

Transportation Planning Division

Work Session
Woodbury Road
Roadway Conceptual Analysis Study

March 23, 2021

Presentation Outline

- Study Overview
- Existing Conditions
- Alternatives Considered
- Public Engagement
- Preferred Alternative
- Next Steps





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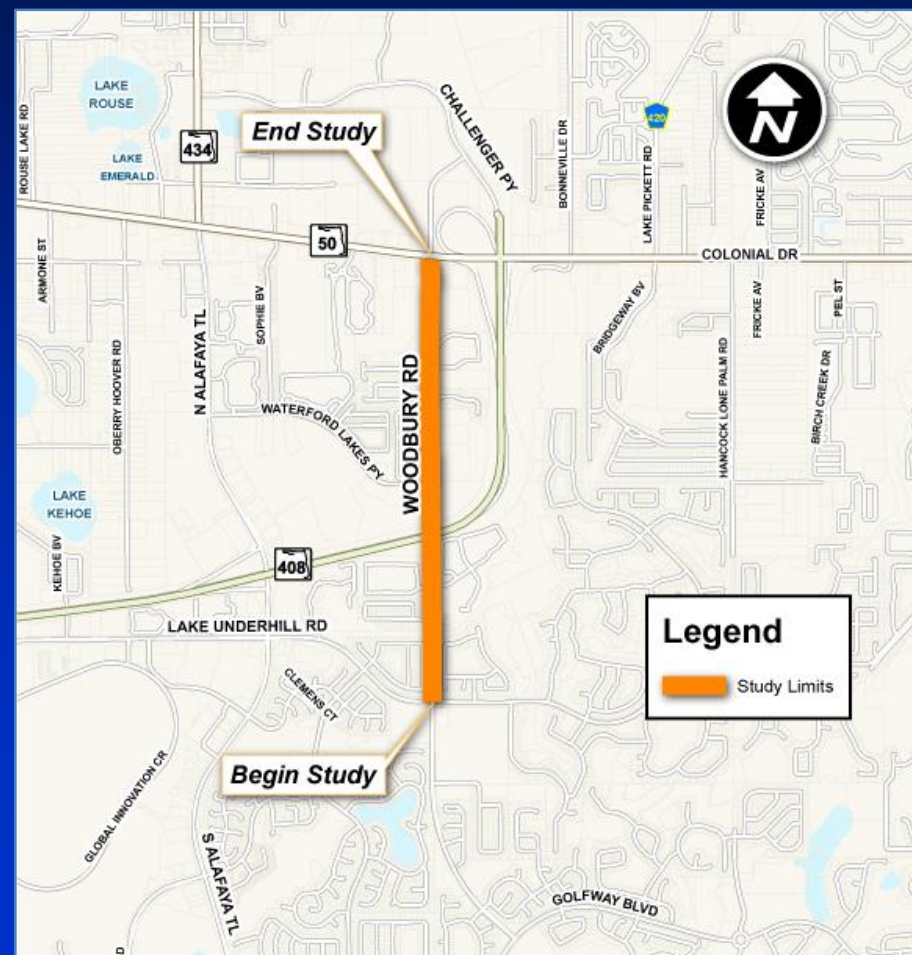


Study Overview

- **Woodbury Road project limits**
 - Lake Underhill Road to SR 50
 - 1.5 Miles
- **Study Purpose**
 - Identify Context Sensitive & Cost Feasible Improvements
 - Document Project Need
 - Balance Needs of All Users



Project Location



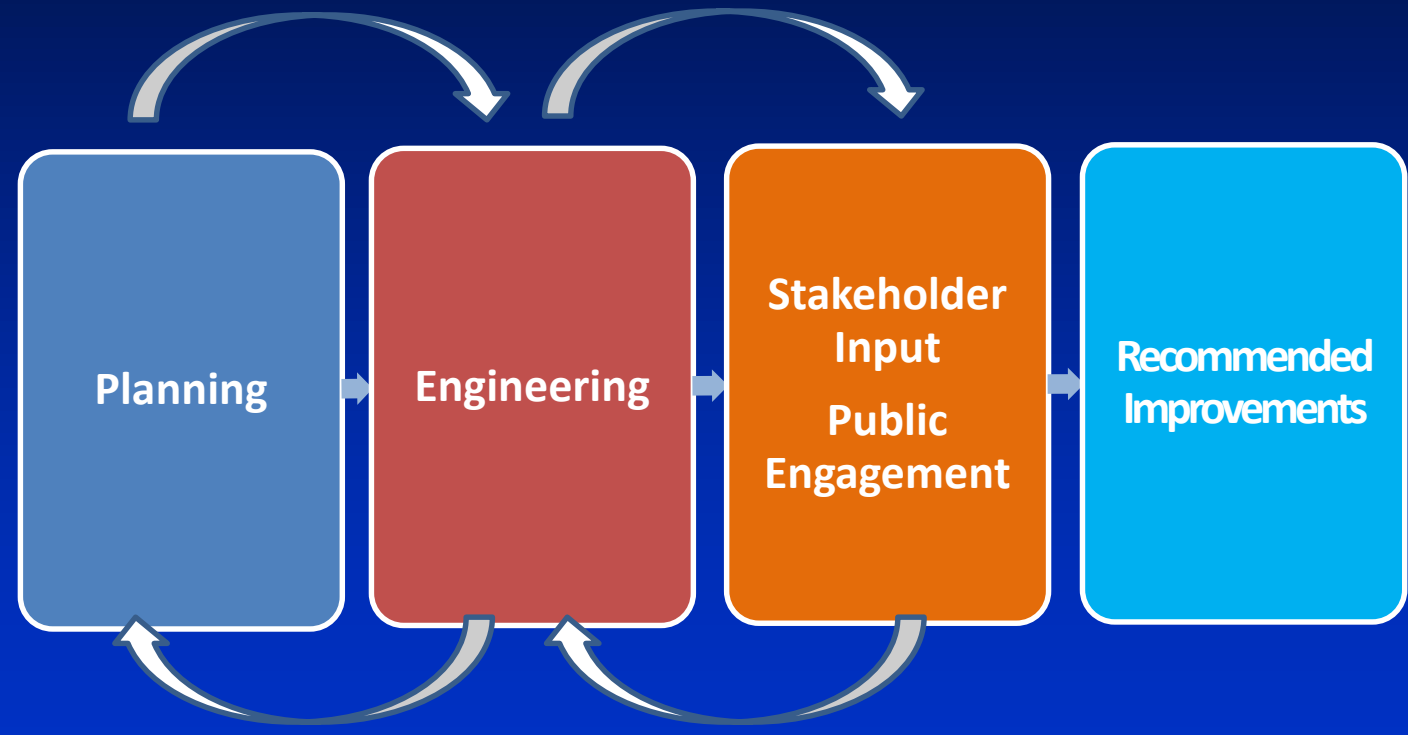










Study Overview

- **Roadway Conceptual Analysis (RCA) Study**
 - Similar to FDOT’s Project Development and Environment (PD&E) study process
 - Required by the County’s Comprehensive Plan Transportation Element
 - Confirms roadway and corridor needs, recommends the most suitable alignment and design characteristics, provides refined cost estimates and analyzes social/environmental land use impacts
 - Includes opportunities for intensive public participation
 - Part of the four-step process of implementing the Long-Range Transportation Plan. Following approval by the Board of County Commissioners, project design, right-of-way acquisition, and construction phases may commence



Study Overview



-  Geometric Roadway Design
-  Complete Streets Analysis
-  Traffic Forecast & Analysis
-  Crashes
-  Access Management
-  Drainage
-  Environmental
-  Costs



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Existing Conditions

- Two-lane undivided urban roadway
- Bridge over SR 408
- Turn lanes at intersections
- Widens to 4 lanes approaching SR 50
- Speed Limit 40 MPH



Existing Conditions

- Mostly developed
- Single and multi-family residential
- Waterford Elementary School
- Discovery Middle School
- Some commercial
- Churches





Existing Conditions

- Continuous sidewalk west side
- Sidewalk east side Waterford Lakes Parkway to Woodbury Cove Drive
- Bike lanes at north end
- LYNX Link 320 with stop at Waterford Lakes Pkwy and NeighborLink 621





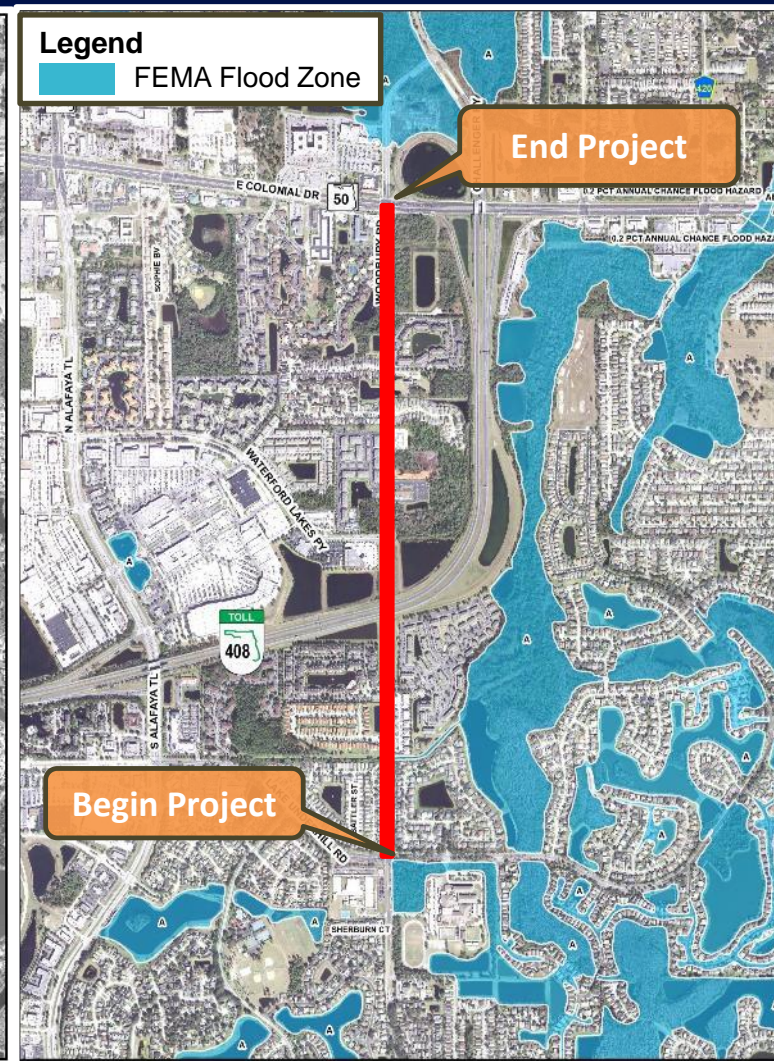
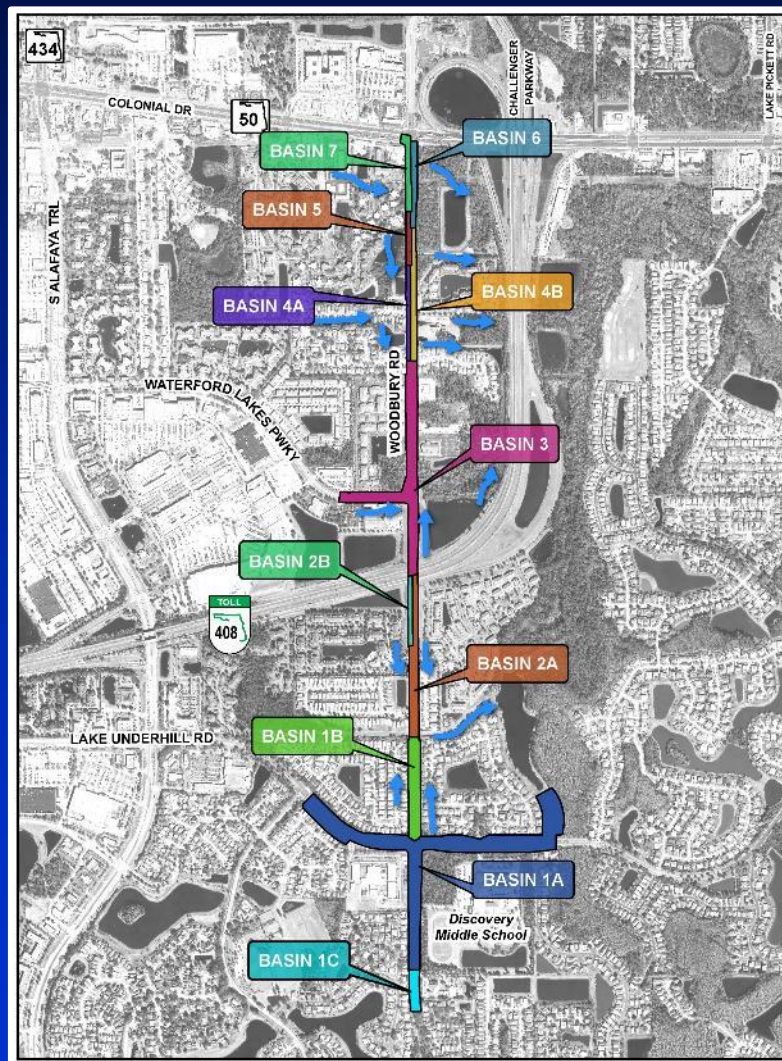
Existing Conditions

Existing drainage

- Within Econlockhatchee drainage basin
- Water flows east to the Econlockhatchee River
- Seven drainage basins
- Joint Use Ponds
- Concrete box culvert for canal

Existing Floodplain

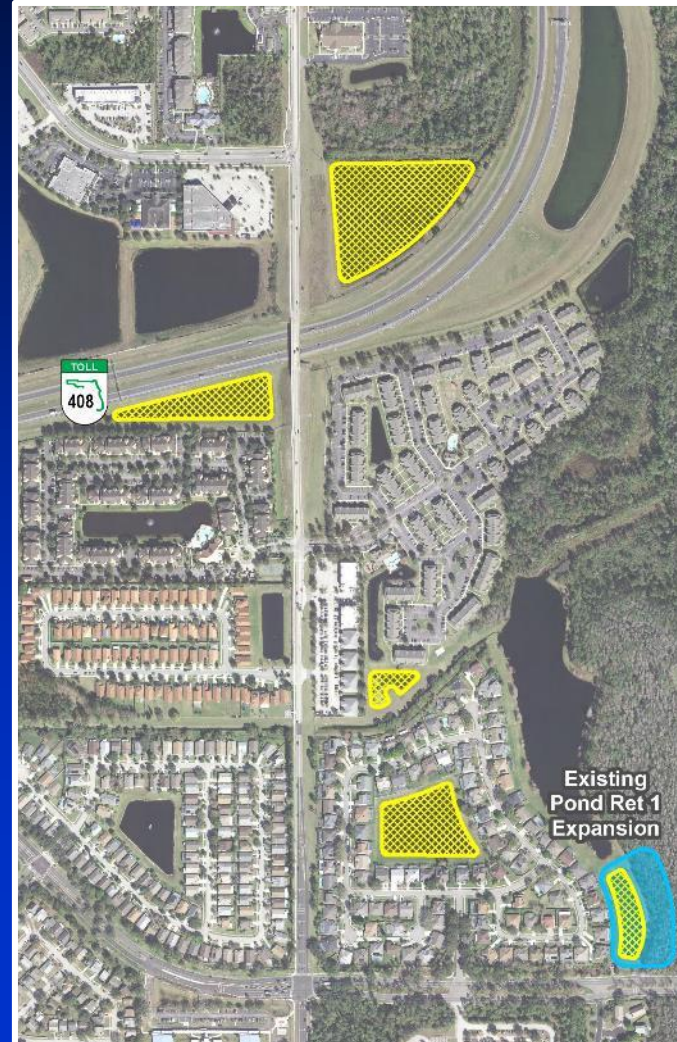
- 100-year floodplain (Zone A)





Existing Conditions

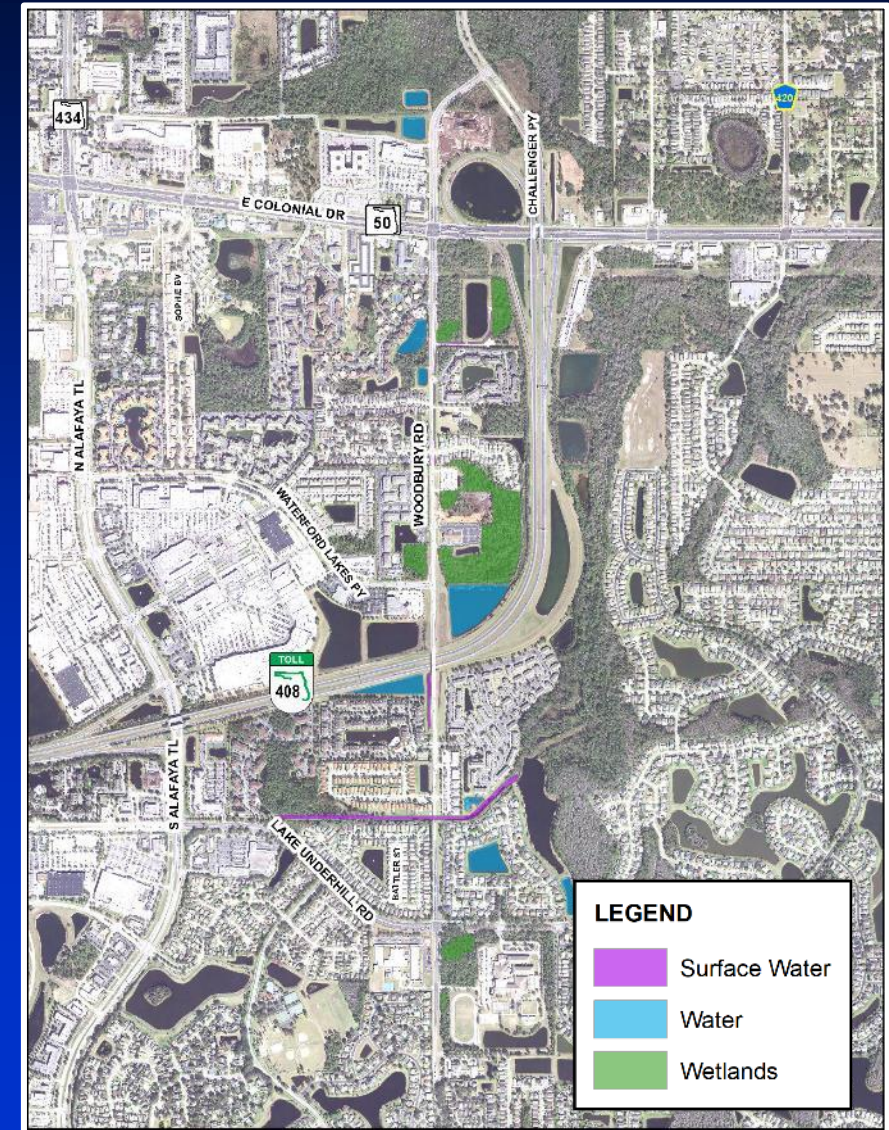
- 9 Existing Ponds
- 1 Proposed Pond Site
 - South of SR 50 adjacent to SR 408 (Pond 4B)
- 1 Pond Expansion
 - Ret 1 Pond on north side of Lake Underhill Road





Existing Conditions

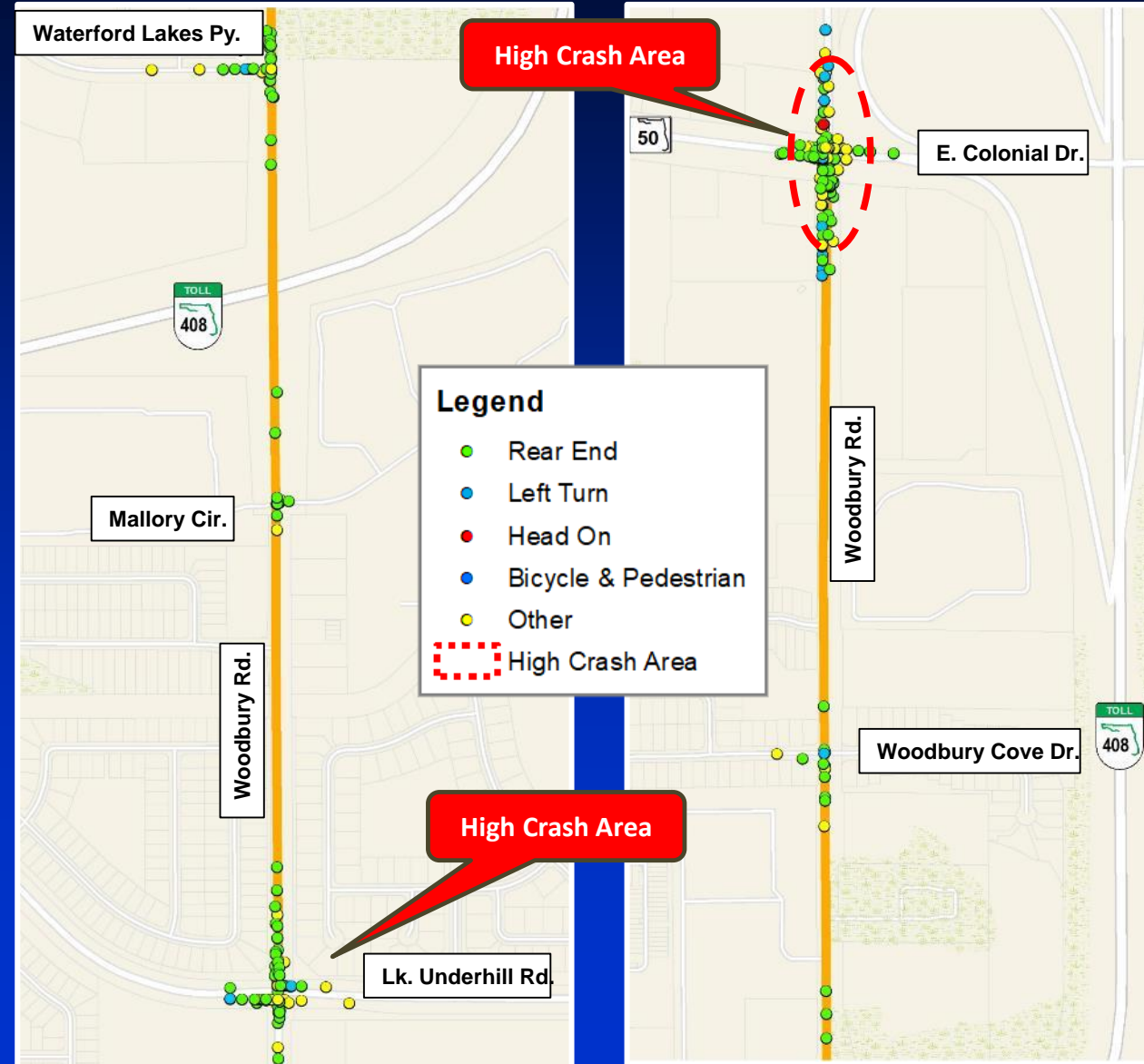
- 6 wetlands and ten surface waters
- Potential for protected wildlife species
 - Wood Stork
 - Roseate spoonbill
 - Tricolored heron
 - Little blue heron
 - American alligator
- No historic buildings or archaeological sites identified





Existing Conditions

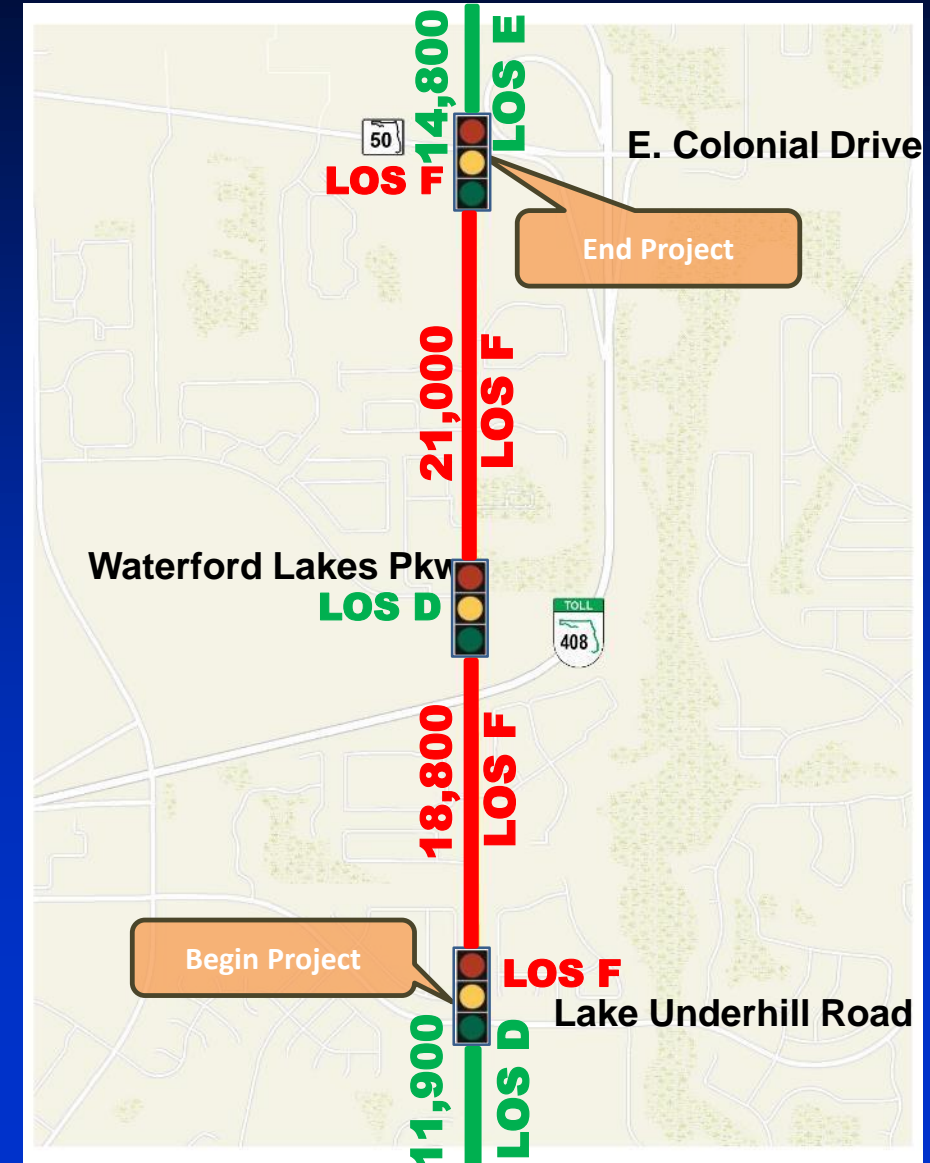
- 5 years of data (April 2014 – March 2019)
 - 579 total crashes
 - 1 fatality / 141 injury crashes
 - 429 rear-end crashes
 - 10 bicycle and pedestrian crashes
 - 229 crashes related to distracted drivers (40%)





Existing Conditions

- Existing Year Average Daily Traffic Volumes Range from 11,900 AADT to 21,000 AADT
- Level of Service (LOS)
 - Throughout project limits = LOS F
 - North and south of project = LOS D or E (acceptable)
 - E. Colonial Drive and Lake Underhill intersections = LOS F
 - Waterford Lakes Parkway intersection = LOS D





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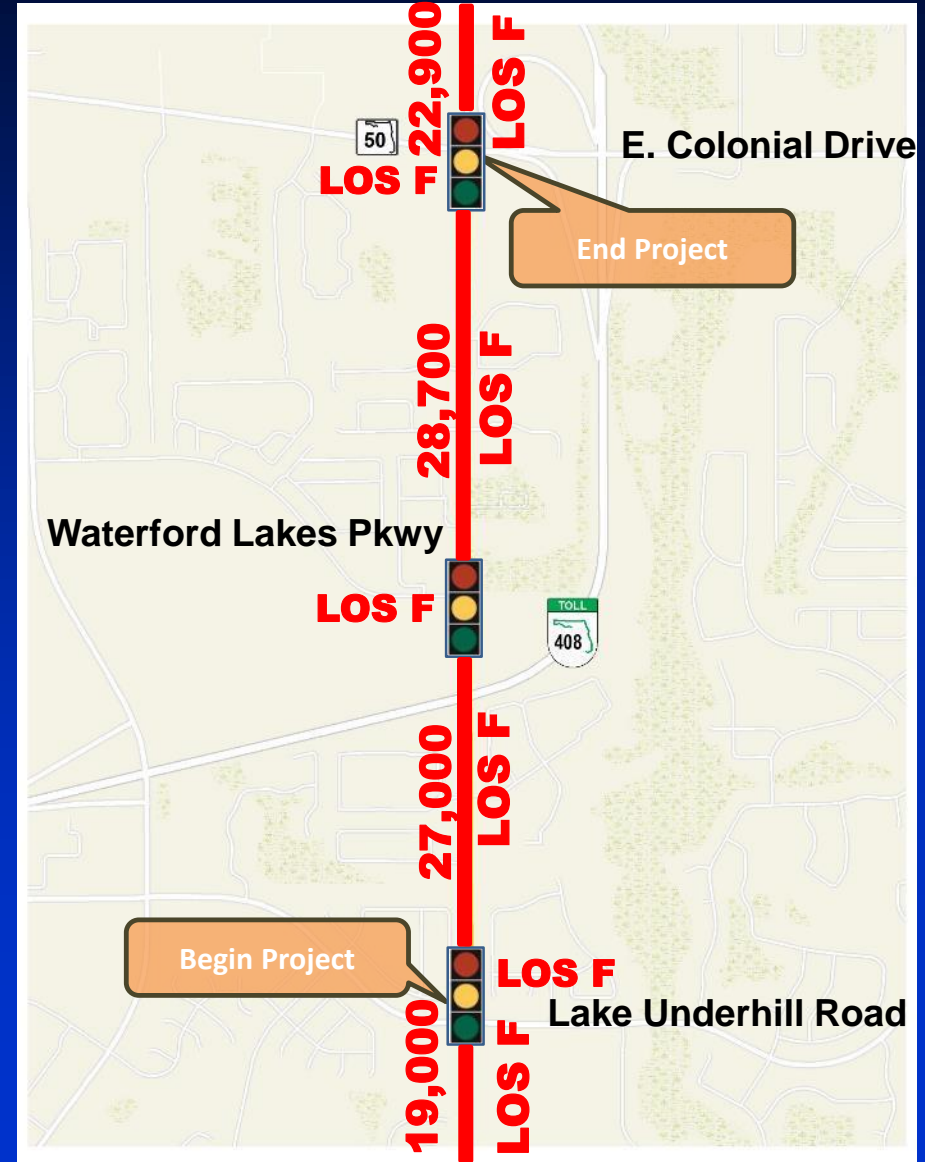
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Alternatives Considered

- No Build Alternative
- Design Year 2047 Average Daily Traffic (ADT) Volumes along Woodbury Road Range from 19,000 to 28,700 vehicles per day
- Level of Service (LOS)
 - All roadway segments fail
 - All intersections fail





Alternatives Considered

No-Build Alternative

- No improvements are made to Woodbury Road

Transportation Systems Management & Operations (TSM&O)

- Considers intersection improvements and traffic signal improvements

Alternative 1: 4-Lane Widening, Sidewalk and Shared-Use Path

- Can generally be constructed within existing ROW

Alternative 2: 4-Lane Widening, Sidewalk and On-Street Bike Lanes

- Maintain existing ROW one side and acquire ROW from other side of Woodbury Road

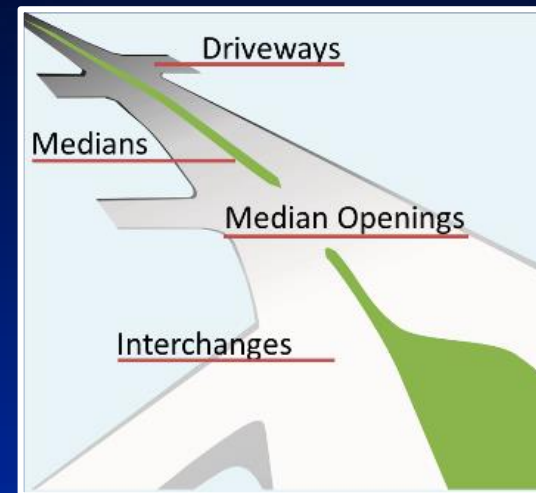
Alternative 3: 4-Lane Widening, Sidewalk, Bike Lanes, and Shared-Use Path

- Maintain existing ROW one side and acquire ROW from other side of Woodbury Road

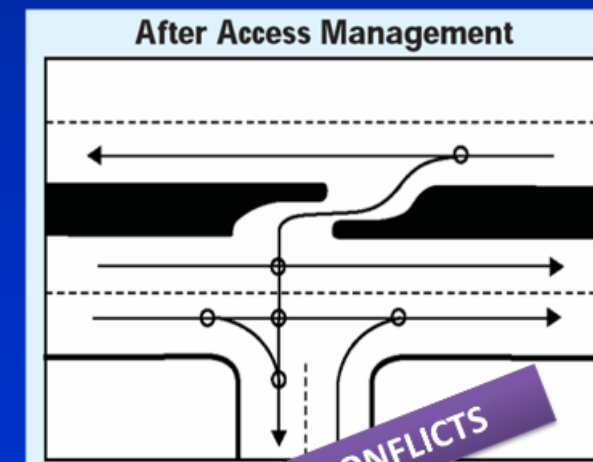
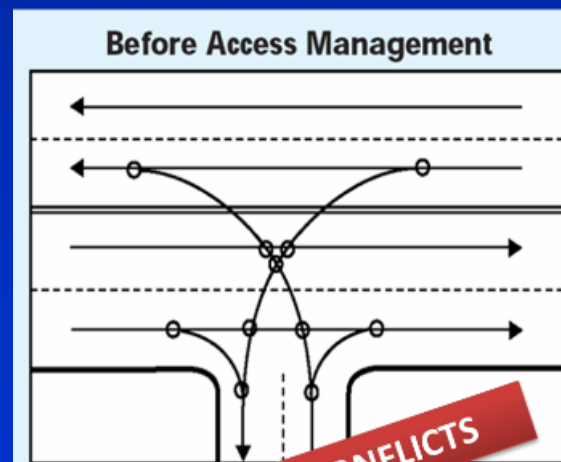


Alternatives Considered

- **Access Management**
 - The careful planning of the location, type, and design of access
 - Introduction of a median reduces conflict points and improves safety
 - U-turns are often much safer than direct left turns
 - All 3 Build alternatives include 4-lane widening with a median



More conflict points means more crashes





Alternatives Considered

Evaluation Matrix

Evaluation Criteria	No-Build	Alternative 1 Shared-Use Path, Sidewalk, No Bike Lanes	Alternative 2 Sidewalks, On-Street Bike Lanes	Alternative 3 Shared-Use Path, Sidewalk, On-Street Bike Lanes
Residential/Business Acquisitions	None	0	0	0
Parcels Impacted	None	12	39	39
Social & Neighborhood	None	Low	Med	Med
T&E Species	None	No Adverse Impacts	No Adverse Impacts	No Adverse Impacts
Wetlands (ac)	None	4.4	6.2	6.2
Floodplains (ac)	None	1.9	1.9	1.9
Design	None	\$3,661,000	\$3,878,000	\$3,975,000
Right-of-Way & Mitigation	None	\$3,642,000	\$4,037,000	\$4,255,000
Construction & CEI	None	\$28,068,000	\$29,734,000	\$30,473,000
Reimbursable Utility Relocation	None	\$1,000,000	\$1,000,000	\$1,000,000
Total	None	\$36,371,000	\$38,649,000	\$39,703,000



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Public Engagement



Newsletters



Website

www.woodburyroadstudy.com



Community
Meetings



LPA/BCC
Public Hearings

- 2 virtual community meetings
- Online survey

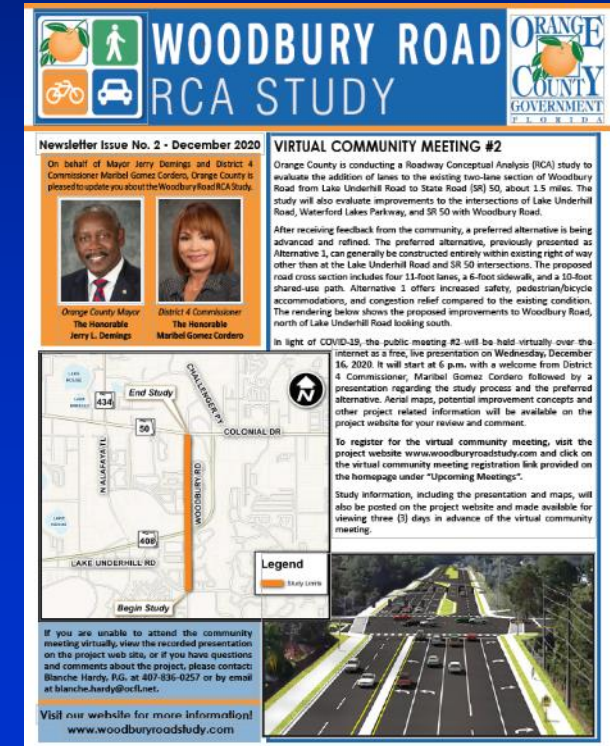
- Website with project documents
- Online comment form



Public Engagement

▪ Robust Outreach Participation

- Roughly 760 Newsletters per event have or will be mailed prior to the two Community Meetings, the LPA and BCC Public Hearings, and after BCC approval
- Waterford Lakes Master HOA participated in mass email distribution of community meeting notices and information
- 39 people attended remotely held Community Meeting #1 and 21 people attended remotely held Community Meeting #2
- 153 Surveys were completed



WOODBURY ROAD RCA STUDY

Newsletter Issue No. 2 - December 2020

On behalf of Mayor Jerry Daniels and District 4 Commissioner Maribel Gomez Cordero, Orange County is pleased to update you about the Woodbury Road RCA Study.

VIRTUAL COMMUNITY MEETING #2

Orange County is conducting a Roadway Conceptual Analysis (RCA) study to evaluate the addition of lanes to the existing two-lane section of Woodbury Road from Lake Underhill Road to State Road (SR) 50, about 1.5 miles. The study will also evaluate improvements to the intersections of Lake Underhill Road, Waterford Lakes Parkway, and SR 50 with Woodbury Road.

After receiving feedback from the community, a preferred alternative is being advanced and refined. The preferred alternative, previously presented as Alternative 1, can generally be constructed entirely within existing right of way other than at the Lake Underhill Road and SR 50 intersections. The proposed road cross section includes four 11-foot lanes, a 6-foot sidewalk, and a 10-foot shared-use path. Alternative 1 offers increased safety, pedestrian/bicycle accommodations, and congestion relief compared to the existing condition. The rendering below shows the proposed improvements to Woodbury Road, north of Lake Underhill Road looking south.



In light of COVID-19, the public meeting #2 will be held virtually over the internet as a live presentation on Wednesday, December 16, 2020. It will start at 6 p.m. with a welcome from District 4 Commissioner, Maribel Gomez Cordero followed by a presentation regarding the study process and the preferred alternative. Aerial maps, potential improvement concepts and other project related information will be available on the project website for your review and comment.

To register for the virtual community meeting, visit the project website www.woodburyroadstudy.com and click on the virtual community meeting registration link provided on the homepage under "Upcoming Meetings".

Study information, including the presentation and maps, will also be posted on the project website and made available for viewing three (3) days in advance of the virtual community meeting.

If you are unable to attend the community meeting virtually, view the recorded presentation on the project web site, or if you have questions and comments about the project, please contact: Blanche Hardy, P.E., at 407-836-0257 or by email at Blanche.hardy@ocfl.net.

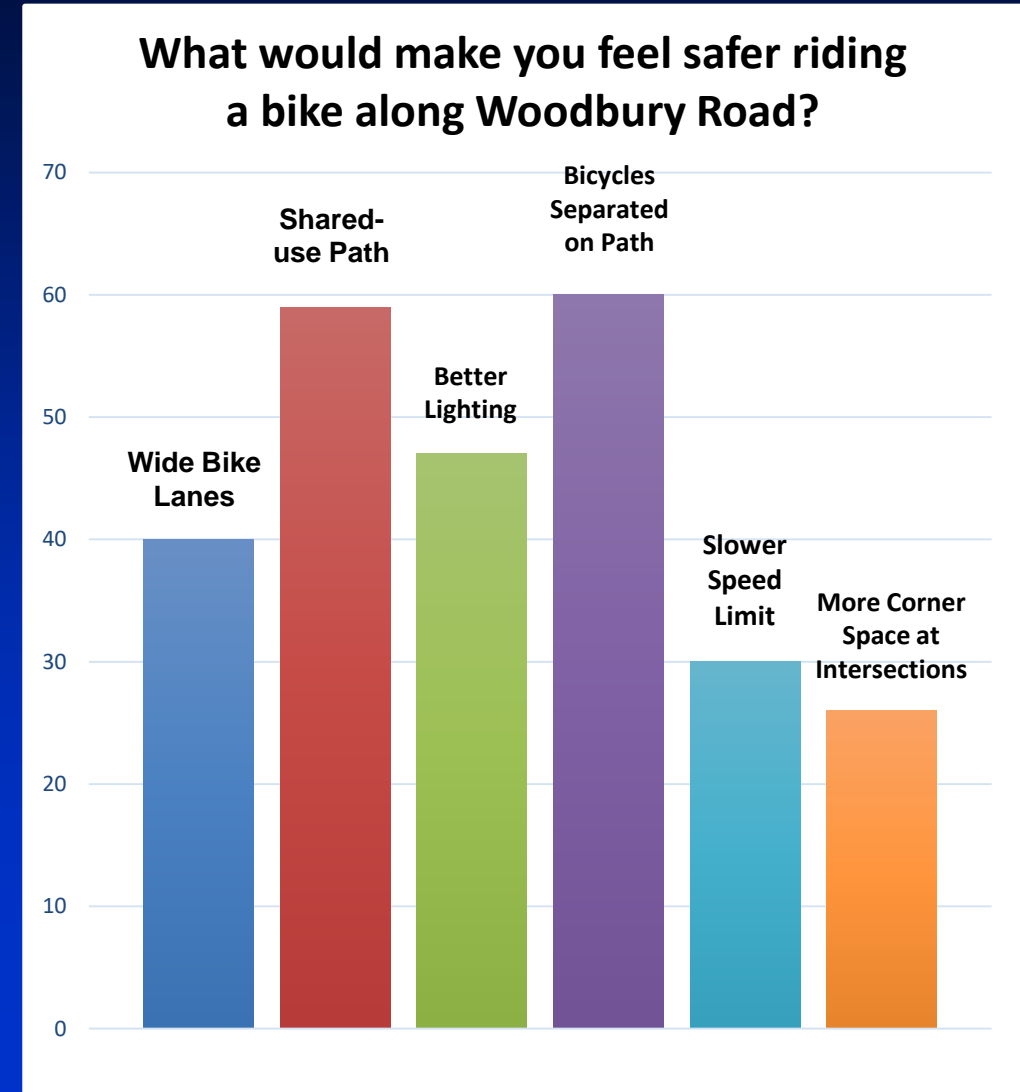
Visit our website for more information!
www.woodburyroadstudy.com





Public Engagement

- People generally feel unsafe riding a bike
- People much preferred bikes sharing an off-road path with pedestrians than using on-street bike lanes
- People would feel safer riding a bike with bikes separated on a path, a shared-use path, and better lighting

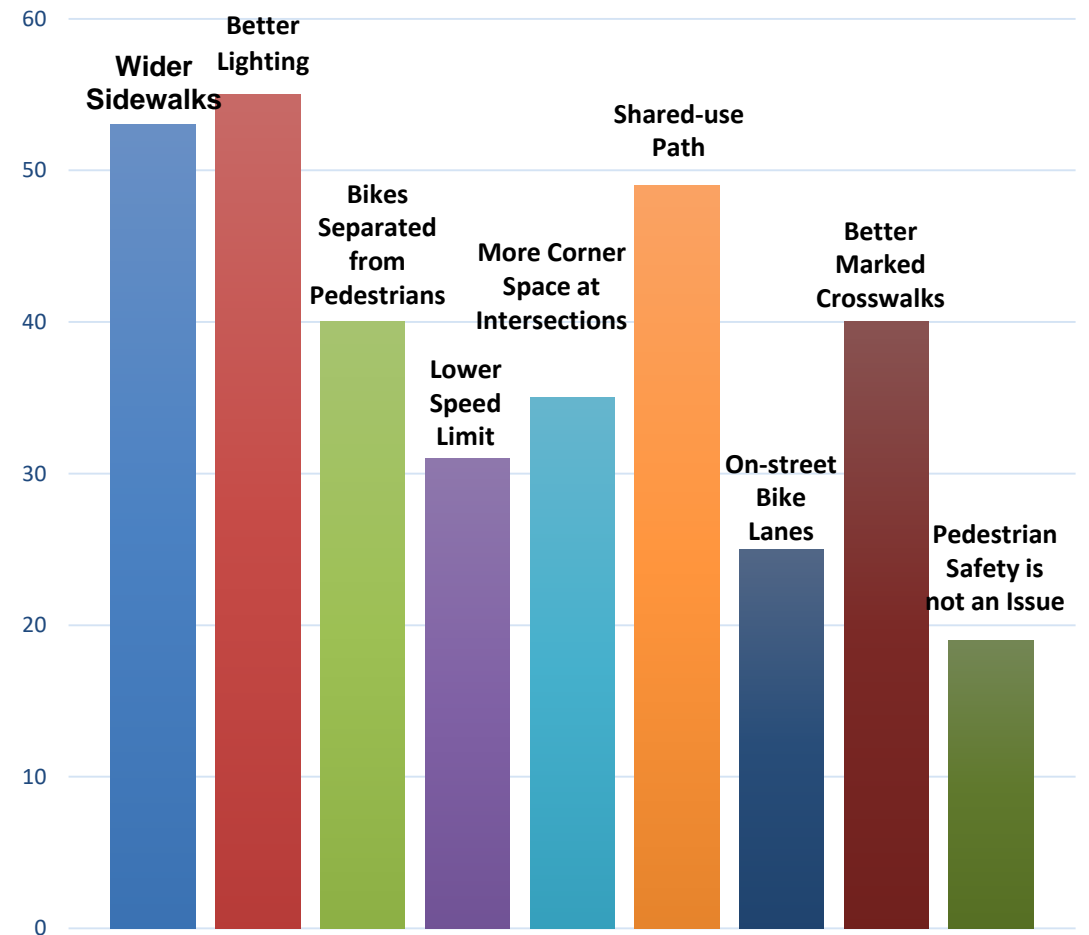




Public Engagement

- People feel more safe walking than biking
- People favored increased pedestrian safety features at the Lake Underhill Road intersection
- People would feel safer walking with wider sidewalks, better lighting, and a shared-use path

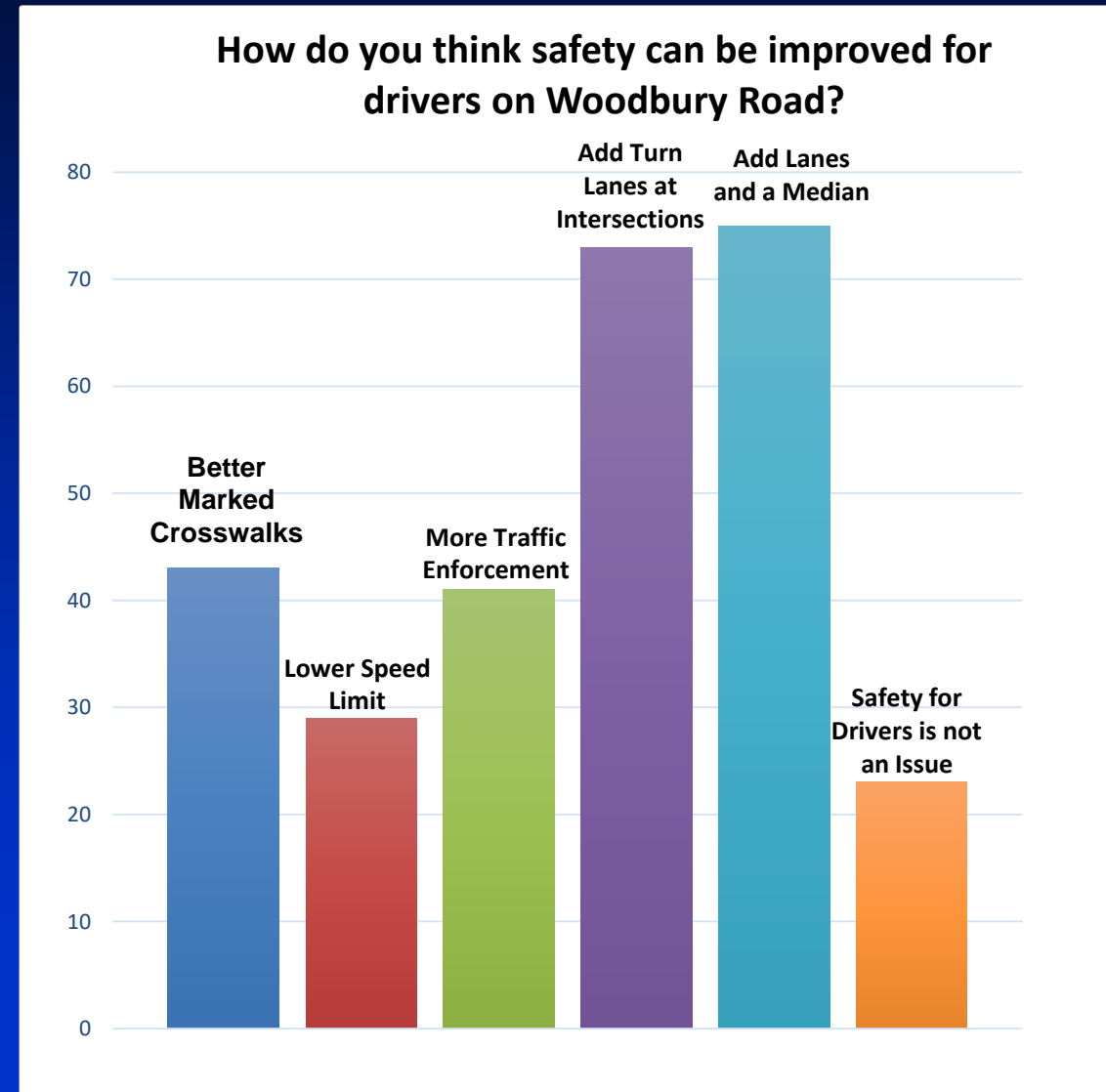
What would make you feel safer walking along Woodbury Road?





Public Engagement

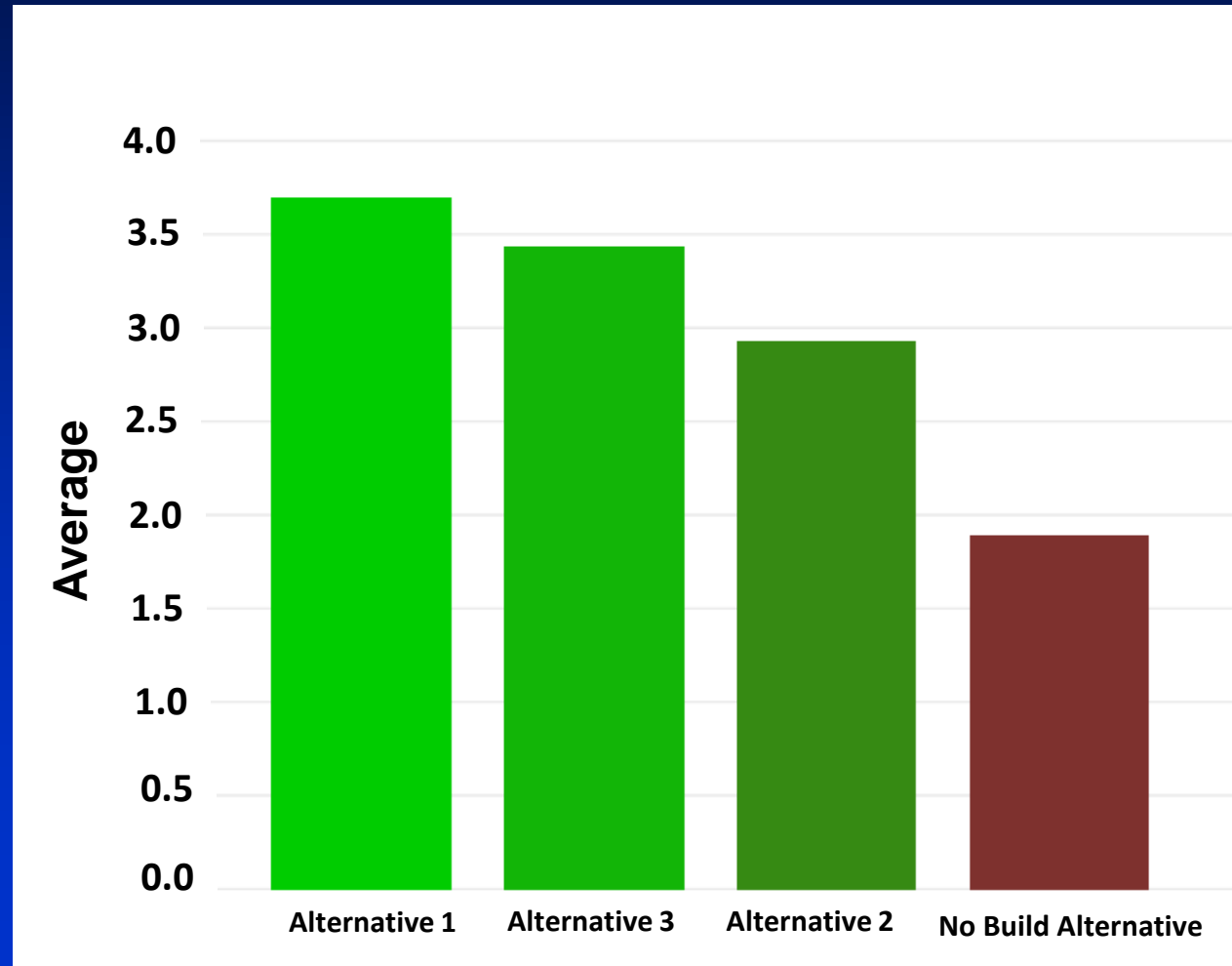
- People experience congestion in both the morning and afternoon
- People think adding roadway lanes, intersection turn lanes, and improving signal timing would relieve traffic
- People think additional travel lanes, a median, and additional turn lanes at intersections would improve safety for drivers
- Most people think the current speed limit of 40 mph is just right
- People most strongly preferred that access to the roadway be controlled with a median rather than maintain direct access to Woodbury Road





Public Engagement

Average Rating of Each Alternative from the Survey





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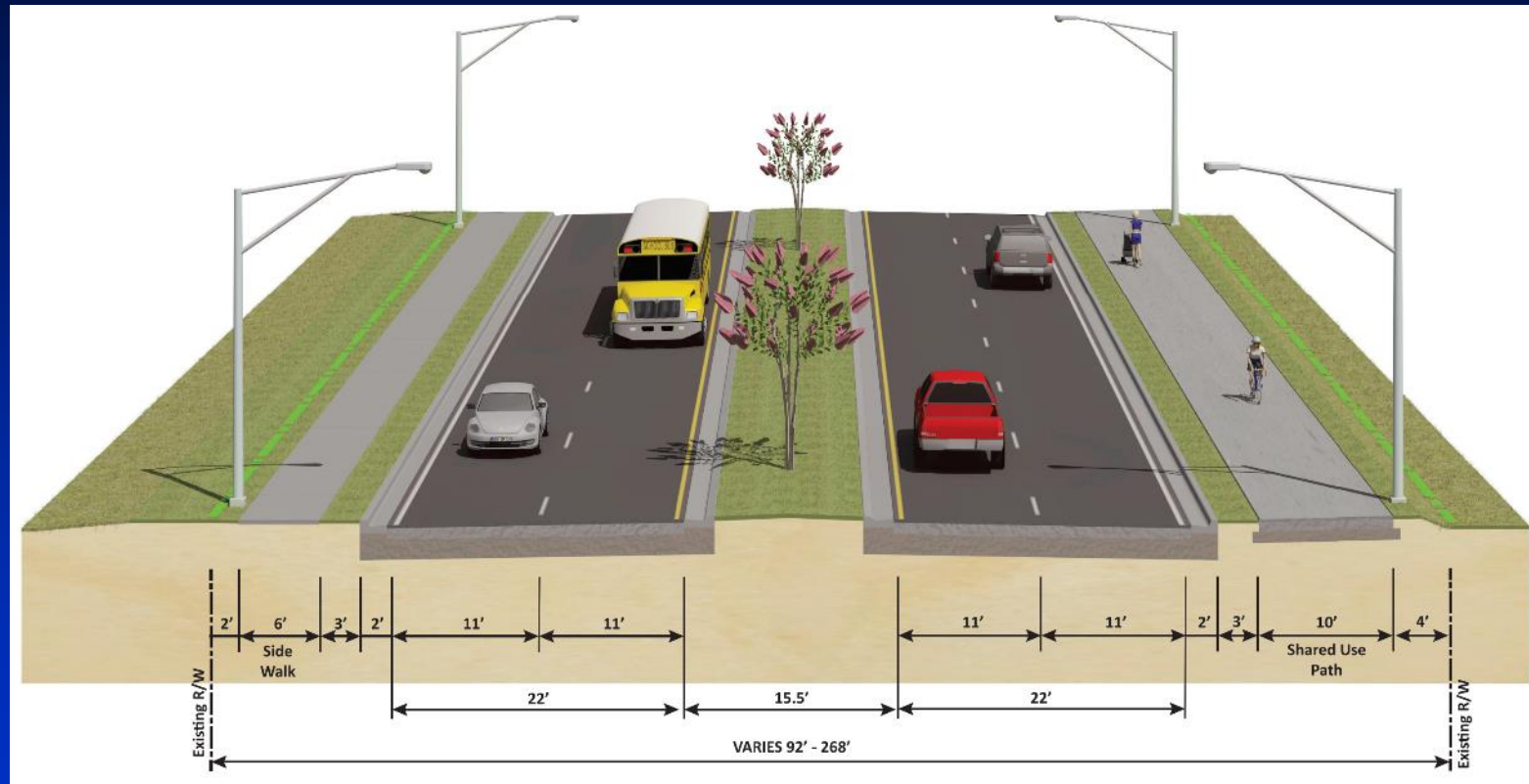
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Preferred Alternative

Alternative 1

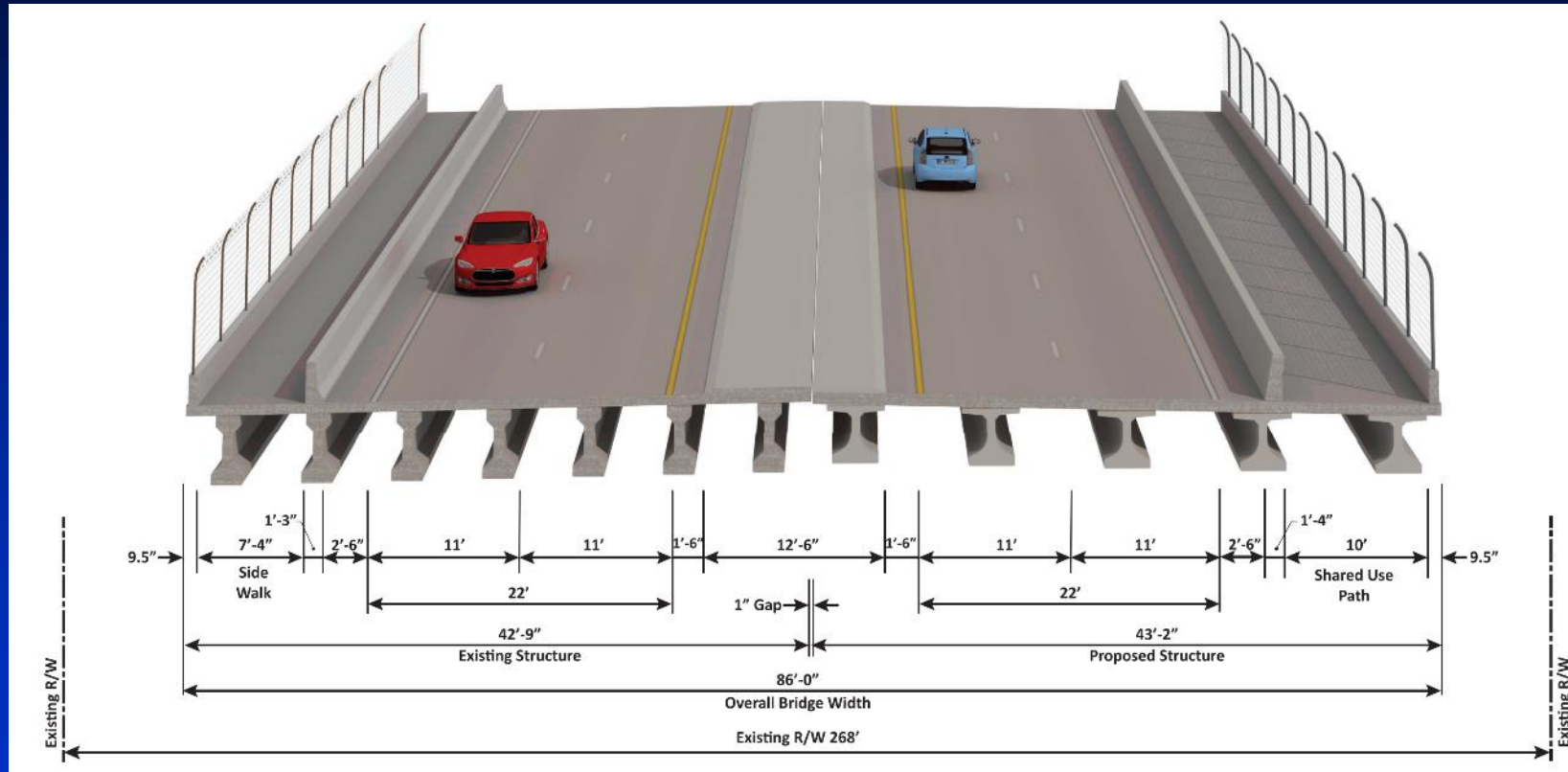


- Improves mobility for people walking and biking
- Requires little or no additional right-of-way
- Minimizes stormwater run-off
- Lowest construction cost of the three Build Alternatives



Preferred Alternative

Alternative 1 Bridge





Preferred Alternative

Existing Conditions

Looking south toward
Lake Underhill Road



Future Conditions

Proposed Alternative
1 Improvements

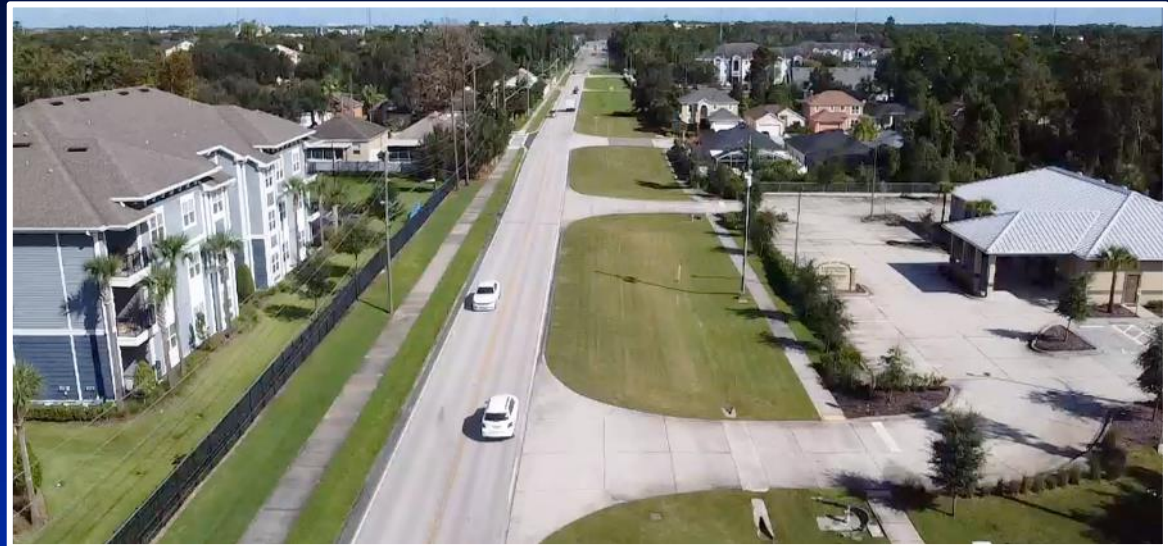




Preferred Alternative

Existing Conditions

North of Waterford Lakes
Parkway looking north
toward SR 50



Future Conditions

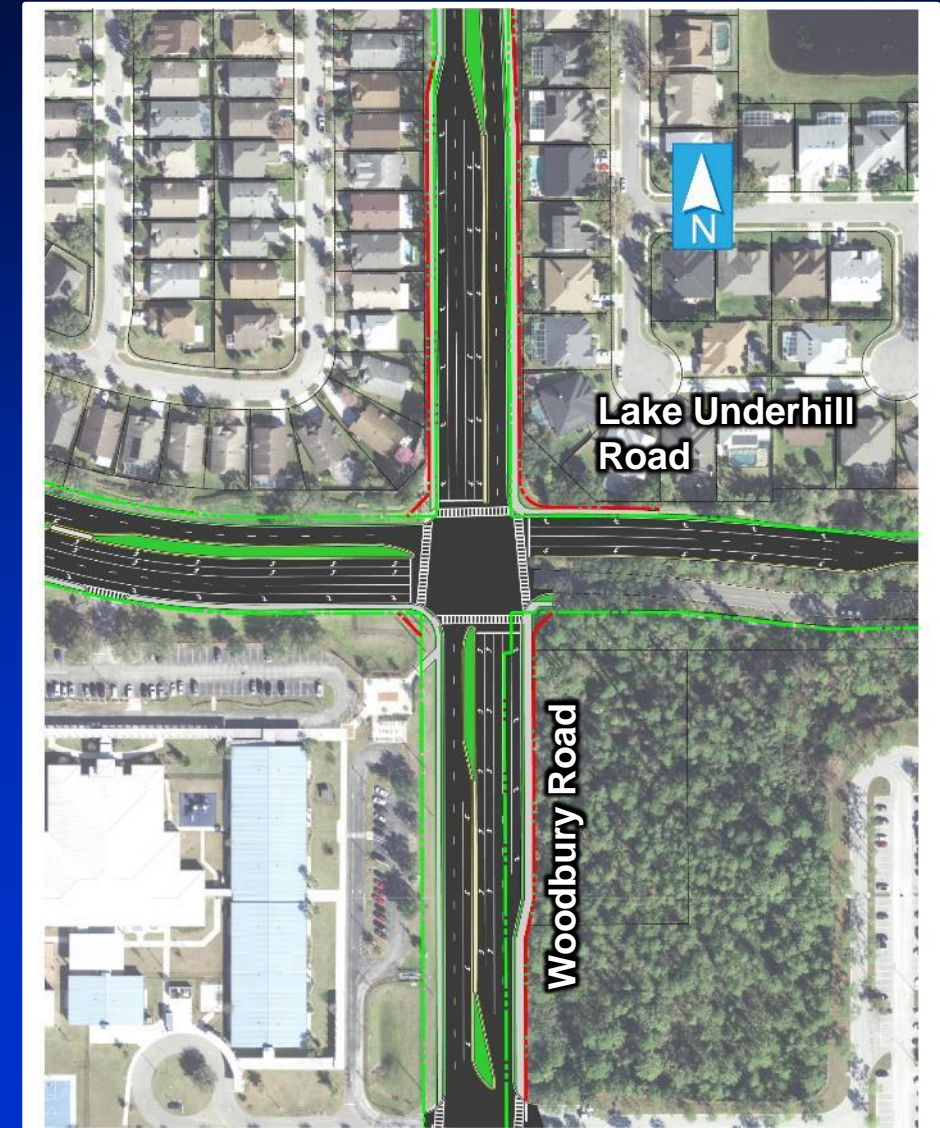
Proposed Alternative
1 Improvements





Preferred Alternative

- **Woodbury Road at Lake Underhill Road Proposed Intersection Improvements**
 - Add right turn lanes northbound, southbound, and westbound
 - Add second left turn lane eastbound
 - Extend turn lanes
 - Maintain stop in all directions for students to cross



Preferred Alternative

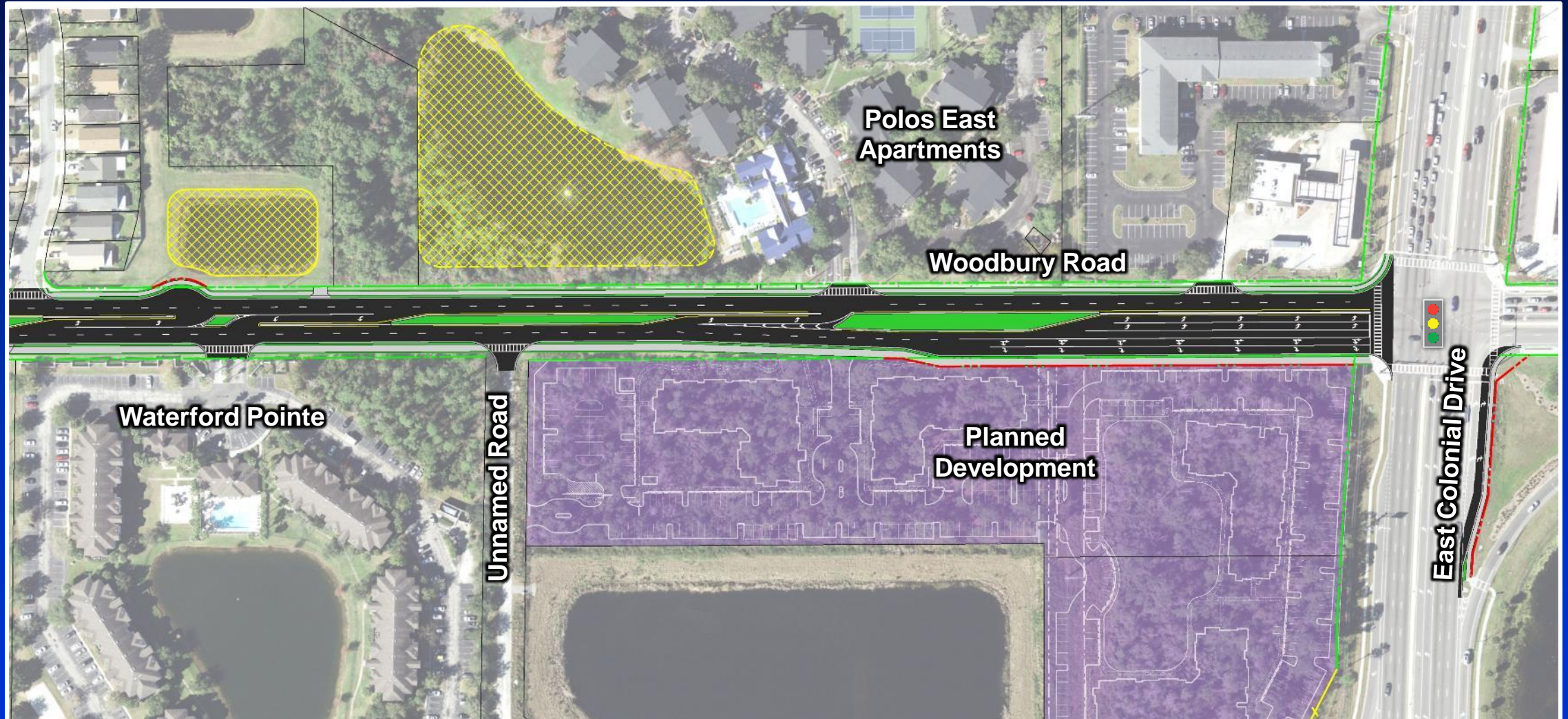
- **Woodbury Road at E. Colonial Drive (SR 50) Proposed Intersection Improvements**
 - Add second left turn lane northbound
 - Add right turn lane northbound
 - Second right turn lane westbound needed on SR 50 (by FDOT)
 - Future multi-family residential development planned for southeast corner of intersection





Preferred Alternative

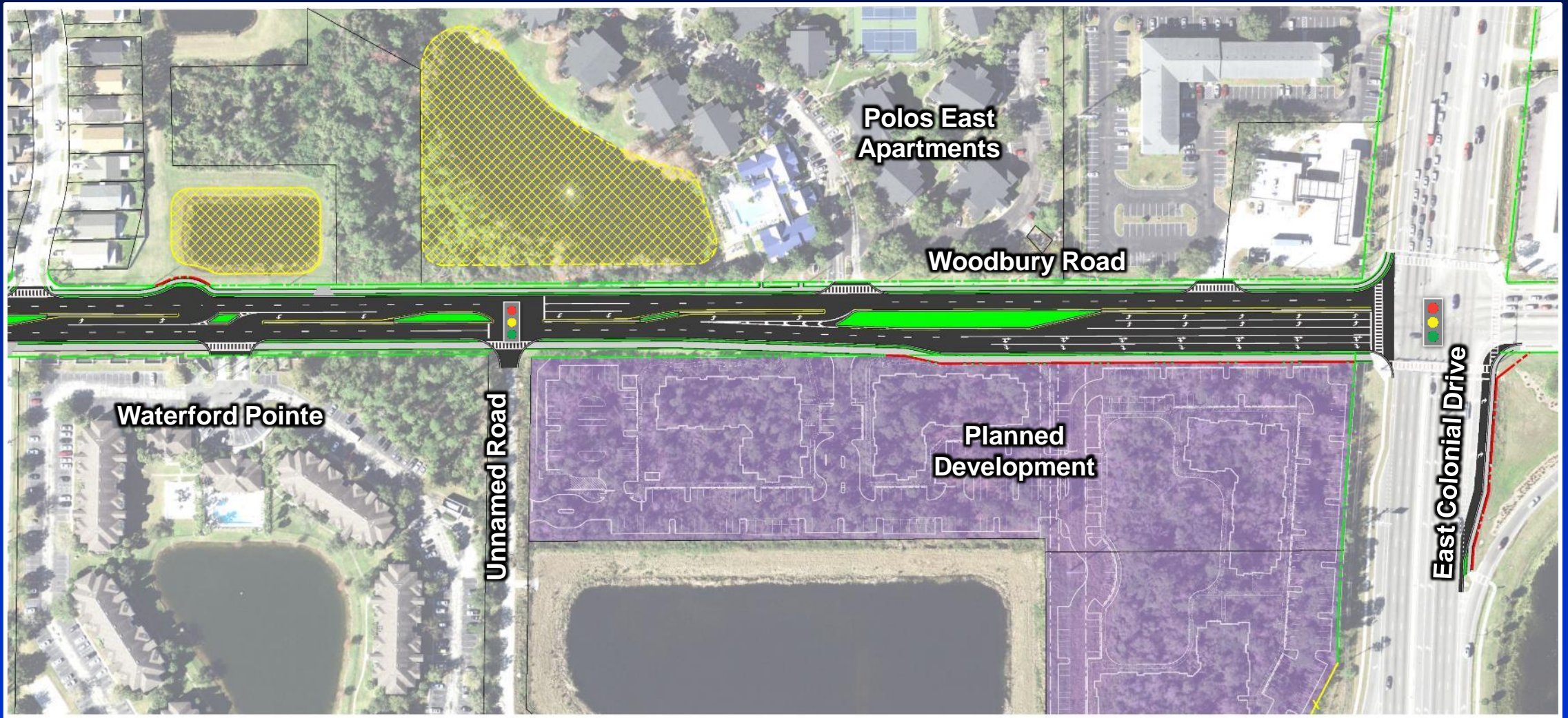
Access Management Preferred Alternative 1





Preferred Alternative

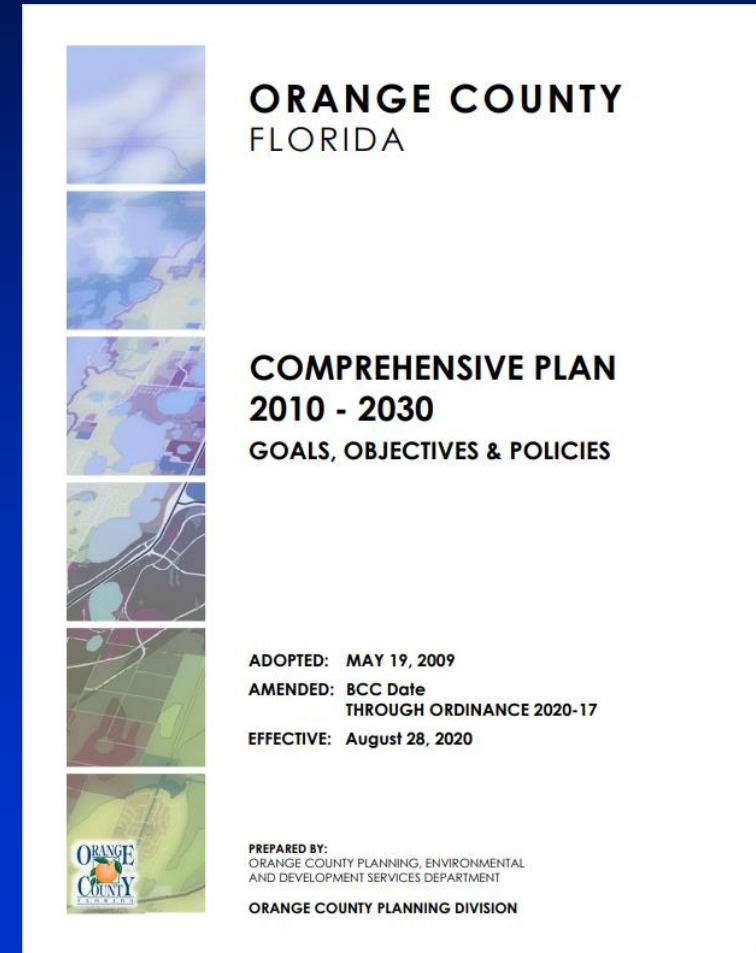
Access Management Preferred Alternative 1B





Preferred Alternative

- **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)





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Next Steps

- **A Public hearing will be scheduled for May 2021**