

Transportation Planning Division

**CHULUOTA ROAD (CR 419)
RCA STUDY**

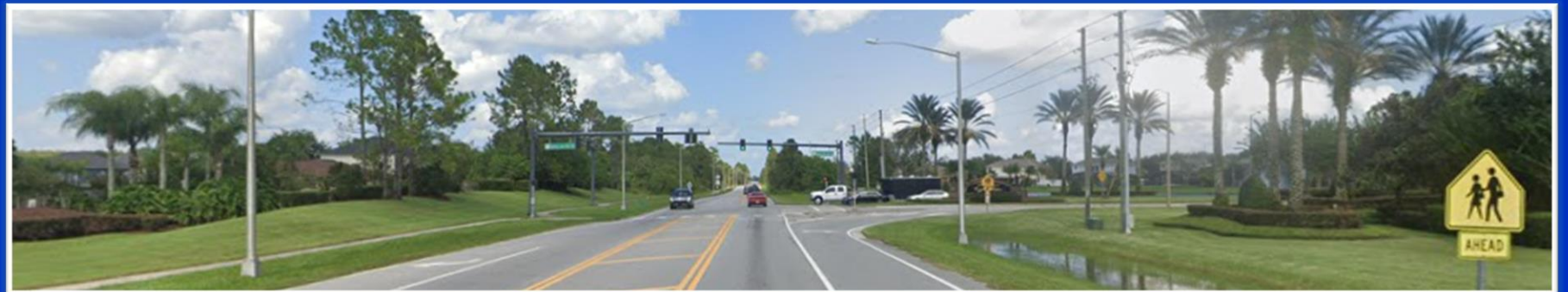
**Board of County Commissioners
Public Hearing**

March 7, 2022



Presentation Outline

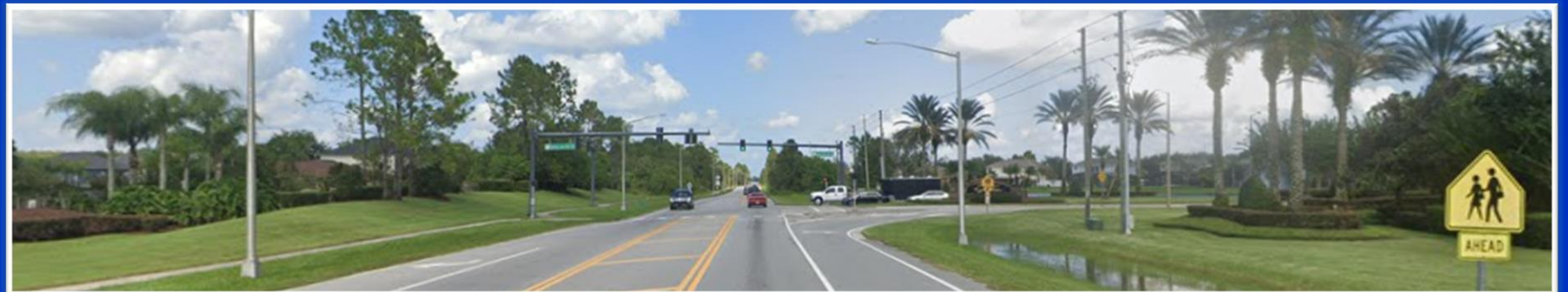
- Overview
- Existing Conditions
- Recommended Improvements
- Public Engagement
- Summary and Recommendation





Presentation Outline

- Overview
- Existing Conditions
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- Summary and Action Requested



Overview

▪ Identify Improvements:

- Document Project Need
- Balance Needs of all users
 - Safety
 - Mobility
 - Comfort
 - Connectivity



Automobiles



Pedestrians



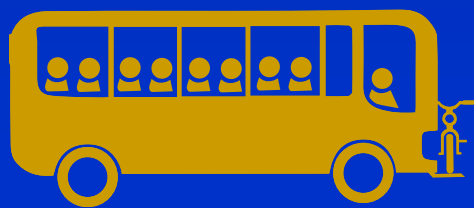
Cyclists



Freight

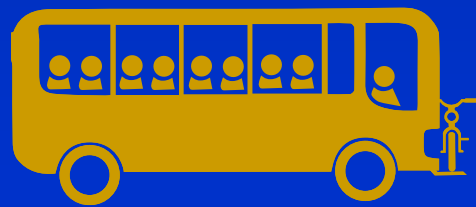
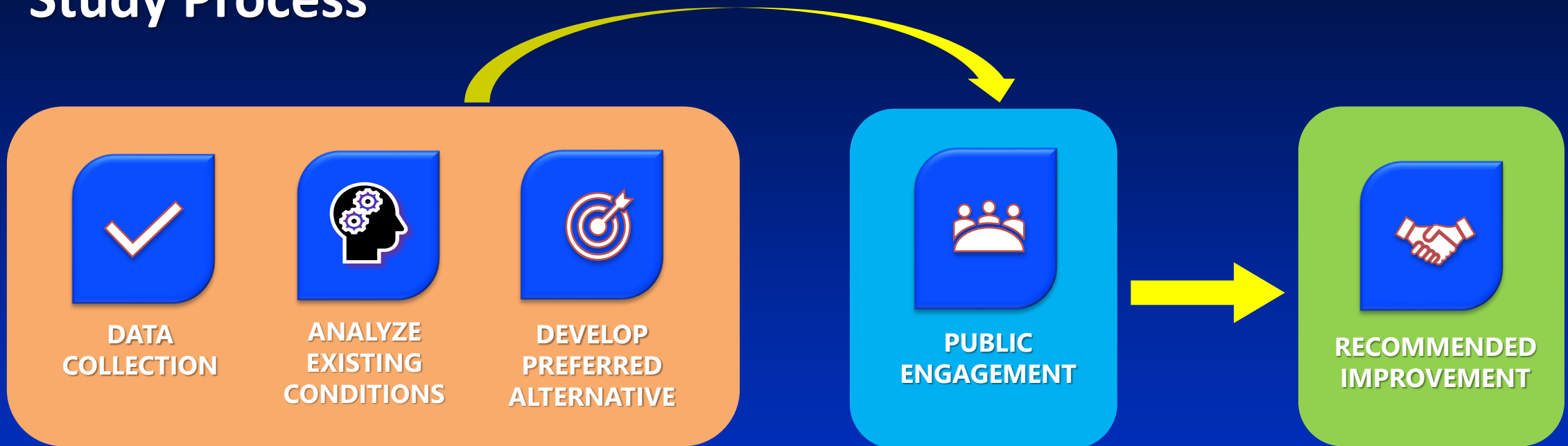


Transit



Overview

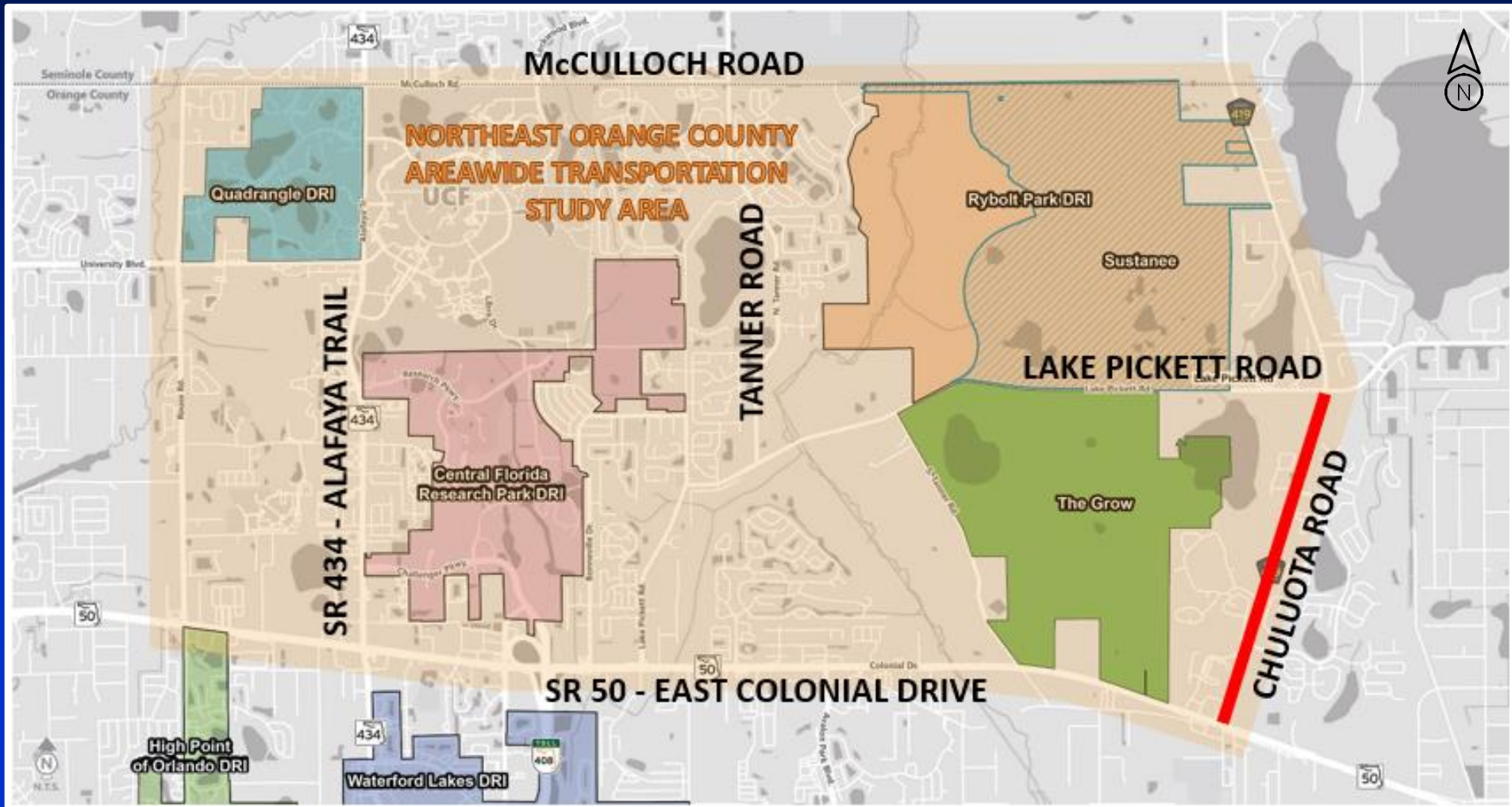
■ Study Process





Overview

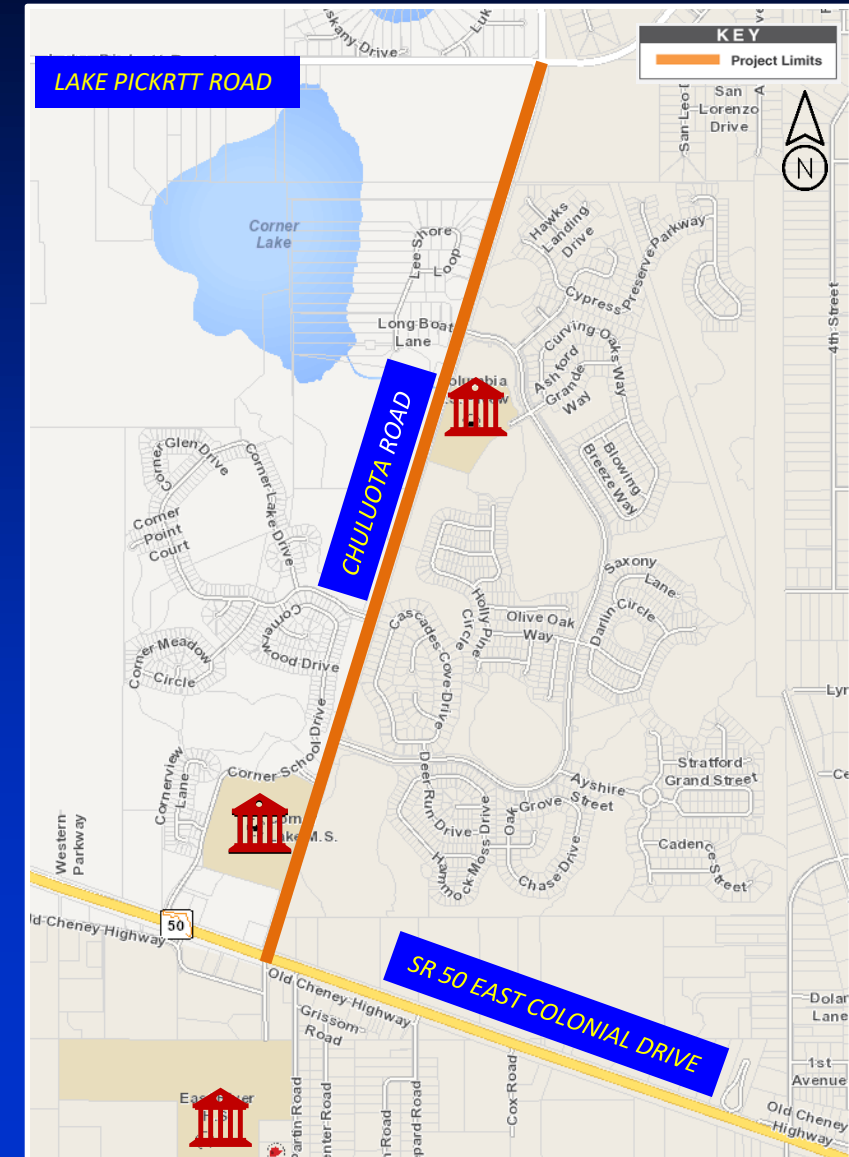
- Project Location





Overview

- Study begins at SR 50 and extends to Lake Pickett Road, roughly 1.9 miles
- The corridor primarily consists of residential developments with commercial activity concentrated near SR 50
- Chuluota Road improvement is in Orange County's Long Range Transportation Plan
- Two Schools: Corner Lake Middle and Columbia Elementary
- Part of Invest in Our Home for Life initiative, fully funded at current dollars





Presentation Outline

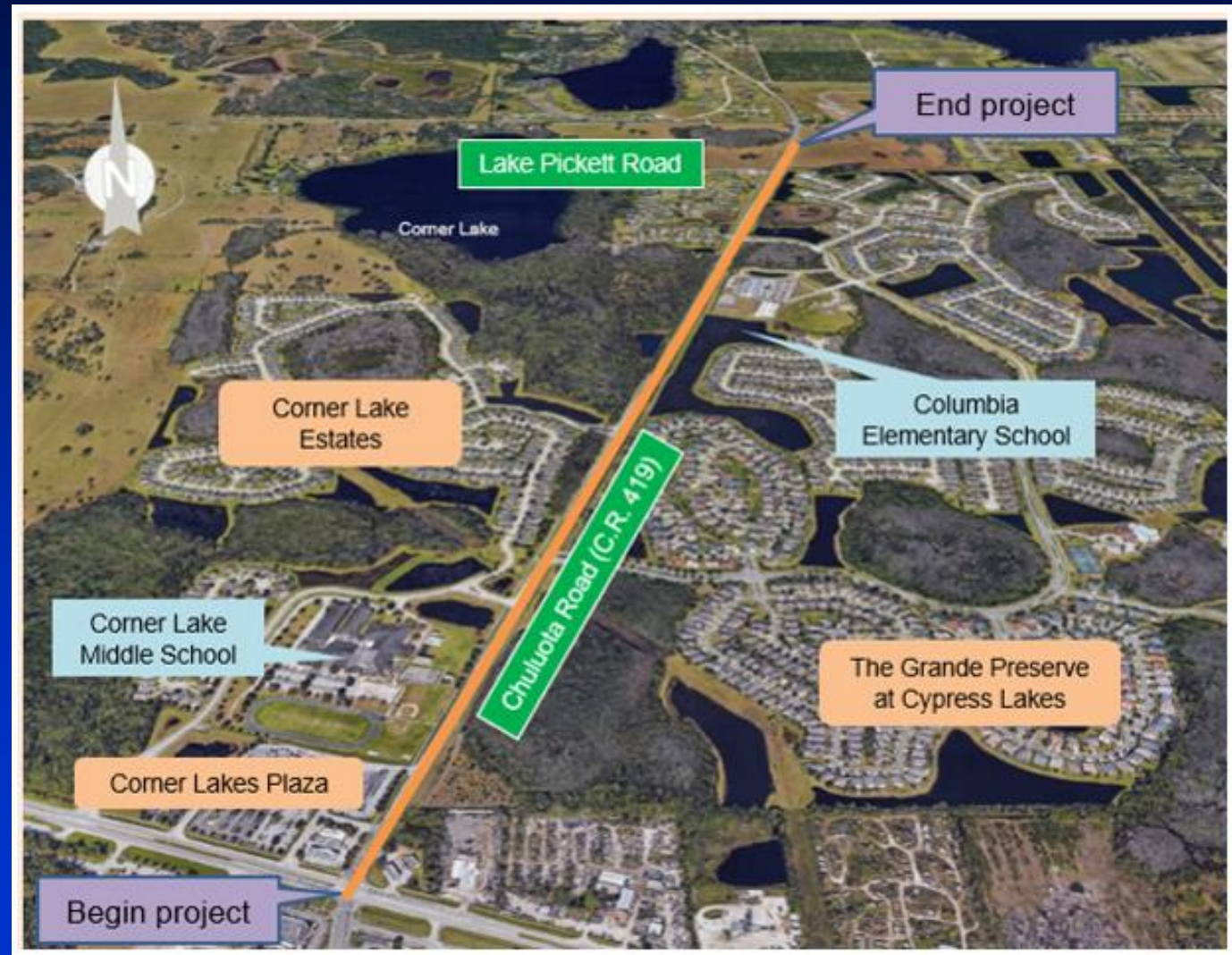
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Existing Conditions

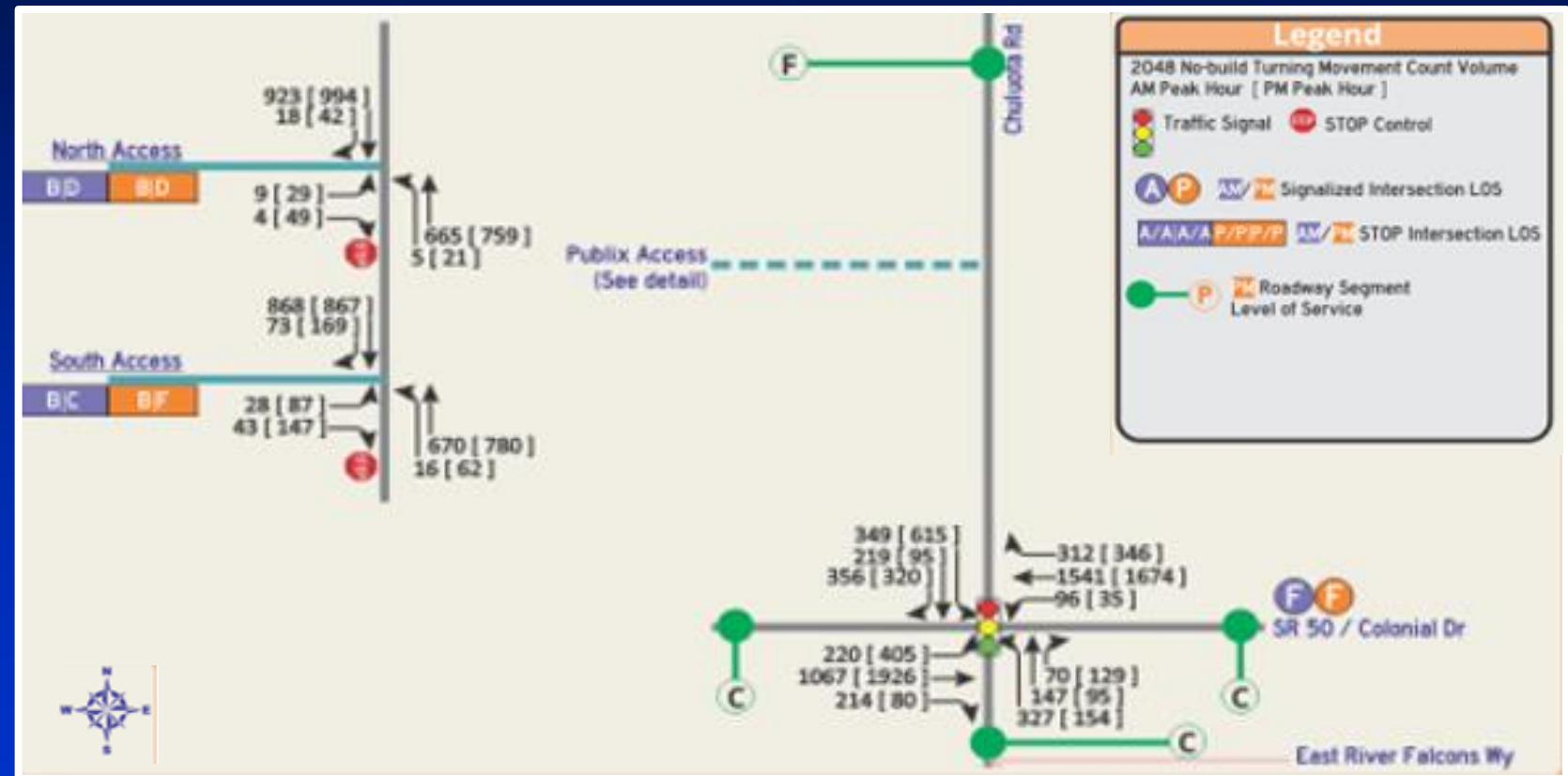
- **Roadway Characteristics**
 - Two-lane roadway with flush paved shoulders
 - Open ditch drainage with no stormwater ponds
 - Sidewalks are present along portions of the project
 - The existing right of way varies from 100 to 130 feet





Existing Conditions

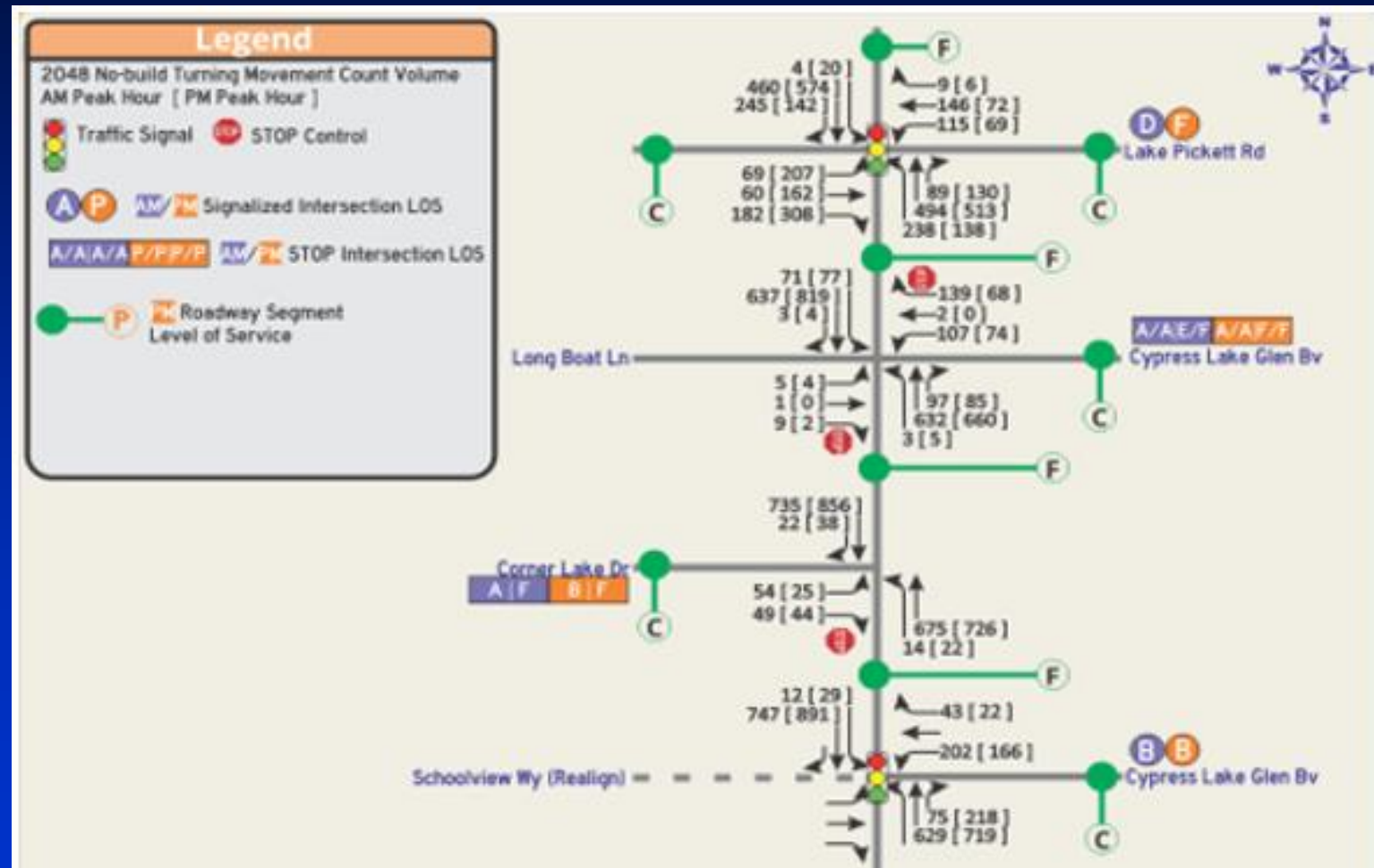
- Traffic volumes range from 11,500 to 15,400 vehicles per day
- Segments of Chuluota Road projected to operate at a Level of Service F In Design Year - 2048





Existing Conditions

- Traffic volumes range from 11,500 to 15,400 vehicles per day
- Segments of Chuluota Road projected to operate at a Level of Service F In Design Year - 2048





Existing Conditions

■ Bicycle and Pedestrian Counts

Study Intersections	Pedestrian Volumes						Bicycle Volumes						Combined Volumes					
	AM 6:00-9:00		MID-DAY 12:00-2:00		PM 4:00-7:00		AM 6:00-9:00		MID-DAY 12:00-2:00		PM 4:00-7:00		AM 6:00-9:00		MID-DAY 12:00-2:00		PM 4:00-7:00	
	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor
Chuluota Road																		
Lake Pickett Road	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
Long Boat Lane/Cypress Lake Gl Blvd (N)	2	6	0	1	2	4	3	2	1	0	6	2	5	8	1	1	8	6
Corner Lake Drive	0	3	0	2	0	4	3	2	1	0	6	2	3	5	1	2	6	6
Cypress Lake Gl Blvd (S)	12	3	20	1	12	6	10	0	3	1	5	0	22	3	23	2	17	6
Corner Lake Plaza (Both Driveways)	0	5	0	20	0	9	1	11	0	1	0	3	1	16	0	21	0	12
SR 50	4	16	7	52	1	3	3	9	2	8	3	2	7	25	9	60	4	5



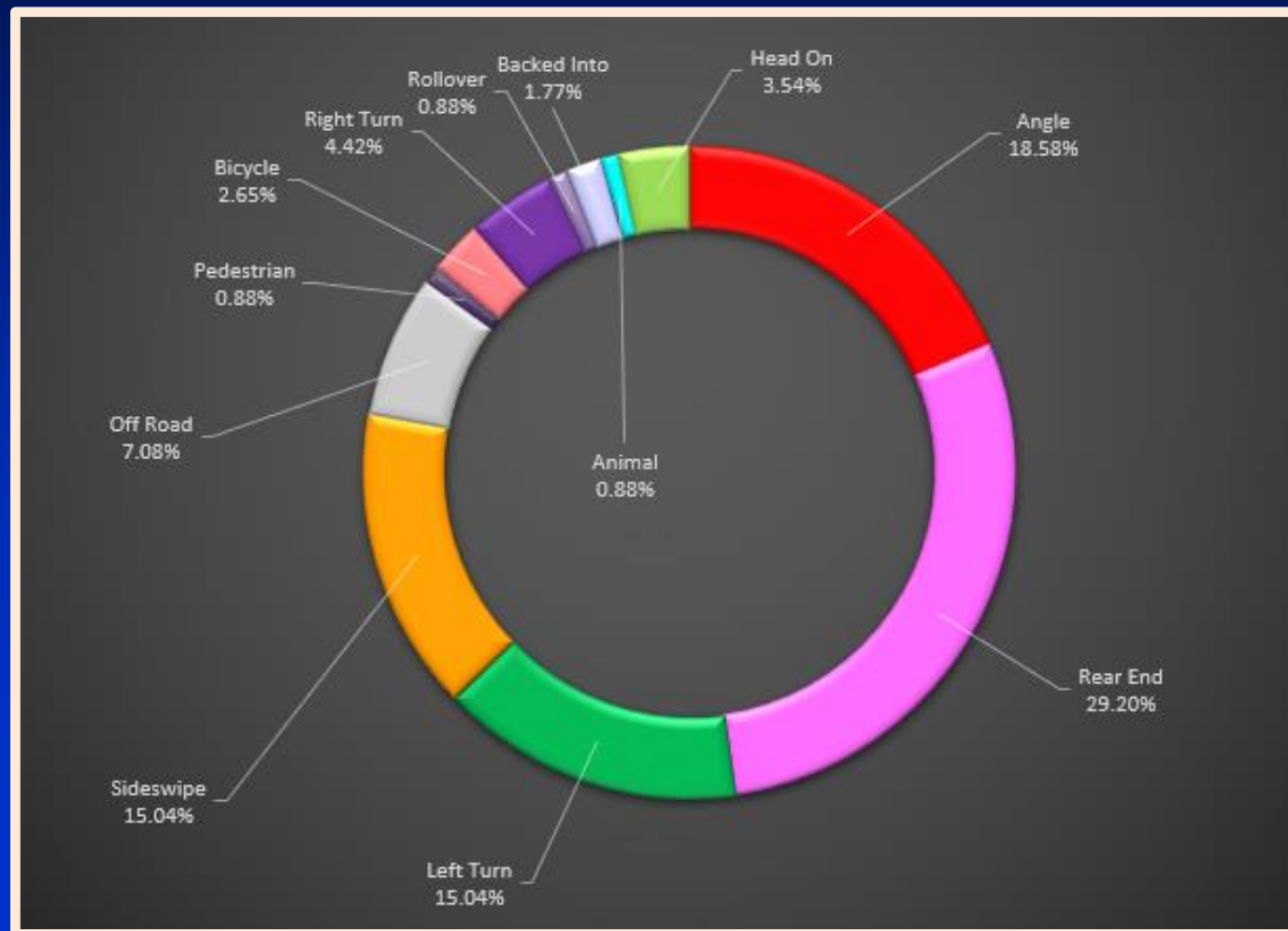


Existing Conditions

Crash History

Five-Year Period 2016 – 2020:

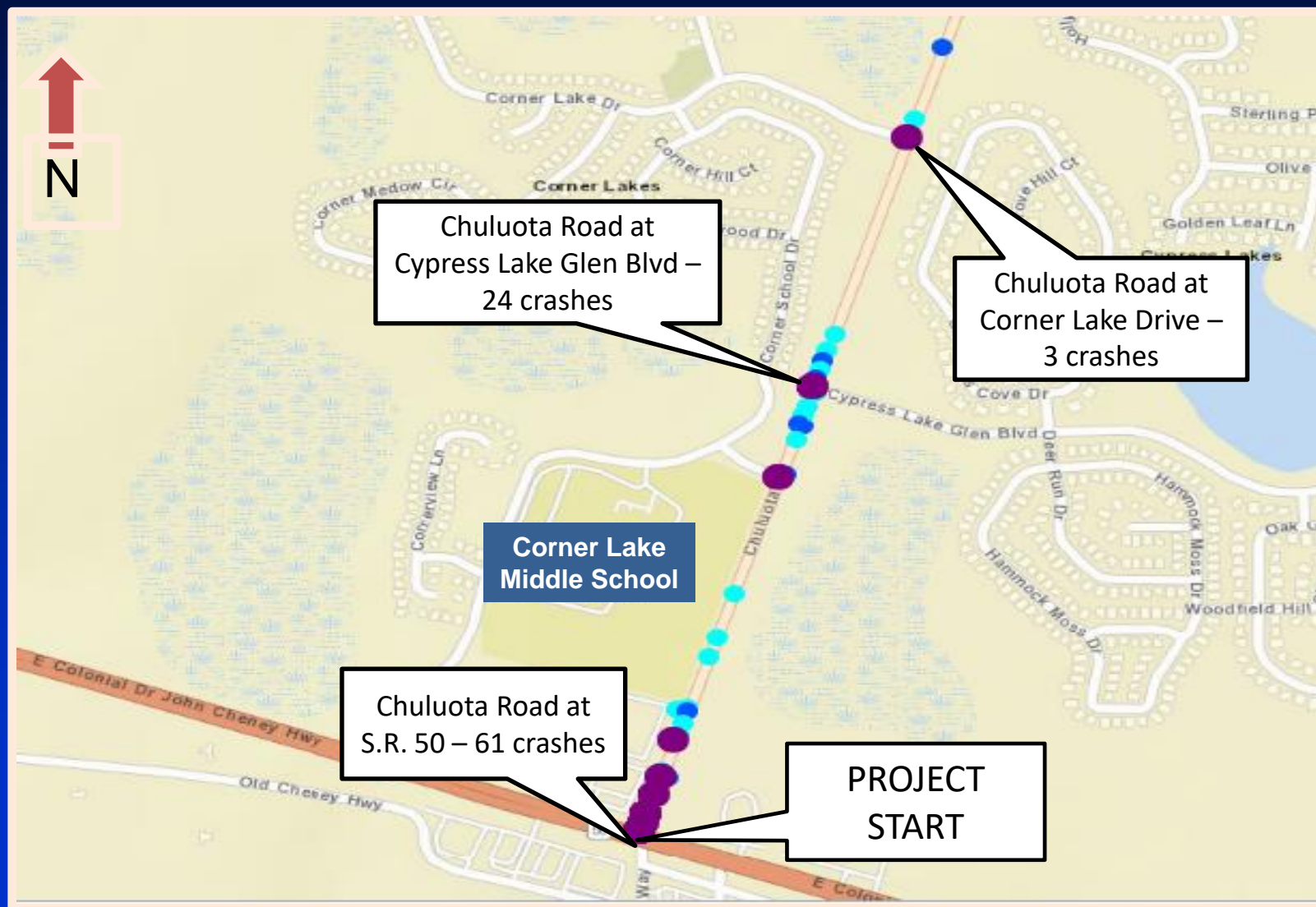
- 113 Total Crashes
- 36 Injury Crashes
- No Fatalities
- One Pedestrian Crash
- Three Bicycle Crashes





Existing Conditions

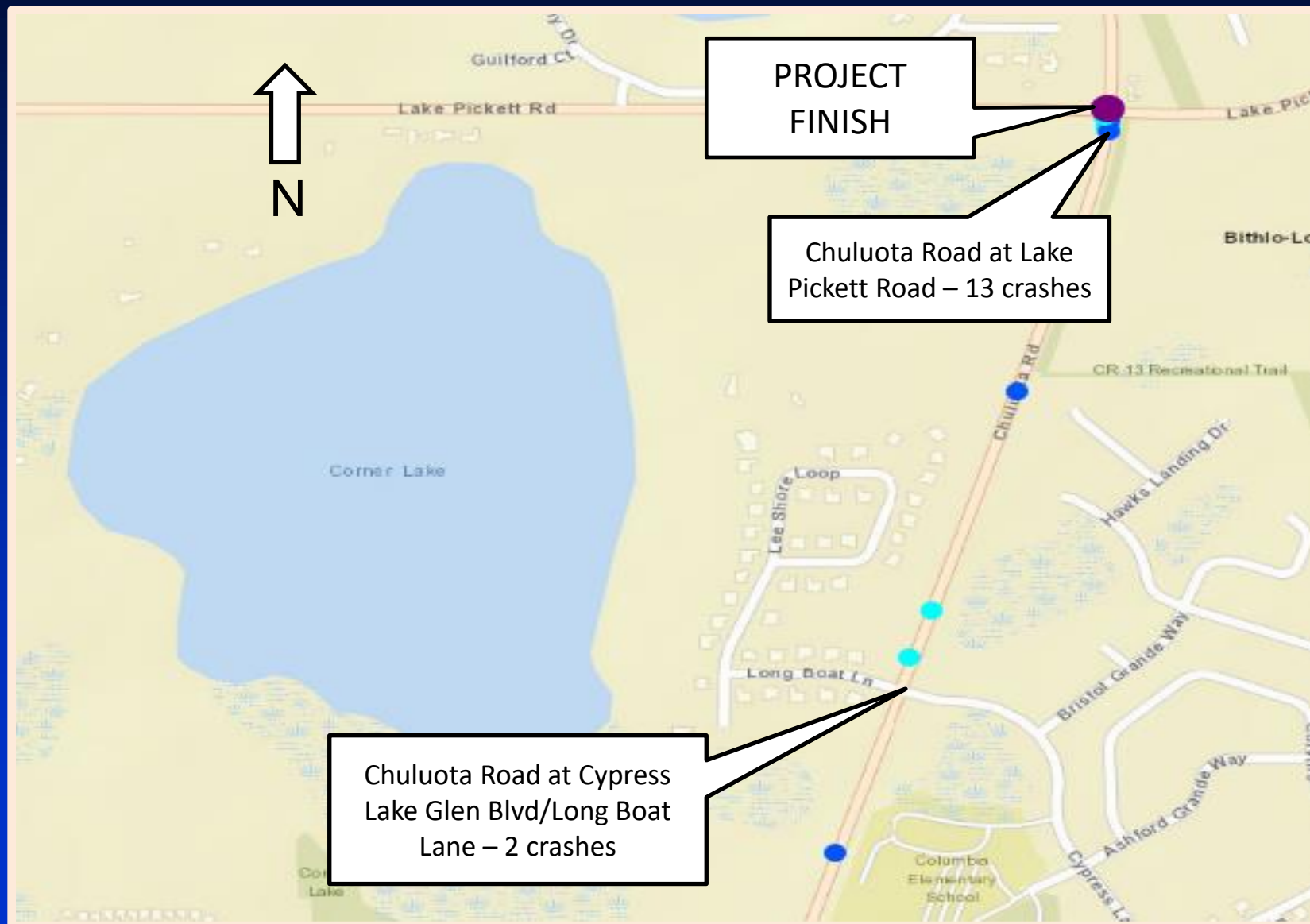
- Crash History
 - South Section (2016-2020)





Existing Conditions

- **Crash History**
– North Section
(2016-2020)





Recommended Improvements

▪ Environmental Assessment

- Wetland impacts expected to be minimal
- Riparian Habitat Protection Zone (RHPZ) impacts expected to be minimal
- Habitat supporting flora and fauna species of concern including Gopher tortoise, snail kite, Florida sandhill crane, wood stork, little blue heron, tri-colored heron, and American alligator is present in the vicinity of the corridor
- Species counts will be performed during design
- No Impacts to potential high or medium risk contamination sites





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Recommended Alternative

- Context Classification C3C Suburban Commercial and C3R Suburban Residential



Allows for 35-45 mph Design Speed According to Context
Allows the Creation of Project Specific Transition Zones



Recommended Alternative

STRATEGIES TO ACHIEVE DESIRED OPERATING SPEED FOR ARTERIALS AND COLLECTORS

CONTEXT CLASSIFICATION	DEIGN SPEED (MPH)	STRATEGIES
C3R	45-55	ProJet Specific Transition Zone
	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFBs, and PHBs
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Islands in Crossings, Road Diet, RRFBs, and PHBs, Terminated Vistas
C3C	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Rectangular Rapid Flashing Beacons (RRFB), and Pedestrian Hybrid Beacons (PHB)
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Median Islands in Crossings, Road Diet, RRFB and Hawk, Terminated Vistas

Included in the Study:

- Horizontal Deflection addressed by Horizontal Curves
- Street Trees
- Curb/Gutter, Medians
- Lane Narrowing

Determined in Design:

- Median Island Crossings

Post Construction as Indicated by Pedestrian and Bicyclist Use Patterns

- Speed Feedback Signs
- Textured Surfaces
- Mid-Block Crossings
- Speed Tables / Raised Intersections
- RRFBs, PHBs, Hawk



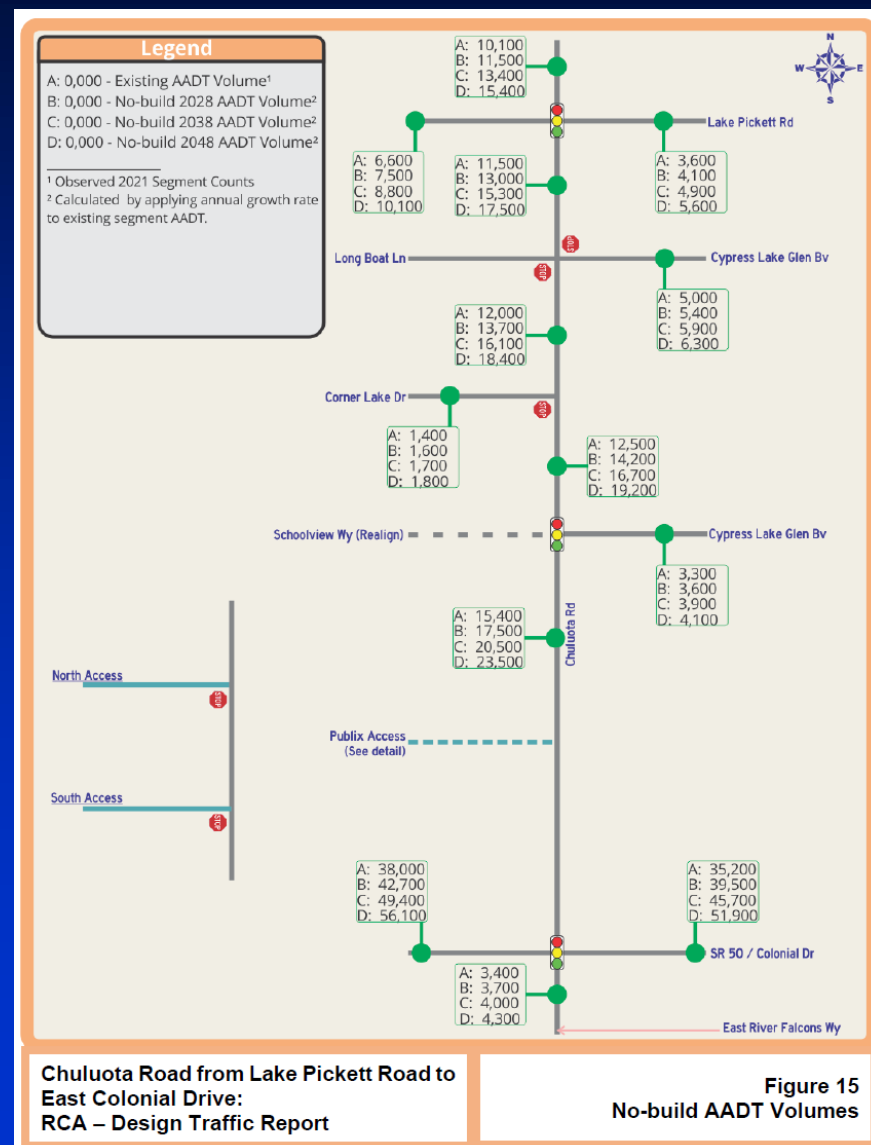
Recommended Alternative

2048 Design Year Traffic

CHULUOTA ROAD RCA DESIGN YEAR AADT

ROADWAY SEGMENT	AAADT
SR 50 - Cypress Lake Glenn Boulevard	23,500
Cypress Lake Glenn Boulevard - Corner Lake Drive	19,200
Corner Lake Drive - Long Boat Lane	18,400
Long Boat Lane - Lake Pickett Road	17,500

- Traffic forecast - Without widening segments are projected to reach LOS F by the design year
- NEOCATS – Listed segment as currently at capacity
- FDOT Quality/Level of Service Handbook - LOS E for C3C = 19,530 ADT
- According to the Orange County Currency Management System no additional capacity is available for the study segment. Proposed developments are contributing the Proportionate Fair Share



Chuluota Road from Lake Pickett Road to East Colonial Drive:
RCA – Design Traffic Report

Figure 15
No-build AADT Volumes

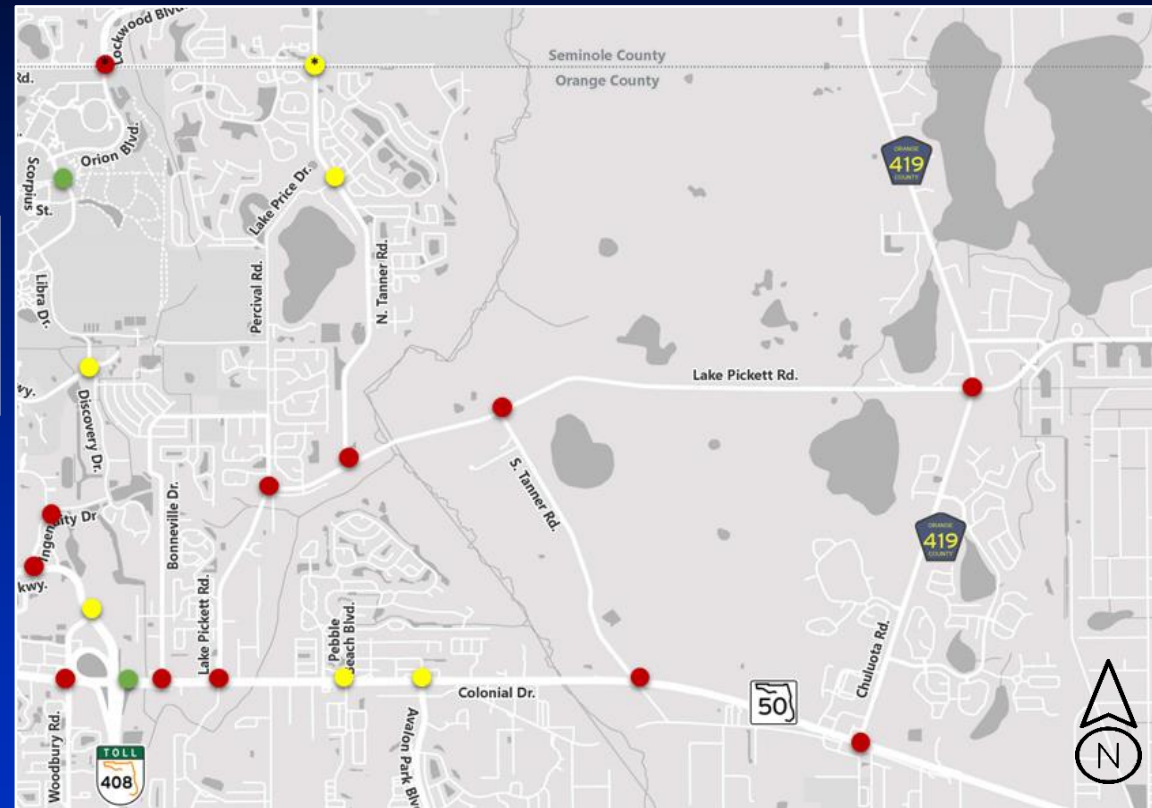
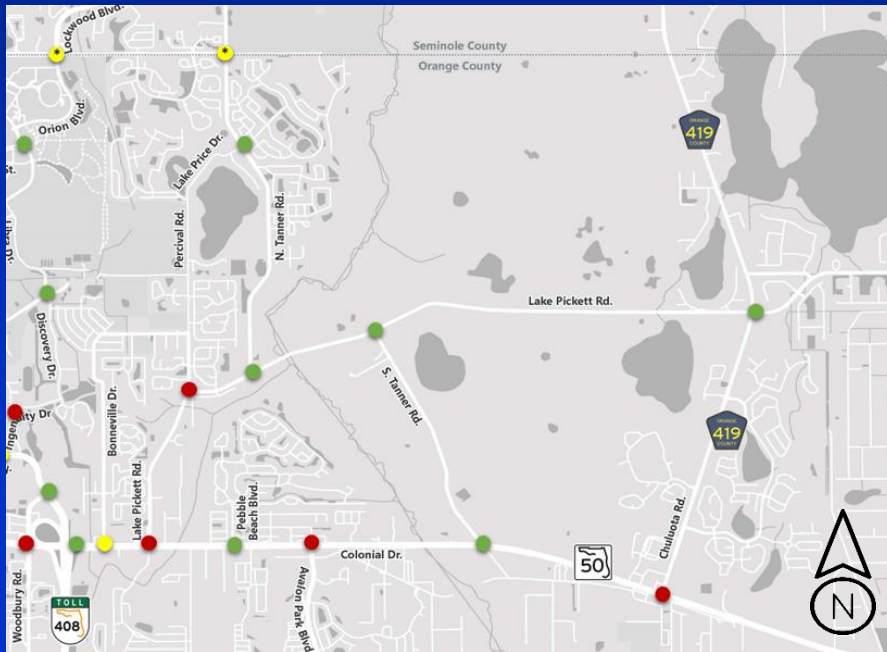


Overview



**NEOCATS
Segments
Currently
Over
Capacity**

NEOCATS Intersections Existing Conditions

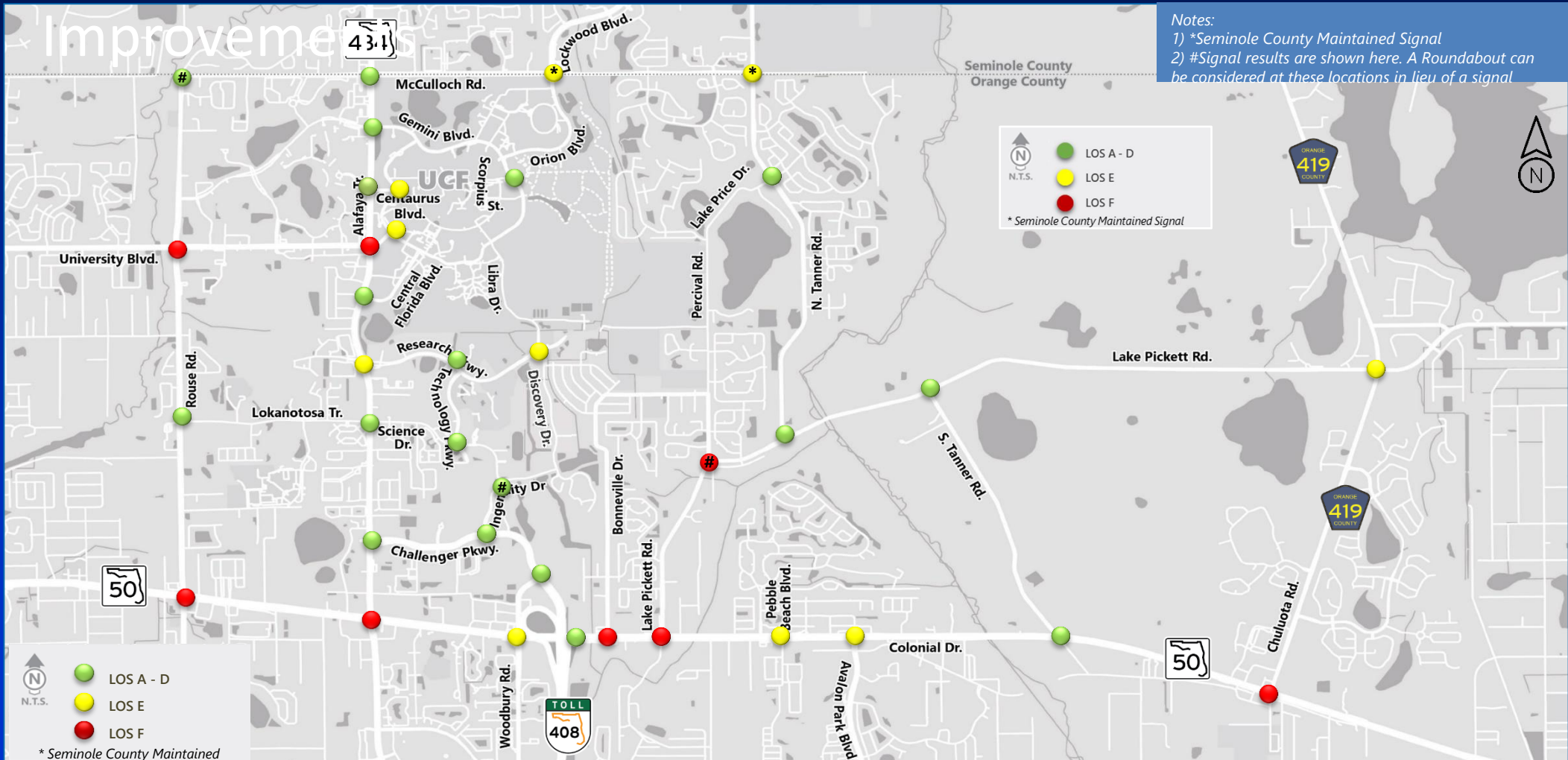


NEOCATS Intersections 2045 No Build



Overview

Future Build Traffic Conditions with Programmed/Planned Improvements





Recommended Alternative

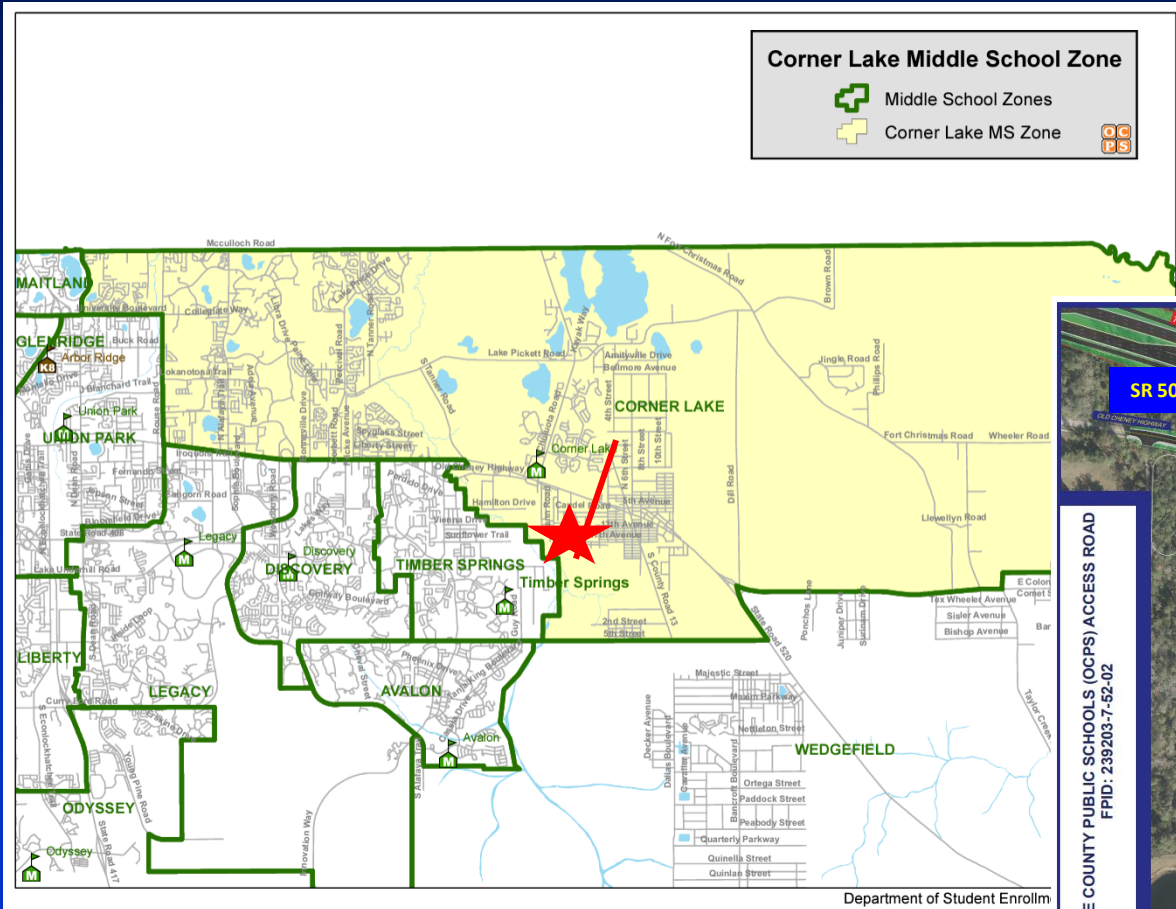
Study Intersections	Future Traffic Control	Peak Hour Period	2048 Build Four-Lane Chuluota Road Cross Section									
			EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Chuluota Rd Lake Pickett Rd	Signal	AM	31.5	C	33.6	C	17.5	B	27.6	C	24.5	C
		PM	30	C	37	C	20.6	C	27	C	25.8	C
	R/A	AM	19.5	C	26.6	D	8.8	A	21.5	C	16.9	C
		PM	305.1	F	15.4	C	16.7	C	11.6	B	95.9	F
Chuluota Rd Cypress Lake Glen Bv (S)	Signal	AM	20.6	C	29.4	C	22.9	C	20.5	C	22.5	C
		PM	29.9	C	28.3	C	20.5	C	19.2	B	21	C
	R/A	AM	10	A	13.3	B	6.4	A	9.4	A	8.7	A
		PM	19.6	C	14.4	B	9.7	A	11.6	B	11.3	B

- The delay differential between traditional intersections and roundabouts was calculated
- Roundabouts are not recommended due to higher delay time, school traffic accommodation, and travel / approach speeds
- Additional considerations include ROW Impacts on existing private properties and established subdivision landscaping and monument features

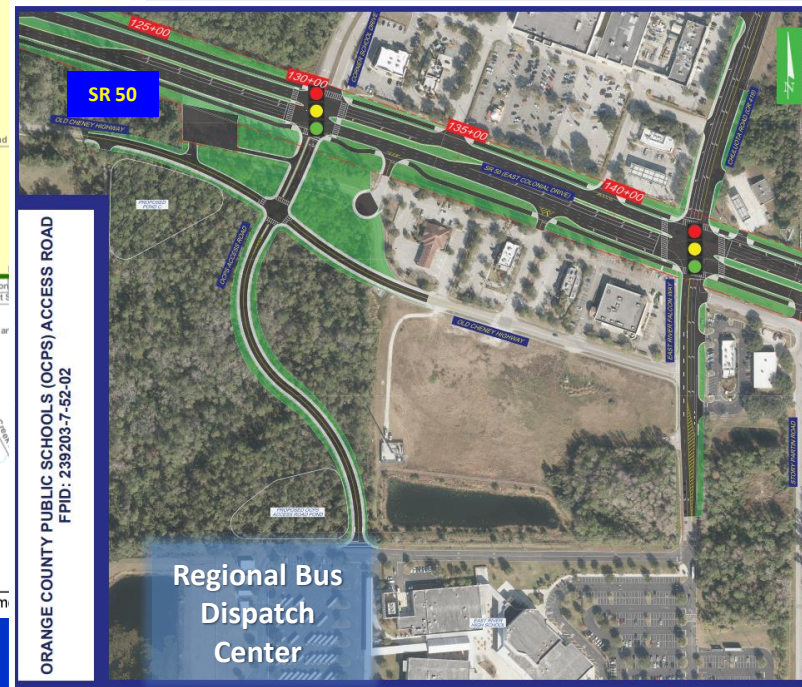


Recommended Alternative

Corner Lake Middle School Zone



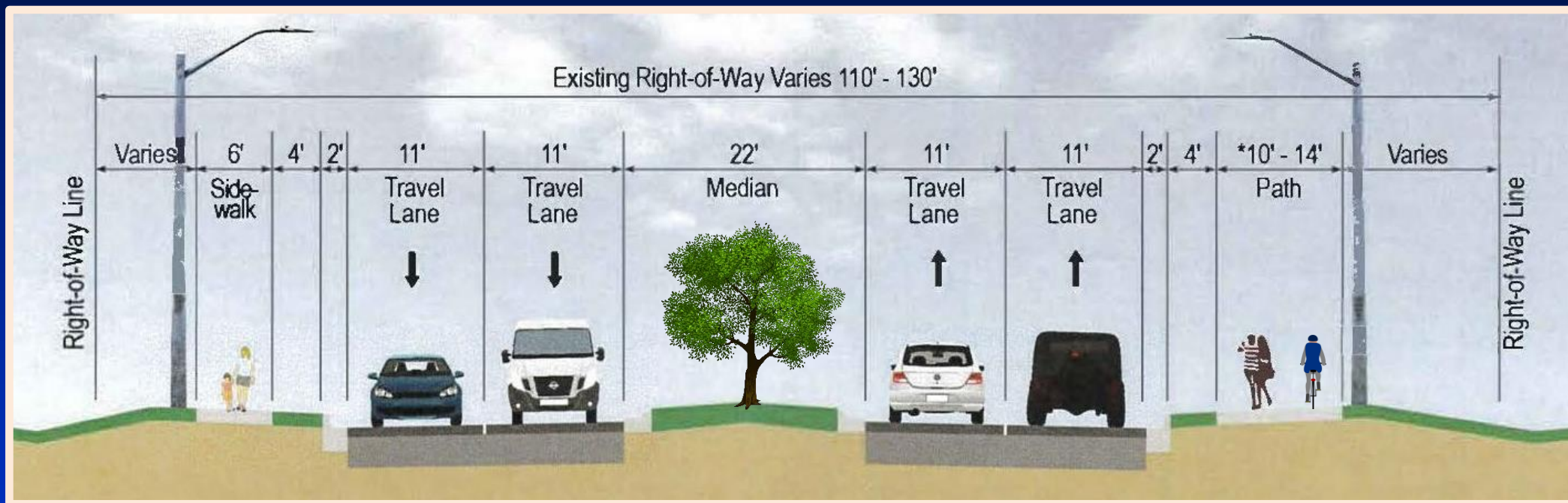
FDOT Proposed Improvements





Recommended Alternative

Typical Section Elements From Cypress Lake Glen Boulevard to Lake Pickett Road



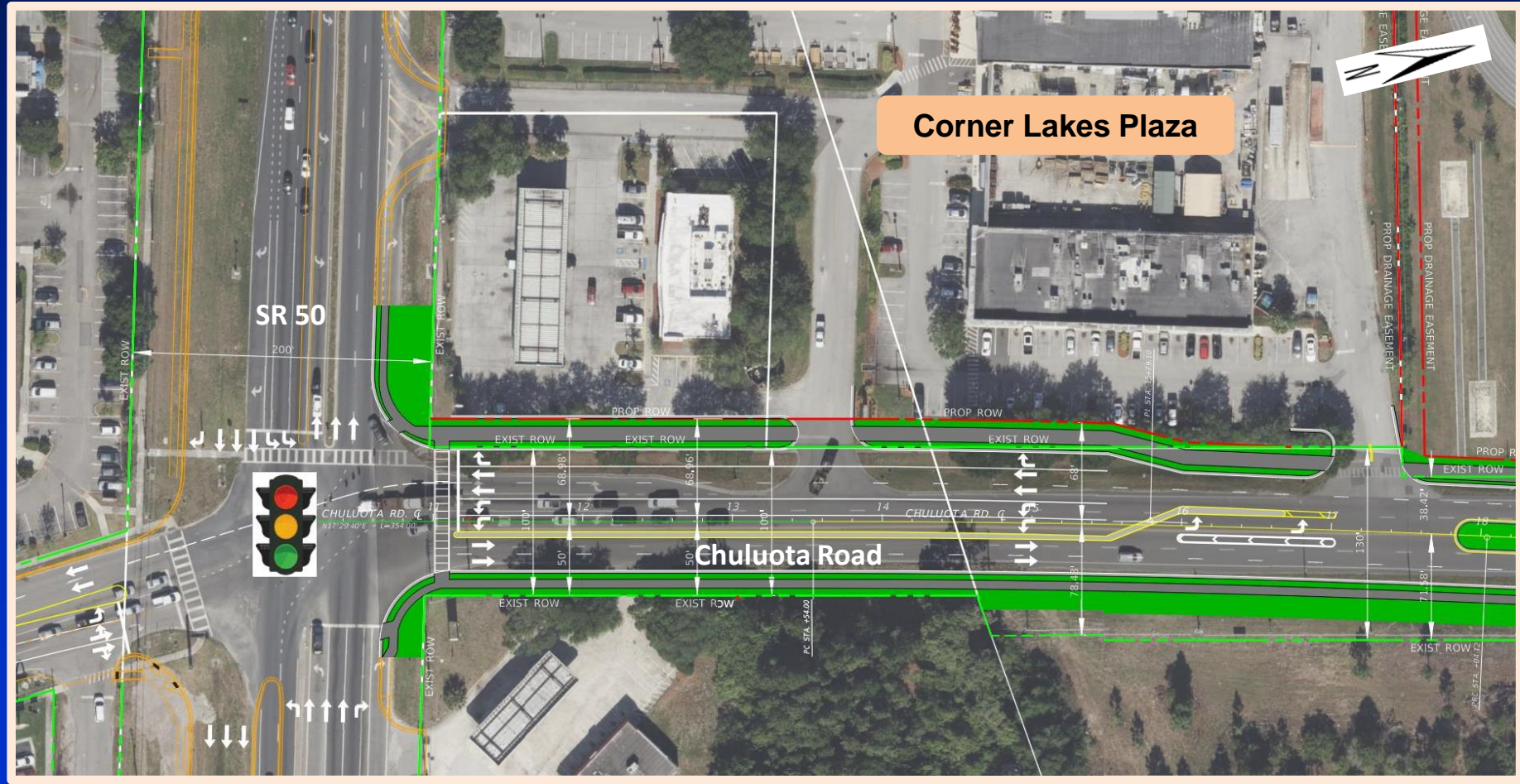
- Four 11-foot-wide travel lanes (two each direction) with 22-foot raised median
- Multi-modal accommodations consisting of 6-foot-wide sidewalk on west side, and 10- to 14-foot-wide path on the east side of Chuluota Road
- Closed drainage system with stormwater treatment ponds
- Nominal 120' right-of-way required which can be accommodated within the existing right-of-way



Recommended Alternative

Access Management Changes at Corner Lake Plaza

- Only right-in, right-out movements will be provided at the south driveway to Corner Lakes Plaza given the close proximity to SR 50
- Full access to Corner Lakes Plaza will be provided at the north driveway to accommodate shopping center movements





Recommended Alternative

Changes at Cypress Lake Glen Boulevard

- Provide new westerly connection to Corner School Drive at the signalized Cypress Lake Glen Boulevard Intersection
- Improves access to Corner Lake Middle School
- Improves operations along Chuluota Road

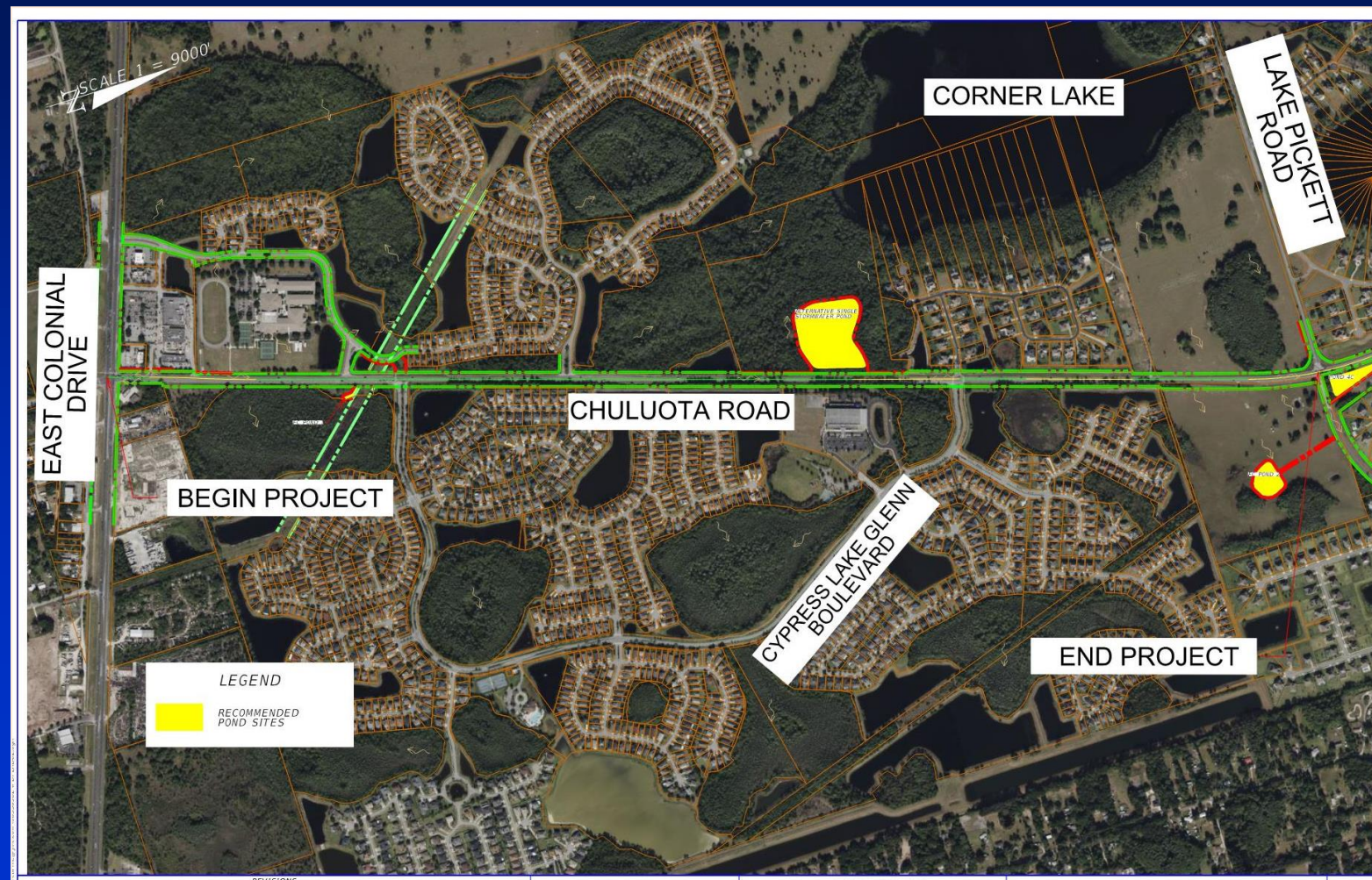




Recommended Alternative

Recommended Pond Sites

- Two preferred stormwater ponds
- Two preferred floodplain compensation ponds





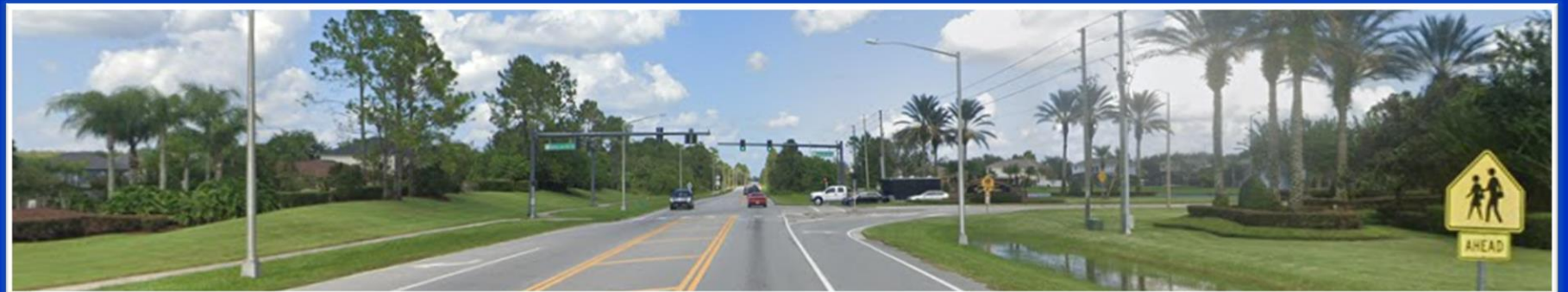
Recommended Alternative

Chuluota Road RCA From SR 50 to Lake Pickett Road Alternatives Evaluation Matrix		
	No-Build Alternative	Preferred Alternative
Evaluation Criteria	No Improvements	Four-Lane Urban Section with 6' SW and 10-14' Path
Relocations		
Number of Residential Acquisitions	None	1
Number of Business Acquisitions	None	None
Number of Parcels Impacted	None	10
Social, Natural and Physical Impacts		
Social and Neighborhood	None	Low
Archeological/Historic Sites	None	None
Threatened and Endangered Species	None	No Adverse Impacts
Wetland Impacts (Acres)	None	None
RHPZ Uplands Impacts (Acres)	None	1.03
Floodplain Impacts (Acre-Feet)	None	0.798
Potential High or Medium Ranked Contamination Sites	None	None
Estimated Costs (Present Day Costs)		
Estimated Construction Cost	No Cost	\$27,538,176
Design, Adm Costs (15% of Construction)	No Cost	\$4,130,726
CEI (15% of Construction)	No Cost	\$4,130,726
Right-of-Way Costs	No Cost	\$2,148,566
Wetland Mitigation	No Cost	
RHPZ Uplands Mitigation	No Cost	\$103,000
Reimbursable Utility Relocation	No Cost	
Subtotal		\$38,051,194
Contingency (20%)		\$7,610,239
TOTAL ESTIMATED COSTS		\$45,661,433



Presentation Outline

- Overview
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- **Public Engagement**
- Summary and Action Requested





Public Engagement & Schedule

Public Engagement

- Call/Email
- Attend LPA and
- BCC Hearings



Newsletters



Public
Community
Meeting

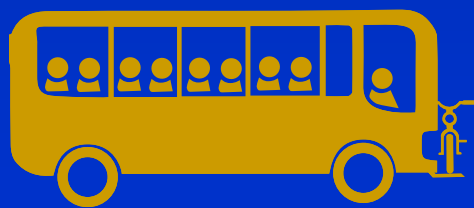


LPA Hearing



BCC Hearing

Project Website: <https://www.chuluotarca.com>





Public Engagement & Schedule

Public Engagement and Agency Meetings

- 2/23-24/23 Cypress Lakes HOA, President
- 2/9/23 FDOT SR50 – FDOT Public Meeting – Chuluota / SR 50 intersection
- 2/16/23 LPA Hearing
- 2/6/23 Commissioner Bonilla Meeting
- 2/6/23 Commissioner Gomez Cordero Briefing
- 2/7/23 BCC Work Session
- 2/20/23 Commissioner Moore Briefing
- 1/19/23 LPA Work Session
- 12/5/22 Community Meeting #2
- 11/7/22 Cross Life Church, pond location
- 10/6/22 Gangadai Ramnarine – NE Corner Chuluota and Pickett, Pond Location
- 9/20/22 Community Meeting
- 7/11/22 Cross Life Church – Roadway ROW and Pond location
- 6/27/22 OCPS/FDOT/OC Chuluota / East River Falcons Way



Public Engagement & Schedule

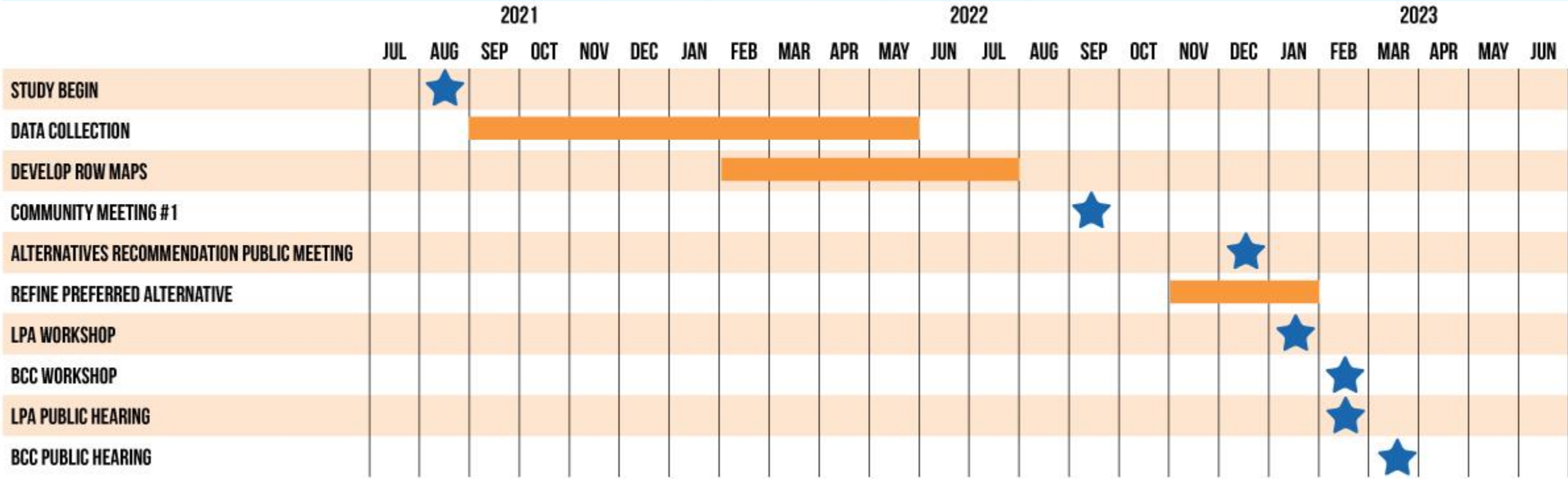
Public Engagement and Agency Meetings

- 6/14/22 SE Corner Pickett and Chuluota, Potential pond site / Flood Plain Comp Storage pond
- 6/14/23 Corner Lake Gardens Community Meeting (SW corner Chuluota/Pickett)OC Planning
- 6/7/22 Cross Life Church – Roadway ROW and Pond location
- 5/25/22 FDOT Chuluota / SR 50 intersection
- 5/11/22 Tree preservation meeting for Cross Life Church property
- 5/5/22 Tree preservation meeting for Cross Life Church property
- 3/4/22 Corner Lake Gardens Development Chuluota ROW needs (roadway and potential pond)
- 12/2/21 Trail Coordination Meeting (OC Parks)
- 11/12/21 OCPS Coordination Meeting
- 11/5/21 FDOT Quarterly Meeting – Chuluota Road / SR 50 intersection



Public Engagement & Schedule

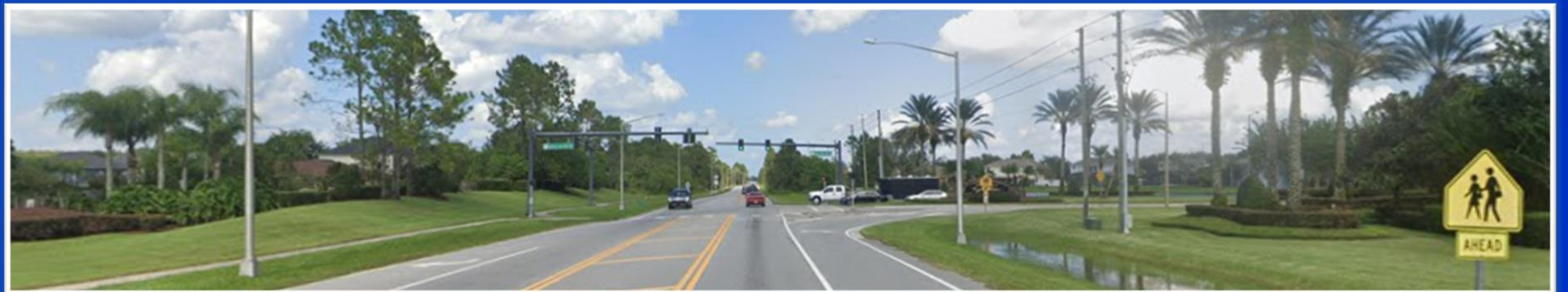
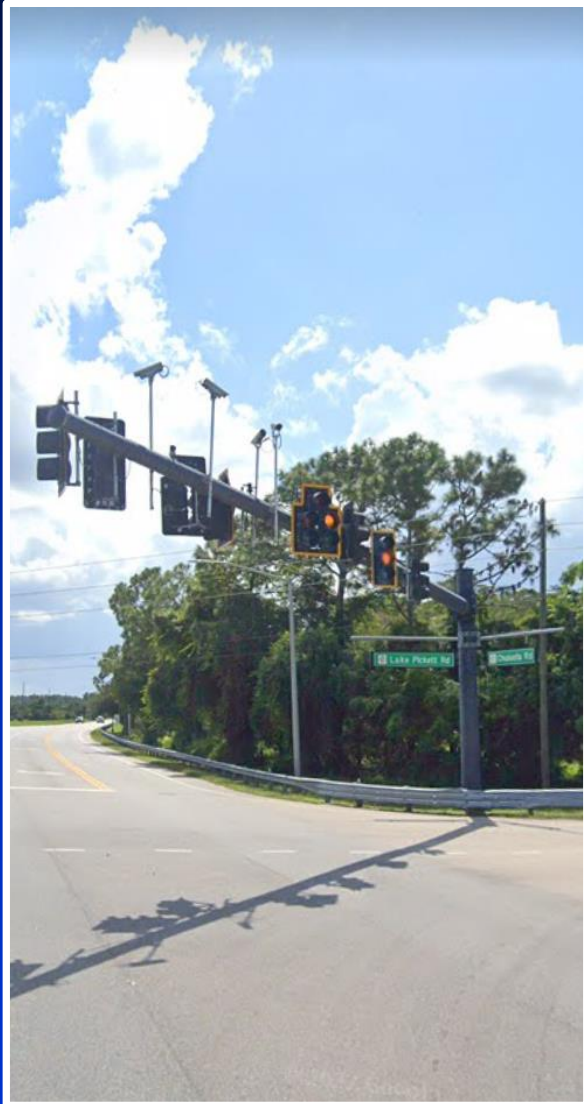
CHULUOTA ROAD RCA PROJECT SCHEDULE





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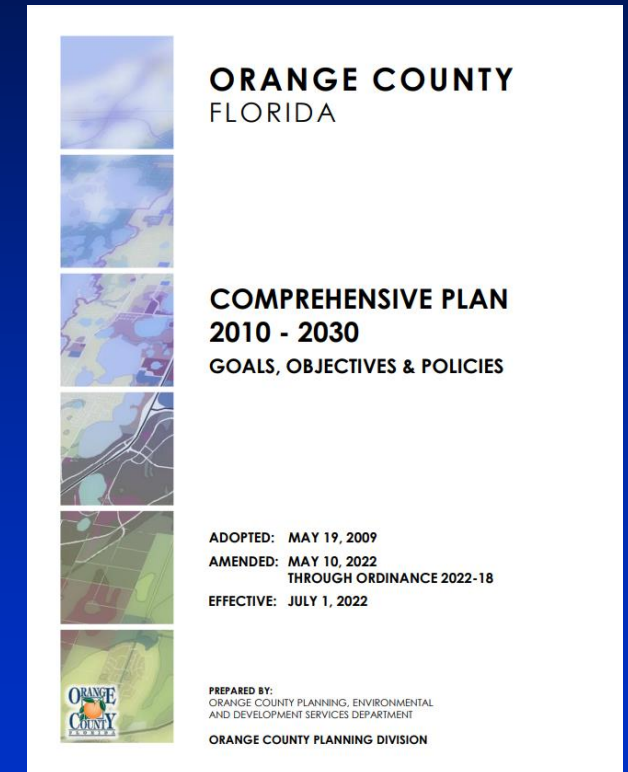




Summary

▪ Consistency with the Comprehensive Plan

- Implement Long Range Transportation Plan (Obj. T1.1)
- Implement financially-feasible multimodal transportation system (Obj. T1.3)
- Ensure LOS standards are met on County roads within unincorporated Orange County (Obj. T1.3)
- Support strategies which promote convenient & efficient mobility system for all modes (Obj. T3.1)
- Build street, pedestrian and bicycle networks that provide interconnectivity and access to multimodal transportation facilities (Obj. T3.2)





Summary

- Chuluota Road is a developing collector roadway ultimately intended to connect SR 50 East Colonial Drive to Lake Pickett Road and Seminole County to the north
- The RCA considered existing and future conditions and engineering criteria to anticipate future conditions and recommend a preferred alternative which addresses access management for all modes
- Chuluota Road is being designed as a 4-lane urban roadway and will carry a significant volume of traffic in the future
- New, contiguous pedestrian/bicycle facilities are proposed
- The County has engaged the public through a variety of means



Next Steps

CHULUOTA ROAD IMPROVEMENT SCHEDULE							
	2023	2024	2025	2026	2027	2028	2029
RCA	■						
DESIGN	■	■	■	■			
ROW			■	■	■	■	
CONSTRUCTION						■	■

*Tentative Schedule



Action Requested

- **Find the Chuluota Road Roadway Conceptual Analysis Study Consistent with the Comprehensive Plan**
- **Approve the Study and Approval to Initiate Design, Right-of-way Acquisition and Construction**

Transportation Planning Division

**CHULUOTA ROAD (CR 419)
RCA STUDY**

**Board of County Commissioners
Public Hearing**

March 7, 2022