left” configuration that involved creating signalized median openings east and west on University Boulevard to relocate turns away from the intersection.

The “reverse jug-handle” configuration replaces the left turn with two right turns. The jug handle is actually a type of ramp, or slip road, which allows drivers to change directions (left to right) without disruptive stops or U-turns. Instead of making a left turn from the left lane, drivers use a ramp on the right side of the road that takes them off the road they are currently travelling on and loops them back around to merge with traffic. For the “reverse jug-handle” turn, the ramp leaves after the intersection, and left-turning traffic loops around to the right to merge with the crossroad before the intersection.

The “U-turn” or “Michigan left” configuration is an at-grade intersection design that replaces each left turn with a permutation of a U-turn and a right turn. Where a “U-turn” or “Michigan Left” is in place, left turns at the intersection are not permitted. Instead, to

turn left, drivers continue straight or turn right, then make a U-turn at a median crossover, guided by the appropriate signage.

6.3.3 Design Characteristics

Existing travel characteristics for the project corridor were developed from the traffic count information collected for this study and from the existing traffic count information provided by Orange County. The design traffic characteristics were developed using traffic flow characteristics obtained from the traffic count data. Based on past and current growth in this area, it is assumed that the travel characteristics for the area will vary slightly. **Table 6-1** contains the recommended design characteristics in terms of K_{30}, D_{30}, and T-peak factors.

Table 6-1
Dean Road RCA
Recommended Design Traffic Characteristics

Roadway	K30	D30	Tdaily	Tpeak
Dean Road	9.9%	56.2%	4.0%	2.0%
Side Streets				
University Boulevard	9.2%	54.0%	4.6%	2.3%
McCulloch Road/Lake George Drive	9.2%	59.4%	2.0%	10.0%
Lake Georgia Drive	9.6%	64.0%	2.0%	10.0%
Cheshunt Drive	9.2%	53.4%	2.0%	10.0%
Shadrack Court	12.4%	50.8%	2.0%	10.0%

K30 value for Dean Road and University Boulevard based on the 5-yr average (2006-2010) of historical measured K values converted to estimated K30. K30 values for side streets based on the greater of either the estimated K30 or the minimum recommended K30 for an urban arterial, FDOT Project Traffic Forecasting Handbook. D30 value for University Boulevard based on the 5-yr average (2006-2010) of historical D values. D30 values for side streets based on the greater of the measured D values or the minimum recommended D30 for an urban arterial, FDOT Project Traffic Forecasting Handbook.

The analysis approach also incorporated a supplemental analysis that focused on the design traffic volumes and recommended improvements for the Build scenario at the intersection of University Boulevard and Dean Road. This was determined to be a critical intersection within the Dean Road corridor due to the existing high volumes on University Boulevard and the different factors that will affect the potential short-range and long-range growth on University Boulevard. Using the existing traffic counts collected as part of the supplemental analysis for the intersection of Dean Road and University Boulevard (September 2011), that reflected conditions with the area schools (UCF, VSC and OC Public Schools) in session, separate Recommended Design Traffic Characteristics were developed. The Recommended Design Characteristics for the supplemental analysis (minimum limits of future design traffic volumes) for the intersection of University Boulevard and Dean Road (Build scenario) are shown on the next page.

	Dean Road	University Boulevard
K_{30} Factor	9.20%	8.70%
D Factor	55.40%	53.40%
T_{Peak}	2.00%	2.00%
T_{Daily}	4.00%	4.00%

6.4 Traffic Volume Projections

Future year traffic volume projections were developed from an examination of historical traffic growth, proposed development in the corridor vicinity, and a basic understanding of the traffic circulation patterns and characteristics of the corridor. Various growth rates were examined to arrive at volume forecasts for Dean Road.

6.4.1 Florida Standard Urban Transportation Model System (FSUTMS)

The Orlando Urban Area Transportation Study (OUATS) FSUTMS model was used in forecasting future traffic for the Dean Road corridor. This model has a base year 2004 validation and a long-range forecasting application for the year 2030. The model was used to forecast volumes for the No-Build and Build conditions, with the No-Build condition representing a continuation of existing roadway geometry and the Build condition reflecting the proposed widening of Dean Road.

The OUATS Year 2030 mode Cost Feasible network did not include the widening of Dean Road from University Boulevard to the Seminole County line. However, the widening of Dean Road from two to four lanes from the Seminole County line to Aloma Avenue was included. This model network was used for the “No Build” scenario. For the “Build” scenario, the Cost Feasible network of the OUATS model was edited to change the number of lanes on Dean Road for this project from two to four lanes. Other modifications which were made to both the “Build” and “No Build” networks include:

- Correcting the coding of the new Richard Crotty Parkway from a 2 lane roadway to a 4 lane divided roadway from Semoran Boulevard to Forsyth Road, and
- Widening SR 50 from 4 lanes to 6 lanes from Dean Road to Old Cheney Highway.

The future traffic volumes for the No Build Scenario and Build Scenario were prepared from a comparison of the trends analysis, OUATS FSUTMS model, and other sources to determine the recommended growth rates. The FSUTMS model projections for Dean Road were believed to be overly high and unrealistic, especially for the “Build” run. It was concluded that in order to use the model volumes alone for this project a sub-area

model would need to be calibrated; therefore, for this project other sources were also used to develop the traffic projections. Additional information on the traffic forecast model is included in the *Dean Road Design Traffic Technical Memorandum*.

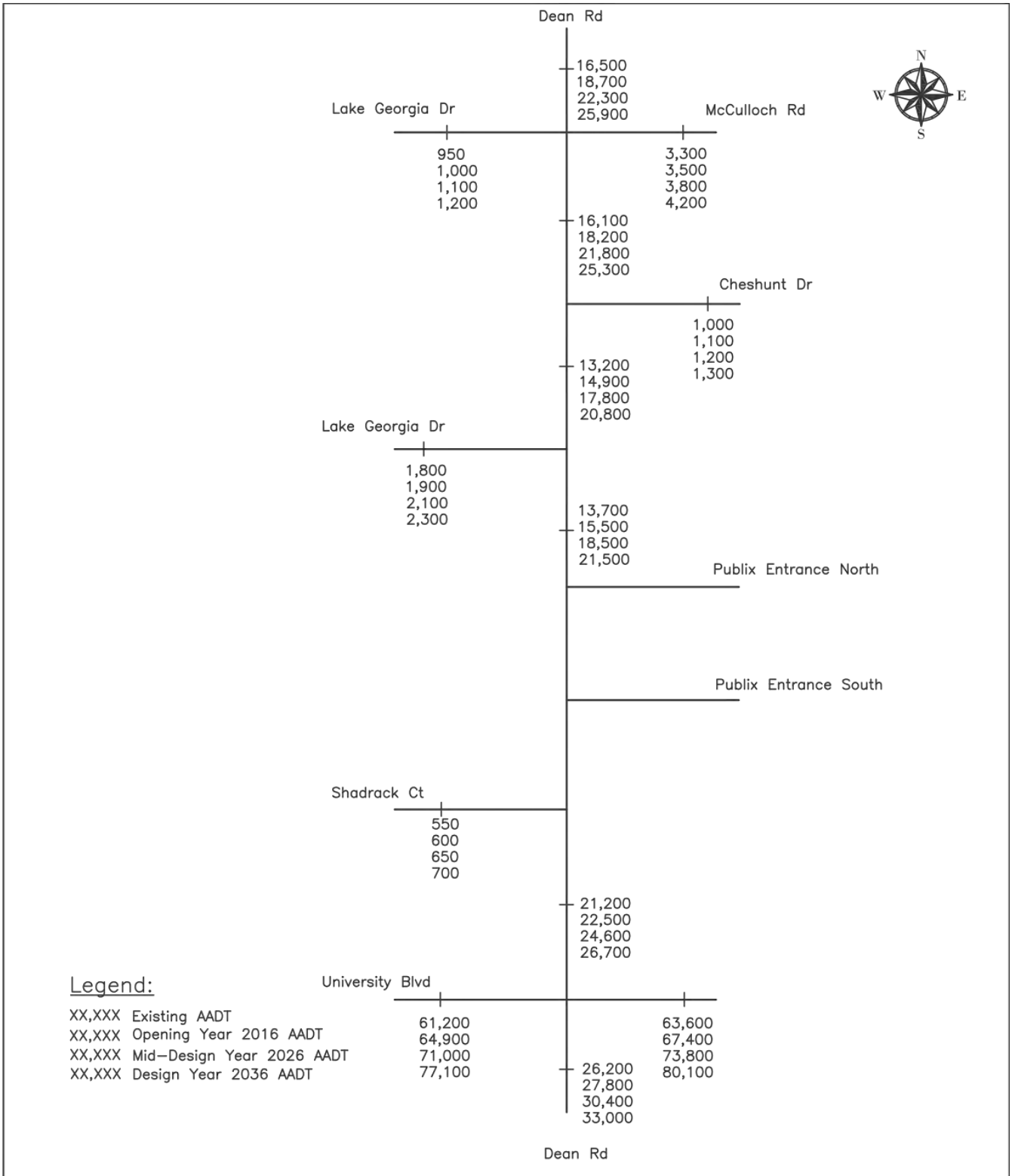
6.5 Future Conditions – No-Build

The No-Build condition for the project assumes that the facility will maintain the existing lane geometry and intersection configurations (see **Figure 6-2**). The No-Build geometry is generally the same as the existing roadway geometry, with the exception of any programmed improvements. There were determined to be no programmed construction projects proximate to the Dean Road corridor.

6.5.1 No-Build Traffic Forecasts

The existing and projected AADT volumes for the opening year 2016, mid-design year 2026, and design year 2036 for the No-Build condition are depicted on **Figure 6-7**. The recommended growth rate for Dean Road south of McCulloch Road/Lake Georgia Drive is 2.20% per year, which is a conservative average of the trends, “No Build” OUATS, and “No Build” Seminole County study growth rates. This growth rate was used for the majority of the project from Lake Georgia Drive to McCulloch Road/Lake Georgia Drive. For Dean Road north of University Boulevard a growth rate of 1.00% per year is recommended, corresponding with the OUATS “No Build” model growth rate. This growth rate was used for the short segment from University Boulevard to the Publix driveways which is already high-volume.

TURNS5 spreadsheets were used to develop design hour volumes for each of the intersections. The AM peak and PM peak design hour volumes for Dean Road for the opening year, mid-design year, and design year, are shown on **Figures 6-8 to 6-13**.

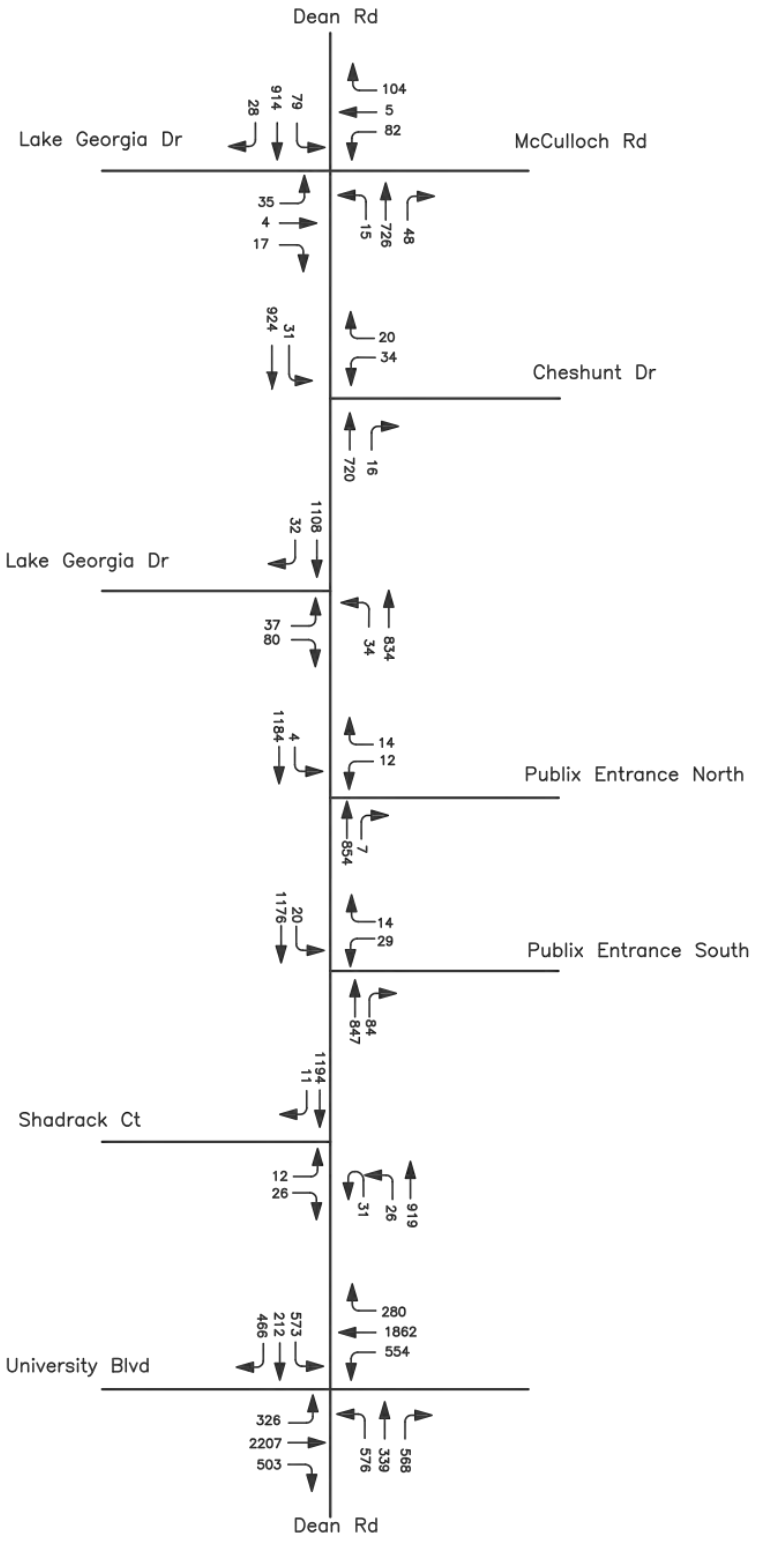


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Daily Traffic Projections
No Build Scenario

Figure 6-7

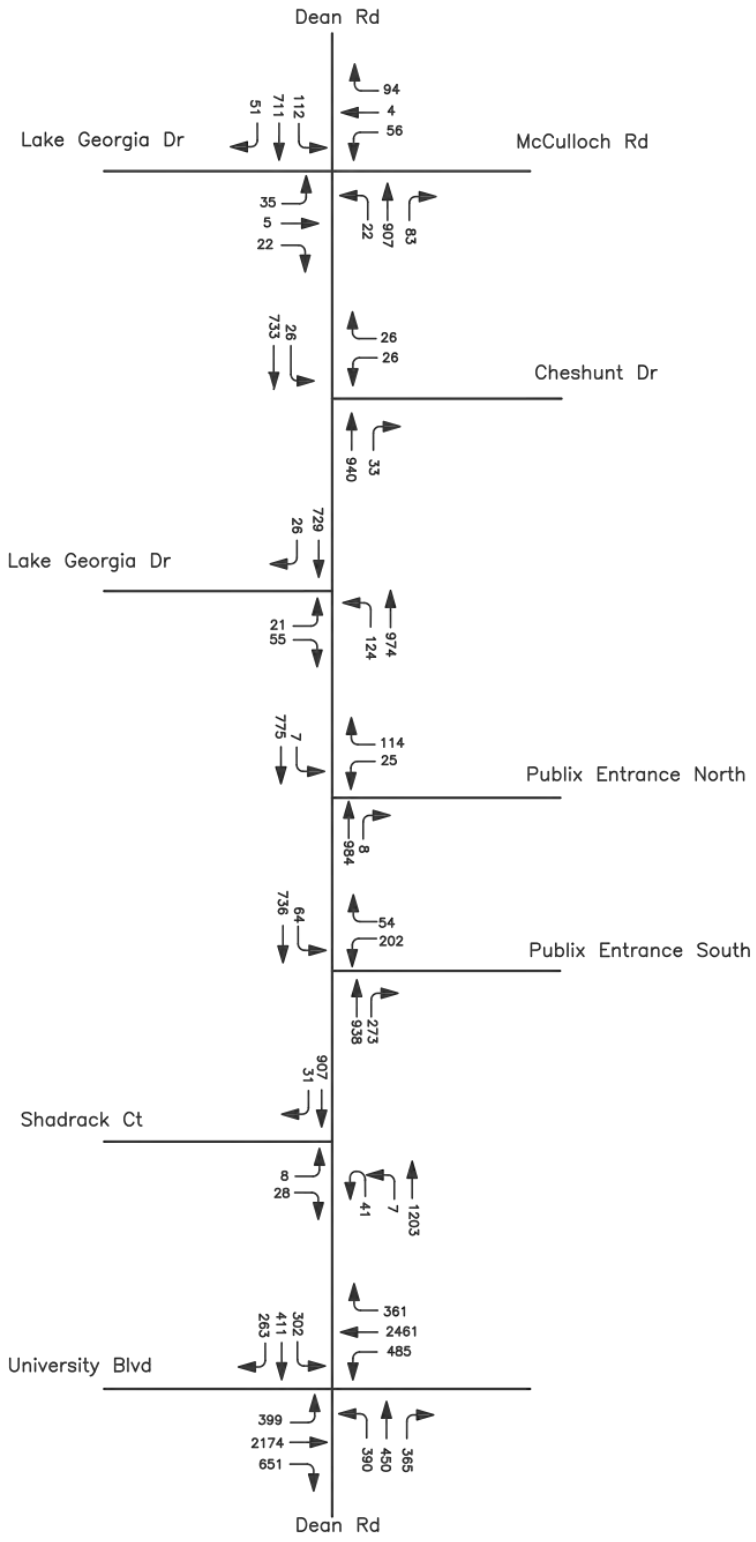


ORANGE COUNTY GOVERNMENT FLORIDA

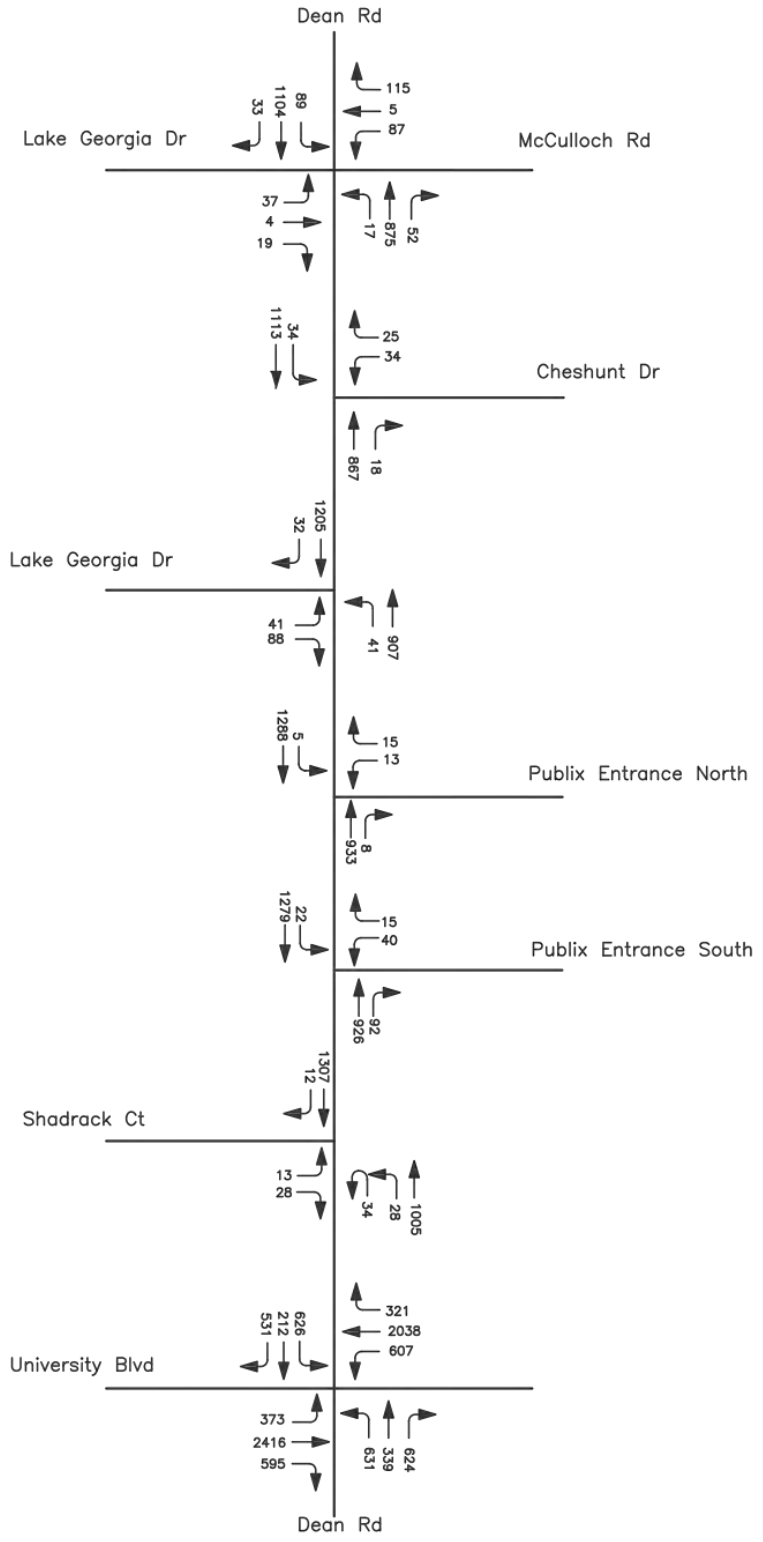
Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Opening Year 2016
No Build Scenario
Turning Movements Volumes
AM Peak Hour

Figure 6-8



ORANGE COUNTY GOVERNMENT FLORIDA	Dean Road Roadway Conceptual Analysis University Blvd to McCulloch Rd	Opening Year 2016 No Build Scenario Turning Movements Volumes PM Peak Hour Figure 6-9

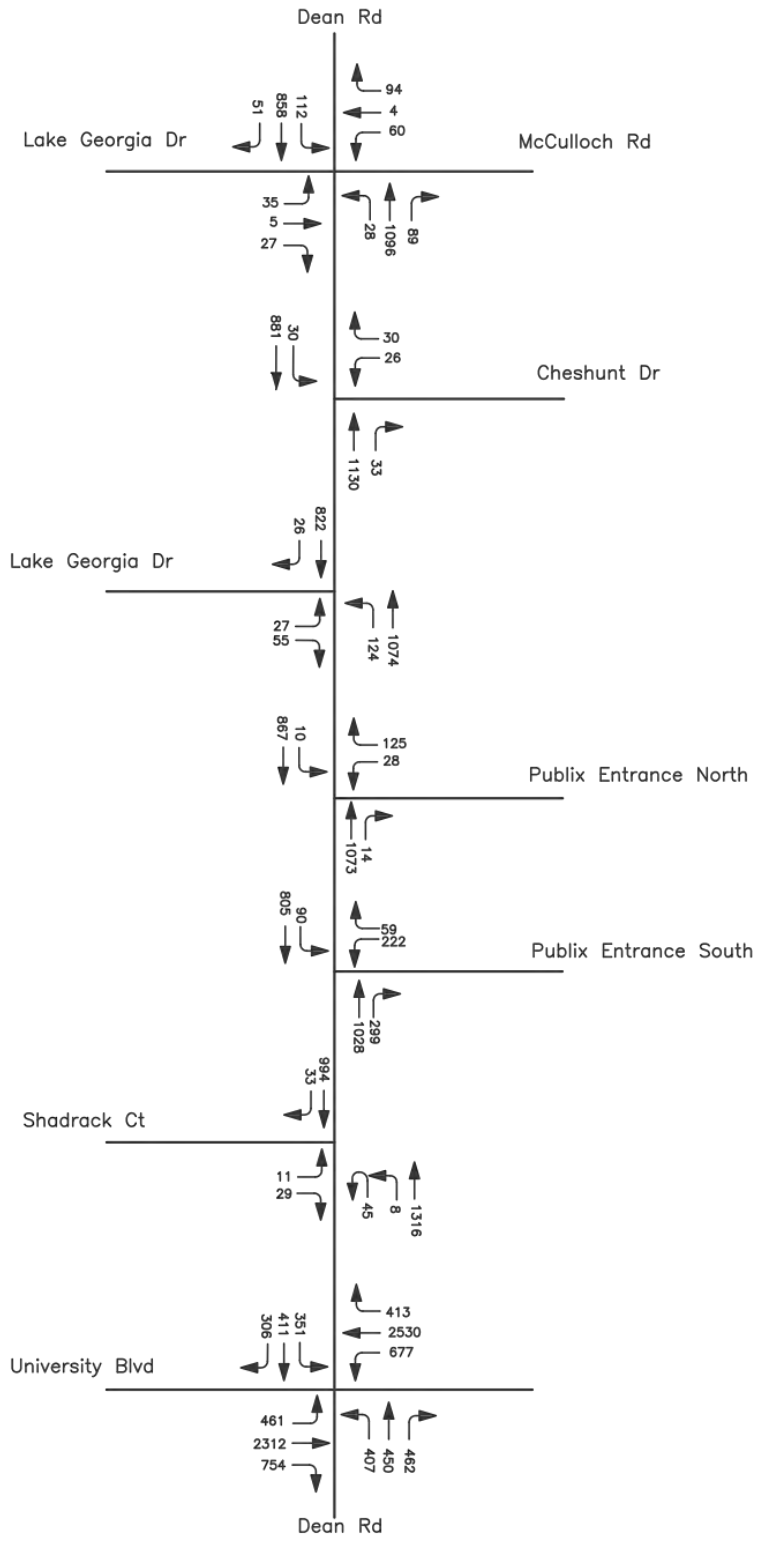


ORANGE COUNTY GOVERNMENT FLORIDA

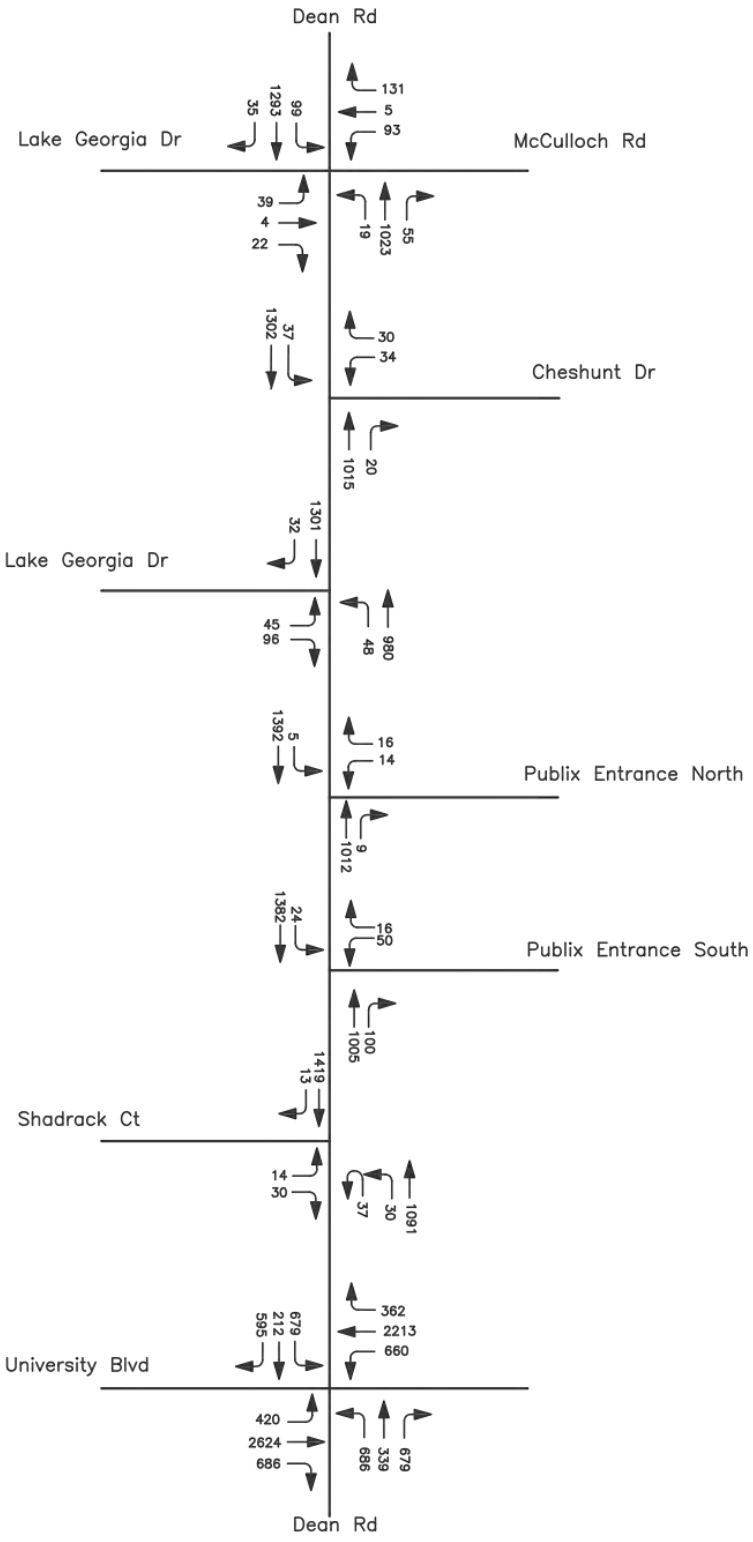
Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Mid-Design Year 2026
No Build Scenario
Turning Movements Volumes
AM Peak Hour

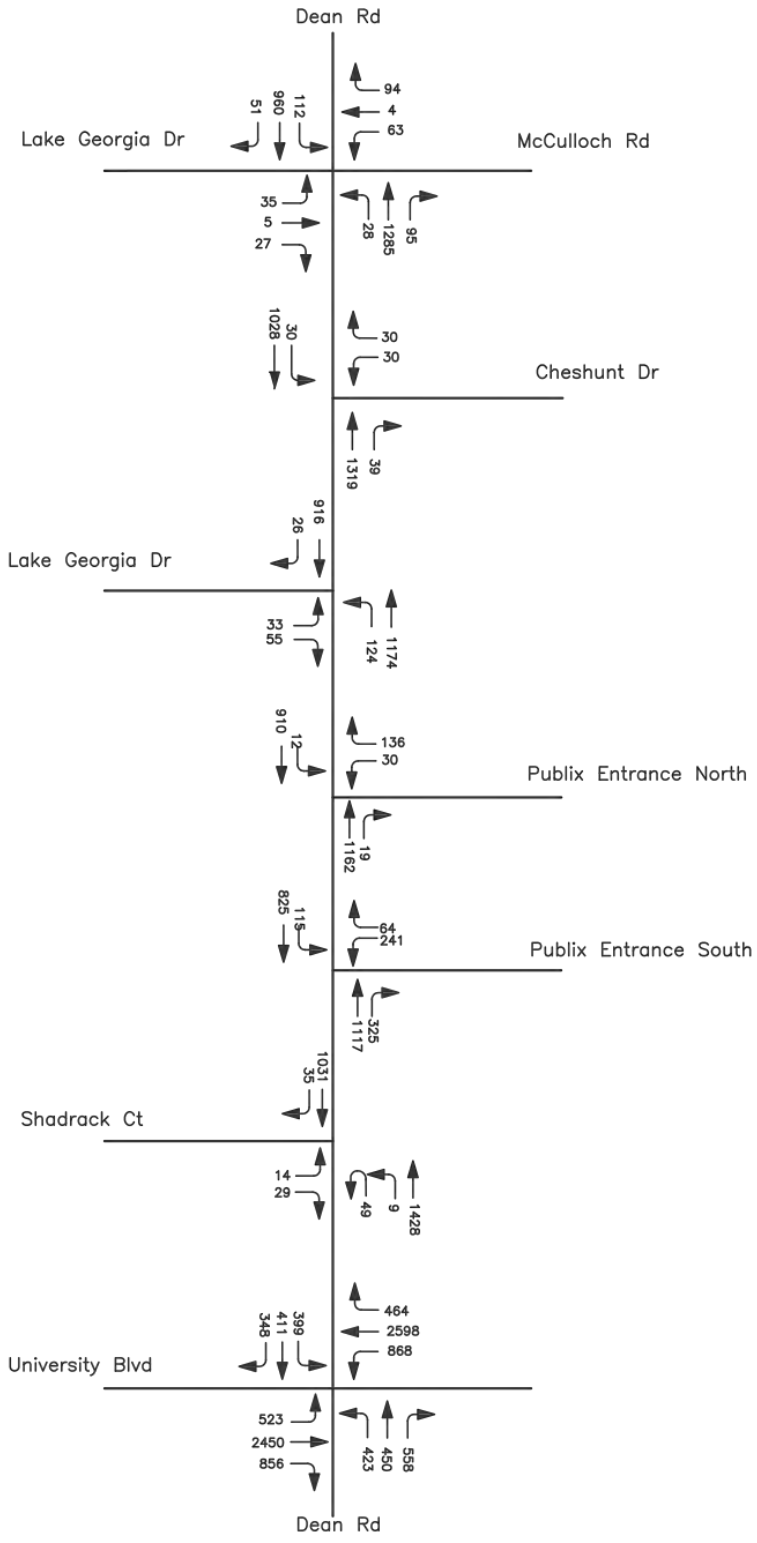
Figure 6-10



ORANGE COUNTY GOVERNMENT FLORIDA	Dean Road Roadway Conceptual Analysis University Blvd to McCulloch Rd	Mid-Design Year 2026 No Build Scenario Turning Movements Volumes PM Peak Hour Figure 6-11



ORANGE COUNTY GOVERNMENT FLORIDA	Dean Road Roadway Conceptual Analysis University Blvd to McCulloch Rd	Design Year 2036 No Build Scenario Turning Movements Volumes AM Peak Hour Figure 6-12



Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Design Year 2036
No Build Scenario
Turning Movements Volumes
PM Peak Hour

Figure 6-13

6.5.2 No-Build Level of Service (LOS)

For the "No Build" scenario, the future volumes presented in the figures from Section 6.5.1 above **Figures 6-8 to 6-13** were evaluated based on no improvement to the roadway system, with Dean Road as a two lane undivided roadway .

The results of the No Build Scenario arterial analysis are presented in **Table 6-2** for opening year 2016, mid-design year 2026, and design year 2036 for both the AM and PM peak hours, by direction. In the opening year, Dean Road is projected to operate with an overall LOS D in the northbound direction during both peak hours and an overall LOS C in the southbound direction during both peak hours. These levels of service continue through the mid-design year 2026. However, by the design year the level of service for the northbound direction during the PM peak hour drops to LOS E.

The worse level of service during the AM peak hour for the non-peak direction (LOS D) compared to the peak direction (LOS C) occurs because although the peak direction for Dean Road during the AM peak hour is southbound from McCulloch Road to University Boulevard, the peak direction for the short segment south of University Boulevard is northbound. The failing level of service at the University Boulevard intersection causes the level of service for this approach to be LOS F, and the overall arterial level of service to be LOS D.

The results of the No Build Scenario intersection analysis are presented in **Table 6-3** for opening year 2016, mid-design year 2026, and design year 2036 for both the AM and PM peak hours.

For all horizon years the University Boulevard intersection, is projected to fail at LOS F during both AM and PM peak hours if no improvement is made. The McCulloch Road/Lake Georgia Drive intersection is projected to operate at LOS B and C in the opening year during the AM and PM peak hours, respectively. This intersection progresses to LOS C in the mid-design year and LOS D in the design year during both peak periods.

The unsignalized intersections are all projected to operate with acceptable levels of service for the Dean Road approaches from the opening year through the design year. The side street approaches of all but one of the unsignalized intersections, however, are projected to experience long delays which result in failing levels of service during both the AM and PM peak periods. These long delays are due to the STOP control for the minor street movement and are not a geometric deficiency.

The only exception is the Shadrack Court approach. During the PM peak period the Shadrack Court approach progresses from LOS C in the opening year, to LOS D in the

mid-design year, and to LOS E in the design year. However, during the AM peak hour it is projected to deteriorate from LOS E in the opening year to LOS F in the mid-design year and design year.

Table 6-2
Dean Road RCA
Arterial Level of Service Analysis Results
No Build Scenario

Year	Segment	AM		PM	
		NB (non-pk dir)	SB (peak dir)	NB (peak dir)	SB (non-pk dir)
2016	S. of University Blvd	F	n/a	F	n/a
	University Blvd to McCulloch Rd	A	C	B	C
	north of McCulloch Rd	n/a	B	n/a	B
	Overall	D	C	D	C
2026	S. of University Blvd	F	n/a	F	n/a
	University Blvd to McCulloch Rd	A	C	B	D
	north of McCulloch Rd	n/a	C	n/a	B
	Overall	D	C	D	C
2036	S. of University Blvd	F	n/a	F	n/a
	University Blvd to McCulloch Rd	A	C	C	D
	north of McCulloch Rd	n/a	D	n/a	B
	Overall	D	C	E	C

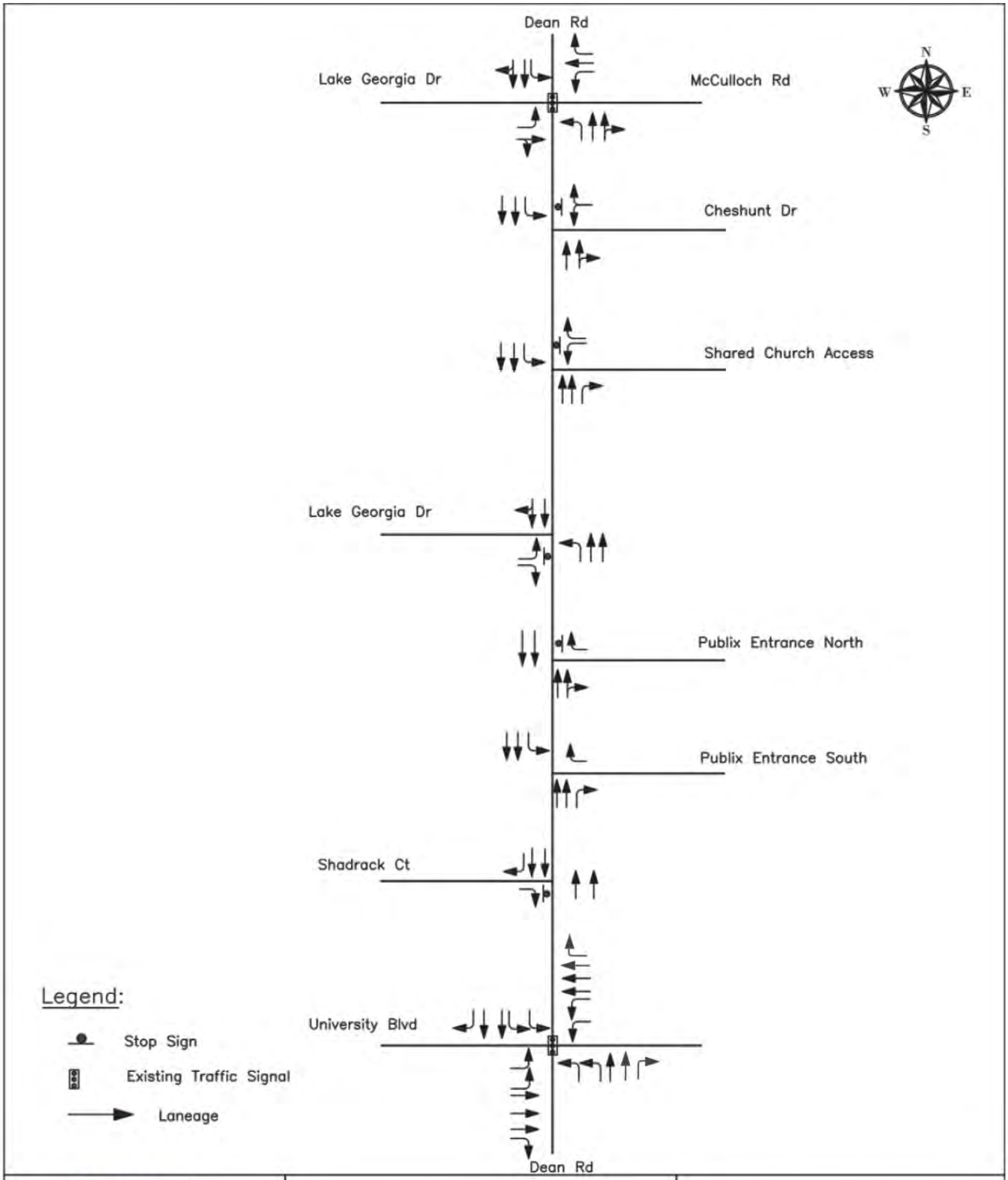
Table 6-3
Dean Road RCA
Intersection Level of Service Analysis Results
No Build Scenario

Intersection with Dean Road	Intersection Level of Service					
	Opening Year 2016		Mid-Design Year 2026		Design Year 2036	
	AM	PM	AM	PM	AM	PM
University Bv	F	F	F	F	F	F
Shadrack Ct	B/E	B/C	B/F	B/D	B/F	B/E
Publix Dr S	B/F	C/F	B/F	C/F	B/F	D/F
Publix Dr N	A/F	A/F	A/F	A/F	A/F	A/F
Lake Georgia Dr	B/F	B/F	B/F	B/F	B/F	B/F
Cheshunt Dr	A/F	A/F	A/F	A/F	A/F	A/F
McCulloch Rd	B	C	C	C	D	D

Note:
For signalized intersections, level of service represents overall intersection level of service.
For unsignalized intersections, level of service represents Dean Rd/minor street level of service.

6.6 Future Conditions – Build

The Build condition for Dean Road assumes that the facility will be widened to a four-lane roadway. The recommended roadway and intersection Build geometry is shown on **Figure 6-14**. The proposed Build geometry includes an additional through lane in the northbound and southbound directions and auxiliary right turn lanes on northbound Dean Road and westbound University Boulevard at the Dean Road and University Boulevard intersection.



ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Recommended Build
Intersection Geometry

Figure 6-14

6.6.1 Build Design Hour Traffic Forecasts

The existing and projected AADT volumes for the opening year 2016, mid-design year 2026, and design year 2036 for the Build Condition are shown on **Figure 6-15**. TURNS5 spreadsheets were used in developing design hour volumes for each of the 7 intersections. The design hour volumes for the opening year, mid-design year, and design year, are shown on **Figures 6-16** through **6-21**.

Future traffic volume forecasts were also developed as part of a supplemental analysis that focused on the Build scenario at the intersection of University Boulevard and Dean Road. See **Figure 6-22** for the preferred Dean Road and University Boulevard intersection options. The supplemental analysis utilized an alternative set of assumptions relating to traffic characteristics and growth rates, which resulted in lower future volumes for the intersection of University Boulevard and Dean Road for the Build Scenario. Using this approach, minimum and maximum limits of future intersection volumes for University Boulevard and Dean Road were identified using the initial analysis for the entire Dean Road corridor (maximum limit) and the supplemental analysis of the intersection of University Boulevard and Dean Road (minimum limit). The design traffic volumes for the Build Scenario at the intersection of University Boulevard and Dean Road are included in **Figure 6-23**.

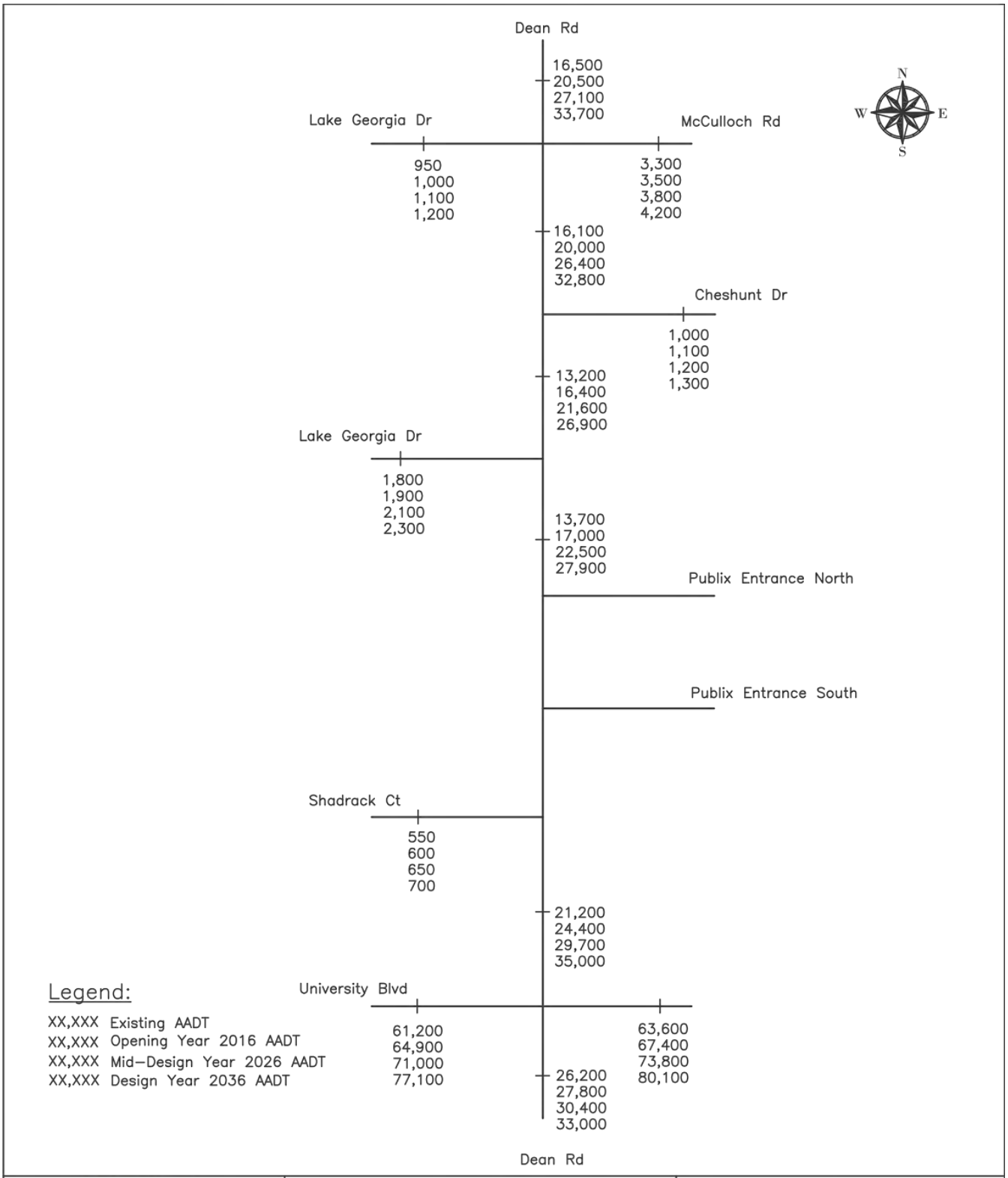
6.6.2 Build Level of Service (LOS)

For the “Build” scenario, the design year 2036 volumes presented in **Figures 6-20** and **6-21** were evaluated based on the widening of Dean Road to a four lane divided arterial.

ACCESS MANAGEMENT

The projected turning movement volumes presented in **Figures 6-16** through **6-21** represent future “Build” traffic under existing access conditions. However, Dean Road is planned to be widened as a four lane divided roadway with a median. It was assumed that Dean Road will be considered as FDOT Access Class 5 based on land use and roadway type. The access management spacing standards for Access Class 5 are:

- 245’ connection spacing,
- 660’ directional opening spacing, and
- 1320’ full opening spacing.

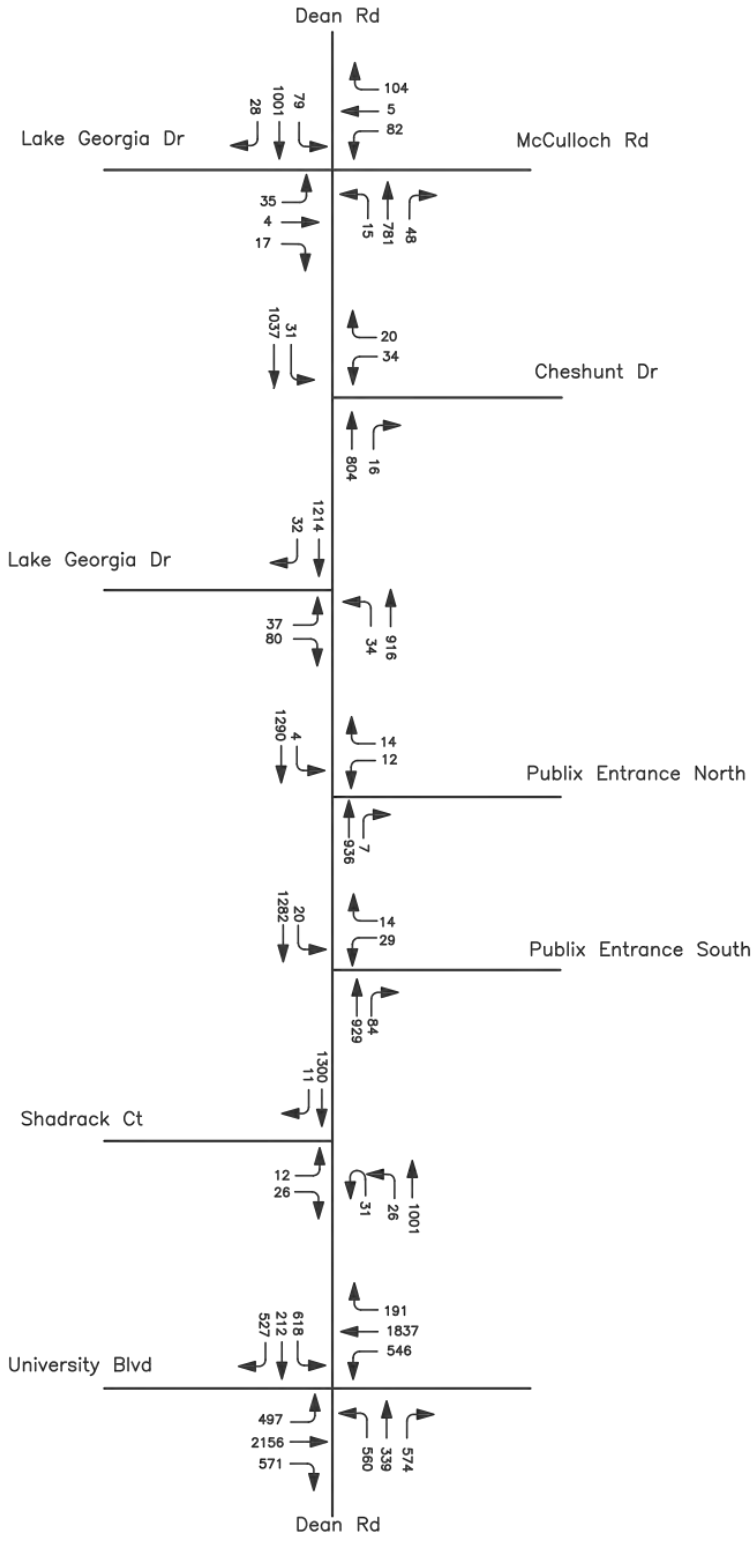


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Daily Traffic Projections
Build Scenario

Figure 6-15

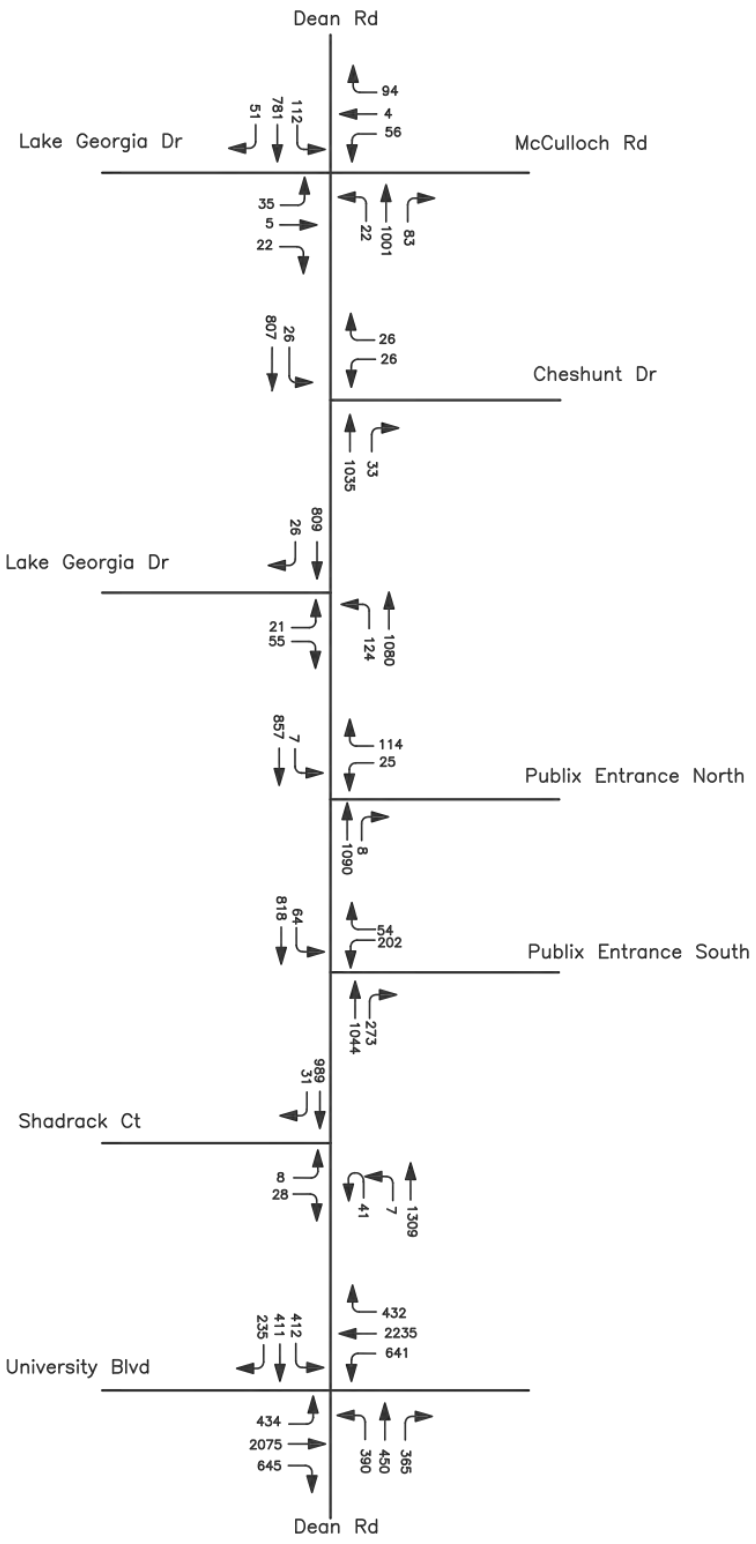


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Opening Year 2016
Build Scenario
Turning Movements Volumes
AM Peak Hour

Figure 6-16

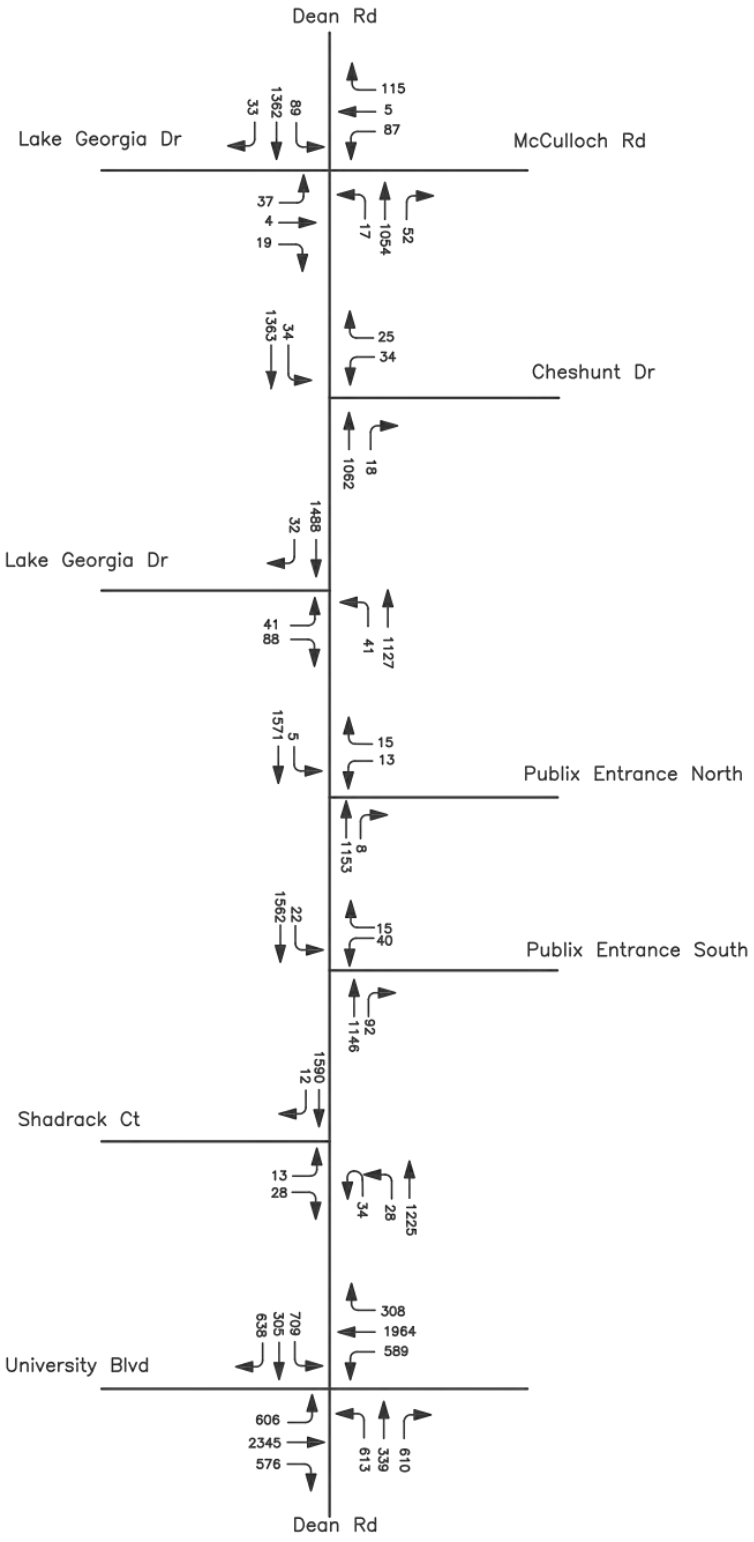


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Opening Year 2016
Build Scenario
Turning Movements Volumes
PM Peak Hour

Figure 6-17

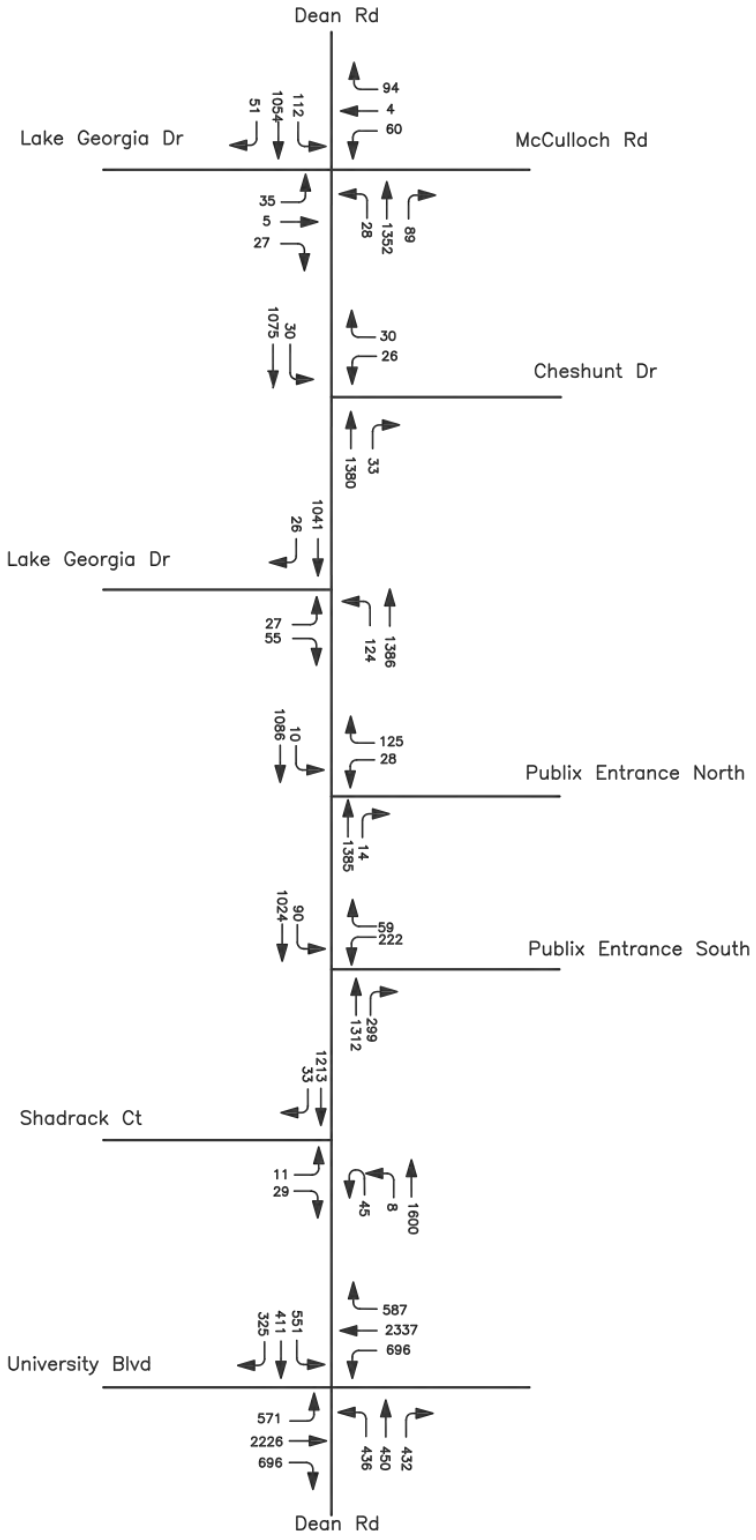


ORANGE COUNTY GOVERNMENT FLORIDA

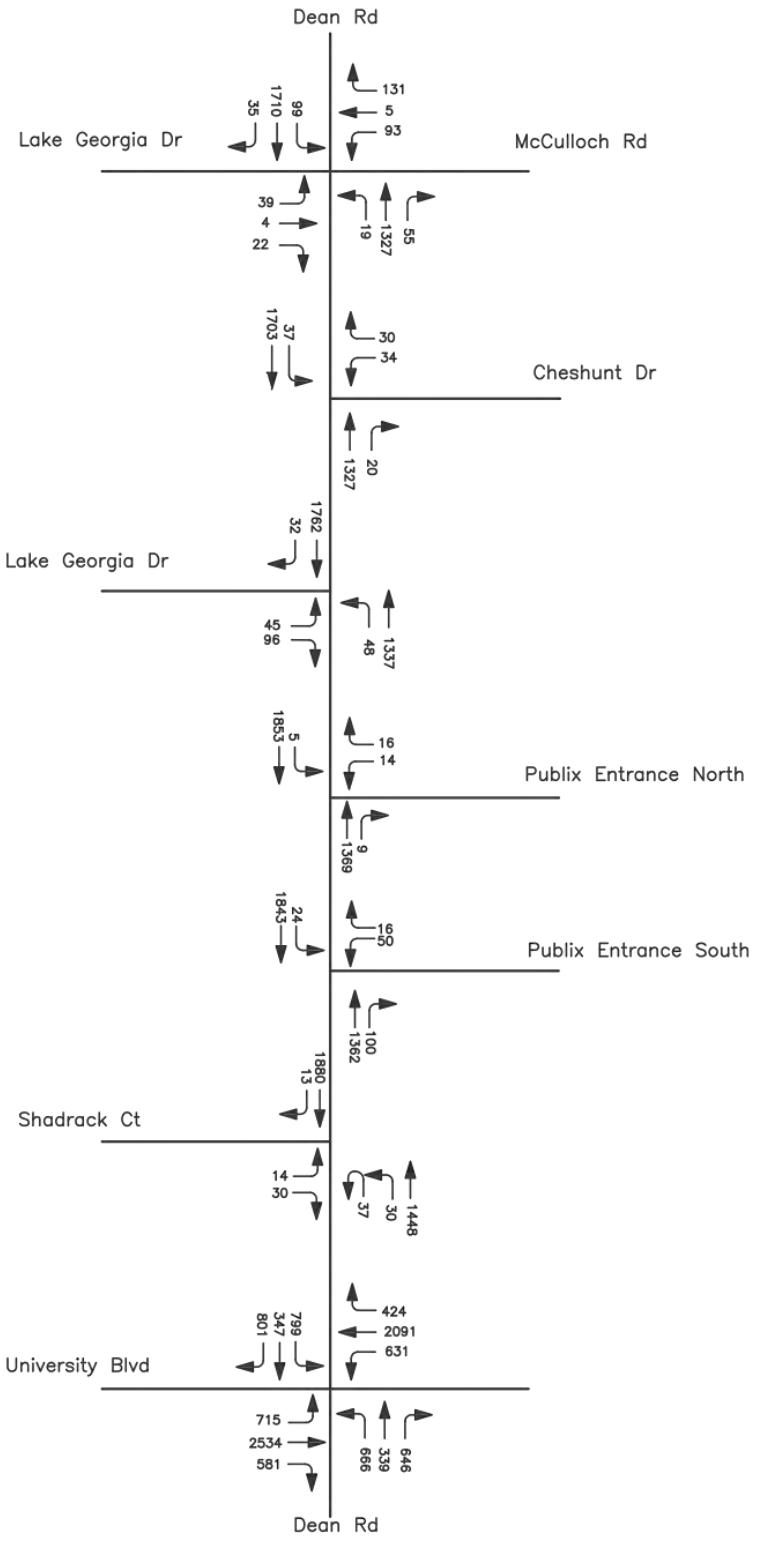
Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Mid-Design Year 2026
Build Scenario
Turning Movements Volumes
AM Peak Hour

Figure 6-18



ORANGE COUNTY GOVERNMENT FLORIDA	Dean Road Roadway Conceptual Analysis University Blvd to McCulloch Rd	Mid-Design Year 2026 Build Scenario Turning Movements Volumes PM Peak Hour Figure 6-19

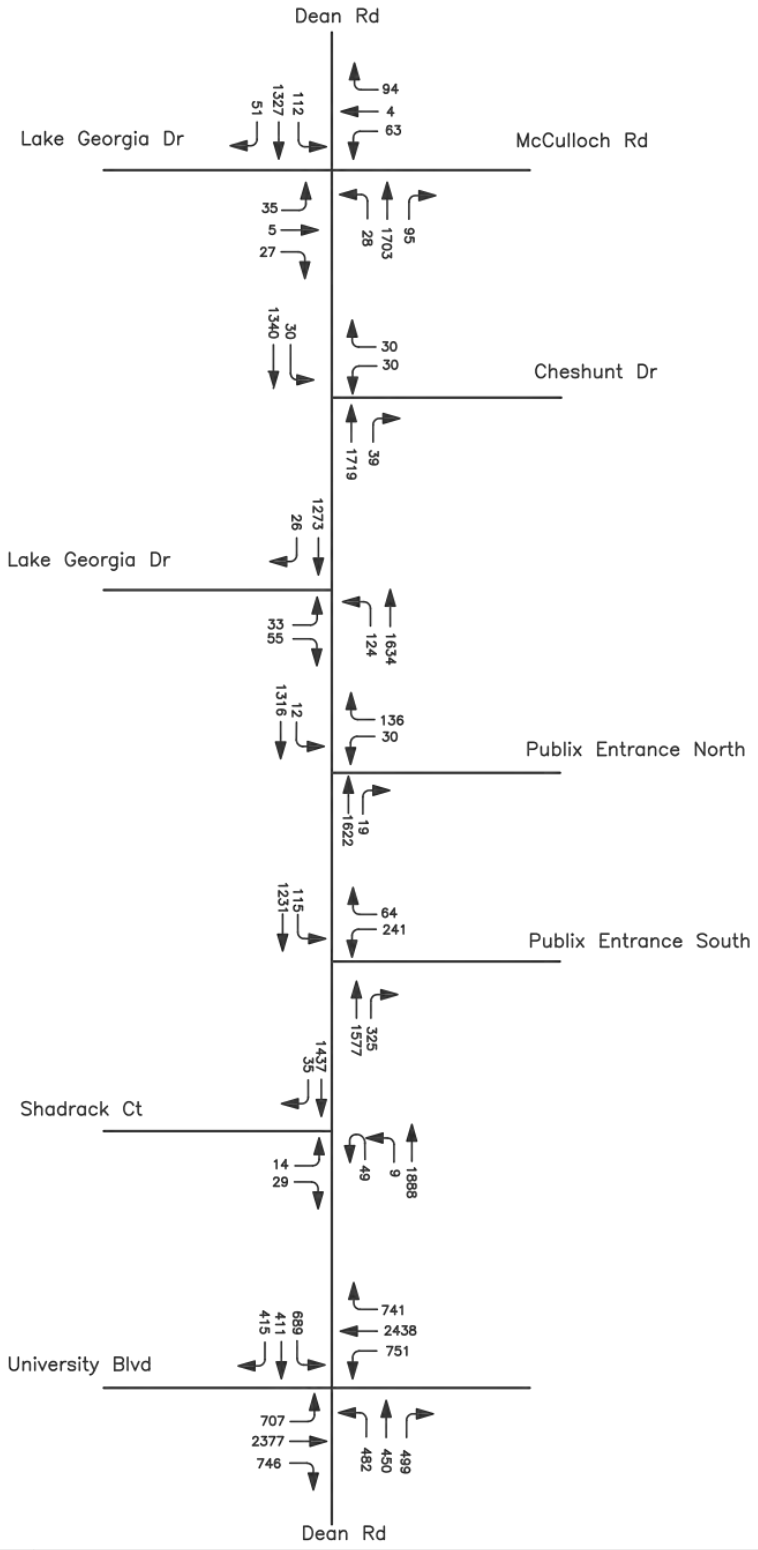


ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Design Year 2036
Build Scenario
Turning Movements Volumes
AM Peak Hour

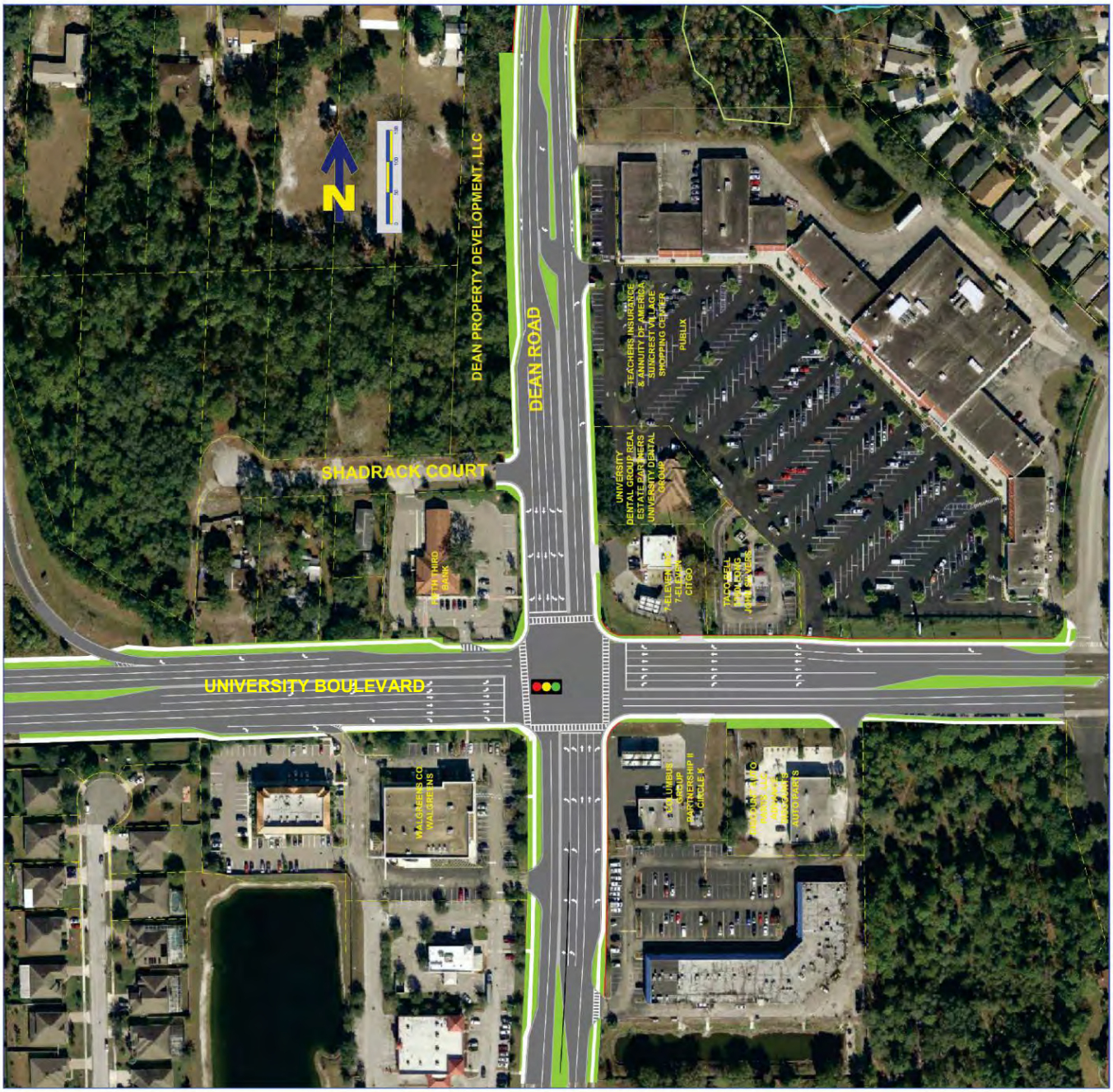
Figure 6-20



Dean Road
Roadway Conceptual Analysis
University Blvd to McCulloch Rd

Design Year 2036
Build Scenario
Turning Movements Volumes
PM Peak Hour

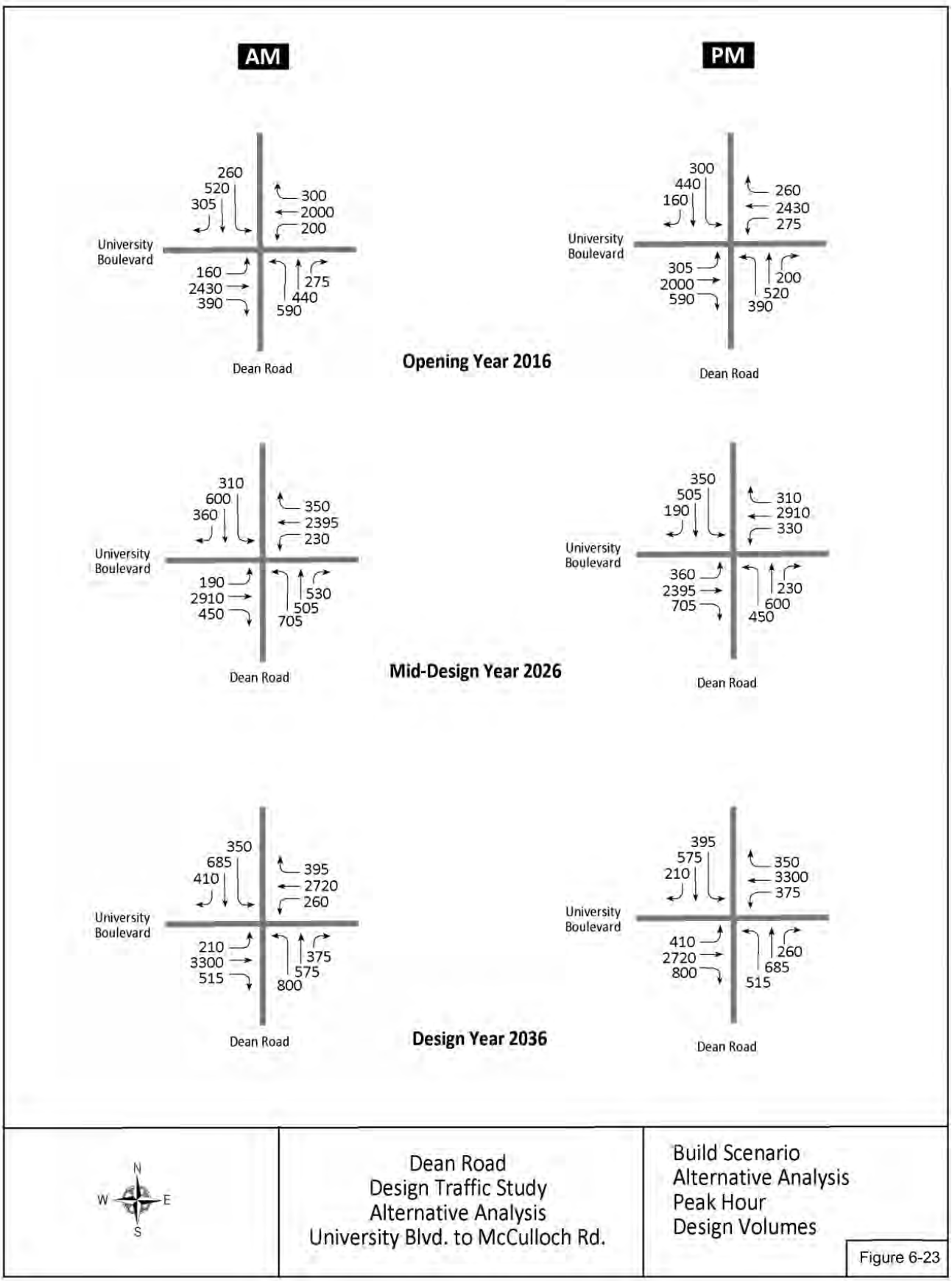
Figure 6-21



Dean Road Design Traffic Study
Build Scenario
Dean Road and University Boulevard

Preferred Intersection Options

Figure 6-22


AM
PM
University Boulevard
Dean Road
260
520
305
300
2000
200
160
2430
390
275
440
590
Opening Year 2016
300
440
160
260
2430
275
305
2000
590
200
520
390
310
600
360
350
2395
230
190
2910
450
530
505
705
Mid-Design Year 2026
350
505
190
310
2910
330
360
2395
705
230
600
450
350
685
410
395
2720
260
210
3300
515
375
575
800
Design Year 2036
395
575
210
350
3300
375
410
2720
800
260
685
515
N
W
E
S
Dean Road
Design Traffic Study
Alternative Analysis
University Blvd. to McCulloch Rd.
Build Scenario
Alternative Analysis
Peak Hour
Design Volumes
Figure 6-23

With these standards in mind, the side street intersections of Lake Georgia Drive and Cheshunt Drive will include full access medians. Three additional locations along the study corridor were evaluated, each with different access management plans developed to address future "Build" conditions. These plans address three alternative access plans for the Suncrest Shopping Center, two alternative access plans for the two churches north of Lake Georgia Drive and two alternative access plans for the un-platted parcels between the churches and the Deans Landing at Sheffield Forests subdivision. Descriptions of the differences between each access plan are discussed below.

Plan 1: Access to the Suncrerst Shopping Center.

Option 1: Allows left-in access to the Suncrest Shopping Center at the south entrance and right-in/right-out access from both shopping center driveways.

Option 2: Allows left-in access to the Suncrest Shopping Center at the north entrance and right-in/right-out access from both shopping center driveways.

Option 3: Allows full access to the Suncrest Shopping Center at the south entrance and right-in/right-out access from the north shopping center driveway.

Plan 2: Access to the Church of Jesus Christ of Latter-day Saints, St Matthews Episcopal Church of The Diocese of Central Fl Inc. and a private, vacant parcel owned by Greenhaven Homestead LLC.

Option 1: Allows full access to all three properties through a single shared driveway and right-in/right-out access.

Option 2: Allows for right-in/right-out to access at each of the three existing driveways.

Plan 3: Access for the un-platted parcels between the churches and the Dean's Landing subdivision.

Option 1: Allows for right-in/right-out to access at each of the parcels and U-turn access at both ends of the un-platted parcels.

Option 2: Allows for right-in/right-out to access at each of the parcels.

Option 1 for each analysis plan location represents the recommended median/access management plan for the Dean Road project. **Figure 6-14** depicts future "Build" intersection geometry (at major intersections) for the recommended plan.

The results of the analysis are found in **Table 6-4**. The evaluation was conducted for the recommended access management option (Option 1) for both the AM and PM peak hours.

Table 6-4
Dean Road RCA
Arterial Level of Service Analysis Results
Design Year 2036
Build Scenario

Segment	Arterial Level of Service			
	AM		PM	
	NB (non-pk dir)	SB (peak dir)	NB (peak dir)	SB (non-pk dir)
S. of University Blvd	F	n/a	F	n/a
University Blvd to McCulloch Rd	A	C	A	C
North of McCulloch Rd	n/a	B	n/a	B
Overall	D	C	E	C

During the AM peak hour the northbound direction is projected to operate at an overall LOS D. The southbound direction is projected to operate at an overall LOS C.

During the PM peak hour the northbound direction is projected to operate at an overall LOS E and the southbound direction is projected to operate at an overall LOS C.

The results of the Opening Year (2016), Mid-Year (2026) and Design Year (2036) for the "Build" scenario intersection analysis are presented in **Table 6-5**.

Table 6-5
Dean Road RCA
Intersection Level of Service Analysis Results
Design Year 2036
Build Scenario

Intersection with Dean Road	Intersection Level of Service	
	AM Peak	PM Peak
University Blvd	F	F
Shadrack Ct	C	C
Publix Dr S	FREE	FREE
Publix Dr N	C	D
Lake Georgia Dr	C/E	C/E
Chestnut Dr	A/D	A/E
McCulloch Rd	B	B

Note:
For signalized intersections, the level of service is the overall intersection level of service.
For unsignalized intersections, the level of service is Dean Rd LOS/minor street LOS
For Right In/Right Out driveways, the level of service is for the minor street approach
"FREE" means free flow right; No intersection LOS since there are no conflicting movements

The Design Traffic for the minimum limit Design Traffic volumes were analyzed to identify recommended geometric improvements for the intersection of University Boulevard and Dean Road (Build scenario) for Opening Year 2016, Mid-Design Year 2026, and Design Year 2036. The revised traffic volumes are shown in **Figure 6-23**.

Subsequently, Orange County staff re-evaluated the strategy for improvements to the intersection of University Boulevard and Dean Road. The re-evaluation was made considering the following:

- ROW limitations and high costs of ROW acquisition for the approaches to the intersection,
- Public opposition to major impacts to the businesses fronting the intersection,
- The addition of more lanes (such as triple-left-turns lanes) to the approaches would create challenges to meeting the County's goals to improve safety for pedestrians and bicyclists, and
- Future multi-modal improvements and additional parallel roads through the University Boulevard corridor are expected to reduce east-west traffic volumes on University Boulevard over the planning horizon.

Therefore, Orange County staff developed a plan to extend the vehicle storage lengths for the existing turn lanes and provide limited additional right-turn lanes at the intersection of University Boulevard and Dean Road. The improvements plan includes the following:

- Westbound auxiliary right-turn lane on University Boulevard,
- Northbound auxiliary right-turn lane on Dean Road, and
- Extensions to existing turn lanes.

Figure 6-22 includes the recommended improvements to achieve the following P.M. peak hour overall levels of service (LOS) operations for the intersection of University Boulevard and Dean Road (Build scenario):

- Opening Year 2016: LOS D
- Mid-Design Year 2026: LOS F
- Design Year 2036: LOS F

6.7 Intersection Design

The only signalized intersections within the Dean Road improvements limits are at McCulloch Road/Lake Georgia Drive and University Boulevard. The design for the McCulloch Road/Lake Georgia Drive intersection is based on the design developed by Seminole County. The design of the intersection of University Boulevard was based on available right-of-way for the turn lane storage lengths, as summarized in Section 6.6. Actual design and implementation of these storage length requirements will be a function of final design and physical practicality of their construction.

6.8 Future Signal Requirements

Under the No-Build and Build scenarios, no signalization was determined to be warranted for the unsignalized intersections along Dean Road.

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Section 7 ALTERNATIVE ALIGNMENT ANALYSIS

The first step in the RCA Study process is to conduct a corridor analysis. The corridor evaluation consists of a general assessment of the affected physical and natural environments, as well as the area's transportation roadway network and traffic conditions within the study boundary. Since Dean Road is on an existing alignment, the primary objective of this analysis is to affirm that the existing corridor is the appropriate corridor within which improvement concepts should be developed and evaluated. The criteria for evaluating alternative corridors are:

- Optimum spacing between parallel east-west facilities,
- Location of intersections and interchanges with major north-south routes,
- Utilization of existing right-of-way to reduce impacts, and
- Maintain access to major land uses.

Figure 1 provides an overview of the study area. The presence of large residential developments and large wetlands and lakes within the area greatly limits potential locations for new north-south corridors as an alternative to the existing Dean Road corridor. Opportunities for a new north-south corridor between University Boulevard and McCulloch Road exist, but are not without substantial social, economic, and environmental impacts.

Most of the areas to the east and west of the existing Dean Road corridor are developed with, primarily, residential land uses. A large commercial development exists at the intersection of Dean Road and University Boulevard. Locating a new corridor through these areas would involve significant right-of-way acquisition, resulting in substantial residential and business relocations that would undermine existing community cohesion.

A new corridor would create alignment conflicts with the section of Dean Road in Seminole County, north of McCulloch Road. This section of Dean Road is already programmed to be widened to four lanes. Realignment of Dean Road to an alternative corridor east of the existing corridor at University Boulevard would provide a greater separation from the SR 417 interchange ramps, although such a realignment would require significant modifications to University Boulevard and the alignment of Dean Road south of University Boulevard. In addition, a new corridor would most likely not attract any additional traffic beyond that which has been projected for the existing alignment in the design year.

The most favorable corridor will be the one that provides the greatest overall benefit to the region while minimizing environmental and social impacts. Significant consideration

is given to the availability of existing right-of-way through which an improved facility may be developed.

As a result of the physical, social, and environmental constraints in the study area, alternative transportation corridors to the existing Dean Road alignment are excluded from further consideration.

The following sections describe the various roadway improvement alternatives considered, including the No-Build alternative.

7.1 No-Build Alternative

The No-Build alternative includes maintaining the existing two lanes along Dean Road through the project limits. The implications of this alternative include acceptance of decreases in LOS for intersections and roadway links through the study area as traffic volumes continue to increase with the growth of the area.

7.1.1 Advantages

There are some benefits to the No-Build alternative that are typical when considering a roadway construction project. These advantages include:

- No design and right-of-way costs,
- No construction or utility relocation costs,
- No impacts to business or residential properties,
- No business damages costs,
- No impacts to the natural environment, and
- No inconvenience caused by roadway construction.

7.1.2 Disadvantages

Although the advantages of the No-Build alternative are substantial, there are also disadvantages to the No-Build alternative that must be considered. If the Dean Road corridor is not improved, the following issues are anticipated to result:

- Facilities will not adequately serve projected traffic demand and LOS will continue to deteriorate to unacceptable levels,
- There will be a lack of laneage and capacity continuity within the Dean Road corridor, since north and south of the study corridor there will be four through-lanes,
- The section from University Boulevard to McCulloch Road will remain with only two lanes,
- Motorists at signalized intersections will continue to experience significant delay and the roadway will fail to meet the minimum LOS set by Orange County,
- Deficiencies in pedestrian and bicycle facilities will not be improved,
- Increase in user costs with increased congestion,
- Deterioration in air quality with increased congestion, and

- A lack of consistency with the goals and objectives of Orange's County Comprehensive Policy Plan.

7.2 Transportation System Management and Travel Demand Management

This analysis was not performed for this report.

7.3 Typical Sections

The recommended typical section for Dean Road is a 100-foot wide urban section, including a 4-lane divided roadway consisting of two 12-foot travel lanes in each direction separated by a 17.5-foot raised grass median. Four-foot bicycle lanes will be provided in both directions along the outside travel lane. Five-foot wide sidewalks will be provided along both sides of the roadway. The sidewalk will be separated from the curb by a 3-foot grass/utility strip. **Figure 1-1** illustrates the recommended roadway typical section.

7.4 Evaluation of Build Alternative

Multiple alignments were evaluated for this corridor for both a 40 mph and a 45 mph design speeds. The alignment alternatives included three typical sections; a 90-foot, a 100-foot, and 120-foot typical sections. For each alternative, a left-side widening alignment, a right-side widening alignment, a centered widening alignment, and a left/right/center widening combination alignment were evaluated for this corridor. The design considerations included horizontal curvature, super-elevation rates, right-of-way width, and access management among other factors.

7.5 Evaluation Matrix

Each alternative alignment was evaluated based on right-of-way costs, based on 2013 dollars and without legal fees or administrative costs; relocation impacts; environmental impacts; and social impacts. The results of the evaluation are shown in **Table 7-1**.

7.6 Recommended Alternative

A recommended alternative was selected. This recommendation was based upon the results of the engineering considerations, social and natural environment analysis, and input received from the public. The recommended alternative minimizes right-of-way costs, social impacts as measured by relocations, and environmental impacts measured by wetlands. The recommended alternative alignment described below is shown on the Concept Plans provided in **Appendix A**.

The recommended alignment alternative for Dean Road is the Alternative Option 4. Section 8 – Preliminary Design Analysis provides a detailed evaluation of the recommended alternative.

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Table 7-1
Dean Road Roadway Conceptual Analysis (RCA) Study

From University Boulevard to McCulloch Road

Evaluation Matrix

Summary of Estimated Project Costs and Impacts

EVALUATION MEASURE	100' ROW					120' ROW					90' ROW				
	ROADWAY IMPROVEMENTS	INTERSECTION OPTIONS				ROADWAY IMPROVEMENTS	INTERSECTION OPTIONS				ROADWAY IMPROVEMENTS	INTERSECTION OPTIONS			
		PREFERRED	TRIPLE LEFTS	U-TURN	JUG HANDLE		PREFERRED	TRIPLE LEFTS	U-TURN	JUG HANDLE		PREFERRED	TRIPLE LEFTS	U-TURN	JUG HANDLE
Community Impacts															
Residential															
Single Family Homes Impacted (Each)	24	0	3	3	3	24	0	0	0	0	24	0	0	0	0
Single Family Homes Displaced (Each)(Rdwy)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single Family Homes Displaced (Each)(Ponds)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vacant Land Impacts	7	0	0	0	13	7	0	0	0	13	7	0	0	0	13
Business															
Businesses Impacted (Each)	23	25	35	45	1	23	25	35	45	1	23	25	35	45	1
Businesses Displaced (Each)	0		0	0	0	0	0	0	0	0	0	0	0	0	0
Churches															
St Matthews Episcopal Church	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
The Church of Jesus Christ of Latter-day Saints	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Right-of-way Impacts															
Acres Impacted (Rdwy)	1.47	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acres Impacted (Ponds)	1.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres Impacted	2.47	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Environmental Impacts															
Wetland Impacts (Acres)	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potential Contamination Sites Impacted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Threatened and Endangered Species Impacts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Costs															
Design Costs	$1,288,000	$680,000	$1,146,000	$1,193,000	$1,170,000	$1,288,000	$680,000	$1,146,000	$1,193,000	$1,170,000	$1,288,000	$680,000	$1,146,000	$1,193,000	$1,704,000
Right-of-Way Costs	$4,960,000	$1,800,000	$5,000,000	$7,848,000	$4,300,000	$5,952,000	$2,645,000	$5,833,000	$8,700,000	$5,100,000	$4,464,000	$161,000	$4,400,000	$7,200,000	$3,644,000
Construction Cost	$7,997,000	$1,800,000	$4,500,000	$4,000,000	$2,600,000	$7,997,000	$1,800,000	$4,500,000	$4,000,000	$2,600,000	$7,997,000	$1,800,000	$4,500,000	$4,000,000	$2,600,000
Mitigation Banking (Based on $75,804/Credit)	$455,000					$546,000					$546,000				
Cost of Roadway and Intersections	$14,700,000	$4,280,000	$10,646,000	$13,041,000	$8,070,000	$15,783,000	$5,125,000	$11,479,000	$13,893,000	$8,870,000	$14,295,000	$2,641,000	$10,046,000	$12,393,000	$7,948,000
*Total Costs		**$18,980,000**	**$25,346,000**	**$27,741,000**	**$22,770,000**		**$20,908,000**	**$27,262,000**	**$29,262,000**	**$24,653,000**		**$16,936,000**	**$24,341,000**	**$26,688,000**	**$22,243,000**

Notes:

1. Based on 2013 Cost Information.
2. Wetland impacts evaluated on 100' ROW without intersection.
3. Right of Way cost estimates are for budgeting purposes only and cannot substitute for appraisals. No potential business damages were included in these estimates.
4. *Total cost = Raodway cost plus Intersection cost

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Section 8 PRELIMINARY DESIGN ANALYSIS

This section discusses the results of the preliminary design analysis that was conducted for the preferred alternative discussed in Section 7.5. The recommended improvement concept plans are located in **Appendix A**.

8.1 Design Traffic Volumes

The Dean Road Roadway Conceptual Analysis Design Traffic Technical Memorandum (February 2011) documents the existing traffic conditions and the analysis of the Build and No-Build Scenarios. The existing traffic conditions and analysis is summarized in Section 6 of this report. **Table 6-1** lists the design factors used in the analysis and design of the recommended improvements.

Although overall operating conditions for the Build Scenario are acceptable, deficiencies will be present at the following locations:

- Intersections: University Boulevard and Dean Road) - LOS F
- Roadway Links: South of University Boulevard (northbound) - LOS F

8.2 Typical Section

The recommended alternative for entire project consists of one urban typical section, as shown in **Figure 1-1**. The major design elements incorporated into this typical section include the following:

- Four, 12-foot travel lanes,
- Two, 4-foot bicycle lanes,
- Two, 5-foot sidewalks,
- Outside lanes - 2-foot type F curb and gutter,
- A 17.5-foot raised median which includes 2.25-foot type E curb and gutter,
- Two 3-foot utility strips between the type F curb and gutter and the sidewalk, and
- A separation of 3.25 feet between the sidewalk and the right-of-way line.

The total required right-of-way width for the recommended alternative is 100 feet. Where auxiliary lanes are proposed to facilitate right-turn movements, an additional 12 feet of right-of-way will be required to accommodate this need at certain locations. The border area between the outside curb and gutter and the right-of-way line may be reduced during the final design phase if field conditions allow for tie-in to existing ground lines.

8.3 Intersection Concepts and Signal Analysis

The recommended roadway and intersection geometry is shown in **Figure 6-14**. This geometry is required to sustain through traffic flow within the Dean Road alignment and

provide the required LOS. All intersections can be expected to operate at or above LOS D by the 2036 design year, with the exception of the intersection listed in Section 8.1.

The existing signalized intersections at University Boulevard and McCulloch Road/Lake Georgia Drive will remain. Traffic signalization is not recommended at any of the unsignalized intersections.

8.4 Alignment and Right-of-Way Needs

The existing right-of-way widths are described in Section 4.1.4 and illustrated in **Appendix B**. Anticipated right-of-way needs are as follows:

- Limited additional right-of-way (ROW) will be acquired from both the east and west sides of the roadway, based on the recommended alignment,
- There were also some limited ROW needs identified at corners of intersections to be improved, and
- Specific ROW requirements will be identified later in the Dean Road design process.

8.5 Displacements

There are no displacements of residences, businesses or institutions as a result of the recommended alternative. However, 24 residential parcels, 7 vacant parcels, and 48 business parcels (23 are impacted by the roadway improvements and 25 by the intersections improvements) will be impacted by the recommended alternative along with two church parcels.

8.6 Project Costs

The anticipated costs identified for the recommended alternative in the following sections are estimates in 2013 dollars and were prepared by Orange County. Estimates of construction costs were developed using historical pricing information for recent similar roadway projects within the Orange County area. The total project costs for the recommended alternative are $18,980,000. These costs are presented in **Table 8-1**, showing the breakdown between the roadway improvements and the intersection improvements.

8.6.1 Engineering Design Costs

Engineering costs normally include components for topographic survey, geotechnical investigation, right-of-way engineering, roadway and drainage design, and design support during construction. The total design costs for the recommended alternative are $1,968,000. In addition, mitigation banking costs are estimated at $455,000 for the recommended alternative.

8.6.2 Right-of-Way Costs

The total estimated right-of-way costs for the recommended alternative are $ 6,760,000. These costs are estimates only and do not replace the need for appraisals. Also, these cost estimates do not include potential business damages.

Table 8-1
Dean Road Roadway Conceptual Analysis (RCA) Study
From University Boulevard to McCulloch Road
Recommended Alternative (100' ROW)
Summary of Estimated Project Costs and Impacts

EVALUATION MEASURE	ROADWAY IMPROVEMETNS	INTERSECTION IMPROVEMENTS	TOTAL
Community Impacts			
Residential			
Single Family Homes Impacted (Each)	24	0	24
Single Family Homes Displaced (Each)(Rdwy)	0	0	0
Single Family Homes Displaced (Each)(Ponds)	0	0	0
Vacant Land Impacts	7	0	7
Business			
Businesses Impacted (Each)	23	25	48
Businesses Displaced (Each)	0	0	0
Churches			
St Matthews Episcopal Church	1	0	1
The Church of Jesus Christ of Latter-day Saints	1	0	1
Right-of-way Impacts			
Acres Impacted (Rdwy)	1.47	0	1.47
Acres Impacted (Ponds)	1.01	0	1.01
Total Acres Impacted	2.47	0	2.47
Environmental Impacts			
Wetland Impacts (Acres) (2)	0.65	0	0.65
Potential Contamination Sites Impacted	0	0	0
Threatened and Endangered Species Impacts	0	0	0
Project Costs (1)			
Design Costs	$1,288,000	$680,000	$1,968,000
Right-of-Way Costs (3)	$4,960,000	$1,800,000	$6,760,000
Construction Cost	$7,997,000	$1,800,000	$9,797,000
Mitigation Banking (Based on $75,804/Credit)	$455,000	$0	$455,000
Cost of Roadway and Intersections	$14,700,000	$4,280,000	**$18,980,000**

Notes:
1. Based on 2013 Cost Information.
2. Wetland impacts evaluated on 100' ROW without intersection.
3. Right of Way cost estimates are for budgeting purposes only and cannot substitute for appraisals. No potential business damages were included in these estimates.

8.6.3 Construction Costs

The total construction costs for the recommended alternative are $ 9,797,000.

8.7 Recycling of Salvageable Materials

Orange County encourages contractors to recycle salvageable materials, such as old asphaltic concrete pavement, base material, and drainage structures.

The existing pavement may be milled for recycling during construction. Any other salvageable materials will be identified during the design of the project. If these materials should be removed from the construction site, it is to be done as specified in the current FDOT Standard Specifications for Road and Bridge Construction. The opportunity to utilize existing pavement will also be identified during the final design of the project.

8.8 User Benefits

AASHTO's *Manual on User Benefit Analysis of Highway and Bus-Transit Improvements* (1977) defines highway user costs as the sum of: (1) motor vehicle running cost, (2) the value of the vehicle user travel time, and (3) traffic accident cost. User benefits, usually measured in terms of a decrease in user costs, include the cost reductions and other advantages that occur to highway motor vehicle users through the use of a particular transportation facility when compared to the use of another.

The recommended alternative provides user benefits to the extent that it reduces user costs when compared to the No-Build Scenario, which would operate at an unacceptable LOS. With the recommended Build Alternative, a benefit will occur due to the following:

- Expected reduction in motor vehicle running costs,
- Expected reduction in vehicle user travel time, and
- Potential for reduction in traffic accident costs.

Another expected benefit is that to users who do not use motor vehicles. The addition of bike lanes, sidewalks, and a raised median on this facility will provide an added safety benefit, both real and perceived, to high school and college students who utilize non-motorized modes of transportation, such as walking and bicycling.

8.9 Pedestrian and Bicycle Facilities

This project will incorporate pedestrian and bicycle facilities as part of the proposed improvements that comply with the Americans with Disabilities Act (ADA). A designated 4-foot bicycle lane will be provided in both directions. The bicycle lanes will be located between the outside travel lanes and the type F curb and gutter as shown in **Figure 1-1**.

Along each side of the roadway, 5-foot sidewalks will be provided. In some areas, there are existing sidewalks that will not be impacted by the proposed improvements. A field review will be conducted during the final design phase to determine the areas where the

existing sidewalks can remain and the areas where new sidewalks will have to be constructed. A 3-foot utility strip will be utilized between the back of the type F curb and gutter and the 5-foot sidewalk in order to provide additional separation between motorists and pedestrians.

Curb cut ramps, pavement markings, signs, traffic signals and pedestrian signals will be incorporated into the proposed improvements in order to make the corridor safer and more "user-friendly" for pedestrians and bicyclists.

8.10 Enhancements

Enhancements are a major aspect in the development of the project. Improved pavement conditions, adequate drainage systems, roadway geometry, access management, pedestrian and bicycle facilities, and the ability to include landscaping and roadway lighting in the future will enhance traffic operations and movement of pedestrians/bicyclists along this corridor.

8.11 Economic and Community Development

Land use in the vicinity of Dean Road is well developed with a mixture of zoning uses including residential, commercial, rural farm land, and planned development. Commercial and planned development designations are predominantly located at the intersection of Dean Road and University Boulevard; residential uses dominate the limits from south Lake Georgia Drive to the Seminole County line. It is anticipated that this project will have no direct or secondary negative impacts on the existing and future economic, and community development of this area. The project is expected to benefit the existing community, as it will provide a safe and efficient means of moving people in and around residential, commercial, and educational establishments in the community.

8.12 Environmental Impacts

Detailed studies and evaluations were conducted to determine the potential for adverse environmental impacts that may result from the proposed project. Baseline data, evaluation procedures, and analysis of results are contained in the project files and in the following reports:

- *Dean Road Roadway Conceptual Analysis Pond Siting Report (September 2011),*
- Interoffice Memorandum: *Report on In-house Corridor Environmental Study, Dean Road Expansion (From University Boulevard to McCulloch Road)*, dated September 28, 2010,
- Interoffice Memorandum: *Report on In-house Corridor Environmental Study, Dean Road Expansion (From University Boulevard to McCulloch Road)*, dated January 18, 2011,

- *Dean Road Roadway Conceptual Analysis Corridor Analysis Report* (October 2011), and
- *Stormwater Pond Report for North Dean Road Roadway Conceptual Analysis* (January 20, 2011).

Since the potential for environmental impacts is relatively low within the existing right-of-way, the selection of the preferred alternative was not influenced by these factors.

8.12.1 Land Use

The project does not have the potential to directly or indirectly create changes in land use adjacent to or near the project site. Due to the existing development within the vicinity, no secondary development is likely to occur. Rather than create land use changes in the area, the proposed improvements will encourage safe and efficient travel.

8.12.2 Community Cohesion

The proposed project will not split or alter neighborhood or community boundaries, nor will it interrupt service areas of community facilities. This project will also not reduce access to community facilities, and will not alter the cohesion of the community by physical or psychological separation of residents and/or activities. The completion of sidewalks will provide continuous pedestrian access and enhance community cohesion along the alignment.

8.12.3 Cultural Impacts

A Cultural Resource Assessment Survey (CRAS) was not conducted as part of this study to identify archaeological and/or historic resources that may influence the evaluation and location of alternative improvement concepts so potential impacts have yet to be determined. This research will be completed during the project's design phase.

8.12.4 Wetlands

The road alignment does not propose any wetland impacts; however, there are two pond options that will cause wetland and/or Riparian Habitat Protection Zone (RHPZ) impacts. Option 1 requires construction of only one pond and Option 2 requires construction of two ponds but has two variations in the amount of wetlands impacted. Each pond option is discussed below.

- **Option 1** includes Pond 1 which is located on the County owned parcel behind the Suncrerst Shopping Center. There is a 0.65 acre isolated wetland that will be impacted by the construction of Pond 1.
- **Option 2A** includes the construction of Pond 1 and Pond 2. Pond 2 is located in the northern section of the project. The parcel is located on the east side of

Dean Road and contains 1.12 acres of wetlands; however, no impacts are proposed. This option will result in the loss of 0.65 acre of wetlands due to the construction of Pond 1.

- **Option 2B** includes the construction of Pond 1 and Pond 2. In this option, both ponds utilize the full extent of the property requiring a total loss of the wetlands and RHPZ on site. In this option, the total direct and secondary wetland impacts are 2.74 acres, and the total RHPZ impacts are 1.49 acres.

Mitigation for these permanent and secondary impacts will be addressed in accordance with the provisions of Chapter 373.4137, Florida Statutes. Due to the linear nature of this roadway project, on-site mitigation is not practical, and off-site mitigation opportunities were explored. It is recommended that purchase credits at the TM-Econ Phase IV Mitigation Bank (County owned). The County's bank was permitted utilizing the ratio method and not UMAM and therefore ratios were utilized to determine the potential mitigation costs. If a UMAM bank is utilized the mitigation cost may change. Project impacts are presented in **Table 8-2**.

Table 8 - 2 – Wetland Impacts

Impact Type	Amount (acres)	Credits (2:1)	Mitigation Cost
Wetland 1	0.65	1.30	$65,000.00
Wetland 2	1.12	2.24	$112,000.00
Secondary	0.97	1.94	$197,000.00
RHPZ	1.49	2.98	$149,000.00

8.12.5 Wildlife and Habitat

No listed species were observed within the project corridor; however it should be noted that an updated threatened and endangered species survey and report should be performed during design. **Figure 4-10** provides the listed species occurrence in Orange County, Florida.

8.12.6 Construction

Construction activities will have temporary air, noise, water quality, traffic flow, and visual impacts for those residents and travelers within the immediate vicinity of the project. These impacts will be minimized by adherence to all State and local regulations

and to the FDOT Standard Specifications for Road and Bridge Construction, current edition.

There should be no further direct impacts to wetlands other than those acreages that fall within the project limits. In other words, ingress/egress of construction vehicles, materials storage and other secondary construction-related activities will not infringe on the wetland boundaries any more than primary activities necessitate.

Secondary impacts will be kept to a minimum using industry-standard precautions and methods. This will include such items as silt fences and/or turbidity barriers, where appropriate, to minimize effect outside of the active construction zone.

8.13 Utility Impacts

The determination of final impacts to utilities will be based upon field survey of existing utilities, and underground utilities impacts will be dependent upon the final roadway profile. This research will be completed during the project's design phase. Service lines to individual properties will likely require replacement for lines that are ultimately relocated, but are not considered significant for this analysis. Utilities are listed in **Table 4-7**.

8.14 Traffic Control Plan

The Traffic Control Plan will be developed during the design process.

8.15 Drainage

8.15.1 Preliminary Drainage Design Analysis

An urban typical section is utilized to minimize floodplain and wetland impacts. Through this area, stormwater will be collected in curb and gutter, through curb inlets and storm sewers, draining ultimately to stormwater management ponds. The stormwater management facilities are designed to provide water quality treatment, runoff rate attenuation, and floodplain compensation prior to offsite discharge.

Sufficient gradient is required to convey runoff. Control elevations were estimated based upon the preliminary geotechnical survey performed by Geotechnical and Environmental Consultants, Inc. Additional topographic survey information will be collected during the drainage system design phase.

8.15.2 Stormwater Management Facilities

Stormwater management facilities were designed to meet the most stringent requirements of the Orange County Subdivision Regulations and St. John River Water Management District (SJRWMD). SJRWMD (Chapter 40C-42, F.A.C.) regulations require detention of stormwater, equivalent to the greater of the first one-inch of runoff

from the project area or 2.5 inches of runoff from the new impervious area. In addition, SJRWMD (Chapters 40C-4 and 40C-40) require stormwater runoff attenuation for the mean annual and 25-year/24-hour design events. Due to the high water table levels at the site, wet detention systems were selected as the stormwater quality treatment facilities type. The surface waters to which the project discharges are Class III. The proposed stormwater management facilities for this project eventually discharge to a segment of the Little Econlockhatchee River that is located downstream of Michaels Dam. This segment is designated as an Outstanding Florida Water (OFW).

OFW criteria require providing an additional 50% water quality when sizing stormwater quality treatment facilities.

The following sections summarize the SJRWMD design criteria applicable to this project. Only wet detention criteria are listed.

Pond Locations

Pond 1 is located on the east side of Dean Road (behind the Suncrerst Shopping Center) at Station 121+00 right and encompasses two parcels currently owned by Orange County. Parcel 05-22-31-8475-00-001 was dedicated to Orange County per the Suncrest Unit V subdivision plat. This parcel is 16.10 acres and includes Lake Phillips which encompasses 12.15 acres. There is 1.15 acres of undeveloped land on the southwesterly portion of this parcel that is being proposed for the south segment of the pond. Parcel 05-22-31-0000-00-029 is the second County owned parcel that abuts the aforementioned parcel and would be used for Pond 1. This parcel is 4.34 acres and 1.92 acres would be used for the north segment of the pond.

Pond 1 is sized for water quality treatment for the section of the roadway located between Station 110+00 and Station 151+00. A total of 3.07 acres of land is needed. The pond will outfall east into Lake Phillips and then to a series of ponds located within the Suncrest development before ultimately discharging into the Little Econlockhatchee River. Peak flow attenuation for the 25 year/24 hour storm event is provided in Lake Phillips by raising the invert of the 24 inch outfall pipe by 0.25 feet. There are no adverse impacts to Lake Phillips stage by modifying the outfall structure. For detailed information and analysis refer to the Conceptual Drainage and Pond Siting Report.

This pond option has the least amount of impacts to property owners, floodplains and the environment. As a County owned parcel, it is anticipated that no easements will be needed for this site. There are 0.65 acre of previously impacted and now isolated wetland at the southwesterly portion of the pond that will require mitigation. The mitigation cost is anticipated to be minimal due to the quality of the remaining portion of

the wetland. The Contamination Screening Evaluation Report (CSER) indicates that the Contamination Risk Potential is low.

8.15.3 Cross Drains

This section is not required for this report.

8.15.4 Floodplain and Floodways

Orange County requires all development within a Special Flood Hazard Area (SFHA) must provide compensating storage for all floodwater displaced by development. Compensating storage is to be accomplished between the normal high water elevation of the SFHA and the Base Flood Elevation (BFE), i.e. 1% annual chance flood event, (Orange County Code Sec. 34-228 b).

The proposed alignment for Dean Road does not appear to impact the Lake Georgia floodplain. If the proposed alignment changes, floodwaters displaced would have to be accommodated by providing compensating storage. Final design will demonstrate, through hydrologic and hydraulic modeling, that stage level of Lake Georgia will not increase.

8.15.5 Stormwater Permits

This section is not required for this report.

8.16 Special Features

8.16.1 Retaining Walls

Two retaining walls are anticipated for this project. In recent years Orange County installed a sidewalk on the west side of Dean Road from Shadrack Court to Lake Georgia Drive which included a retaining wall. The widening project will necessitate the relocation of this sidewalk and a retaining wall to the west of its current location. The second location that will need a retaining wall is along the St. Mathews Episcopal Church. The vertical elevation difference between Dean Road and the church is approximately twelve (12) feet based on Orange County's one-foot elevation contours. In addition, gravity walls may be needed in order to minimize right-of-way impacts.

Screen walls will be evaluated during final design based upon Orange County criteria and the new roadway profile.

8.16.2 Cross Street Improvements

Cross street improvements include intersection improvements at Lake Georgia Drive (adding of additional turn lanes). The various access management Options 1, 2 and 3 also included elimination of left-turn lanes and some of the minor cross-streets. The limits of side street construction will be identified during final design and is influenced by

the final roadway elevations. Coordination concerning improvements for University Boulevard should be incorporated into the design of this project.

8.17 Access Management

During the analysis phase of this project, the application of FDOT access management criteria, and the resulting impacts to the community, were taken into consideration. Dean Road is planned to be widened as a four lane divided roadway with a median. It was assumed that Dean Road will be considered FDOT Access Class 5 based on land use and roadway type. With these spacing standards in mind, three locations along the Dean Road corridor were evaluated with different access management options developed to address future "Build" conditions. Option 1, for each of the locations, represented the recommended median/access management plan for the Dean Road project. **Figure 6-14** depicts future "Build" intersection geometry for the recommended plan.

8.18 Aesthetics and Landscaping

Aesthetic and landscaping improvements will be investigated for inclusion into the project during the final design phase. The four-lane divided urban typical section provides the opportunity for landscaping enhancements in the median and behind the sidewalk. All landscaping improvements should be developed in conformance with the design criteria for appropriate maintenance of the required clear zones and lines of sight at intersections. Landscaping will be in conformance with Orange County landscaping guidelines and the budget is to be determined.

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Section 9 PUBLIC INVOLVEMENT

This section provides an overview of the public involvement activities completed for the Dean Road RCA. **Appendix C** includes copies of: the public notice; sign in sheets; public comments and action request forms.

9.1 Public Involvement Plan

A Public Involvement Plan was developed and implemented as part of this study. The Public Involvement Plan (September 2010) provided the guidelines for implementing the outreach program for the Dean Road RCA. Specifically, the Plan describes: identification of state and local agencies, state and local officials, and concerned public; coordination meetings; small group meetings; media; newsletters and mailing list; advertisements and news releases; internet web site; presentation materials; public involvement data; public information meetings; Local Planning Agency (work session and public hearing); and Board of County Commissioners Public Hearing. A copy of this Plan is in **Appendix C**.

9.2 Public Information Distribution

Public information has been distributed through the following outlets:

- Newsletters were mailed to property owners and interested persons prior to each public meeting;
- Public meeting advertisements were placed in the *Orlando Sentinel* along with press releases;
- A project website that provided information on the project, including the RCA process, meeting schedules and minutes, project schedule, alternative exhibits, and contact information.

9.3 Coordination & Small Group Meetings

Three small group meetings were held with property owners and residents. Two meetings focused on access management issues and the third meeting centered on intersection alternatives for the Dean Landing neighborhood. Minutes from these meetings are included in **Appendix C**.

9.4 Public Meetings

Two public meetings were held for the Dean Road RCA. The Introductory Alternatives Information Public Meeting was held on August 2, 2011 at Arbor Ridge School, located at 2900 Logandale Road, Orlando, Florida 32817, from 6:00 pm to 8:00 pm. The second meeting was held June 26, 2013.

9.5 Local Planning Agency Work Session

The Local Planning Agency (LPA) work session will be scheduled. **Appendix C** will include the PowerPoint presentation and meeting minutes. (To be updated following the LPA work session.)

9.6 Local Planning Agency Public Hearing

The Local Planning Agency (LPA) Public Hearing will be scheduled. **Appendix C** will include the PowerPoint presentation and meeting minutes. (To be updated following the LPA Public Hearing.)

9.7 Board of County Commissioners Public Hearing

The Board of County Commissioners (BCC) Public Hearing will be scheduled. **Appendix C** will include the PowerPoint presentation and meeting minutes. (To be updated following the BCC Public Hearing.)

APPENDIX

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APPENDIX A – PREFERRED ALTERNATIVE

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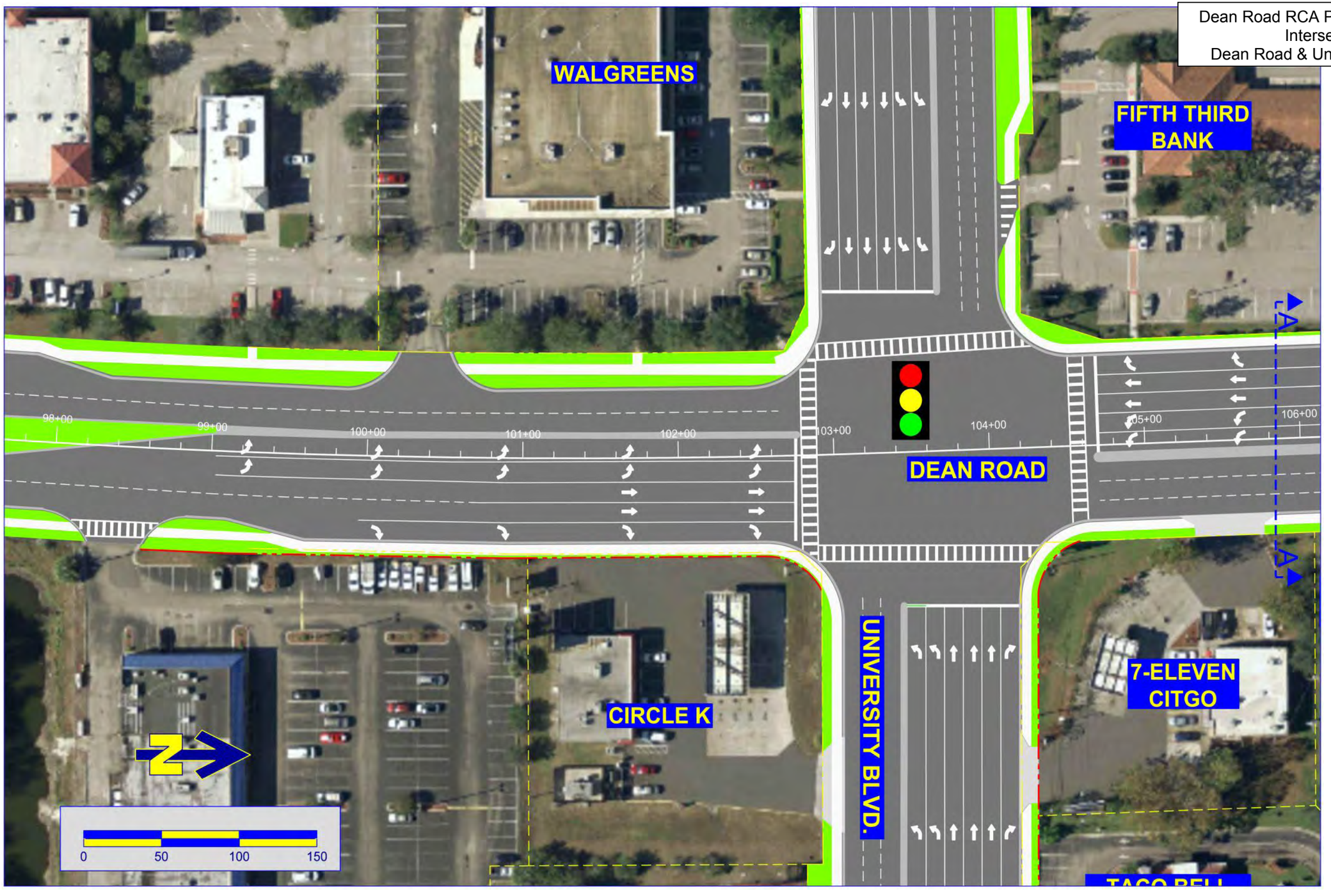
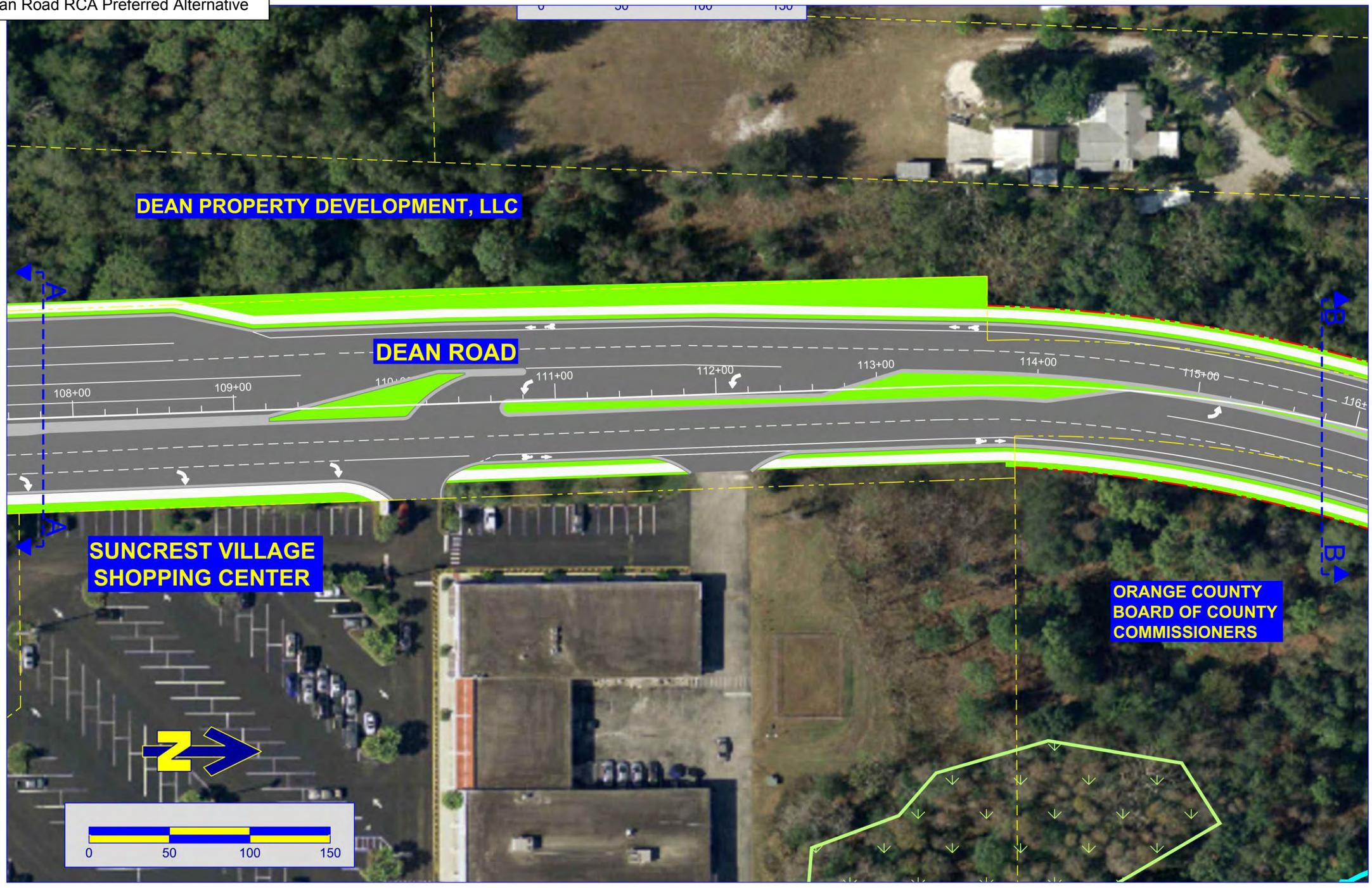
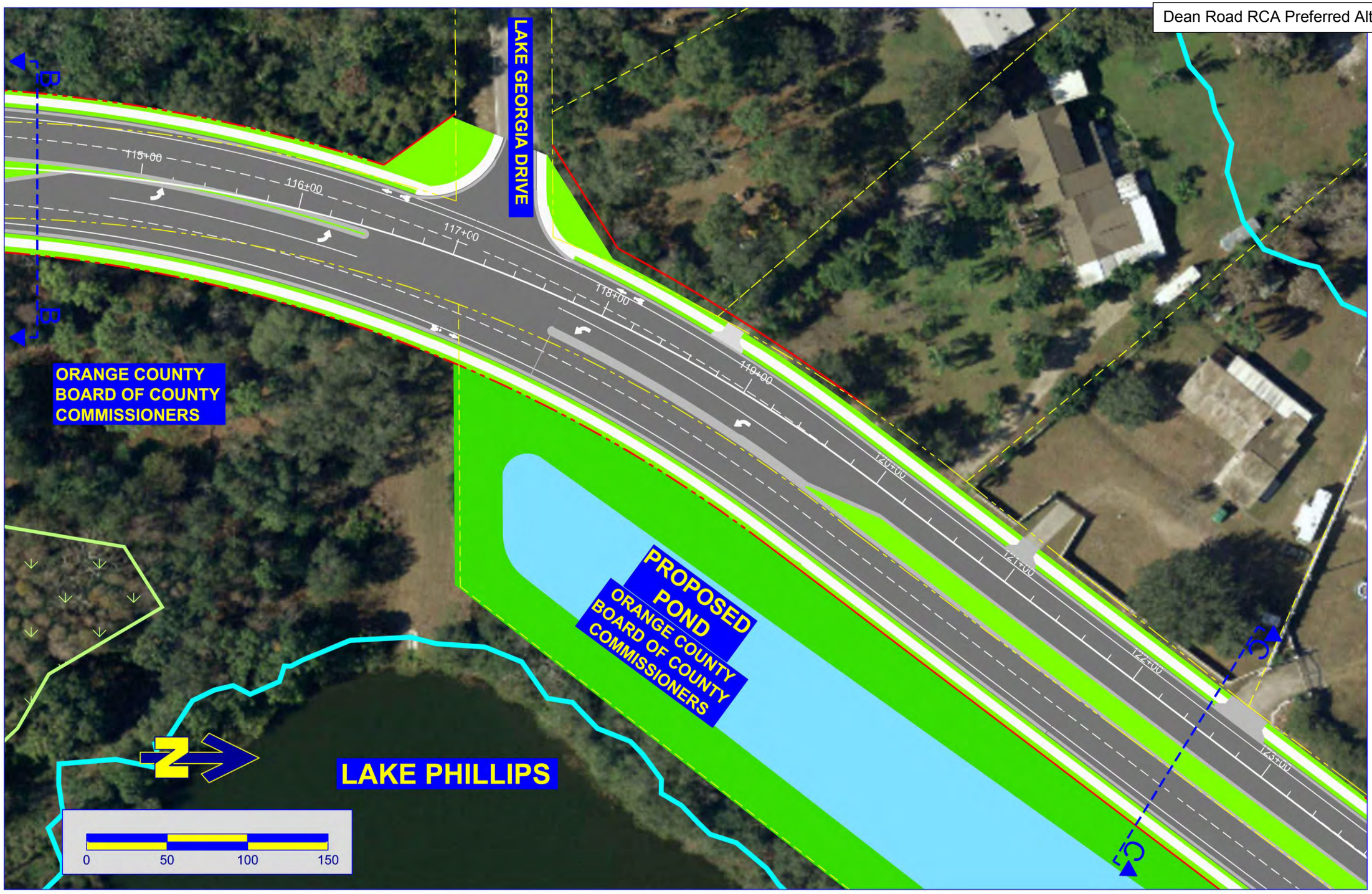
Dean Road RCA Preferred Alternative
Intersection of
Dean Road & University Boulevard

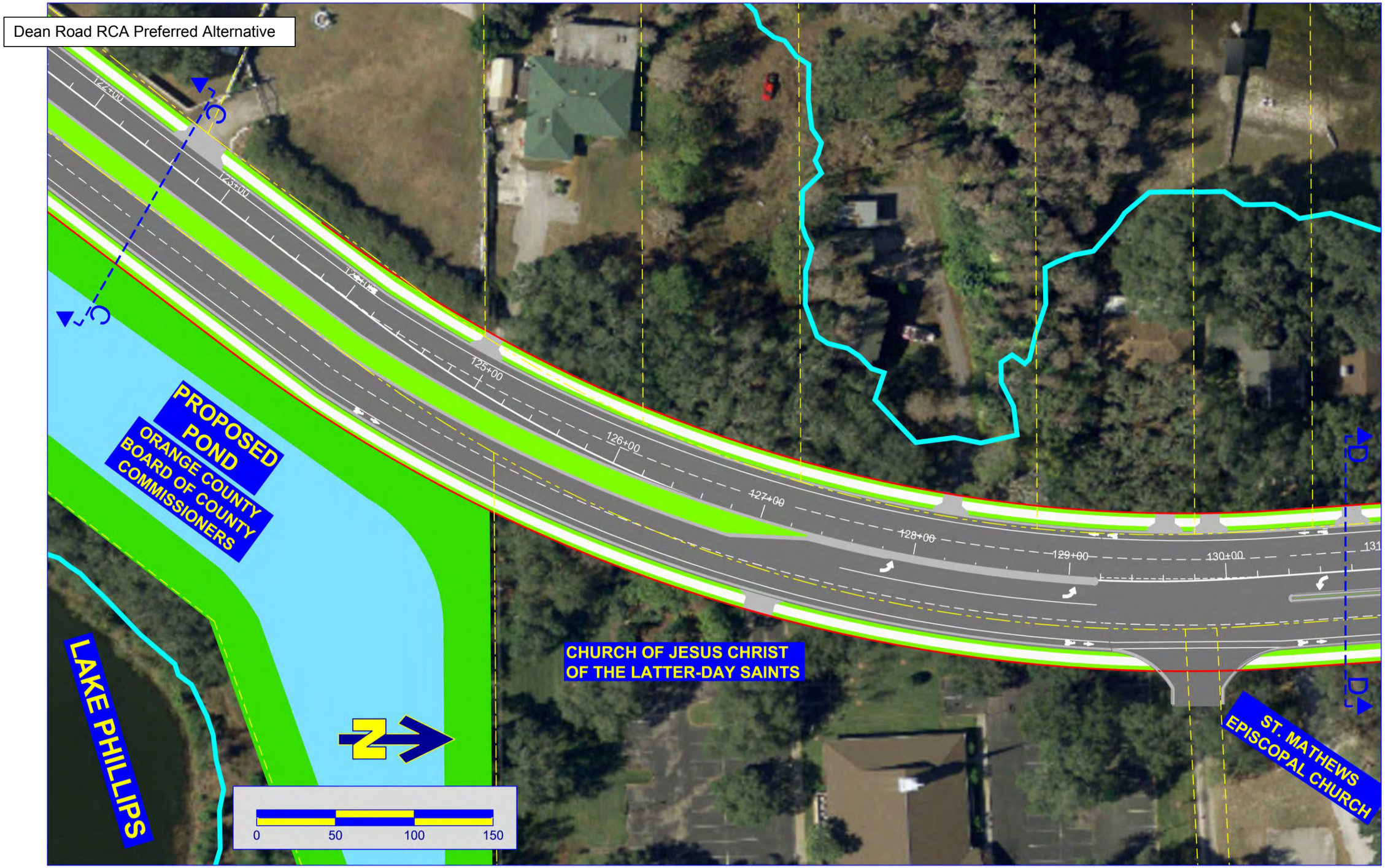


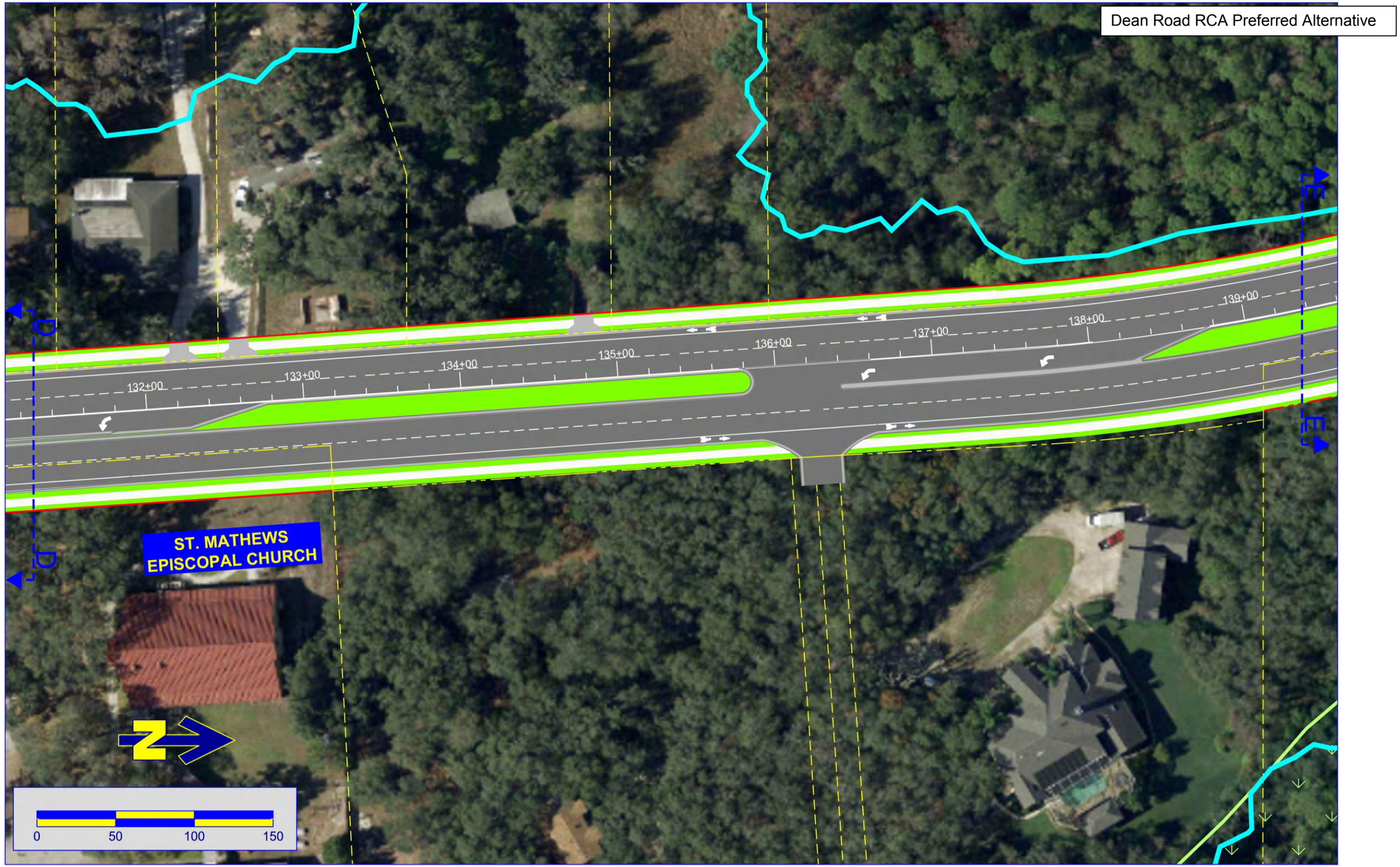
Dean Road RCA Preferred Alternative

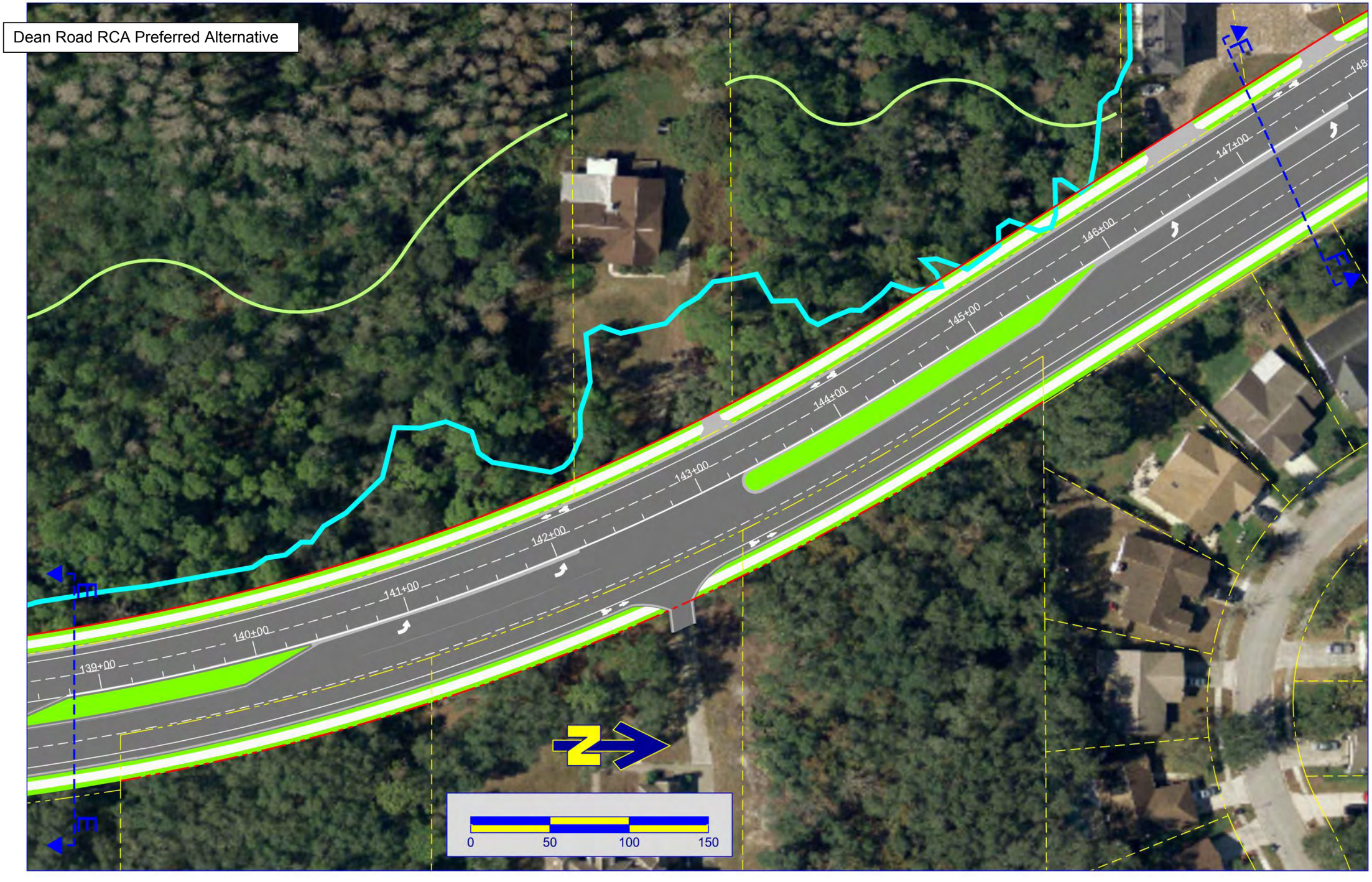


Dean Road RCA Preferred Alternative

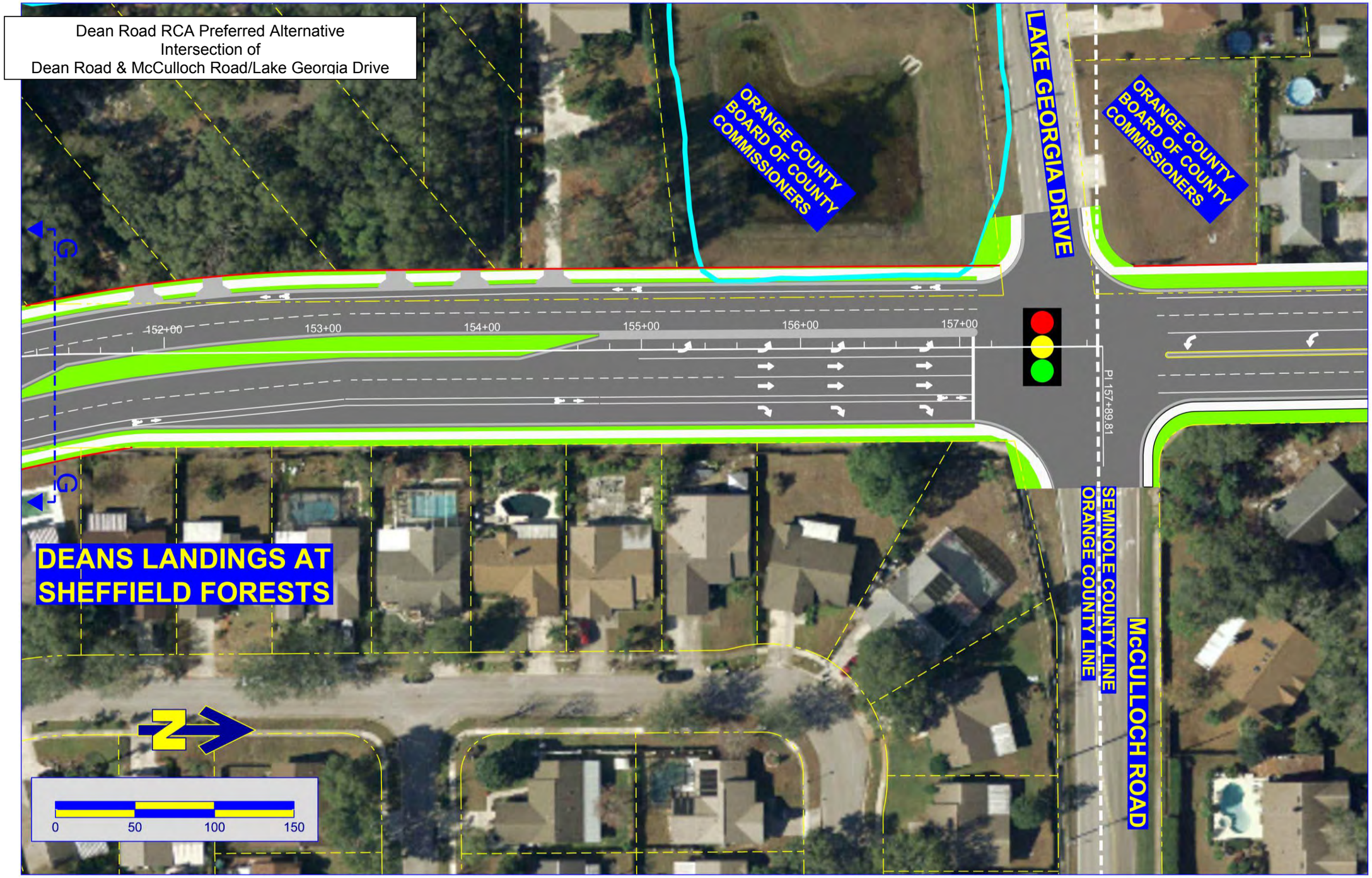



Dean Road RCA Preferred Alternative
C
C
D
D
122+00
123+00
124+00
125+00
126+00
127+00
128+00
129+00
130+00
PROPOSED POND
ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
LAKE PHILLIPS
CHURCH OF JESUS CHRIST OF THE LATTER-DAY SAINTS
ST. MATHEWS EPISCOPAL CHURCH
0
50
100
150

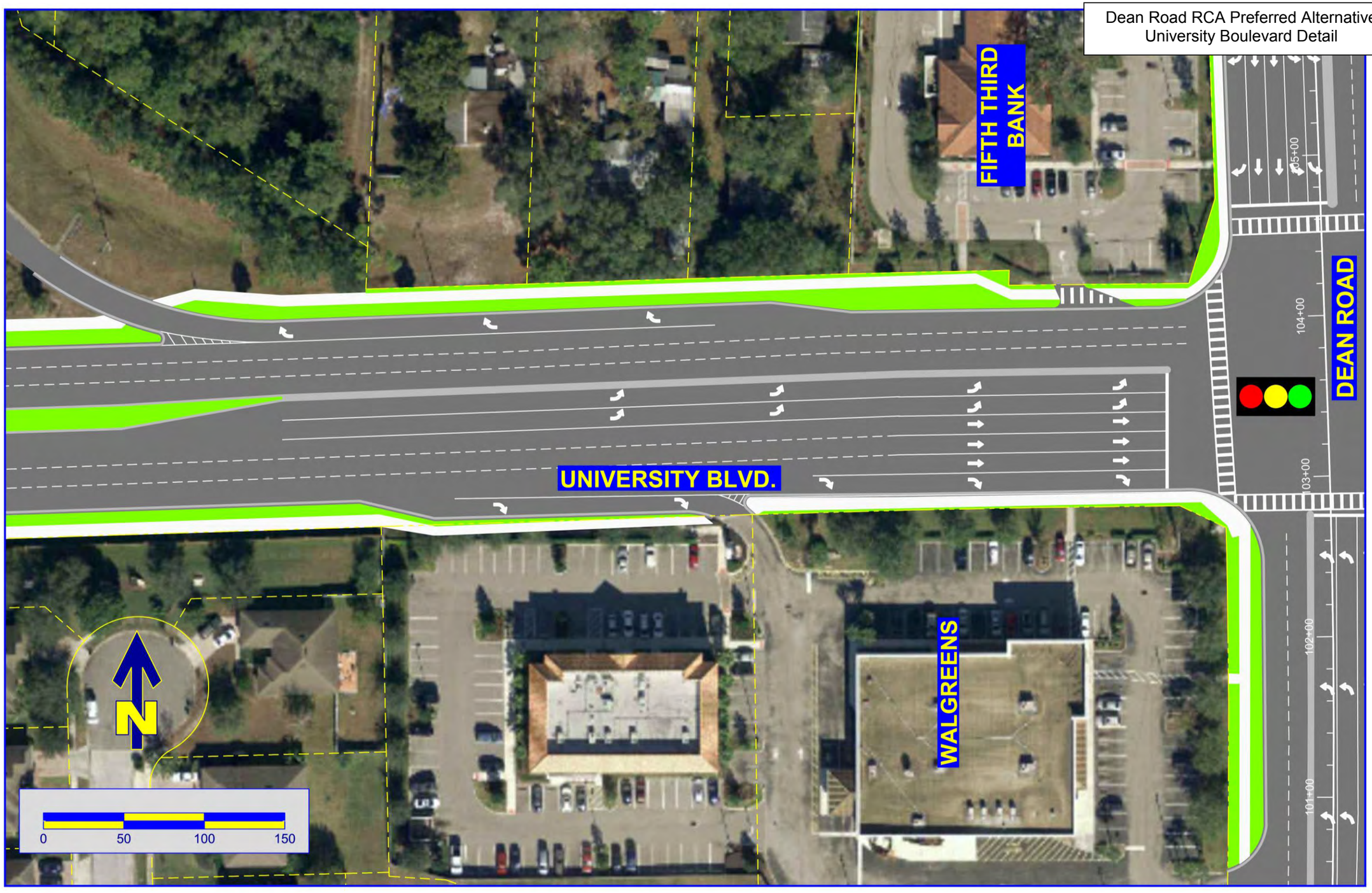

Dean Road RCA Preferred Alternative
132+00
133+00
134+00
135+00
136+00
137+00
138+00
139+00
ST. MATHEWS
EPISCOPAL CHURCH
0
50
100
150


Dean Road RCA Preferred Alternative
E
E'
F
F'
139+00
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
0
50
100
150

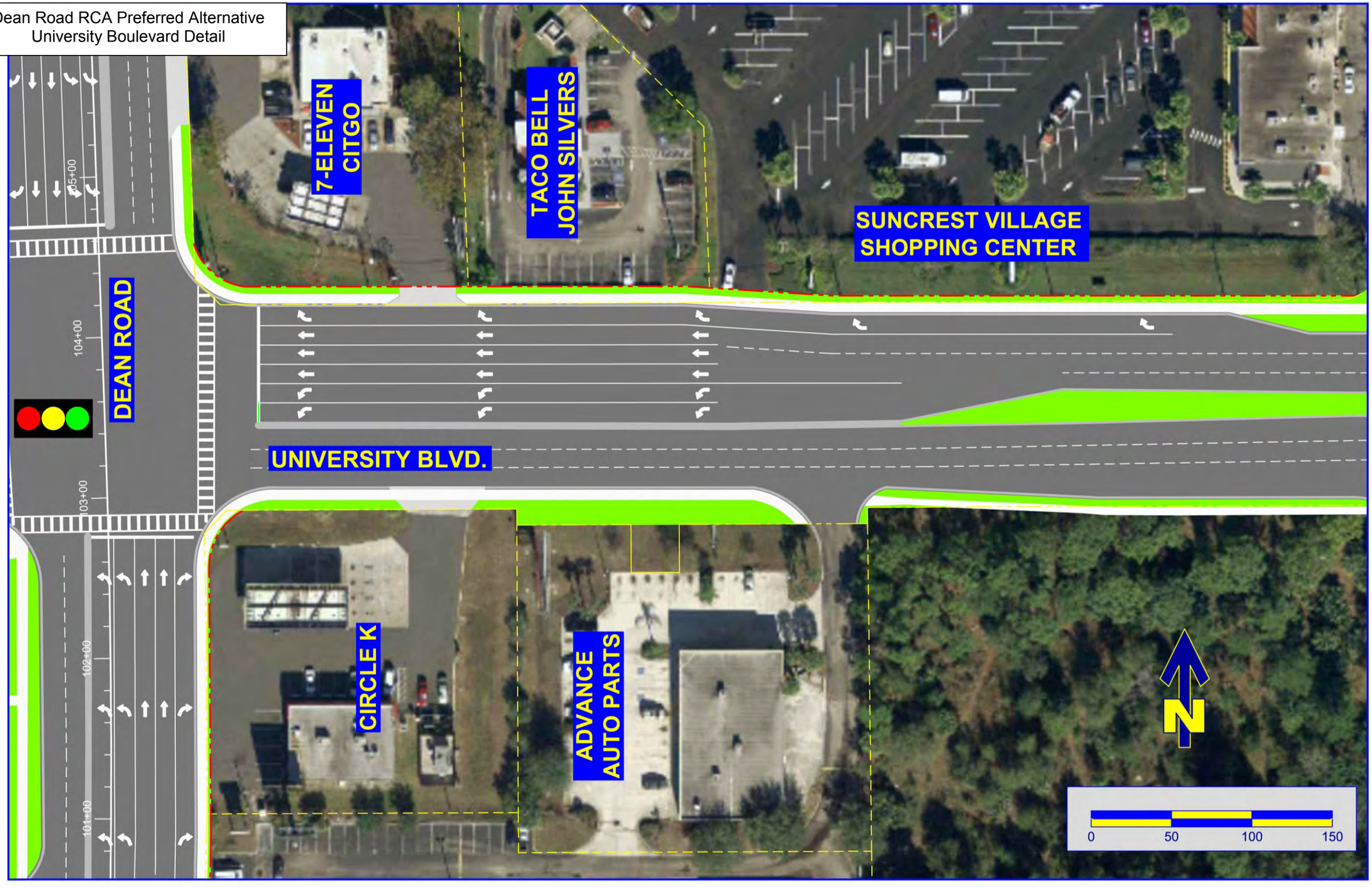

Dean Road RCA Preferred Alternative
ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
DEANS LANDINGS AT SHEFFIELD FORESTS
CHESHUNT DRIVE
F
F'
G
G'
148+00
149+00
150+00
151+00
152+00
153+00
154+00
155+00
156+00
N
0
50
100
150


Dean Road RCA Preferred Alternative
Intersection of
Dean Road & McCulloch Road/Lake Georgia Drive
ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
LAKE GEORGIA DRIVE
ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS
G
152+00
153+00
154+00
155+00
156+00
157+00
PI 157+89.81
DEANS LANDINGS AT SHEFFIELD FORESTS
SEMINOLE COUNTY LINE
ORANGE COUNTY LINE
McCULLOCH ROAD
N
0
50
100
150

Dean Road RCA Preferred Alternative
University Boulevard Detail



Dean Road RCA Preferred Alternative
University Boulevard Detail



APPENDIX B – RIGHT-OF-WAY PLANS

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RIGHT OF WAY IDENTIFICATION MAP

DEAN ROAD

UNIVERSITY BOULEVARD TO SEMINOLE COUNTY LINE

SECTION 5, TOWNSHIP 22 SOUTH, RANGE 31 EAST

ORANGE COUNTY, FLORIDA

CIP 3071

DISTRICT NO. 5

GENERAL NOTES

1. Bearings shown herein are based on Florida State Plane Coordinates, East Zone, utilizing the NAD 83/90 adjustment, with the west line of Section 5, Township 22 South, Range 31 East being S02°12'54"W.

2. The purpose of the maps is to identify the existing right of way along Dean Road from University Boulevard to the Seminole County line.

3. The alignment shown herein is based on the County Road Bond Project 21 Section B as recorded in Road Map Book 1, pages 8 and 9, and is subject to further consideration.

4. Title Information provided by Orange County as prepared by First American Title Insurance Company. Deed dimensions have been reported based on information provided. Parcel lines are shown for graphic purposes only. No computation of parcels has been performed.

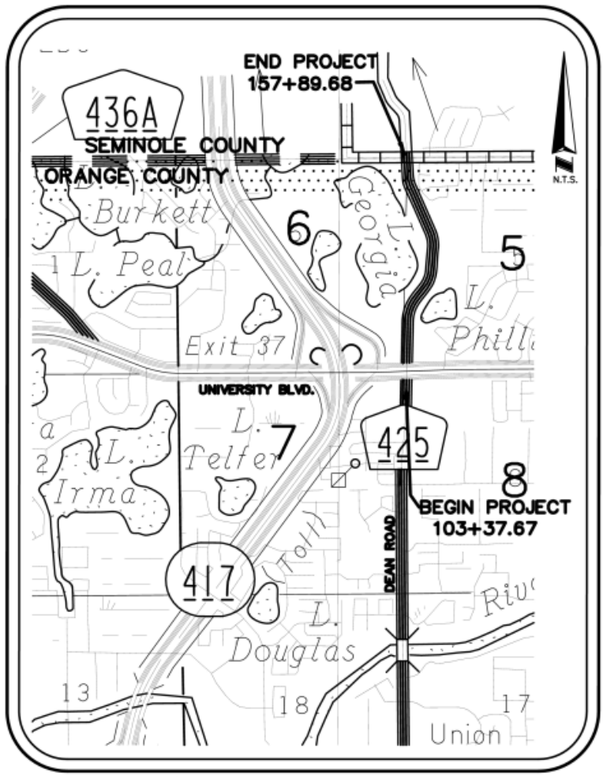
5. The Right of Way Identification Map of Dean Road as represented herein is not a survey.

6. Survey Baseline shown herein represents a computed alignment based on physical evidence, County Road Bond project reference in Note 3. and existing recorded subdivision plats. Stations and offsets shown herein are relative to the calculated Survey Baseline.

LEGEND & ABBREVIATIONS

O.R.	OFFICIAL RECORDS BOOK	Ch	CHORD LENGTH
P.B.	PLAT BOOK	CB	CHORD BEARING
PG.	PAGE	DB	DEED BOOK
(F)	FIELD	PC	POINT OF CURVATURE
(C)	CALCULATED	PI	POINT OF INTERSECTION
(P)	PLAT	PT	POINT OF TANGENCY
Δ	CENTRAL ANGLE/DELTA	L	ARC LENGTH
R	RADIUS	TAN	TANGENT
FND.	FOUND	(D)	DEED

VICINITY MAP



TERESA JACOBS — **COUNTY MAYOR**

BOARD OF COUNTY COMMISSIONERS

S. SCOTT BOYD	DISTRICT 1
FRED BRUMMER	DISTRICT 2
PETE CLARKE	DISTRICT 3
JENNIFER THOMPSON	DISTRICT 4
TED B. EDWARDS	DISTRICT 5
TIFFANY MOORE RUSSELL	DISTRICT 6

MARK V. MASSARO, P.E.
AJIT M. LALCHANDANI, P.E.
DIRECTOR OF PUBLIC WORKS
COUNTY ADMINISTRATOR

FINAL MAPS
OCTOBER 1, 2013

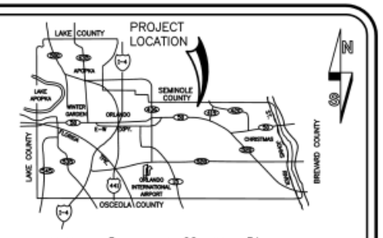
SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT A SURVEY OF THE RIGHT OF WAY SHOWN HEREON WAS MADE UNDER MY SUPERVISION AND THAT THE SURVEY MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027 OF THE FLORIDA STATUTES AND THAT THE SKETCH HEREON IS A TRUE AND ACCURATE REPRESENTATION THEREOF TO THE BEST OF MY KNOWLEDGE AND BELIEF. SUBJECT TO NOTES AND NOTATIONS SHOWN

THIS _____ DAY OF _____, 2013.

_____
KIMBERLY A. BUCHHEIT, PSM #4838
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
LICENSED BUSINESS #6167

ORANGE COUNTY GOVERNMENT FLORIDA



SEC. 5 TWP. 22 RGE. 31 E.

LOCATION MAP

INDEX OF SHEETS

PREPARED FOR:
ORANGE COUNTY PUBLIC WORKS
ENGINEERING
4200 SOUTH JOHN YOUNG PARKWAY
ORLANDO, FLORIDA 32839
PHONE (407) 836-7908

REVISIONS	DATE	BY
REVISE PROPOSED RIGHT OF WAY ALIGNMENT	10/1/13	BHJ

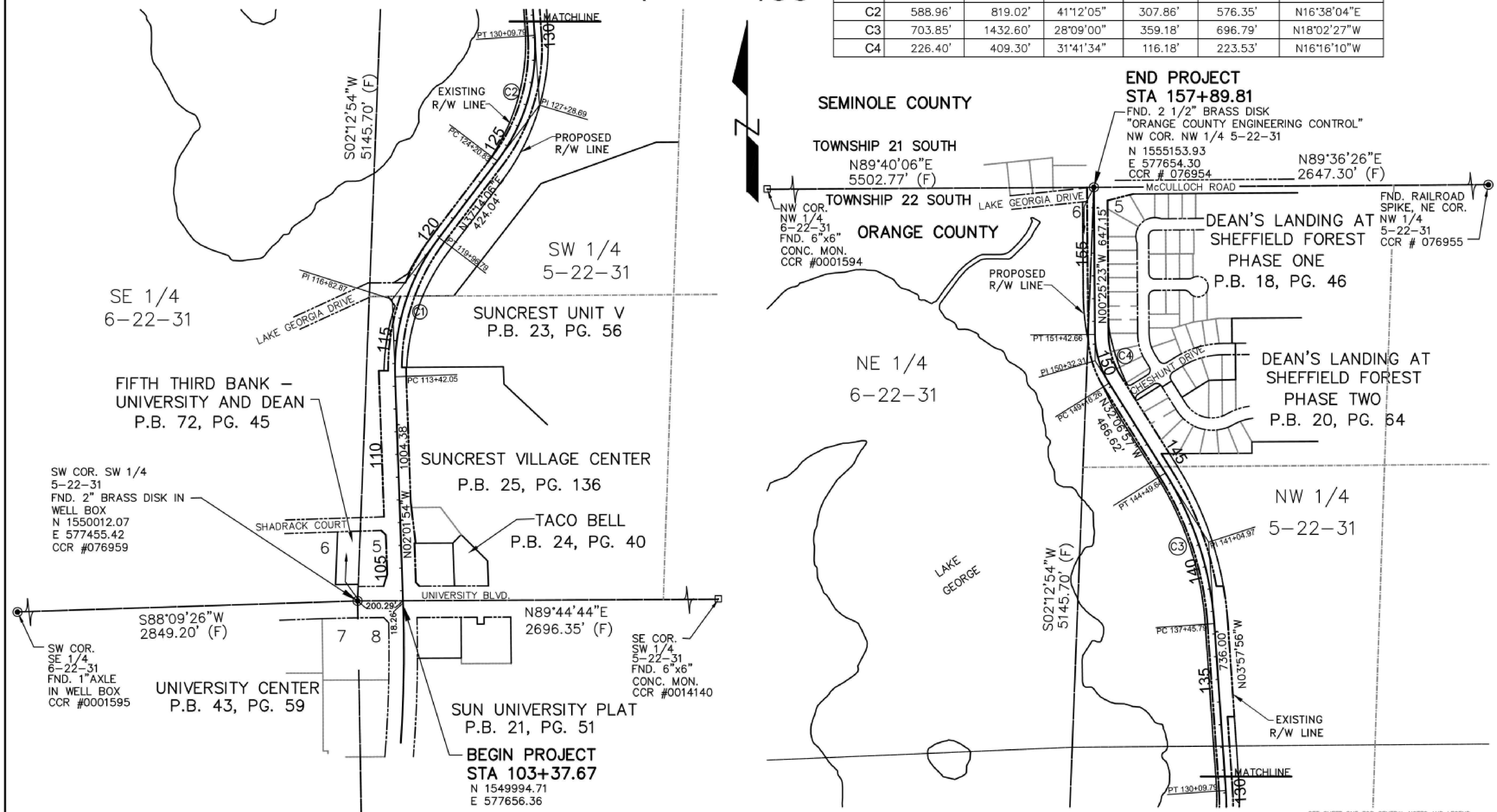
MAPS PREPARED BY:
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
427 CenterPointe Circle Suite 1811
Altamonte Springs, Florida 32701
(407) 331-0505 Fax: (407) 331-3266
LB #6167

DESIGNED BY:	DATE:
DRAWN BY: BHJ	DATE: 9/20/13
CHECKED BY: MSR	DATE: 9/20/13
APPROVED BY:	DATE:
PROJECT NO: 2080011-0001	

SHEET 1 OF 13

KEY MAP
1" = 400'

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CH. BEARING
C1	654.74'	955.36'	39°16'00"	340.81'	642.00'	N17°36'06"E
C2	588.96'	819.02'	41°12'05"	307.86'	576.35'	N16°38'04"E
C3	703.85'	1432.60'	28°09'00"	359.18'	696.79'	N18°02'27"W
C4	226.40'	409.30'	31°41'34"	116.18'	223.53'	N16°16'10"W



RIGHT OF WAY IDENTIFICATION MAP

ORANGE COUNTY PUBLIC WORKS–ENGINEERING RIGHT OF WAY MAPPING

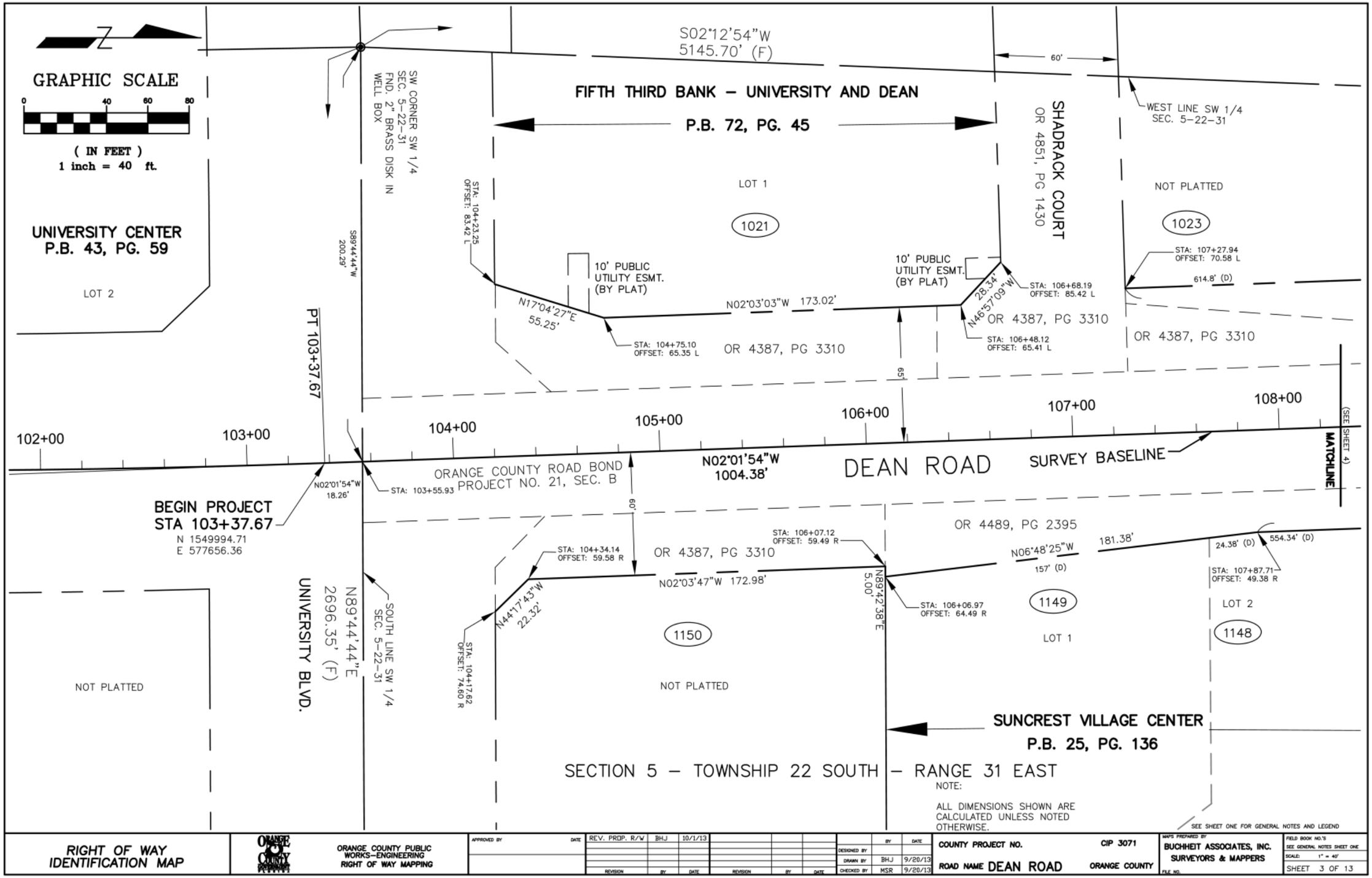
REVISION	BY	DATE
REV. PROP. R/W	BHJ	10/1/13

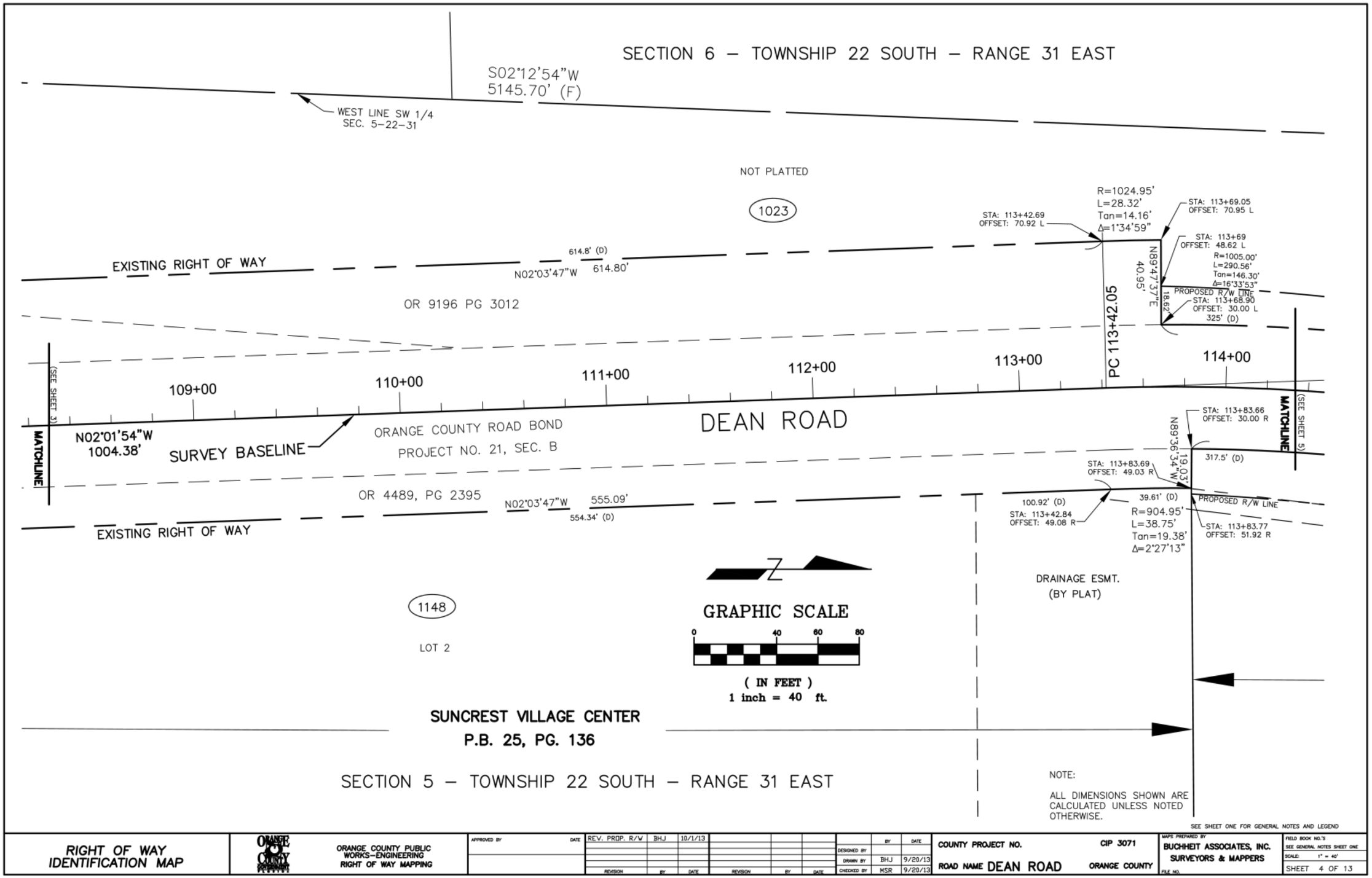
	BY	DATE
DESIGNED BY		
DRAWN BY	BHJ	9/20/13
CHECKED BY	MSR	9/20/13

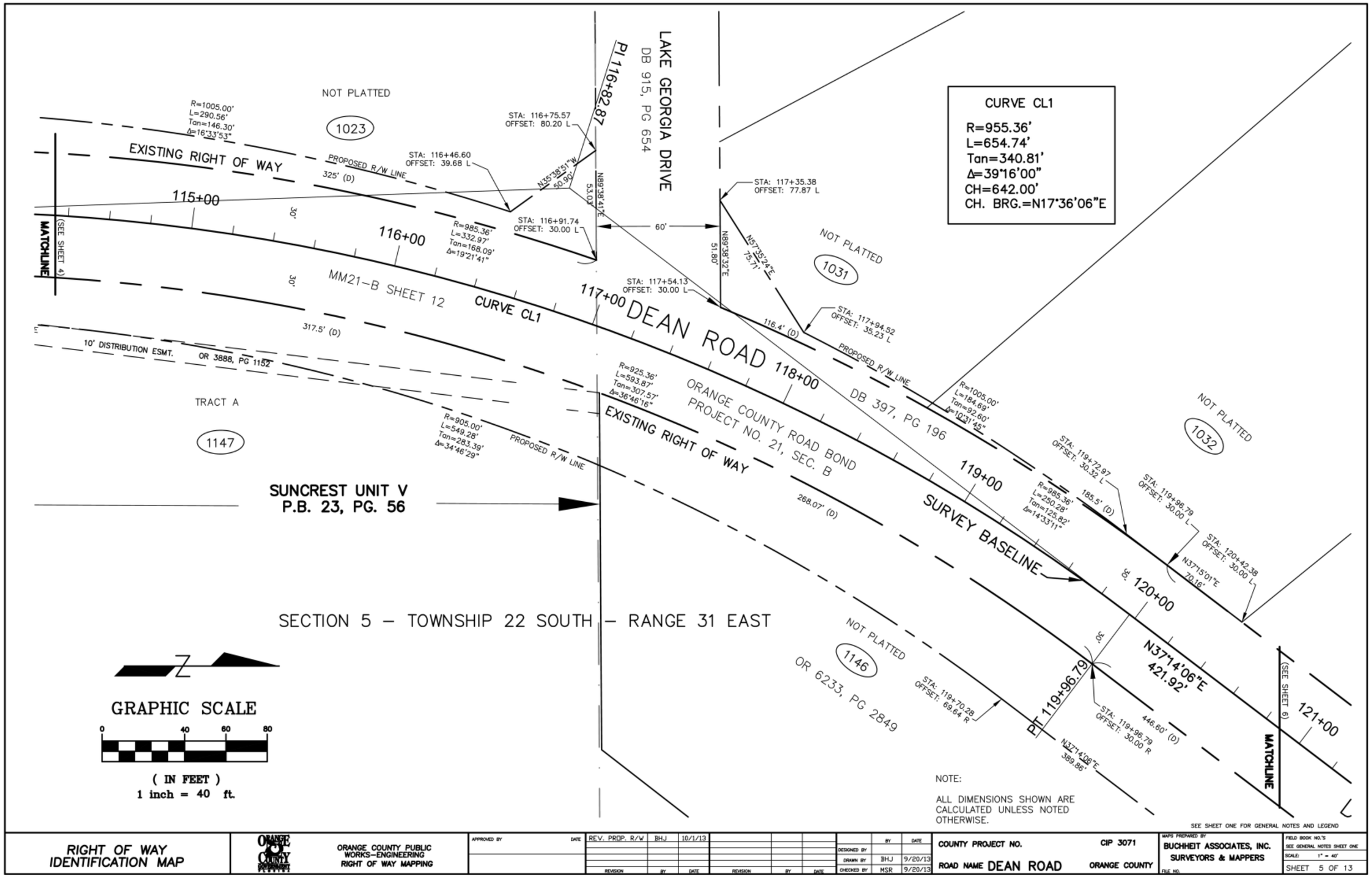
COUNTY PROJECT NO. CIP 3071
ROAD NAME DEAN ROAD ORANGE COUNTY

MAPS PREPARED BY BUCHHEIT ASSOCIATES, INC. SURVEYORS & MAPPERS

SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 400'
SHEET 2 OF 13


GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
UNIVERSITY CENTER
P.B. 43, PG. 59
LOT 2
S02°12'54"W
5145.70' (F)
FIFTH THIRD BANK – UNIVERSITY AND DEAN
P.B. 72, PG. 45
SW CORNER SW 1/4
SEC. 5-22-31
FND. 2" BRASS DISK IN
WELL BOX
S89°44'44"W
200.29'
LOT 1
1021
STA: 104+23.25
OFFSET: 83.42 L
10' PUBLIC
UTILITY ESMT.
(BY PLAT)
N17°04'27"E
55.25'
STA: 104+75.10
OFFSET: 65.35 L
OR 4387, PG 3310
N02°03'03"W 173.02'
10' PUBLIC
UTILITY ESMT.
(BY PLAT)
28.34'
N46°57'09"W
STA: 106+68.19
OFFSET: 85.42 L
STA: 106+48.12
OFFSET: 65.41 L
OR 4387, PG 3310
60'
SHADRACK COURT
OR 4851, PG 1430
WEST LINE SW 1/4
SEC. 5-22-31
NOT PLATTED
1023
STA: 107+27.94
OFFSET: 70.58 L
614.8' (D)
OR 4387, PG 3310
65'
PT 103+37.67
102+00
103+00
104+00
105+00
106+00
107+00
108+00
(SEE SHEET 4)
MATCHLINE
N02°01'54"W
18.26'
BEGIN PROJECT
STA 103+37.67
N 1549994.71
E 577656.36
STA: 103+55.93
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
N02°01'54"W
1004.38'
DEAN ROAD
SURVEY BASELINE
60'
OR 4489, PG 2395
STA: 104+34.14
OFFSET: 59.58 R
OR 4387, PG 3310
N02°03'47"W 172.98'
STA: 106+07.12
OFFSET: 59.49 R
N89°42'38"E
5.00'
N06°48'25"W
157' (D)
181.38'
24.38' (D)
554.34' (D)
STA: 107+87.71
OFFSET: 49.38 R
STA: 106+06.97
OFFSET: 64.49 R
1149
LOT 1
LOT 2
1148
1150
NOT PLATTED
N44°17'43"W
22.32'
STA: 104+17.62
OFFSET: 74.60 R
SOUTH LINE SW 1/4
SEC. 5-22-31
N89°44'44"E
2696.35' (F)
UNIVERSITY BLVD.
NOT PLATTED
SUNCREST VILLAGE CENTER
P.B. 25, PG. 136
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
NOTE:
ALL DIMENSIONS SHOWN ARE
CALCULATED UNLESS NOTED
OTHERWISE.
SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY
IDENTIFICATION MAP
ORANGE COUNTY PUBLIC
WORKS–ENGINEERING
RIGHT OF WAY MAPPING
APPROVED BY
DATE
REV. PROP. R/W
BHJ
10/1/13
REVISION
BY
DATE
DESIGNED BY
DRAWN BY
BHJ
9/20/13
CHECKED BY
MSR
9/20/13
COUNTY PROJECT NO.
CIP 3071
ROAD NAME DEAN ROAD
ORANGE COUNTY
MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 3 OF 13


SECTION 6 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
S02°12'54"W
5145.70' (F)
WEST LINE SW 1/4
SEC. 5–22–31
NOT PLATTED
1023
EXISTING RIGHT OF WAY
614.8' (D)
N02°03'47"W 614.80'
OR 9196 PG 3012
R=1024.95'
L=28.32'
Tan=14.16'
Δ=1°34'59"
STA: 113+42.69
OFFSET: 70.92 L
STA: 113+69.05
OFFSET: 70.95 L
STA: 113+69
OFFSET: 48.62 L
R=1005.00'
L=290.56'
Tan=146.30'
Δ=16°33'53"
N89°47'37"E
40.95'
18.62'
PROPOSED R/W LINE
STA: 113+68.90
OFFSET: 30.00 L
325' (D)
PC 113+42.05
109+00
110+00
111+00
112+00
113+00
114+00
(SEE SHEET 3)
MATCHLINE
N02°01'54"W
1004.38'
SURVEY BASELINE
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
DEAN ROAD
(SEE SHEET 5)
MATCHLINE
STA: 113+83.66
OFFSET: 30.00 R
317.5' (D)
N89°36'34"W
19.03'
STA: 113+83.69
OFFSET: 49.03 R
OR 4489, PG 2395
N02°03'47"W 555.09'
554.34' (D)
EXISTING RIGHT OF WAY
100.92' (D)
STA: 113+42.84
OFFSET: 49.08 R
39.61' (D)
R=904.95'
L=38.75'
Tan=19.38'
Δ=2°27'13"
PROPOSED R/W LINE
STA: 113+83.77
OFFSET: 51.92 R
DRAINAGE ESMT.
(BY PLAT)
1148
LOT 2
GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
SUNCREST VILLAGE CENTER
P.B. 25, PG. 136
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
NOTE:
ALL DIMENSIONS SHOWN ARE CALCULATED UNLESS NOTED OTHERWISE.
SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY IDENTIFICATION MAP
ORANGE COUNTY PUBLIC WORKS–ENGINEERING
RIGHT OF WAY MAPPING
APPROVED BY
DATE
REV. PROP. R/W BHJ 10/1/13
REVISION BY DATE
DESIGNED BY
DRAWN BY BHJ 9/20/13
CHECKED BY MSR 9/20/13
COUNTY PROJECT NO. CIP 3071
ROAD NAME DEAN ROAD ORANGE COUNTY
MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 4 OF 13


CURVE CL1
R=955.36'
L=654.74'
Tan=340.81'
Δ=39°16'00"
CH=642.00'
CH. BRG.=N17°36'06"E
NOT PLATTED
1023
EXISTING RIGHT OF WAY
PROPOSED R/W LINE
R=1005.00'
L=290.56'
Tan=146.30'
Δ=16°33'53"
325' (D)
115+00
116+00
117+00
118+00
119+00
120+00
121+00
30'
MATCHLINE (SEE SHEET 4)
MM21-B SHEET 12
CURVE CL1
317.5' (D)
10' DISTRIBUTION ESMT.
OR 3888, PG 1152
TRACT A
1147
R=905.00'
L=549.28'
Tan=283.39'
Δ=34°46'29"
R=985.36'
L=332.97'
Tan=168.09'
Δ=19°21'41"
STA: 116+46.60
OFFSET: 39.68 L
STA: 116+75.57
OFFSET: 80.20 L
PI 116+82.87
N35°38'51"W
50.90'
N89°38'41"E
53.03'
STA: 116+91.74
OFFSET: 30.00 L
60'
LAKE GEORGIA DRIVE
DB 915, PG 654
STA: 117+35.38
OFFSET: 77.87 L
N89°38'32"E
51.80'
N57°35'24"E
75.71'
STA: 117+54.13
OFFSET: 30.00 L
NOT PLATTED
1031
STA: 117+94.52
OFFSET: 35.23 L
116.4' (D)
PROPOSED R/W LINE
DEAN ROAD
DB 397, PG 196
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
R=925.36'
L=593.87'
Tan=307.57'
Δ=36°46'16"
EXISTING RIGHT OF WAY
268.07' (D)
R=1005.00'
L=184.69'
Tan=92.60'
Δ=10°31'45"
STA: 119+72.97
OFFSET: 30.32 L
185.5' (D)
R=985.36'
L=250.28'
Tan=125.82'
Δ=14°33'11"
SURVEY BASELINE
STA: 119+96.79
OFFSET: 30.00 L
STA: 120+42.38
OFFSET: 30.00 L
N37°15'01"E
70.16'
NOT PLATTED
1032
SUNCREST UNIT V
P.B. 23, PG. 56
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
NOT PLATTED
1146
OR 6233, PG 2849
STA: 119+70.28
OFFSET: 69.84 R
PT 119+96.79
N37°14'06"E
421.92'
STA: 119+96.79
OFFSET: 30.00 R
446.60' (D)
N37°14'06"E
389.86'
(SEE SHEET 6)
MATCHLINE
GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
NOTE:
ALL DIMENSIONS SHOWN ARE CALCULATED UNLESS NOTED OTHERWISE.
SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY IDENTIFICATION MAP
ORANGE COUNTY PUBLIC WORKS–ENGINEERING
RIGHT OF WAY MAPPING
APPROVED BY
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BHJ
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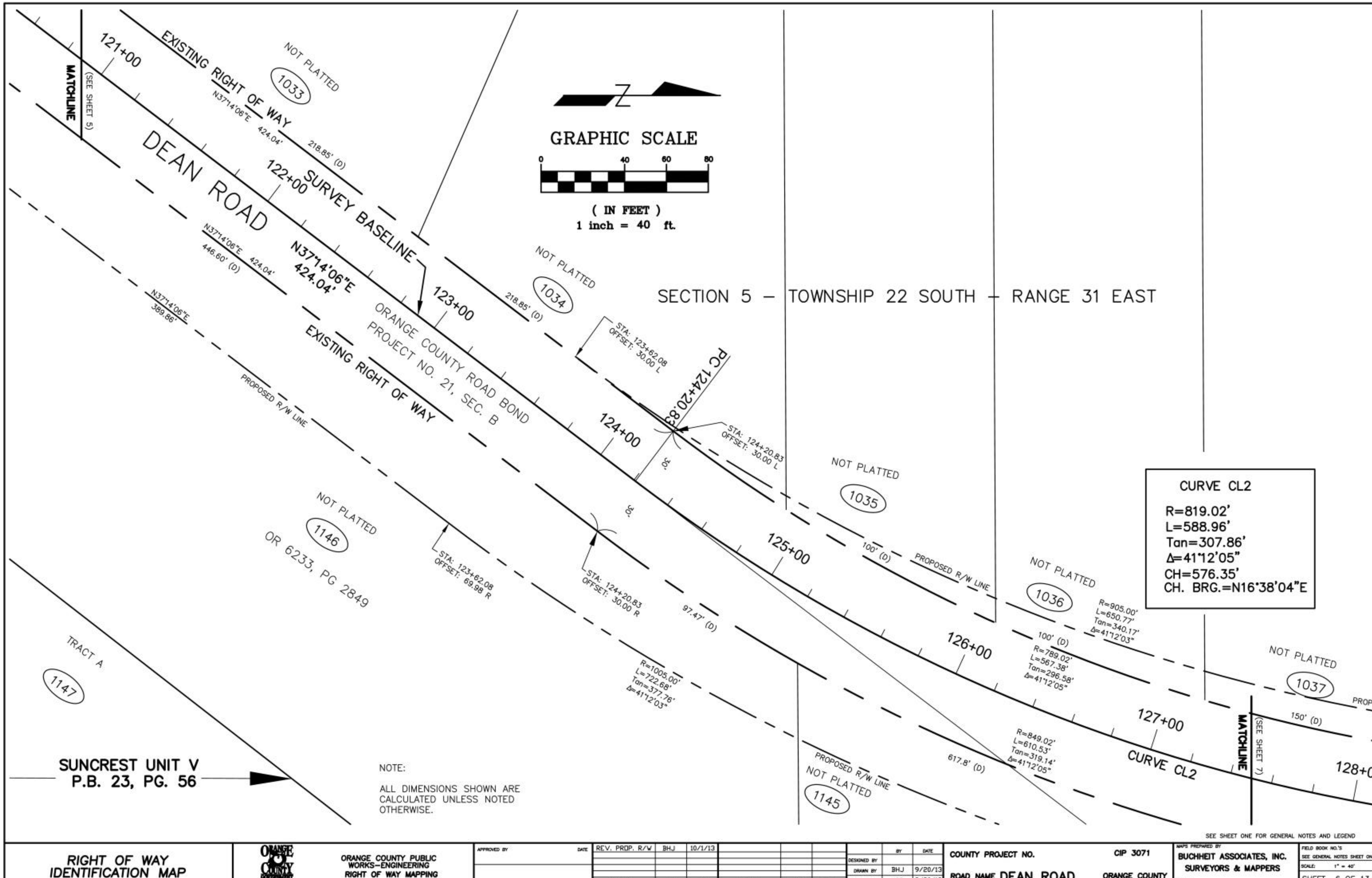
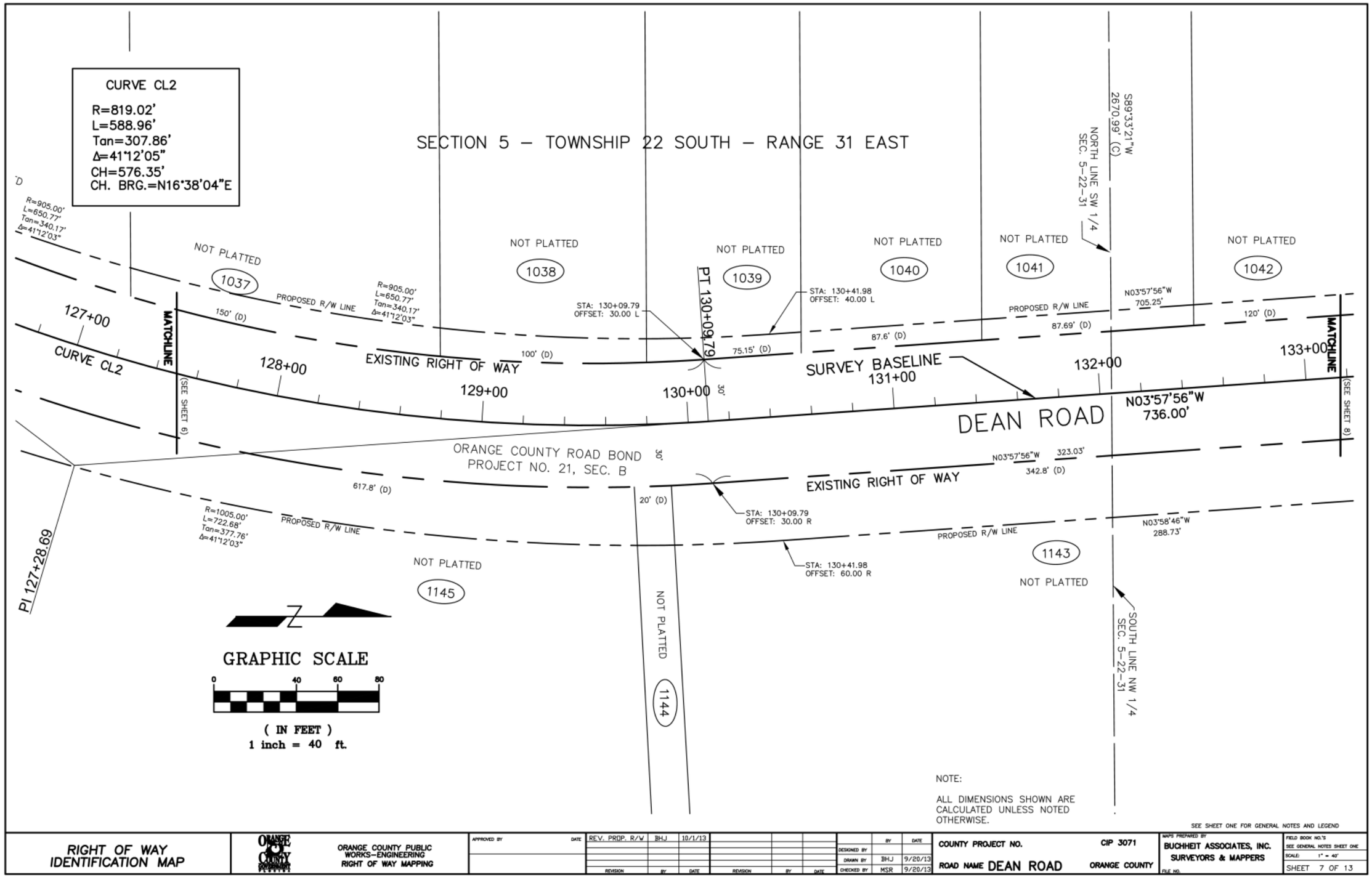
DRAWN BY BHJ 9/20/13
CHECKED BY MSR 9/20/13
COUNTY PROJECT NO.
CIP 3071
ROAD NAME DEAN ROAD
ORANGE COUNTY
MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 5 OF 13


GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
MATCHLINE (SEE SHEET 5)
MATCHLINE (SEE SHEET 7)
DEAN ROAD
EXISTING RIGHT OF WAY
SURVEY BASELINE
N37°14'06"E 424.04'
ORANGE COUNTY ROAD BOND PROJECT NO. 21, SEC. B
PROPOSED R/W LINE
PC 124+20.83
STA: 123+62.08 OFFSET: 30.00 L
STA: 124+20.83 OFFSET: 30.00 L
STA: 123+62.08 OFFSET: 69.98 R
STA: 124+20.83 OFFSET: 30.00 R
121+00
122+00
123+00
124+00
125+00
126+00
127+00
128+00
NOT PLATTED
1033
1034
1035
1036
1037
1145
1146
1147
OR 6233, PG 2849
TRACT A
SUNCREST UNIT V P.B. 23, PG. 56
CURVE CL2
R=819.02'
L=588.96'
Tan=307.86'
Δ=41°12'05"
CH=576.35'
CH. BRG.=N16°38'04"E
NOTE:
ALL DIMENSIONS SHOWN ARE CALCULATED UNLESS NOTED OTHERWISE.
SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY IDENTIFICATION MAP
ORANGE COUNTY PUBLIC WORKS–ENGINEERING RIGHT OF WAY MAPPING
REV. PROP. R/W BHJ 10/1/13
COUNTY PROJECT NO. CIP 3071
ROAD NAME DEAN ROAD
ORANGE COUNTY
BUCHHEIT ASSOCIATES, INC. SURVEYORS & MAPPERS
DRAWN BY BHJ 9/20/13
CHECKED BY MSR 9/20/13
SCALE: 1" = 40'
SHEET 6 OF 13


CURVE CL2
R=819.02'
L=588.96'
Tan=307.86'
Δ=41°12'05"
CH=576.35'
CH. BRG.=N16°38'04"E
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
S89°33'21"W
2670.99' (C)
NORTH LINE SW 1/4
SEC. 5-22-31
NOT PLATTED
1037
1038
1039
1040
1041
1042
R=905.00'
L=650.77'
Tan=340.17'
Δ=41°12'03"
PROPOSED R/W LINE
150' (D)
100' (D)
75.15' (D)
87.6' (D)
87.69' (D)
120' (D)
EXISTING RIGHT OF WAY
STA: 130+09.79
OFFSET: 30.00 L
PT 130+09.79
STA: 130+41.98
OFFSET: 40.00 L
N03°57'56"W
705.25'
127+00
128+00
129+00
130+00
131+00
132+00
133+00
CURVE CL2
MATCHLINE
(SEE SHEET 6)
(SEE SHEET 8)
SURVEY BASELINE
DEAN ROAD
N03°57'56"W
736.00'
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
30'
617.8' (D)
20' (D)
N03°57'56"W
323.03'
342.8' (D)
EXISTING RIGHT OF WAY
STA: 130+09.79
OFFSET: 30.00 R
STA: 130+41.98
OFFSET: 60.00 R
PROPOSED R/W LINE
N03°58'46"W
288.73'
R=1005.00'
L=722.68'
Tan=377.76'
Δ=41°12'03"
PROPOSED R/W LINE
PI 127+28.69
NOT PLATTED
1145
NOT PLATTED
1144
NOT PLATTED
1143
SOUTH LINE NW 1/4
SEC. 5-22-31
GRAPHIC SCALE
0
40
60
80
(IN FEET)
1 inch = 40 ft.
NOTE:
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ORANGE COUNTY PUBLIC WORKS–ENGINEERING
RIGHT OF WAY MAPPING
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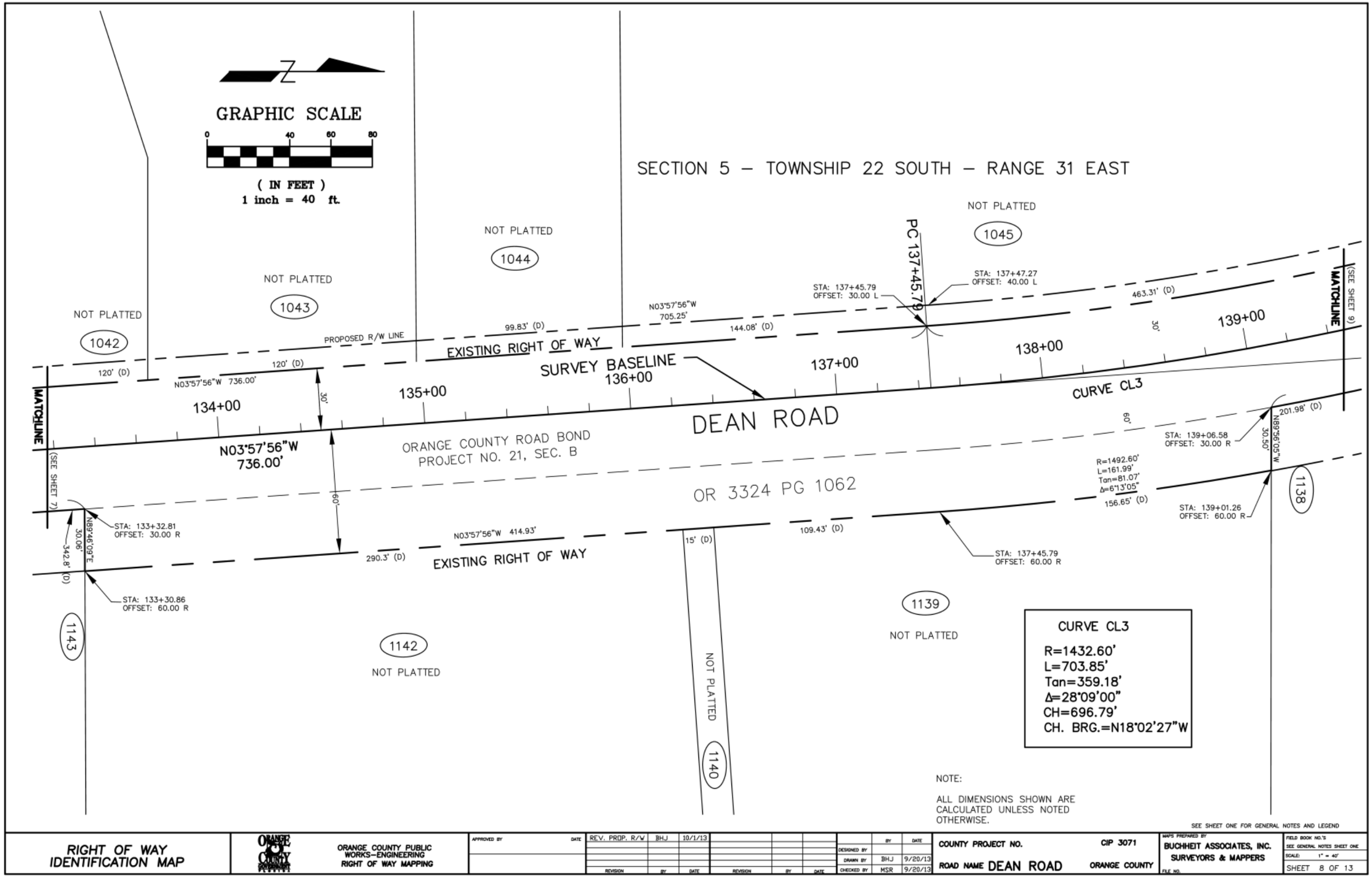
COUNTY PROJECT NO.
CIP 3071
ROAD NAME DEAN ROAD
ORANGE COUNTY
MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 7 OF 13


GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
NOT PLATTED
1042
NOT PLATTED
1043
NOT PLATTED
1044
NOT PLATTED
1045
PC 137+45.79
STA: 137+45.79
OFFSET: 30.00 L
STA: 137+47.27
OFFSET: 40.00 L
N03°57'56"W
705.25'
463.31' (D)
99.83' (D)
144.08' (D)
PROPOSED R/W LINE
EXISTING RIGHT OF WAY
SURVEY BASELINE
120' (D)
120' (D)
N03°57'56"W 736.00'
134+00
135+00
136+00
137+00
138+00
139+00
30'
MATCHLINE
(SEE SHEET 7)
MATCHLINE
(SEE SHEET 9)
DEAN ROAD
CURVE CL3
60'
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
N03°57'56"W
736.00'
OR 3324 PG 1062
R=1492.60'
L=161.99'
Tan=81.07'
Δ=6°13'05"
156.65' (D)
201.98' (D)
N89°46'09"E
30.06'
342.8' (D)
STA: 133+32.81
OFFSET: 30.00 R
STA: 133+30.86
OFFSET: 60.00 R
N03°57'56"W 414.93'
290.3' (D)
EXISTING RIGHT OF WAY
15' (D)
109.43' (D)
STA: 137+45.79
OFFSET: 60.00 R
STA: 139+06.58
OFFSET: 30.00 R
N89°46'09"E
30.06'
STA: 139+01.26
OFFSET: 60.00 R
1138
1139
NOT PLATTED
1140
NOT PLATTED
1142
NOT PLATTED
1143
CURVE CL3
R=1432.60'
L=703.85'
Tan=359.18'
Δ=28°09'00"
CH=696.79'
CH. BRG.=N18°02'27"W
NOTE:
ALL DIMENSIONS SHOWN ARE CALCULATED UNLESS NOTED OTHERWISE.
SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY IDENTIFICATION MAP
ORANGE COUNTY PUBLIC WORKS–ENGINEERING
RIGHT OF WAY MAPPING
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COUNTY PROJECT NO.
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ROAD NAME DEAN ROAD
ORANGE COUNTY
MAPS PREPARED BY
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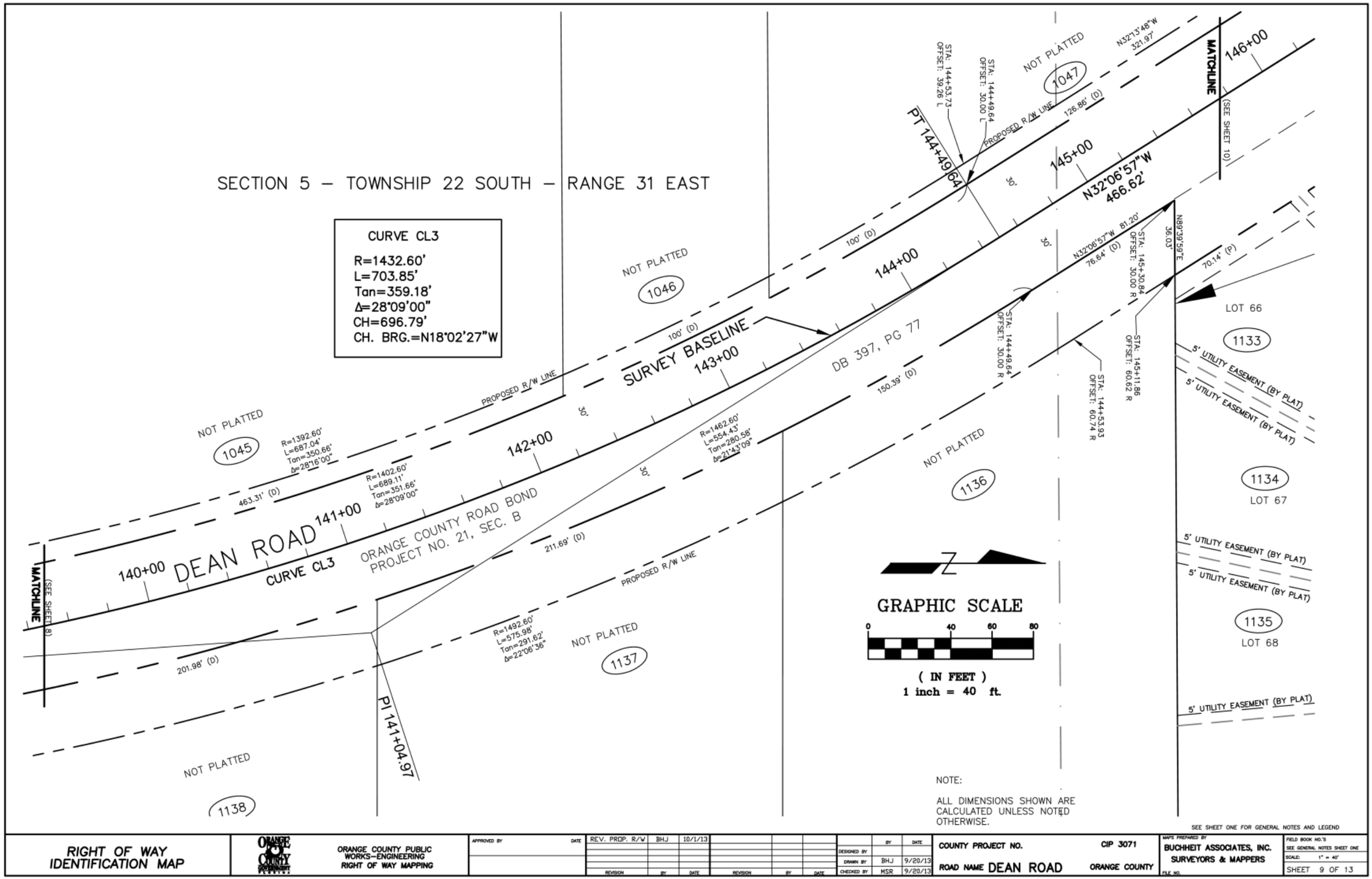
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 8 OF 13



RIGHT OF WAY IDENTIFICATION MAP

ORANGE COUNTY PUBLIC WORKS–ENGINEERING RIGHT OF WAY MAPPING

APPROVED BY	DATE

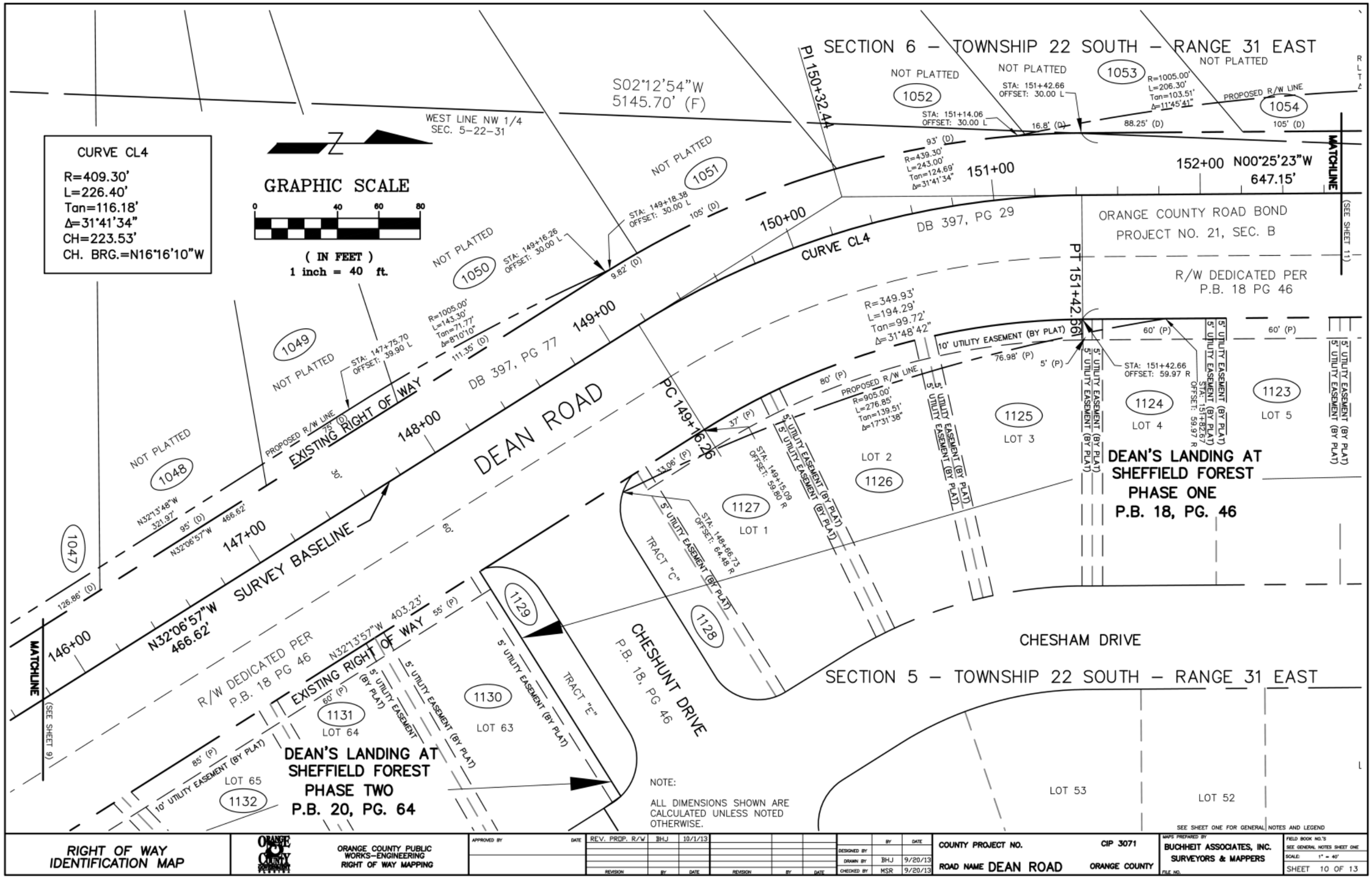
REVISION	BY	DATE
REV. PROP. R/W	BHJ	10/1/13

	BY	DATE
DESIGNED BY		
DRAWN BY	BHJ	9/20/13
CHECKED BY	MSR	9/20/13

COUNTY PROJECT NO. CIP 3071
ROAD NAME DEAN ROAD ORANGE COUNTY

MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.

FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 9 OF 13


CURVE CL4
R=409.30'
L=226.40'
Tan=116.18'
Δ=31°41'34"
CH=223.53'
CH. BRG.=N16°16'10"W
GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
WEST LINE NW 1/4
SEC. 5-22-31
S02°12'54"W
5145.70' (F)
SECTION 6 - TOWNSHIP 22 SOUTH - RANGE 31 EAST
NOT PLATTED
1052
1053
1054
1051
1050
1049
1048
1047
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 63
LOT 64
LOT 65
LOT 53
LOT 52
PI 150+32.44
PC 149+16.26
PT 151+42.56
CURVE CL4
DB 397, PG 29
DB 397, PG 77
DEAN ROAD
SURVEY BASELINE
N32°06'57"W
466.62'
N00°25'23"W
647.15'
EXISTING RIGHT OF WAY
PROPOSED R/W LINE
R/W DEDICATED PER
P.B. 18 PG 46
ORANGE COUNTY ROAD BOND
PROJECT NO. 21, SEC. B
R/W DEDICATED PER
P.B. 18 PG 46
MATCHLINE
(SEE SHEET 11)
(SEE SHEET 9)
DEAN'S LANDING AT
SHEFFIELD FOREST
PHASE ONE
P.B. 18, PG. 46
DEAN'S LANDING AT
SHEFFIELD FOREST
PHASE TWO
P.B. 20, PG. 64
CHESHUNT DRIVE
P.B. 18, PG 46
CHESHAM DRIVE
SECTION 5 - TOWNSHIP 22 SOUTH - RANGE 31 EAST
TRACT "C"
TRACT "E"
10' UTILITY EASEMENT (BY PLAT)
5' UTILITY EASEMENT (BY PLAT)
NOTE:
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SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
RIGHT OF WAY IDENTIFICATION MAP
ORANGE COUNTY PUBLIC WORKS-ENGINEERING RIGHT OF WAY MAPPING
REV. PROP. R/W BHJ 10/1/13
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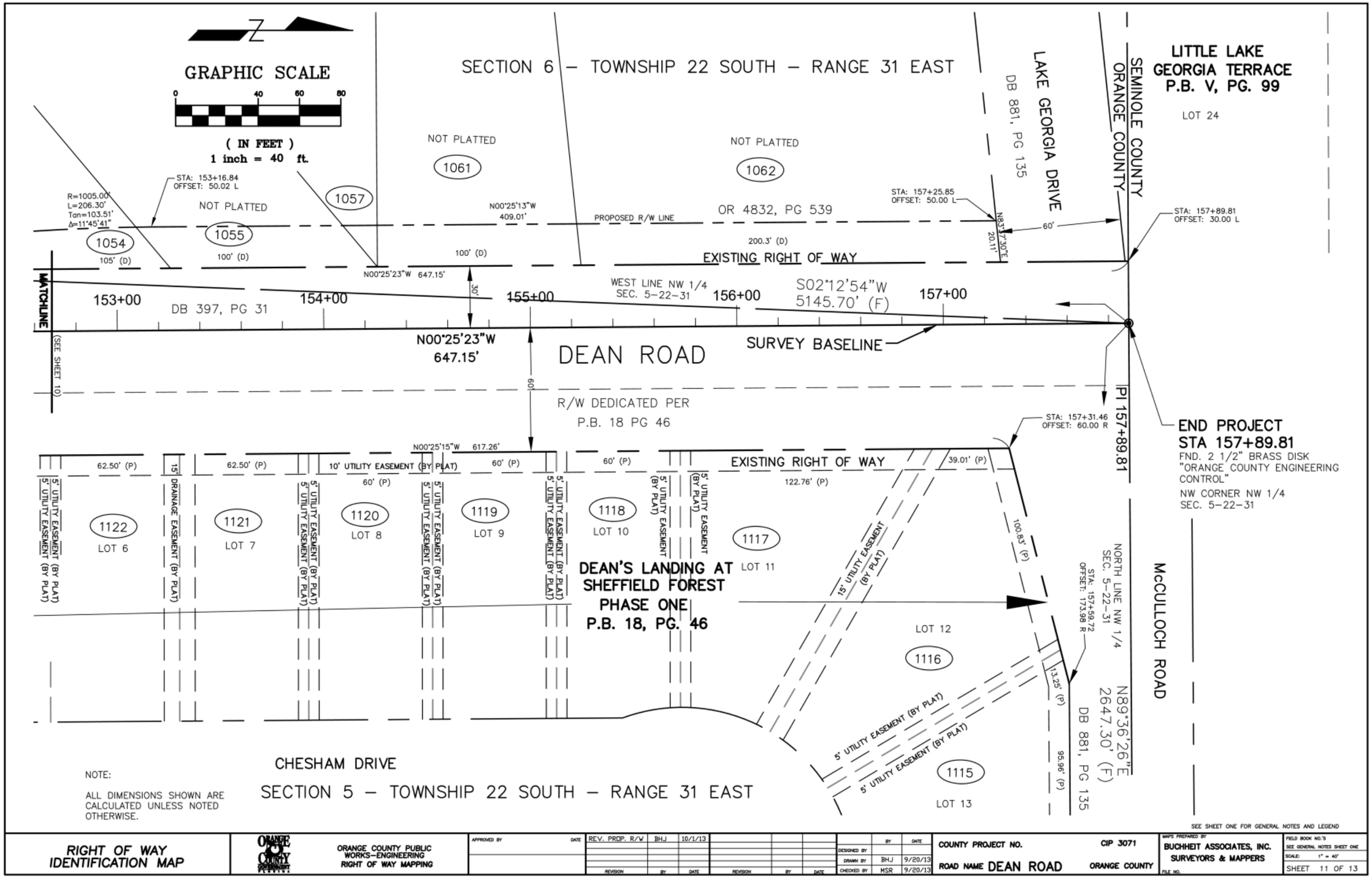
ORANGE COUNTY
MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 10 OF 13


GRAPHIC SCALE
0 40 60 80
(IN FEET)
1 inch = 40 ft.
SECTION 6 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
LAKE GEORGIA DRIVE
DB 881, PG 135
SEMINOLE COUNTY
ORANGE COUNTY
LITTLE LAKE GEORGIA TERRACE
P.B. V, PG. 99
LOT 24
NOT PLATTED
1061
NOT PLATTED
1062
1057
1055
1054
STA: 153+16.84
OFFSET: 50.02 L
R=1005.00'
L=206.30'
Tan=103.51'
Δ=11°45'41"
N00°25'13"W
409.01'
PROPOSED R/W LINE
OR 4832, PG 539
STA: 157+25.85
OFFSET: 50.00 L
N83°17'30"E
20.11'
60'
STA: 157+89.81
OFFSET: 30.00 L
105' (D)
100' (D)
200.3' (D)
EXISTING RIGHT OF WAY
N00°25'23"W 647.15'
30'
WEST LINE NW 1/4
SEC. 5–22–31
S02°12'54"W
5145.70' (F)
WATCHLINE
153+00
154+00
155+00
156+00
157+00
DB 397, PG 31
N00°25'23"W
647.15'
DEAN ROAD
SURVEY BASELINE
(SEE SHEET 10)
60'
R/W DEDICATED PER
P.B. 18 PG 46
PI 157+89.81
STA: 157+31.46
OFFSET: 60.00 R
END PROJECT
STA 157+89.81
FND. 2 1/2" BRASS DISK
"ORANGE COUNTY ENGINEERING CONTROL"
NW CORNER NW 1/4
SEC. 5–22–31
N00°25'15"W 617.26'
62.50' (P)
15' DRAINAGE EASEMENT (BY PLAT)
62.50' (P)
10' UTILITY EASEMENT (BY PLAT)
60' (P)
60' (P)
60' (P)
EXISTING RIGHT OF WAY
122.76' (P)
39.01' (P)
5' UTILITY EASEMENT (BY PLAT)
1122
LOT 6
1121
LOT 7
1120
LOT 8
1119
LOT 9
1118
LOT 10
1117
LOT 11
DEAN'S LANDING AT SHEFFIELD FOREST PHASE ONE
P.B. 18, PG. 46
15' UTILITY EASEMENT (BY PLAT)
100.83' (P)
NORTH LINE NW 1/4
SEC. 5–22–31
STA: 157+59.72
OFFSET: 173.98 R
N89°36'26"E
2647.30' (F)
DB 881, PG 135
McCULLOCH ROAD
LOT 12
1116
13.25' (P)
95.96' (P)
5' UTILITY EASEMENT (BY PLAT)
1115
LOT 13
CHESHAM DRIVE
SECTION 5 – TOWNSHIP 22 SOUTH – RANGE 31 EAST
NOTE:
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SEE SHEET ONE FOR GENERAL NOTES AND LEGEND
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ORANGE COUNTY PUBLIC WORKS–ENGINEERING RIGHT OF WAY MAPPING
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ORANGE COUNTY
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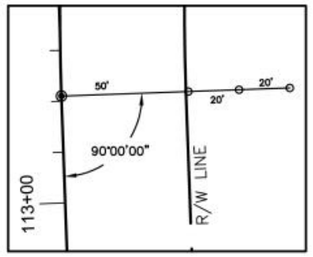
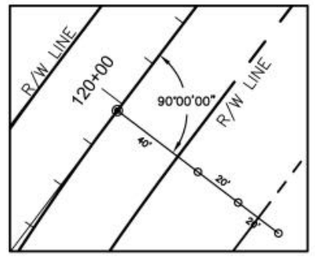
SURVEYORS & MAPPERS
FILE NO.
FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: 1" = 40'
SHEET 11 OF 13

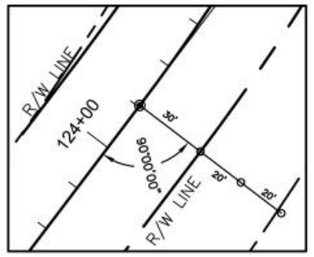
REFERENCES
(NOT TO SCALE)



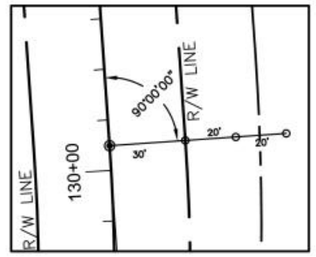
PC STA 113+42.05
N 1550998.46
E 577620.75



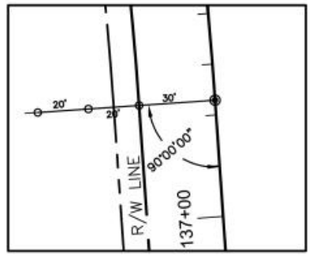
PT STA 119+96.79
N 1551610.40
E 577814.89



PC STA 124+20.83
N 1551948.01
E 578071.48



PT STA 130+09.79
N 1552500.24
E 578236.46



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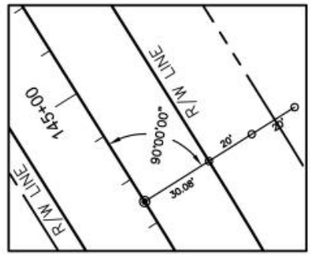
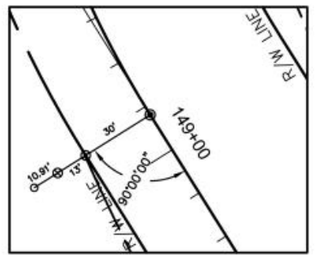
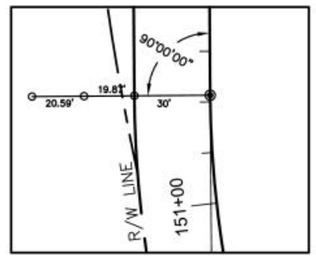
N 1553234.47
E 578185.56



PT STA 144+49.64
N 1553897.01
E 577969.77



PC STA 149+16.26
N 1554292.22
E 577721.70



PT STA 151+42.66
N 1554506.80
E 577659.08

○ SET 5/8" IRON ROD & CAP
"TRAV/REF" PLS 4838"

◉ SET NAIL & DISK
"TRAV/REF" PLS 4838"

⊗ SET "X" CUT

SEE SHEET ONE FOR GENERAL NOTES AND LEGEND

RIGHT OF WAY
IDENTIFICATION MAP

ORANGE COUNTY PUBLIC
WORKS–ENGINEERING
RIGHT OF WAY MAPPING

APPROVED BY DATE

REVISION	BY	DATE	REVISION	BY	DATE
REV. PROP. R/W	BHJ	10/1/13			

	BY	DATE
DESIGNED BY		
DRAWN BY	BHJ	9/20/13
CHECKED BY	MSR	9/20/13

COUNTY PROJECT NO. CIP 3071
ROAD NAME DEAN ROAD ORANGE COUNTY

MAPS PREPARED BY
BUCHHEIT ASSOCIATES, INC.
SURVEYORS & MAPPERS
FILE NO.

FIELD BOOK NO.'S
SEE GENERAL NOTES SHEET ONE
SCALE: NTS
SHEET 12 OF 13

TABLE OF OWNERSHIP
(AS OF 12/03/2010)

PARCEL No.	TAX ID No.	OWNER(S)	DEED
1001	07-22-31-3794-01140	EDGAR L. JOBES and BETTY H. JONES	O.R. 3815, PG. 4320
1002	07-22-31-0000-00074	WILLIAM B. SCHANEL	O.R. 5331, PG. 4715
1003	07-22-31-0000-00019	WILLIAM B. SCHANEL	O.R. 5331, PG. 4715
1004	07-22-31-0000-00062	EMBARQ OD FLORIDA, INC.	O.R. 3622, PG. 0402
1005	07-22-31-5876-00070	THOMAS MOORE and HEIDI MOORE	O.R. 6636, PG. 3758
1006	07-22-31-5876-00060	TINA M. ADAMSKI-BAKER and WILLIAM E. BAKER	O.R. 6309, PG. 0620
1007	07-22-31-5876-00050	JING ZHENG	O.R. 10104, PG. 7995
1008	07-22-31-5876-00040	MYPHI THAN TRAN and QUAN THANH TRAN	O.R. 7066, PG. 2714
1009	07-22-31-5876-00030	RAUL LEY-SOTO, JR. and AMIE N. GUILLETTE	O.R. 6847, PG. 0042
1010	07-22-31-5876-00020	ANTONIO V. LAYCO and YOLANDA D. LAYCO	O.R. 9772, PG. 7760
1011	07-22-31-5876-00010	TAN NGOC BUI	O.R. 7066, PG. 2673; O.R. 9535 PG. 3462
1012	07-22-31-5876-00005 and 07-22-31-5876-00006	MULBERRY HOLLOW HOMEOWNERS ASSOCIATION, INC.	O.R. 5646, PG. 0505; O.R. 5689, PG. 3831; O.R. 8149, PG. 3453
1013	07-22-31-8790-00030	CIROTTI ENTERPRISES, LLC	O.R. 7770, PG. 3451
1014	07-22-31-8790-0031	KENNETH DOWLING	O.R. 9666, PG. 7191
1015	07-22-31-8790-00020	WALGREEN CO.	O.R. 5948, PG. 2680
1016	07-22-31-8790-00010	UNIVERSITY PROFESSIONAL BUILDING LLC	O.R. 8740, PG. 3060
1017	06-22-31-0000-00019	JERRY ROGER JORDAN and BUEHAME LOUISE JORDAN	O.R. 5513, PG. 2808
1018	06-22-31-0000-00049	H. WAYNE TODD and CAROL V. TODD	O.R. 7453, PG. 4022
1019	06-22-31-0000-00096	ROBERT L. HUDSON and PATRICIA A. HUDSON and JAMES R. HUDSON	O.R. 6435, PG. 2116; O.R. 6449, PG. 4619; O.R. 6724, PG. 2272
1020	06-22-31-0000-00095	ROBERT L. HUDSON and PATRICIA A. HUDSON and JAMES R. HUDSON	O.R. 6435, PG. 2116; O.R. 6449, PG. 4619; O.R. 6724, PG. 2272
1021	05-22-31-2681-00010	FIFTH THIRD BANK	O.R. 8517, PG. 4030; O.R. 9654, PG. 0211
1022	N/A	ORANGE COUNTY, FLORIDA	O.R. 4387, PG. 3310; O.R. 4689, PG. 3005; O.R. 4851, PG. 1430
1023	05-22-31-0000-00033	DEAN PROPERTY DEVELOPMENT, LLC	O.R. 7287, PG. 4388
1024	06-22-31-0000-00101	DEAN PROPERTY DEVELOPMENT, LLC	O.R. 7287, PG. 5002
1025	06-22-31-0000-00017	JAMES R. HUDSON	O.R. 3656, PG. 2448; O.R. 6449, PG. 4619; O.R. 7945, PG. 4322
1026	06-22-31-0000-00074	THERESA PROVISERO, RALPH PROVISERO, ANNEMARIE DENEAU, JACK PROVISERO, AMY PROVISERO	O.R. 6198, PG. 1207
1027	06-22-31-0000-00040	HOWARD R. ANDERSON and DINA ANDERSON	O.R. 5120, PG. 0386; O.R. 8667, PG. 3979
1028	06-22-31-0000-00013	DARRELL M. WAGNER	O.R. 4785, PG. 2693; O.R. 5831, PG. 2412
1029	06-22-31-0000-00006	MICHAEL L. MCCORD and PETRA S. MCCORD	O.R. 4781, PG. 0858
1030	06-22-31-0000-00033	WALTER R. NASON and LISA G. NASON	O.R. 1925, PG. 0392; O.R. 4082, PG. 2698
1031	06-22-31-0000-00032	CHRISTOPHER CYCMANICK	O.R. 2457, PG. 1549; O.R. 4063, PG. 3576; O.R. 4656, PG. 3546; O.R. 9387, PG. 2240
1032	05-22-31-0000-00018	FELIX A. LOPEZ and LILLIAN LOPEZ	O.R. 4169, PG. 0049
1033	05-22-31-0000-00027	CHARLES E. THOMPSON	O.R. 4776, PG. 3742; O.R. 6367, PG. 4809
1034	05-22-31-0000-00024	CHRISTOPHER TRABULSY	O.R. 4181, PG. 1433; O.R. 4838, PG. 4363; O.R. 9858, PG. 4168, O.R. 9863, PG. 5516
1035	05-22-31-0000-00036	DAVID A. MCELHANEY	O.R. 5660, PG. 3747; O.R. 7588, PG. 0853; O.R. 8223, PG. 1076
1036	05-22-31-0000-00017	HAI NGUYEN	O.R. 6391, PG. 3849
1037	05-22-31-0000-00002	MICHAEL L. BRONSON, ERIC M. BRONSON and KEVIN L. BRONSON	O.R. 7538, PG. 2965
1038	05-22-31-0000-00010	GORDON D. SEVEY and NANCY G. SEVEY	O.R. 7237, PG. 0874, O.R. 7237, PG. 0976; O.R. 7926, PG. 4680
1039	05-22-31-0000-00016	HARVEY D. MURPHY and BRENDA Q. MURPHY	O.R. 2338, PG. 0656
1040	05-22-31-0000-00026	BETTY L. OSHER	O.R. 1826, PG. 0542
1041	05-22-31-0000-00030	SCOTT C. BYERLY and KIMBERLY BEACH BYERLY	O.R. 6043, PG. 4978
1042	05-22-31-0000-00009	ANTHONY J. COUTHARD	O.R. 6480, PG. 1452
1043	05-22-31-0000-00025	WEN FANG SUN	O.R. 3861, PG. 3692
1044	05-22-31-0000-00023	KATH BRANTLEY REVOCABLE TRUST	O.R. 6035, PG. 4112
1045	05-22-31-0000-00047	OLIVER C. JAMES	O.R. 6115, PG. 3465
1046	05-22-31-0000-00045	ROBERT BLOUIN	O.R. 7761, PG. 2239
1047	05-22-31-0000-00013	OLIVER C. JAMES	O.R. 6115, PG. 3465
1048	06-22-31-0000-00091	DEAN TASMAN and RACI TASMAN	O.R. 5799, PG. 0547, O.R. 7706, PG. 3830, O.R. 7769, PG. 1291
1049	06-22-31-0000-00082	RICHARD SCOTT EISAMAN and NADENE L. EISAMAN	O.R. 5799, PG. 0547
1050	06-22-31-0000-00050	TAMMY LIMA and JORGE LIMA	O.R. 9507, PG. 3564
1051	06-22-31-0000-00061	MICHAEL SCHUETHEIS and MERCEDES SCHUETHEIS	O.R. 7460, PG. 0966
1052	06-22-31-0000-00056	JOLENE A. BURTNESS	O.R. 8616, PG. 3594
1053	06-22-31-0000-00075	HILLIARD N. MULFORD, JR. and SYLVIA B. MULFORD	O.R. 1792, PG. 0318
1054	06-22-31-0000-00021	ROBERT J. BARBOUR	O.R. 10004, PG. 4922
1055	06-22-31-0000-00018	GARREN WRIGHT	O.R. 7455, PG. 0186; O.R. 7584, PG. 3500
1056	06-22-31-0000-00094	KENNETH L. WHITEHEAD and JUDITH H. WHITEHEAD	O.R. 4226, PG. 4317; O.R. 4490, PG. 4544
1057	06-22-31-0000-00004	DEAN B. TASMAN and RACI TASMAN	O.R. 3838, PG. 3657
1058	06-22-31-0000-00058	DANILO P. LACSAMANA and ARACELI U. LACSAMANA	O.R. 5288, PG. 3459
1059	06-22-31-0000-00092	DEAN TASMAN and RACI TASMAN	O.R 4044, PG. 3657; O.R. 4279, PG. 2215
1060	06-22-31-0000-00080	FREDERICK COHEN and FAYGE S. COHEN	O.R. 4044, PG. 3679; O.R. 4626, PG. 3945
1061	06-22-31-0000-00059	MARIA SALERNO	O.R. 5288, PG. 4139
1062	06-22-31-0000-00026	ORANGE COUNTY, FLORIDA	O.R. 4832, PG. 0539
1063	06-22-31-0000-00077	ROSALIO FIGUEROA and FRANCISCA FIGUEROA	O.R. 7618, PG. 1775
1064	06-22-31-0000-00079	ROBERT J. BARBOUR	O.R. 7295, PG. 3745
1065	06-22-31-0000-00025	EDUARDO E. BANCALARI and CHRISTINE EBELTOFT-BANCALARI	O.R. 5805, PG. 4668; O.R. 6736, PG. 2615
1066	06-22-31-0000-00024	JON E. NADLER and MELISSA S. NADLER	O.R. 9352, PG. 3329
1067	06-22-31-0000-00023	ROY A. MEADOR and BETTY A. MEADOR	O.R. 2825, PG. 0827
1068	06-22-31-0000-00014	DONALD J. CARTER	O.R. 4475, PG. 4382
1069	06-22-31-0000-00022	EDWIN M. STEAD and SUSAN R. HANNERS-STEAD, and PEGGY STEADWILSON	O.R. 3755, PG. 2362; O.R. 9392, PG. 1060
1070	06-22-31-5100-00330	MARGIE HOGAN	O.R. 5038, PG. 1774
1071	06-22-31-5100-00320	JAY S. ALDRICH and NANCY ALDRICH	O.R. 6822, PG. 4908
1072	06-22-31-5100-00310	MARSHALL G. ADAMS and KELLEY ADAMS	O.R. 4521, PG. 4189
1073	06-22-31-5100-00300	ALFRED MCCALL and SAVANNAH MCCALL	O.R. 2229, PG. 0890
1074	06-22-31-5100-00290	JIMMIE R. JORDAN	O.R. 5267, PG. 1399
1075	06-22-31-5100-00280	SOVEREIGN BANK	O.R. 10072, PG. 3208
1076	06-22-31-5100-00270	KIMBERLY JOUBERT and YURI GONZALEZ	O.R. 6984, PG. 1574
1077	06-22-31-5100-00260	DAVID A. WOOD and SANDRA K. WOOD	O.R. 4856, PG. 2872
1078	06-22-31-5100-00250	KATHERINE J. BENNETT	O.R. 3855, PG. 1936
1079	06-22-31-5100-00240	ORANGE COUNTY, FLORIDA	O.R. 6998, PG. 4510
1103	05-22-31-1983-00250	MICHAEL A. GRIFFIN and MICHELLE L. GRIFFIN	O.R. 9404, PG. 3559
1104	05-22-31-1983-00240	TERESA BRAMLETT and ALBERT LEON JOHNSON	O.R. 8323, PG. 0323
1105	05-22-31-1983-00230	EVELYN VELAZQUEZ	O.R. 8325, PG. 0304
1106	05-22-31-1983-00220	LEO MOSES	O.R. 4197, PG. 3383; O.R. 9140, PG. 1938
1107	05-22-31-1983-00210	BARBARA E. TRUMAN	O.R. 6568, PG. 2716
1108	05-22-31-1983-00200	KAREN ANN MCCOY	O.R. 5211, PG. 1906
1109	05-22-31-1983-00190	CATHERINE A. GIORDANA	O.R. 9725, PG. 1815
1110	05-22-31-1983-00180	WILLIAM E. SCHLEY and CAROL E. SCHLEY	O.R. 3934, PG. 3870
1111	05-22-31-1983-00170	SUONG NGUYEN and MARK W. JOHNSON	O.R. 7583, PG. 0182
1112	05-22-31-1983-00160	CHARLES KORNEGAY and PATRICIA KORNEGAY	O.R. 8031, PG. 4302
1113	N/A	SARAH L. LAWRENCE and GAYLORD M. LAWRENCE	O.R. 6497, PG. 6224
1114	05-22-31-1983-00140	TUNG T. DANG and BUU NGOC DANG	O.R. 3901, PG. 4855
1115	05-22-31-1983-00130	KURTIS T. SABA and WENDI SABA	O.R. 6568, PG. 0404
1116	05-22-31-1983-00120	RICKY M. PARKER and JULIE M. PARKER	O.R. 4470, PG. 0870
1117	06-22-31-1983-00110	EDNA M. DUNCAN	O.R. 4987, PG. 4490
1118	05-22-31-1983-00100	TONY DARNELL and JULIA DARNELL	O.R. 6271, PG. 1084
1119	05-22-31-1983-00090	SHAMIN HANIFF and RUTH E. HANIFF	O.R. 4256, PG. 2110
1120	05-22-31-1983-00080	LOUIS R. POISSON and MARY ANN POISSON	O.R. 8794, PG. 2952
1121	05-22-31-1983-00070	BRUCE R. DAIGNEAULT and JUDY A. DAIGNEAULT	O.R. 3928, PG. 0206
1123	05-22-31-1983-00060	ROBERT C. SHAW and PAMELA A. SHAW	O.R. 4816, PG. 1183
1115	05-22-31-1983-00050	AMY GAMBER and PATRICIA ELDRIDGE	O.R. 8750, PG. 3217
1124	05-22-31-1983-00040	ADRIA T. PERRY-LANDRY	O.R. 5561, PG. 0245; O.R. 6557, PG. 3389
1125	05-22-31-1983-00030	REBECA GERLACH and ROBERT K. PENDLETON	O.R. 7655, PG. 4874
1126	05-22-31-1983-00020	GRACIELA E. VEGA	O.R. 7466, PG. 1883
1127	05-22-31-1983-00010	RONALD J. ROSE, JR. and JULIE GAMBINO	O.R. 8303, PG. 0431; O.R. 8446, PG. 1904
1128	05-22-31-1983-00003	DEANS LANDING AT SHEFFIELD FOREST HOMEOWNER' ASSOCIATION, INC.	O.R. 3432, PG. 1334; O.R. 3887, PG. 4513
1129	05-22-31-1983-00005	DEANS LANDING AT SHEFFIELD FOREST HOMEOWNER' ASSOCIATION, INC.	O.R. 3432, PG. 1334; O.R. 3887, PG. 4513
1101	05-22-31-1993-00630	STELLA YAGOUBIAN and ANNA YAGOUBIAN	O.R. 6820, PG. 4342
1131	05-22-31-1991-00640	ABBAS G. SHARAFI and SOHEILA D. SHARAFI	O.R. 4070, PG. 2615
1132	05-22-31-1991-00650	ANA R. ORTEGA	O.R. 5838, PG. 0743
1133	06-22-31-1991-00660	JOSE E. IRIZARRY	O.R. 10104, PG. 1226
1134	05-22-31-1991-00670	ROBERT E. EVANS	O.R. 4011, PG. 4963; O.R. 8032, PG. 1503
1135	05-22-31-1991-00680	GERALD L. MOON and JOANNE MOON	O.R. 3987, PG. 0231
1136	05-22-31-0000-00031	GARY A. YOUNG	O.R. 8076, PG. 4660
1137	05-22-31-0000-00035	RAYMOND WINDISH and LOAN WINDISH	O.R. 10012, PG. 6738
1138	05-22-31-0000-00046	WILLIAM A. BOLIVAR	O.R. 9216, PG. 4952
1139	01-22-30-4948-00450	ROMAN F. PEREIRA and ERLA M. PEREIRA	O.R. 5696, PG. 3397
1140	N/A	JAMES B. BRYAN, IV	O.R. 8026, PG. 3195
1141	05-22-31-0000-00041	KEVIN A. TUTTLE and APRIL D. TUTTLE	O.R. 3807, PG. 4465; O.R. 5910, PG. 0277; O.R. 6897, PG. 1685
1142	05-22-31-0000-00055	DONALD B. TORDIK and MARY G. TORDIK	O.R. 7315, PG. 1490
1143	05-21-31-0000-00028	ST. MATTHEW'S EPISCOPAL CHURCH OF THE DIOCESE OF CENTRAL FLORIDA, INC.	O.R. 3709, PG. 0580; O.R. 4930, PG. 0595
1144	05-22-31-0000-00015	FRIEDA MULLER and FRIEDA BERTH MUELLER	O.R. 0606, PG. 0206; O.R. 0609, PG. 0643; O.R. 0617, PG. 0467; O.R. 1197, PG. 0518; O.R. 3362, PG. 1391
1145	05-22-31-0000-00014	CORPORATION OF THE PRESIDING BISHP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS	O.R. 4029, PG. 3643
1146	05-22-31-0000-00029	ORANGE COUNTY, FLORIDA	O.R. 6233, PG. 2849
1147	05-22-31-8475-00001	ORANGE COUNTY, FLORIDA	O.R. 3169, PG. 2616; O.R. 3401, PG. 1937; O.R. 3928, PG. 1046
1148	05-22-31-8479-00020	TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA	O.R. 7947, PG. 4855
1149	05-22-31-8479-00010	UNIVERSITY DENTAL GROUP REAL ESTATE PARTNERS	O.R. 4500, PG. 3094
1150	05-22-31-0000-00019	THE SOUTHLAND CORPORATION	O.R. 2511, PG. 0408; O.R. 3467, PG. 2422; O.R. 3554, PG. 1268
1151	05-22-31-8693-00010	BFG FLORIDA, LLC	O.R. 10088, PG. 8923
1152	08-22-31-0000-00003	ANDRE' FRANCOIS HICKMAN and HAROLD A MILLER	O.R. 4556, PG. 0786; O.R. 5928, PG. 0943
1153	08-22-31-8417-00010	DISCOUNT AUTO PARTS, LLC	O.R. 5658, PG. 4199; O.R. 9522, PG. 2548
1154	08-22-31-0000-00130	COLUMBUS GROUP PARTNERSHIP II	O.R. 7747, PG. 4427
1155	08-22-31-8417-00020	CHANNEL SERVICES OF AMERICA, INC.	O.R. 6453, PG. 2859
1156	08-22-31-0000-00165	HERON SENIOR HOUSING, LLC	O.R. 6622, PG. 8682
1157	08-22-31-0000-00001	EPR OPERATING LIMITED PARTNERSHIP	O.R. 4621, PG. 3690; O.R. 6865, PG. 3853; O.R. 6865, PG. 3857

SEE SHEET ONE FOR GENERAL NOTES AND LEGEND

RIGHT OF WAY IDENTIFICATION MAP

ORANGE COUNTY PUBLIC WORKS—ENGINEERING RIGHT OF WAY MAPPING

APPROVED BY DATE

REVISION	BY	DATE
REV. PROP. R/W	BHJ	10/1/13

	BY	DATE
DESIGNED BY		
DRAWN BY	BHJ	9/20/13
CHECKED BY	MSR	9/20/13

COUNTY PROJECT NO. CIP 3071

ROAD NAME DEAN ROAD ORANGE COUNTY

MAPS PREPARED BY: BUCHHEIT ASSOCIATES, INC. SURVEYORS & MAPPERS

FILE NO.

FIELD BOOK NO.'S: SEE GENERAL NOTES SHEET ONE

SCALE: NTS

SHEET 13 OF 13

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APPENDIX C – PUBLIC INVOLVEMENT

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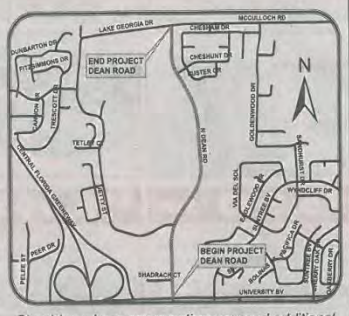
PUBLIC NOTICE

Dean Road Roadway Conceptual Analysis (RCA) Study
Community Meeting

You are invited to attend a community meeting to review and discuss possible improvements for the future widening of Dean Road from south of University Boulevard to north of McCullock Road. The meeting agenda will focus on the recommended roadway improvements developed by the study team. With your help, the study team will finalize the roadway improvement recommendations and present them to the Orange County Board of County Commissioners for final approval.

Public Meeting Scheduled

To ensure that your input is reflected in the evaluation of proposed transportation improvements, we invite you to attend the Recommended Improvement Concept Meeting scheduled for **Wednesday, June 26, 2013 at Union Park Middle School**, located at **1844 Westfall Drive**, from **6:30 p.m. – 8:00 p.m.** The meeting will begin with an open house at 6:30 p.m. There will be a formal presentation at 7:00 p.m. followed by a question and answer forum. Aerial maps, potential improvements and other project related information will be available for your review and comment. Orange County staff will be available to discuss the project and we encourage you to share your interests and concerns regarding potential improvements to Dean Road.



Should you have any questions or need additional information, please contact:

Mr. Brian Sanders
Project Manager
Orange County Community, Environmental and Development Services Department
407-836-8022
brian.sanders@ocfl.net

Para más información, o si desea comunicarse en Español, contacte:
Jonathan Fong
Project Engineer
Orange County Public Works Department
407-836-7976
jonathan.fong@ocfl.net

ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road Roadway Conceptual Analysis
Community Meeting
June 26, 2013

PLEASE PRINT

NAME	ADDRESS	PHONE NUMBER	EMAIL ADDRESS
KIM BRUNSON	5873 N DEAN RD.	407-657-9199	kbrunson0012 cfl.rr.com
PAT SHAUGHNESSY	5873 N DEAN Rd	321-278-9919	PAT.JIM.SHAUGHNESSY@GMAIL.COM
LAURA ANN BARBAGALLO	5926 N DEAN Rd	4076791150	Bigboys48@live.com
Robin Cardoza	9961 Chesham Dr.	407-637-2698	robin.cardoza@aol.com
JAMES CARDOCK	9961 Chesham Dr	863-844-1317	Copperbuyer@GMAIL.com
Howard-Dee Anderson	9998 Lake Georgia Dr.	(407) 672-0283	handerson60@cfl.RR.com
Matt + Rosellen Kraus	9849 Lake Georgia Drive	(407)677-9579	Rosellenk@gmail.com
ROBERT BARBOUR	5840 N DEAN & 9781 LK GEORGIA	321-234-2194	RBARBOUR@EARTHLINK.NET
David Snyder	9845 Lake Georgia Dr.	321-228-8310	DAvid.Snyder1116@cfl.RR.com
Julie Clemente	9841 Lake Georgia Dr.	858-663-1770	julie.clemente@urs.com
Kevin Dermody	10130 Cheshunt Dr	407-616-1192	Kpdermody@yahoo.com
Debbie Brown	4302 Landmark Dr	407 657-5302	Charlesbrown@hotmail.com
RICK PARKER	10001 CHESHAM DR	407-679-6142	LUVHUMBUG@GMAIL.com
CHARLES THOMPSON	5420 N. DEAN Rd	407-678-7396	cthompson130@CFL.RR.com

ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road Roadway Conceptual Analysis
Community Meeting
June 26, 2013

PLEASE PRINT

NAME	ADDRESS	PHONE NUMBER	EMAIL ADDRESS
Cathy.Evansdo@OCFL.net		407-836-8034	
JONATHAN FONG		407-836-7916	
Mr & Mrs Raymond Windish	5717 N. Dean Rd Orl FL 32817		
Christie & Ed Barcalay	9783 Lake Georgia Dr 32817	4074844273	
Melissa & Jon Nadler	9785 Lake Georgia Dr. 32817	3213508597	melissa1e102a@hotmail.com
Ana Ortega	10012 Custer Circle Orl. 32817	407 671 6783	
DAVID A LOPEZ	5412 N Dean Rd Orl. 32817	407 328-8157	MDLOPEZ1@MSN.COM
FELIX A. LOPEZ	5412 N DEAN Rd Orl. 32817	407 679-3317	FALopez1@CFL.RR.COM
Susan Hanners-Stead	9989 Lake Georgia Dr 32817	407-790-7383	n.ibor1@yahoo.com
Manuel Naya	10066 custer circle Orl FL 32817	407-740-4736	mannyandnery@yahoo.com
PETER MCCORD	9985 LK. GA DRIVE (PHYSICAL) 1015 UNIVERSITY BLVD S (MAILING)	(407) 657-6353	OERLIKON@GMAIL.COM

ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road Roadway Conceptual Analysis
Community Meeting
June 26, 2013

PLEASE PRINT

NAME	ADDRESS	PHONE NUMBER	EMAIL ADDRESS
Sonja McCreary	10053 Chestnut Dr. Orlando 32817		sitc4sonja@aol.com
* Dan Johnson	9925 Lake Georgia Dr Orl 32817	407 257-7648	DJPJ6558@MSN.Com

ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
Community Meeting - Wednesday June 26, 2013

Public Comment Form

Your input is important to us! Please take the time to write down any concerns, comments, or questions you may have on this project. You can turn this comment form in tonight or send to:

Su contribución es importante para nosotros! Por favor tome un momento para escribir cualquier preocupación, comentarios o preguntas que tenga sobre este proyecto. Usted puede someter este formulario esta noche o mandarlo a:

For information in English please contact:
Cathy Evangelo
Via mail: Orange County Public Works
4200 South John Young Parkway
Orlando, FL 32839
Tel: (407) 836-8034
Via fax: (407) 836-8024
E-mail: cathy.evangelo@ocfl.net

Para informacion en Espanol llame a:
Johnathan Fong
Via mail: Orange County Public Works
4200 South John Young Parkway
Orlando, FL 32839
Tel: (407) 836-7976
Via fax: (407) 836-8024
E-mail: jonathan.Fong@ocfl.net

Comments: I AM OKAY WITH THE PROPOSED ROADWAY FOR Dean Road But STRONGLY suggest AN 8 FT WALL FOR MY Dean LANDING PROPERTY. IT IS UNFAIR to Be BURDEN with the UNSIGHTLYNESS of the FOUR WAY STOP Light at Dean & McCollough ESPEACIALLY if IT IS ~~to~~ turned INTO FOUR LANES and Brought even closer to my PROPERTY.

Name RICK PARKER Address 10001 CHESHAM DR
Phone 407 679 6142 Email LUVHUMBUG@GMAIL.COM

If you are part of a group that would be interested in scheduling a meeting to discuss the project, please place a check in the box and leave your group's contact name and day time telephone number.

☐ Contact Name / Group _____ Tel: _____
E-mail : _____

ORANGE COUNTY GOVERNMENT FLORIDA

Dean Road
Roadway Conceptual Analysis
Community Meeting - Wednesday June 26, 2013

Public Comment Form

Your input is important to us! Please take the time to write down any concerns, comments, or questions you may have on this project. You can turn this comment form in tonight or send to:

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4200 South John Young Parkway
Orlando, FL 32839
Tel: (407) 836-7976
Via fax: (407) 836-8024
E-mail: jonathan.Fong@ocfl.net

Comments: The widening of Dean Road seems overkill for current and projected growth. Please limit the expansion and exclude expensive medians. Recommended design would leave Dean Road as 2 lanes plus a continuous turn lane the length of Dean Road or eliminate the project completely

Name Rosellen Kraus Address 9849 Lake Georgia Drive
Phone 407-677-9579 Email Rosellenk@gmail.com

If you are part of a group that would be interested in scheduling a meeting to discuss the project, please place a check in the box and leave your group's contact name and day time telephone number.

☐ Contact Name / Group Lake Georgia Home Owners Association Tel: _____
E-mail : _____

ORANGE COUNTY GOVERNMENT FLORIDA

Action Request Form

For Office Use Only
Initial
Resp. ☐ Y ☐ N
Axn

ROBERT BARBOUR

Name 9781 LAKE GEORGIA DR.

Address ORLANDO FL 32817

City 407-221-0162 State ORANGE Zip Code RBARBOUR@ESAIGROUP.COM

Phone Number County E-mail

Location of Problem CANAL TO LAKE GEORGIA

Description of Desired Action (Example: resurfacing, traffic signal retimings, signs, code violations, etc.)

LAST TIME LK GEORGIA CANAL WAS CLEANED/DRAGGED BY ROADS + DRAINAGE DEPARTMENT WAS IN THE 90's DUE TO ~~DRGH~~ DROUGHTS, OVERGROWTH of PLANTS + FALLING DIRT (SIDES of CANAL) HAS MADE CANAL DIFFICULT TO NAVIGATE. NEEDS CLEANING ASAP PLEASE.

ORANGE COUNTY GOVERNMENT FLORIDA

ACTION REQUEST FORM

For Office Use Only
Initial Response ☐ Y ☐ N
Axn

Name Jon/Melissa Nadler

Address 9785 Lake Georgia Dr.

City Orlando County Orange State FL

Zip Code 32817 E-Mail melissa6102a@hotmail.com

Location of Problem Lake Georgia/Dean Road

Description of Desired Action (Example: resurfacing, traffic signal retiming, signs, code violations, etc.)

Meeting request with transportation + water management along with Lake Georgia residents regarding impact of water levels, quality, and run off design in relation to Dean Rd. project. Detailed description how project will affect Iron Bridge running under Dean/Lake Georgia.

ORANGE COUNTY GOVERNMENT FLORIDA

ACTION REQUEST FORM

For Office Use Only
Initial Response ☐ Y ☐ N
Axn_____

Name MATT KRAUS

Address 9849 LAKE GEORGIA DR

City ORLANDO County ORANGE State FL

Zip Code 32817 E-Mail MATT.KRAUS@NUVOLECT.COM

Location of Problem DEAN ROAD PROJECT

Description of Desired Action (Example: resurfacing, traffic signal retiming, signs, code violations, etc.)

NORTH BOUND DEAN FROM UNIVERSITY,
3 LANES ARE PROPOSED, NARROWING TO 2 LANES
OF THESE 2 LANES, 1 LANE IS RIGHT TURN INTO PUBLIX.
RECOMMEND 3 LANES CONTINUE TO PUBLIX ENTRENCE

E2 Orlando Sentinel

Orlando Sentinel home delivery.

ABACK CONCRETE — S /sidewalk/drv/slab

WEDNESDAY, DECEMBER 4, 2013

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www.orangelake.com/careers

POSITION NAME:
MARKETING CAREER EVENT

Contact us:
(407) 395-6412

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TIOUS NAME STATUTE

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Hunters Park Lane,
FL 32837. That the
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is as follows:
B/GYN, LLC
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, Orange County,
25, 2013

12/04/2013

TIOUS NAME STATUTE

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42 Rebeccas Run
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Garden, Orange
vember 26, 2013.

12/4/2013

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aluminum and stainless
• Install Technician wi
manufacturing experien

Legal Notices

REBECCA L. HARRIS
Personal Representative
311 N. 12th Street
LaFollette TN 37766

COR1264373 12/4, 12/11/2013

Public Hearing Notices

ORANGE COUNTY
PLANNING AND ZONING COMMISSION / LOCAL PLANNING AGENCY
PUBLIC HEARING AGENDA
December 19, 2013

DEAR PROPERTY OWNER OR INTERESTED PARTY:

At 9:00 a.m. on Thursday, December 19, 2013, or as soon thereafter as the matters may be considered, the Orange County Planning and Zoning Commission (PZC) shall hold public hearings to consider the rezoning requests listed below.

REZONING PUBLIC HEARINGS

RZ-13-12-037
APPLICANT: Kevin and Christine Pressley
OWNER: Annunziata Lee, LLC
REQUEST: P-O (Professional Office) to P-O (Professional Office) (to modify a previous restriction that limited access to Edgewater Drive, by allowing limited access to Wentrop Lane by owner, fire rescue vehicles and vendors only)
LOCATION: 4474 Edgewater Drive; generally located at the southwest corner of Edgewater Drive and Wentrop Lane
LEGAL: Legal description on file in the Planning Division
TRACT SIZE: ~0.25 acre
DISTRICT: 2

RZ-13-12-038
APPLICANT: Betty L. Teepie
OWNER: Betty L. Teepie
REQUEST: R-T-1(Mobile Home Subdivision District) to R-T-2 (Mobile Home and Single-Family Dwelling District)
LOCATION: 677 North 7th Street; generally located at the southeast corner of North 7th Street and 1st Avenue
LEGAL: Legal description on file in the Planning Division
TRACT SIZE: ~0.46 acre
DISTRICT: 5

RZ-13-12-039
APPLICANT: Isreal Derby
OWNER: Paul S. Robinson
REQUEST: C-1 (Retail Commercial) to C-2 (General Commercial)
LOCATION: 6099 Silver Star Road; generally located on the north side of Silver Star Road, approximately 700 east of North Powers Drive
LEGAL: Legal description on file in the Planning Division
TRACT SIZE: ~0.34 acre
DISTRICT: 2

Also at 9:30 a.m. on Thursday, December 19, 2013, or as soon thereafter as the matter may be considered, the Orange County PZC / Local Planning Agency (LPA) shall hold a separate public hearing to consider a Roadway Conceptual Analysis (RCA) Study for proposed improvements to Dean Road from south of University Boulevard to north of McCulloch Road. The RCA Study is Orange County's detailed project development process to study the engineering, social and environmental impacts of a potential roadway improvement. The intent of the study is to identify the most appropriate and effective improvements for the Dean Road Corridor, as shown in the map below.

Also at 10:00 a.m. on Thursday, December 19, 2013, or as soon thereafter as the matter may be considered, the Orange County PZC / Local Planning Agency (LPA) shall hold a separate public hearing to consider the ordinance described below, addressing the placement of transit facilities within public right-of-way:

ORDINANCE PUBLIC HEARING:
AN ORDINANCE OF THE ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS; PROVIDING FOR THE REGULATION OF CERTAIN TRANSIT FACILITIES IN STATE AND COUNTY RIGHT OF WAY WITHIN ORANGE COUNTY;

ORANGE COUNTY GOVERNMENT FLORIDA

OFFICIAL NOTICE FROM ORANGE COUNTY GOVERNMENT

Dean Road Roadway Conceptual Analysis (RCA) Study From University Boulevard to McCulloch Road

Orange County has initiated a Roadway Conceptual Analysis (RCA) Study for proposed improvements to Dean Road from south of University Boulevard to north of McCulloch Road. The RCA Study is Orange County's detailed project development process to study the engineering, social and environmental impacts of a potential roadway improvement. The intent of the study is to identify the most appropriate and effective improvements for the Dean Road corridor.

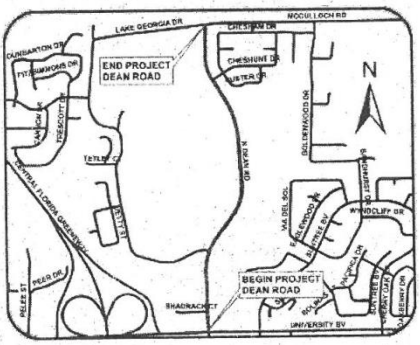
OPEN HOUSE:
9:00 a.m.

FORMAL PRESENTATION:
9:30 a.m.
followed by Citizen Comments

The Board of County Commissioners Public Hearing for this project will be held in the first quarter of 2014.

Public Hearing Scheduled

Orange County has scheduled a Local Planning Agency (LPA) Public Hearing to present the findings from the RCA process for the Dean Road corridor to the LPA Commission for their approval and transmittal to the Board of County Commissioners.
All Public Hearings begin at 9:30 a.m., **Thursday, December 19, 2013, at the Orange County Administration Center located at 201 South Rosalind Avenue in downtown Orlando.** A presentation will be given by Orange County staff, followed by an opportunity for citizens to comment on the proposed improvements.



For questions or additional information,contact:

Brian Sanders
Project Manager
Orange County CEDS
407-836-8022
Brian.sanders@ocfl.net

Jonathan Fong
Project Engineer
Orange County Public Works
407-836-7976
Jonathan.fong@ocfl.net
(para información en Español)

J2 | Orlando Sentinel **Sunday, January 12, 2014** E A B C D E

PUBLIC NOTICE

Dean Road Roadway Conceptual Analysis Study
From University Boulevard to McCulloch Road
Official Notice from Orange County Government

Orange County has initiated a Roadway Conceptual Analysis (RCA) Study for the proposed improvements to Dean Road from south of University Boulevard to north of McCulloch Road. The RCA Study is Orange County's detailed project development process to study the engineering, social and environmental impacts of a potential roadway improvement. The intent of the study is to identify the most appropriate and effective improvements for the Dean Road corridor.

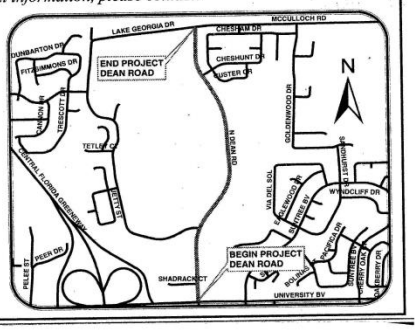
Public Hearing Scheduled

A Public Hearing has been scheduled for Tuesday, January 28, 2014. At which time staff will present the findings of the RCA study to the Board of County Commissioners for their approval. **The hearing is scheduled to begin at 2:30pm, or shortly thereafter,** and will be held at the **Orange County Administration Center located at 201 South Rosalind Avenue Orlando.** Following the presentation by Orange County staff, citizens will have an opportunity to comment on the proposed improvements.

Should you have any questions or need additional information, please contact:

Mr. Brian Sanders
Project Manager
Orange County Community, Environmental and Development Services Department
407-836-8022
brian.sanders@ocfl.net

Para más información, o si desea comunicarse en Español, contacte:
Sr. Jonathan Fong
Project Engineer
Orange County Public Works Department
407-836-7976
jonathan.fong@ocfl.net



ORANGE COUNTY GOVERNMENT FLORIDA

December 31, 2013

TO: Mayor Teresa Jacobs
-AND-
Board of County Commissioners

FROM: Rick V. Baldocchi, P.E., Chairman
Planning and Zoning Commission (PZC) /Local Planning Agency (LPA) Members

SUBJECT: **Dean Road Roadway Conceptual Analysis (RCA) Study**

On December 19, 2013, the Local Planning Agency (LPA) held a public hearing regarding the Dean Road RCA. The study entailed the assessment and feasibility of improvements to Dean Road extending from University Boulevard to the Seminole County line. The LPA approved the findings of the study and found them consistent with the County Comprehensive Plan. In addition, the LPA requests that as the project proceeds to future phases, coordination with the adjoining property owners continue, especially in regards to median openings, median width and access points.

c: Local Planning Agency
Jon V. Weiss, P.E., Director, CEDS Department
Mark V. Massaro, P.E., Director, Public Works Department
Renzo Nastasi, AICP, Manager, Public Works Transportation Planning Division
Robin L. Hammel, P.E., Manager, Public Works Engineering Division