



# Universal Boulevard

Pedestrian Safety Action Plan

Universal Boulevard Stakeholder Meeting | March 28, 2018



# Universal Boulevard Pedestrian Safety Action Plan

## Study Purpose

The Universal Boulevard Pedestrian Safety Action Plan is a comprehensive review of the Universal Boulevard corridor to provide recommendations for a safe integration of pedestrian and bicycle activity with other modes of transportation.



# Agenda



Project Overview



Discussion of Alternatives



Stakeholder Coordination



Next Steps



Data Collection



Needs/Gaps based on  
Data Collected and  
Field Observations



# Universal Boulevard Pedestrian Safety Action Plan

## Stakeholder Meetings

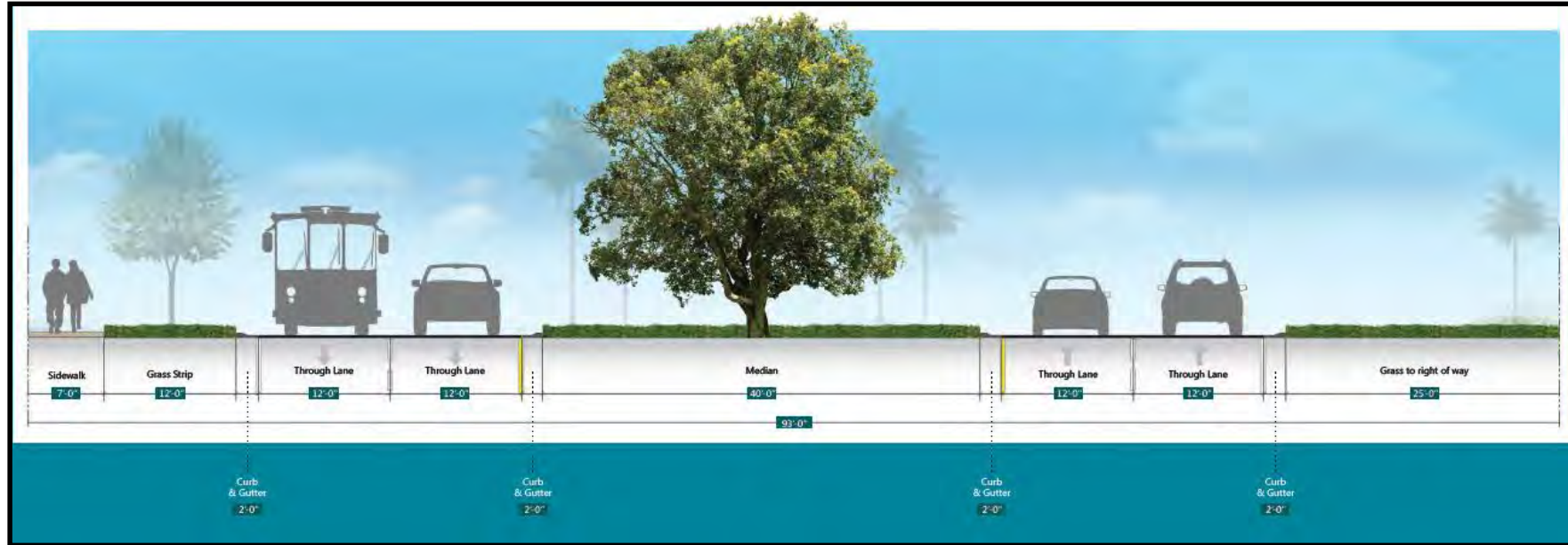
- 02/08/2018** > International Drive CRA Advisory Board
- 02/12/2018** > Universal Representative
- 02/22/2018** > University of Central Florida Rosen College
- 02/27/2018** > Universal Boulevard POA
- 03/02/2018** > Representative for Property Owners  
North of Pointe Plaza
- 03/28/2018** > Universal Boulevard Joint Stakeholders Meeting
- 04/2018** > International Drive Chamber



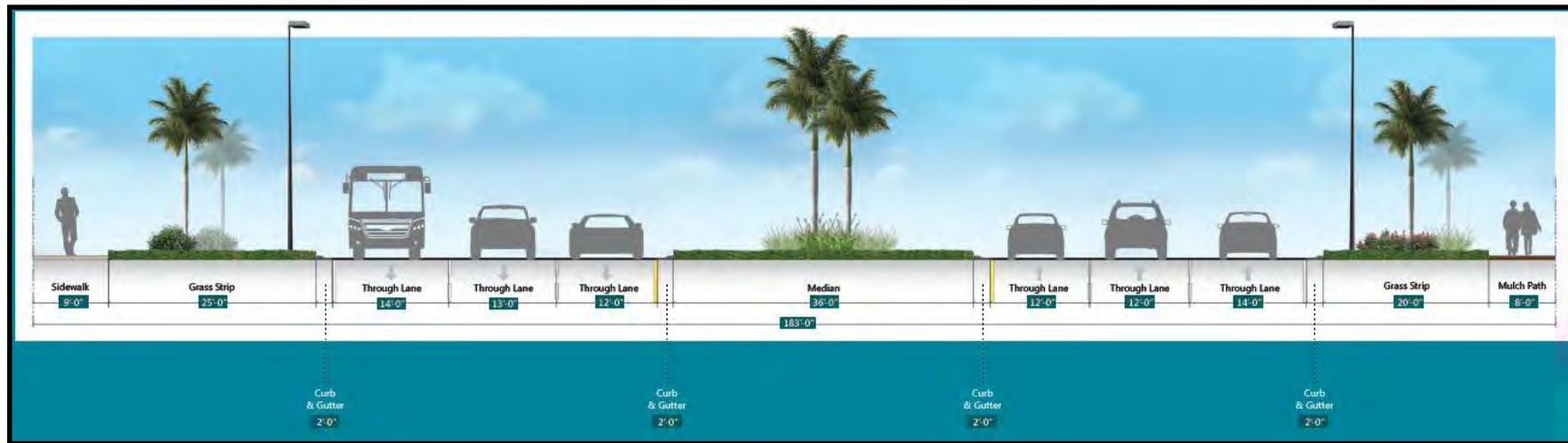


DATA COLLECTION

# Typical Sections



**North Section**  
(North of Austrian Row)



**South Section**  
(North of Destination Parkway)



# DATA COLLECTION Transit

## 2 Transit Providers

### LYNX

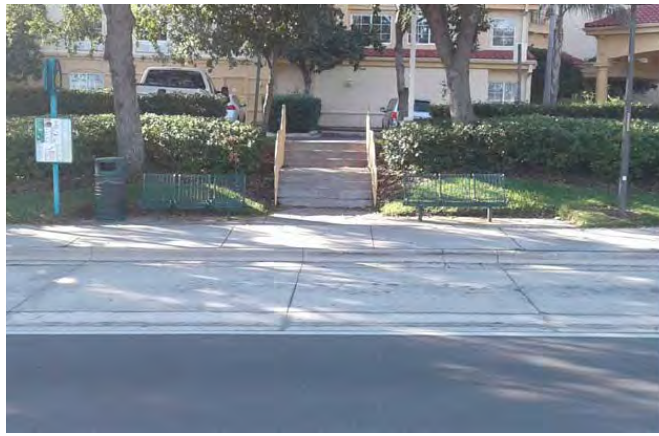
- 9 stops south of Convention Way

### I-Ride Trolley

- 6 stops north of Pointe Plaza Avenue



I-Ride Trolley Stop  
in front of Fairfield Inn  
(Northbound)



I-Ride Trolley Stop in front of  
La Quinta (Southbound)



LYNX Bus Stop South of  
UCF Rosen College Driveway  
(Northbound)





DATA COLLECTION

# Pedestrian Facilities

## Sidewalks and Mulch Path

### Southbound

- Continuous sidewalk – 10-feet wide south of Plaza Luz Row and varies from 5 to 7-feet wide north of Plaza Luz Row

### Northbound (missing gaps)

- Sidewalk segment south of Destination Parkway (8 to 10-feet wide)
- Mulch path between Destination Parkway and Convention Way (8 to 10-feet wide)
- Sidewalk segment north of Convention Way to Pointe Plaza Avenue (5 to 7-feet wide)
- Missing gap between Pointe Plaza Avenue and north of Perimeter Road
- Sidewalk segment north of Perimeter Road to Sand Lake Road (5 to 7-feet wide)







DATA COLLECTION

## Count Data

### Traffic, Pedestrian and Bicycle Count Data

**Turning movement counts** – 17 signalized and unsignalized intersections

**Driveway counts** – 12 locations

**Unsignalized crosswalk counts** – 3 locations (2 are midblock)

**72-hour bi-directional classification counts** – 4 locations

**Sidewalk screenline counts** – 8 locations

**Field review/observations including ADA**





DATA COLLECTION

# Transportation Studies

## Lighting/Luminosity Measurements for Pedestrians

- At signalized and unsignalized intersections – **needs to be improved**
- At midblock crosswalks – **needs to be improved**
- At transit Stops
  - LYNX stops – **needs to be improved**
  - I-Drive stops – **OK**

## Speed and Pedestrian Gap Studies (4 locations)

- 45 mph speed limit for 6-lane section
- 40 mph speed limit for 4-lane section
- 85<sup>th</sup> percentile speeds
  - 6-lane section – between 43 to 51 mph
  - 4-lane section – between 43 to 49 mph

## Traffic Signal Warrant Studies

- Shingle Creek
- Lake Cay Place
- OCCC North Concourse Main Entrance
- Via Mercado
- Austrian Row
- Perimeter Road  
(part of I-Drive Transit Lanes Project)





SUMMARY OF NEEDS/GAPS

# Ped Safety Action Plan

- Reduce traffic speeds
- Traffic signals (if warranted)
- Sidewalk continuity
- Enhanced/modified pedestrian crossings
- Transit amenities
- Lighting
- Signage





DISCUSSION OF ALTERNATIVES

# Corridor-Wide Alternatives

- Uniform lane widths throughout the corridor
  - 6-lane vs 4-lane sections
- Reduced curb radii
- Continuous sidewalk network
- Bicycle lanes
- Consistent and updated signage
- Improve lighting at pedestrian crossing locations

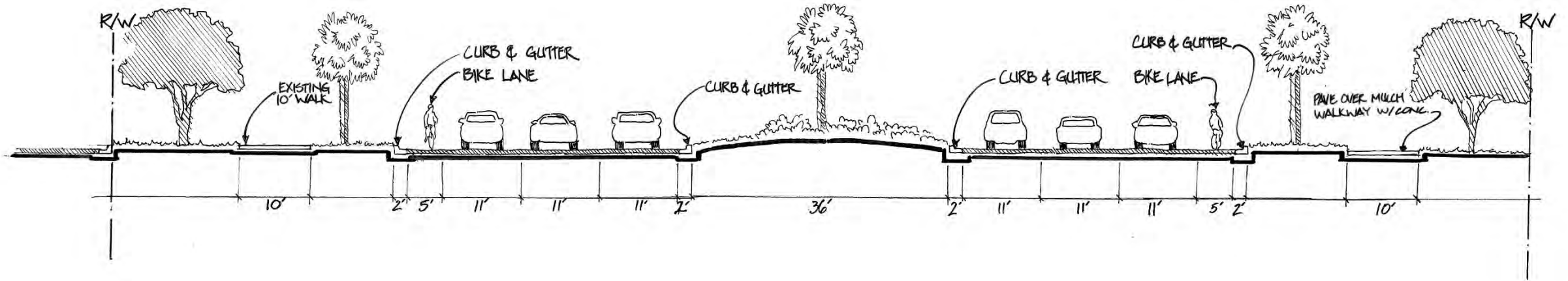


Universal Boulevard south of Sand Lake Road



# Proposed Typical Section

## North of Destination Parkway





# Pedestrian and Bicycle Facilities

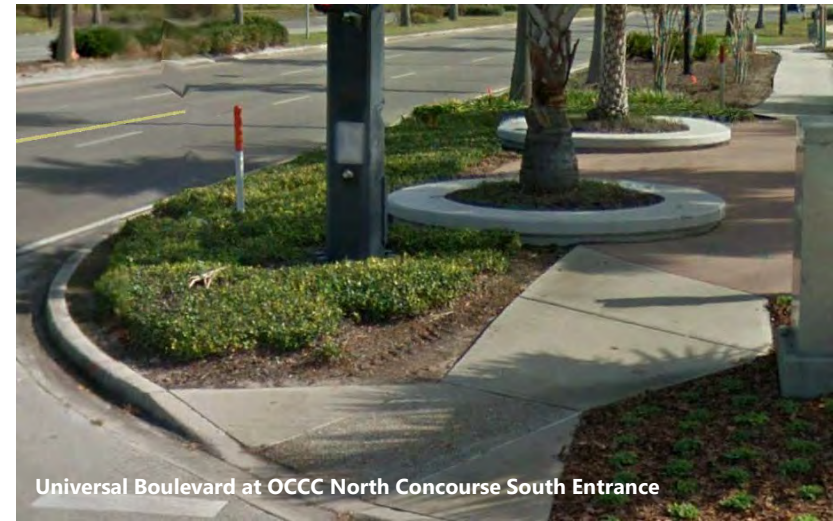
- With the reduced lane widths, there is enough room for a 5' bicycle lane in both directions
  - 6-lane section only, from Shingle Creek Resort to Pointe Plaza Avenue
- Sidewalk continuity
  - 10' multi-use sidewalk
  - From Destination Parkway to Convention Way
    - Pave over mulch path and tie into sidewalks at Mario Andretti/Top Golf
  - From Mario Andretti/Top Golf to north of Perimeter Road
- ADA upgrades
  - Repair/update sidewalk at key locations
  - Alignment of pedestrian crosswalks with sidewalk connections at key locations
  - Push button access



Sidewalk on west side of Universal Boulevard north of Destination Parkway



Universal Boulevard at Plaza Avenue



Universal Boulevard at OCCC North Concourse South Entrance



# DISCUSSION OF ALTERNATIVES

## Proposed Sidewalk and Bicycle Lanes

Little Sand Lake

Big Sand Lake

Sandstone Rd





# DISCUSSION OF ALTERNATIVES

## Traffic Signals

### Recommended Traffic Control

- Shingle Creek (Signal)
- Lake Cay Place (Future Signal)
- OCCC North Concourse Main Entrance (Hawk Signal option)
- Austrian Row (Roundabout?)
- Via Mercado (Future Signal)

### Other Traffic Signal Locations

- Tradeshow Road (signalization TBD with potential Kirkman Road extension)
- Perimeter Road (signalization as part of the I-Drive Transit Lane project)







# DISCUSSION OF ALTERNATIVES

## Destination Parkway

Little Sand Lake

Big Sand Lake

Sandstone Rd





# Midblock Crosswalk

## South of Destination Parkway– Midblock Crosswalk

- Pedestrian-vehicle conflicts
  - Cross six lanes of traffic along Universal Boulevard
  - High speeds and high traffic volumes
  - Proximity to traffic signal

### Recommendation

- Through landscaping and control devices, redirect pedestrians to Destination Parkway
  - Remove crosswalk
  - Covered sidewalk on campus
  - Redirect to signalized intersection
  - Pedestrian channelization barrier in median
  - Landscaping along sidewalk path on Destination Parkway





# Spot Improvements

## Destination Parkway Intersection

- Long crossing distances for pedestrians crossing Universal Boulevard (~140 feet)
- Wide radii at intersections

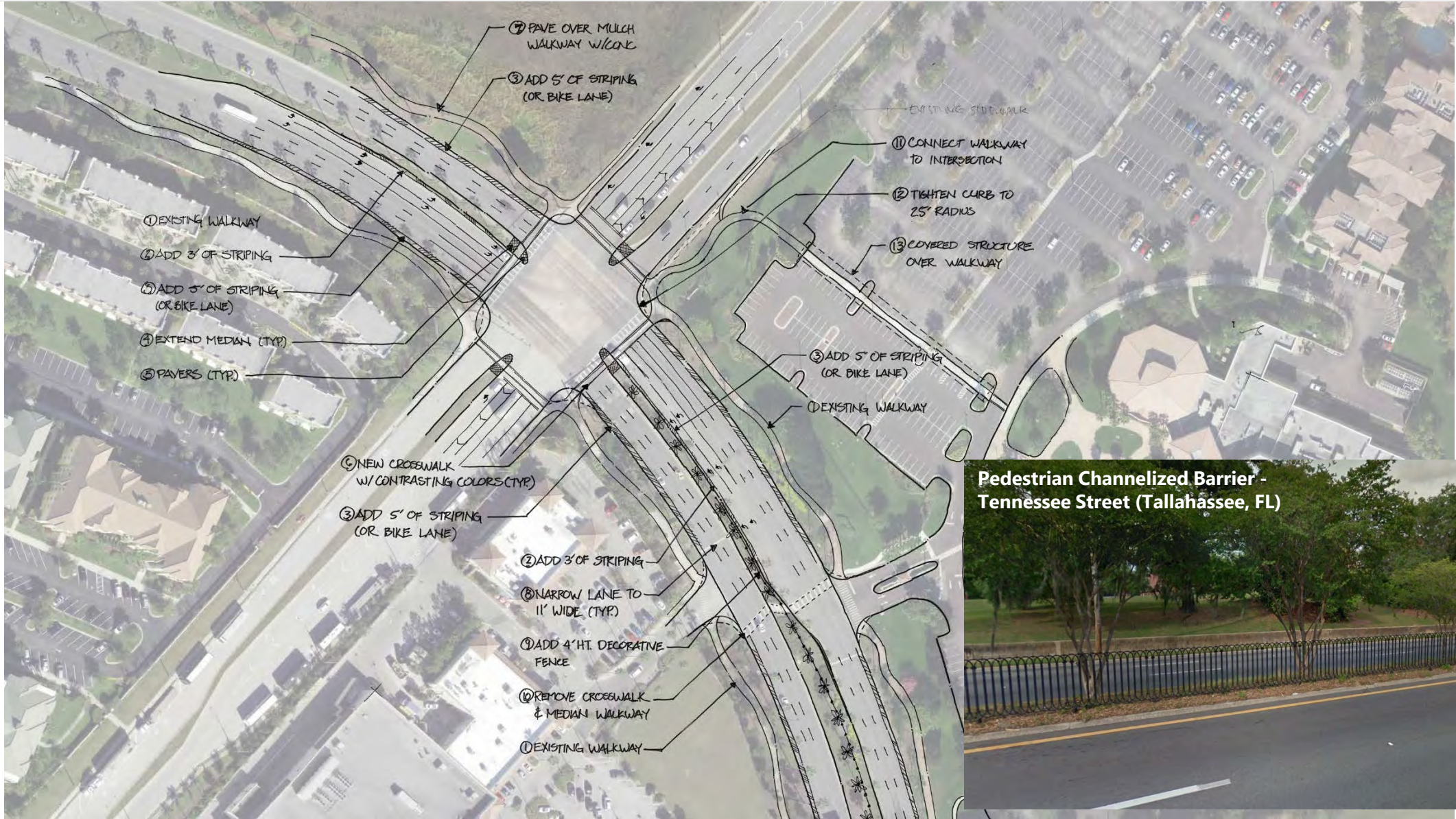
### Recommendation

- Shorten pedestrian crossing distances
  - Extend medians
  - Reduce curb radii
- Add WBL turn lane (part of Destination Parkway extension project)





# Proposed Concept





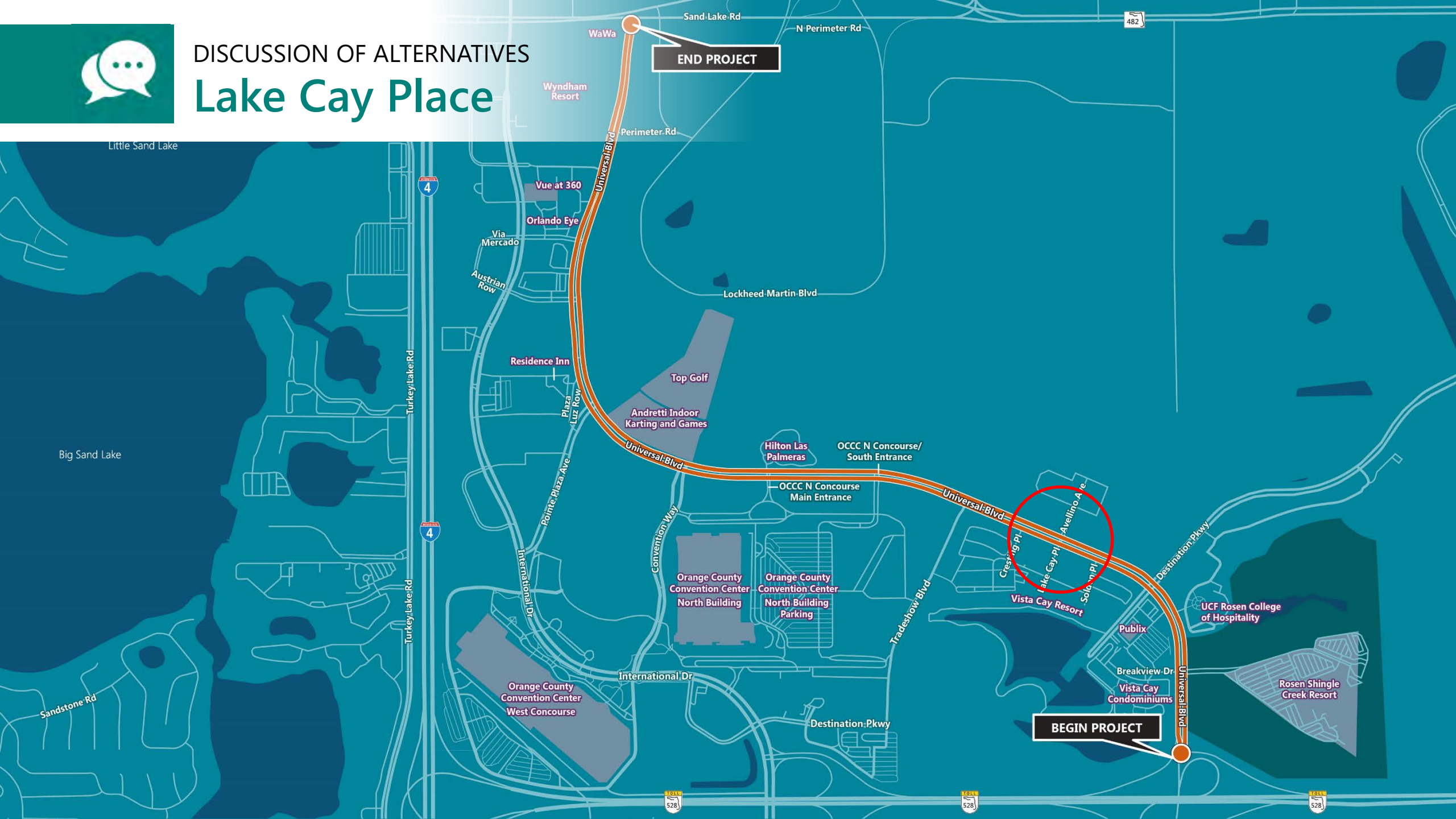
# DISCUSSION OF ALTERNATIVES

## Lake Cay Place

Little Sand Lake

Big Sand Lake

Sandstone Rd





# Spot Improvements

## Lake Cay Place

- Future development
  - New attraction sites on north side of Universal Boulevard
  - Promote pedestrian activity
- High observed through vehicle speeds

## Recommendation

- Future traffic signal
  - Including pedestrian crosswalks and reduced curb radii





# DISCUSSION OF ALTERNATIVES OCCC N Concourse/ Hilton Driveway

Little Sand Lake

Big Sand Lake

Sandstone Rd





# Spot Improvements

## OCCC North Concourse/Hilton Driveway

- 150' pedestrian crossing distance
- Highest speeds along corridor
- Vehicles tend to slow at last minute when a pedestrian is in crosswalk

### Recommendation

- Crosswalk improvements
  - “Bulb-out” with bicycle lane to reduce pedestrian crossing distance by 30’
  - Align crossing with median and add storage in median
- Add beacon in median and add coordinated beacons upstream and downstream; OR
- Install a HAWK signal

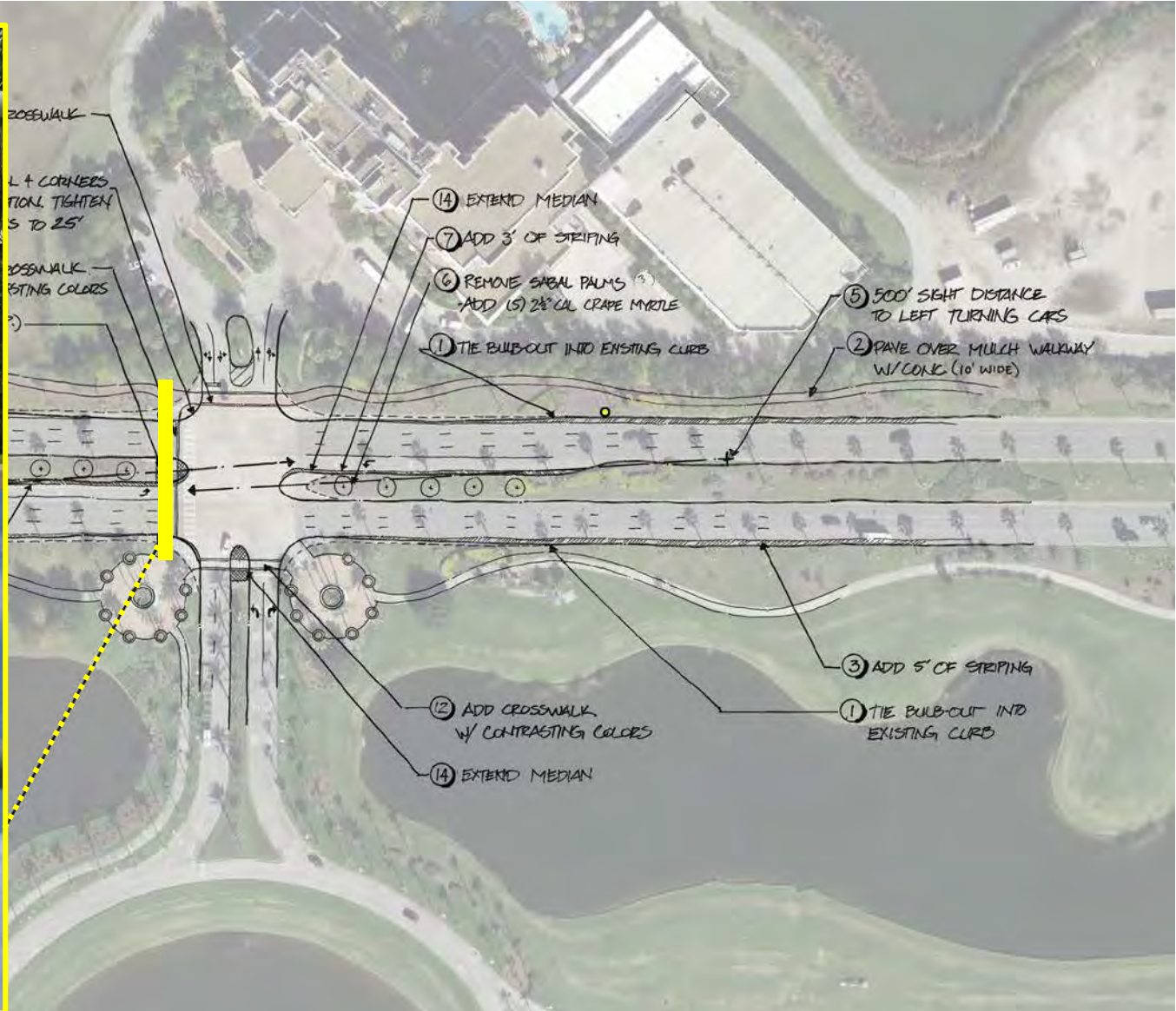
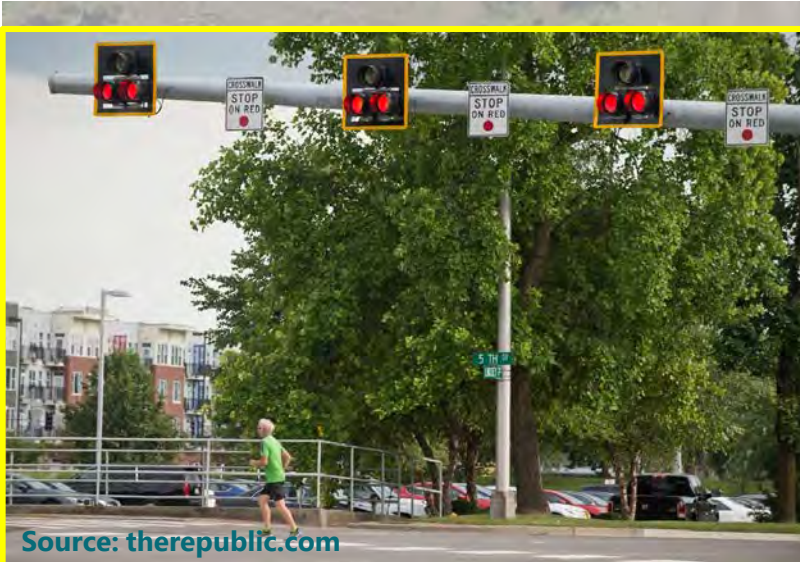


Universal Boulevard at OCCC North Concourse/Hilton Driveway





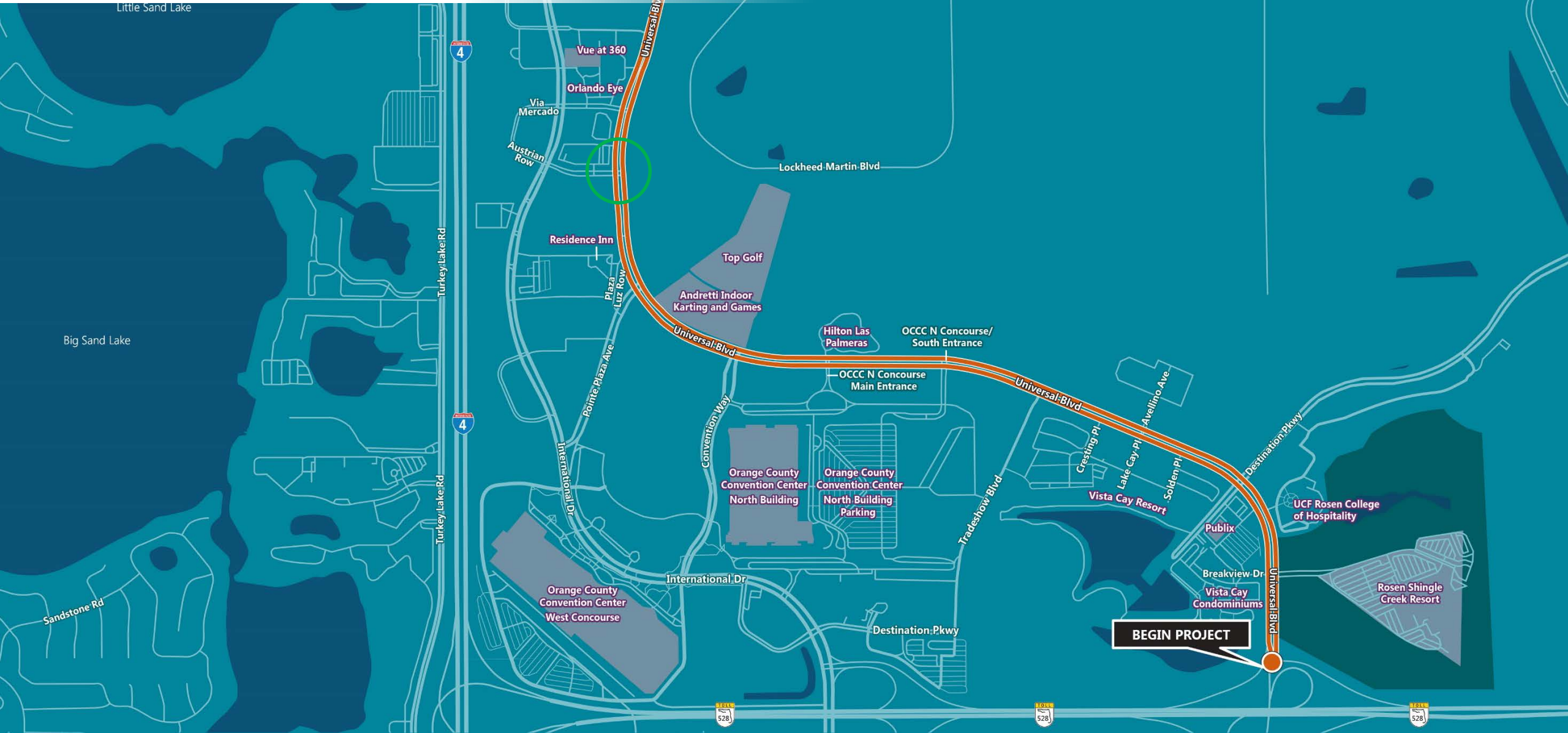
# Proposed Concept





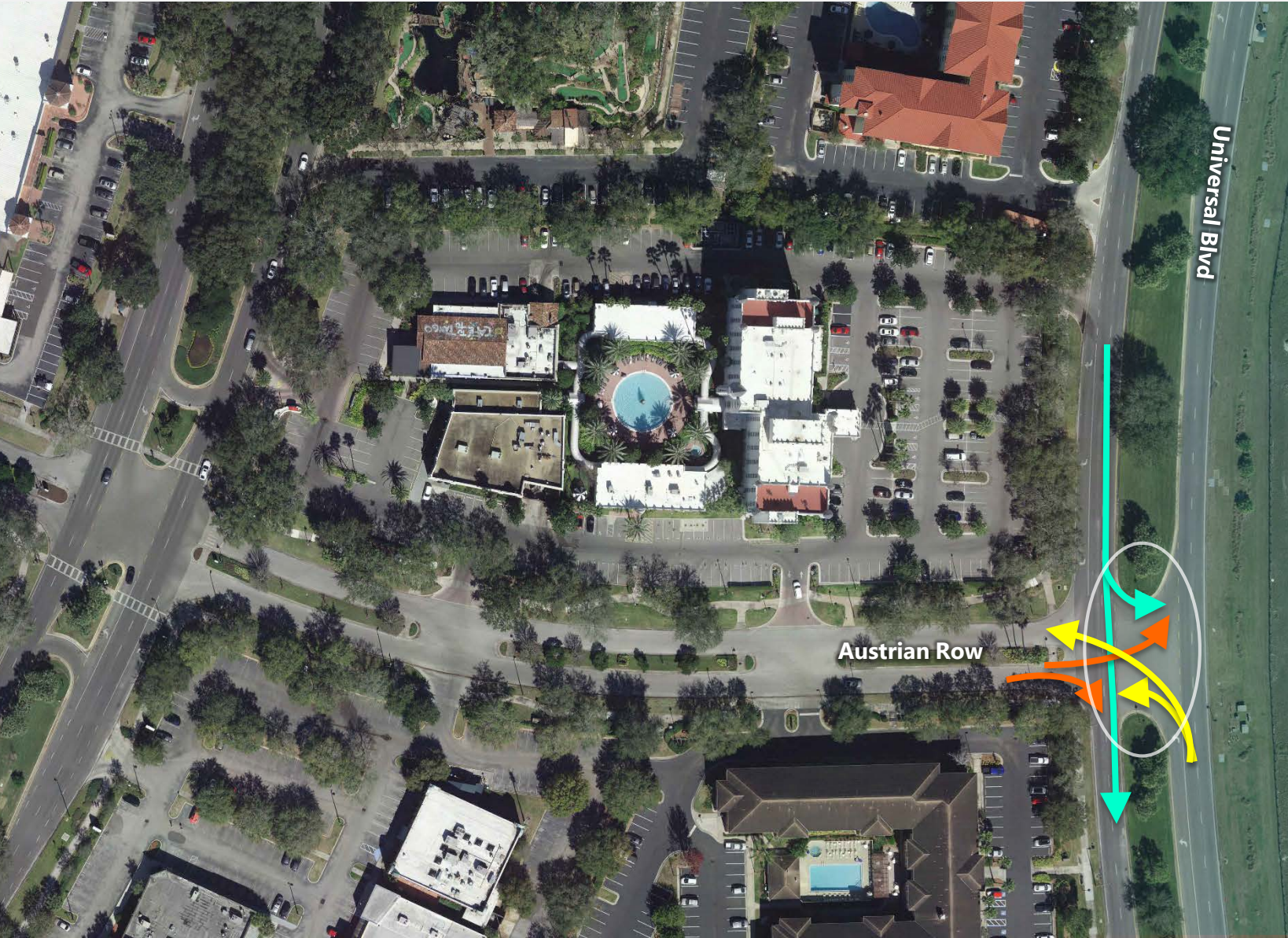
# DISCUSSION OF ALTERNATIVES

## Austrian Row





# Spot Improvements



## Austrian Row

- Conflicts between EBL, NBL and SBT
- Sight obstructions NB and SB
  - Vegetation in median
  - Combined with SB through speeds
- Even worse at night (based on observations)

## Recommendation

- Remove sight obstructions (landscape plan); or
- Alternative control—Roundabout



# Proposed Concept

## Landscape Alternative



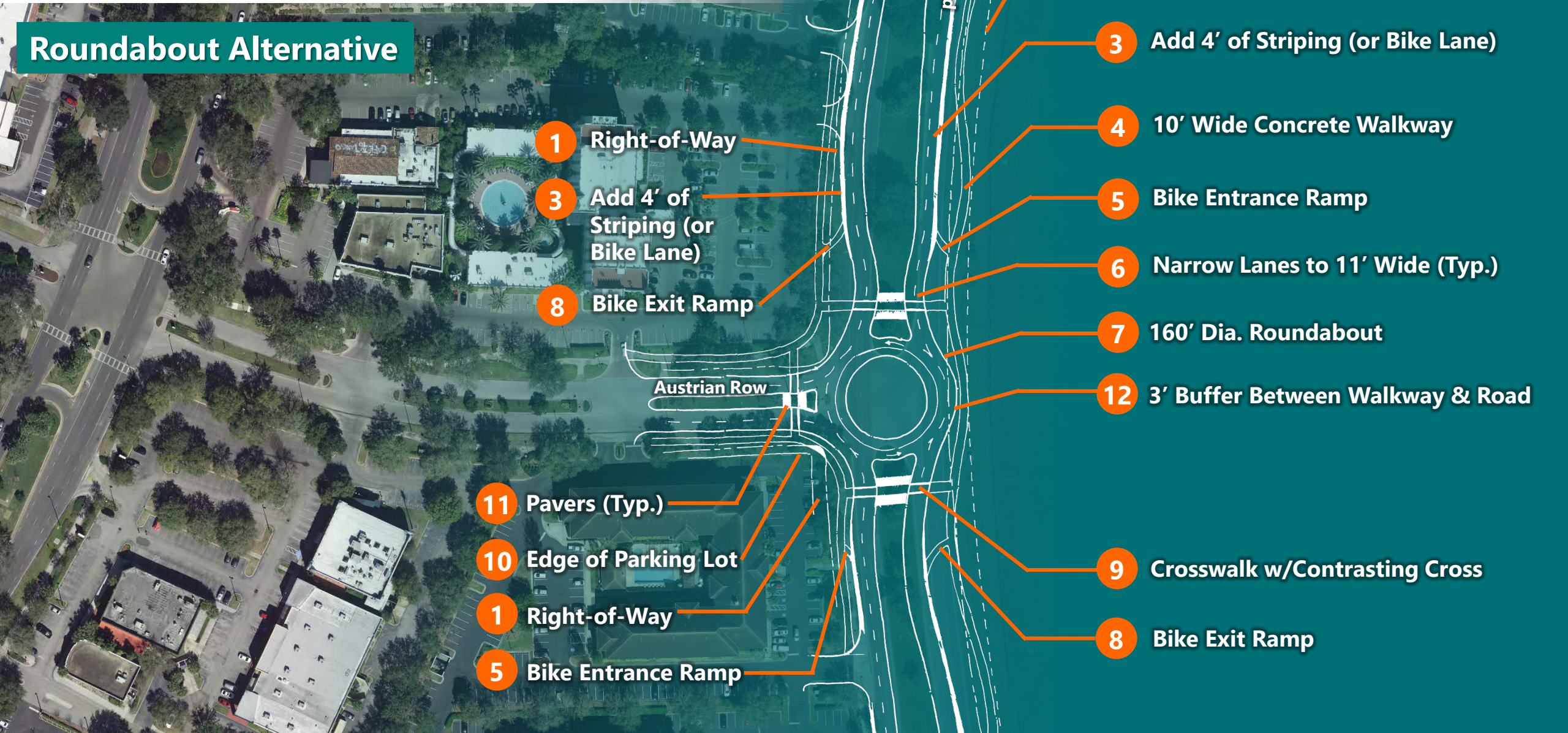
- 1 500' Sight Distance to Left Turning Cars
- 2 Tighten Curb Radius to 25' (Typ.)
- 3 Add Striping
- 4 New Crosswalk with contrasting Paint
- 5 Pavers (Typ.)

- 6 Oak Trees to Remain
- 7 Sabal Palms to Remain
- 8 Lower Berm Height in Median
- 9 Add 4' of Striping (or Bike Lane)
- 6 Oaks to Remain
- 10 Narrow Lanes to 11' Wide (Typ.)
- 11 Sabal Palms to be Removed
- 12 Tighten Radius at End of Median with Striping to 25' (Typ.)
- 11 Sabal Palms to be Removed
- 7 Sabal Palms to Remain



# Proposed Concept

## Roundabout Alternative



**1** Right-of-Way

**3** Add 4' of Striping (or Bike Lane)

**8** Bike Exit Ramp

**11** Pavers (Typ.)

**10** Edge of Parking Lot

**1** Right-of-Way

**5** Bike Entrance Ramp

**1** Right-of-Way

**2** 23' Pedestrian, Utilities and Underground Drainage Easement

**3** Add 4' of Striping (or Bike Lane)

**4** 10' Wide Concrete Walkway

**5** Bike Entrance Ramp

**6** Narrow Lanes to 11' Wide (Typ.)

**7** 160' Dia. Roundabout

**12** 3' Buffer Between Walkway & Road

**9** Crosswalk w/Contrasting Cross

**8** Bike Exit Ramp



# DISCUSSION OF ALTERNATIVES

## Via Mercado

Little Sand Lake

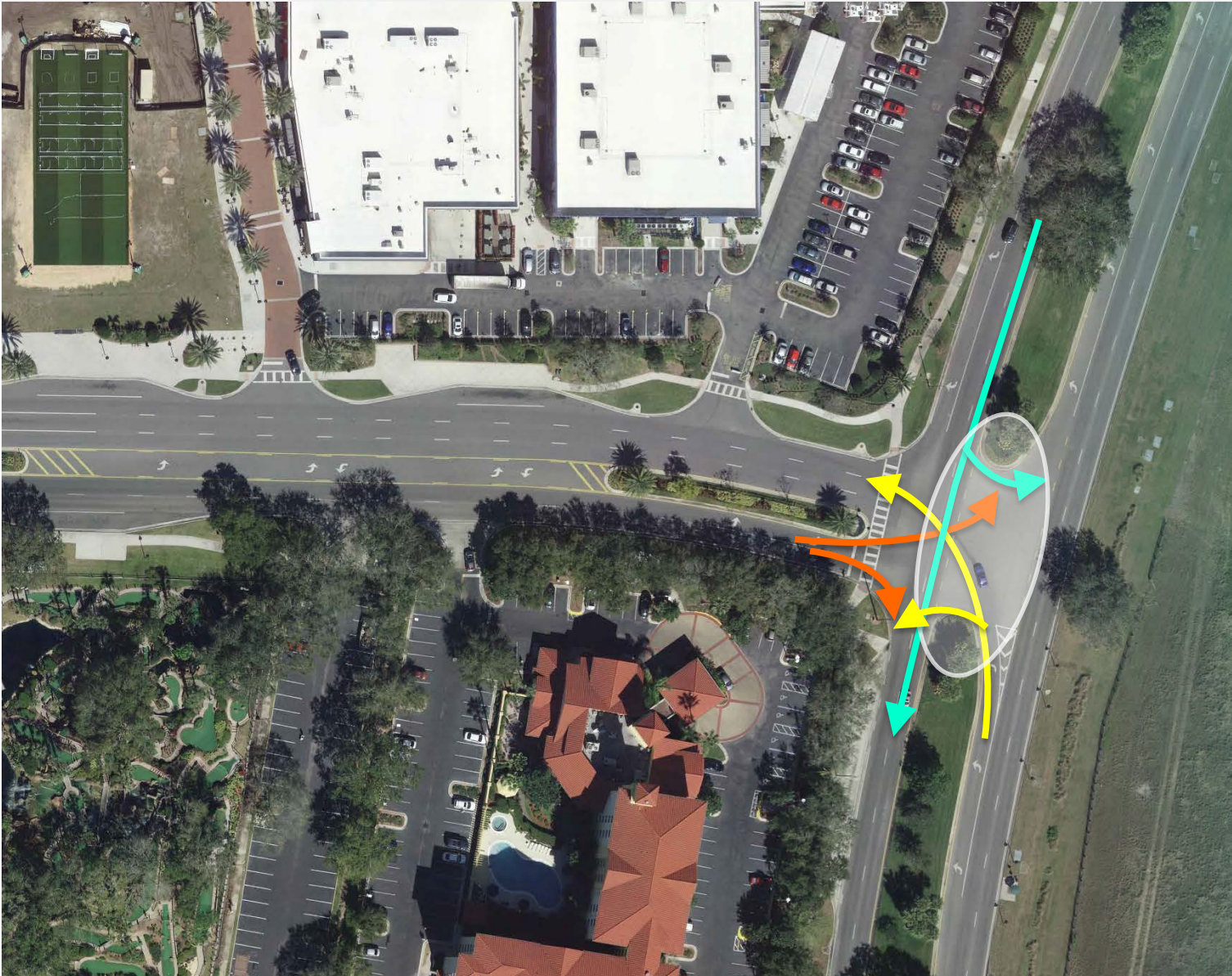
Big Sand Lake

Sandstone Rd





# Spot Improvements



## Via Mercado

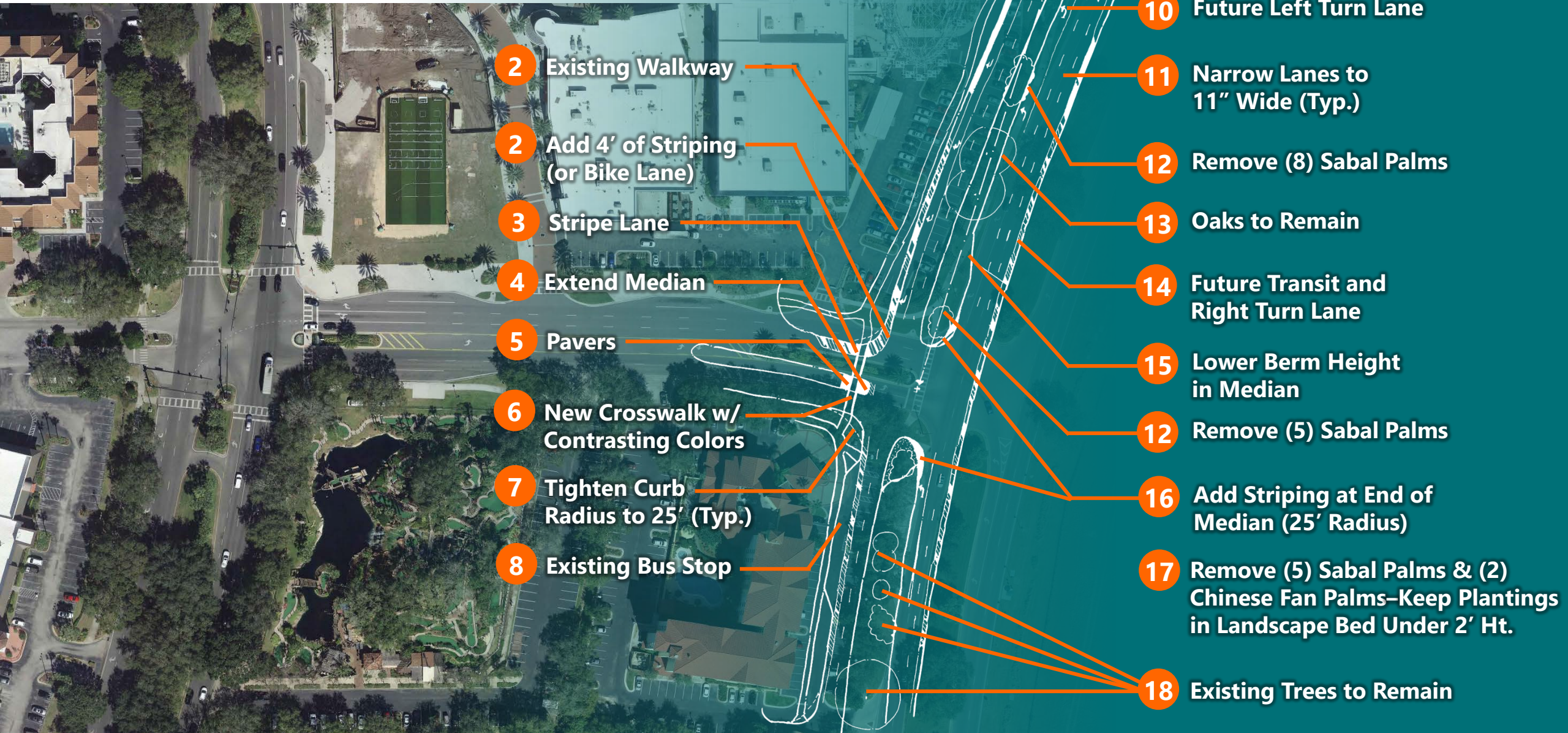
- Conflicts between EBL, NBL and SBT
- Sight obstructions NB and SB
  - Vegetation in median
  - Elevated berm in SB median
  - SB road curvature
  - Combined with SB through speeds
- Even worse at night (based on observations)

## Recommendation

- Future traffic signal
  - Remove sight obstructions (landscape plan)
  - Pedestrian crosswalks



# Proposed Concept



**2** Existing Walkway

**2** Add 4' of Striping  
(or Bike Lane)

**3** Stripe Lane

**4** Extend Median

**5** Pavers

**6** New Crosswalk w/  
Contrasting Colors

**7** Tighten Curb  
Radius to 25' (Typ.)

**8** Existing Bus Stop

**9** 500' Sight Distance to  
Left Turning Cars

**10** Future Left Turn Lane

**11** Narrow Lanes to  
11" Wide (Typ.)

**12** Remove (8) Sabal Palms

**13** Oaks to Remain

**14** Future Transit and  
Right Turn Lane

**15** Lower Berm Height  
in Median

**12** Remove (5) Sabal Palms

**16** Add Striping at End of  
Median (25' Radius)

**17** Remove (5) Sabal Palms & (2)  
Chinese Fan Palms—Keep Plantings  
in Landscape Bed Under 2' Ht.

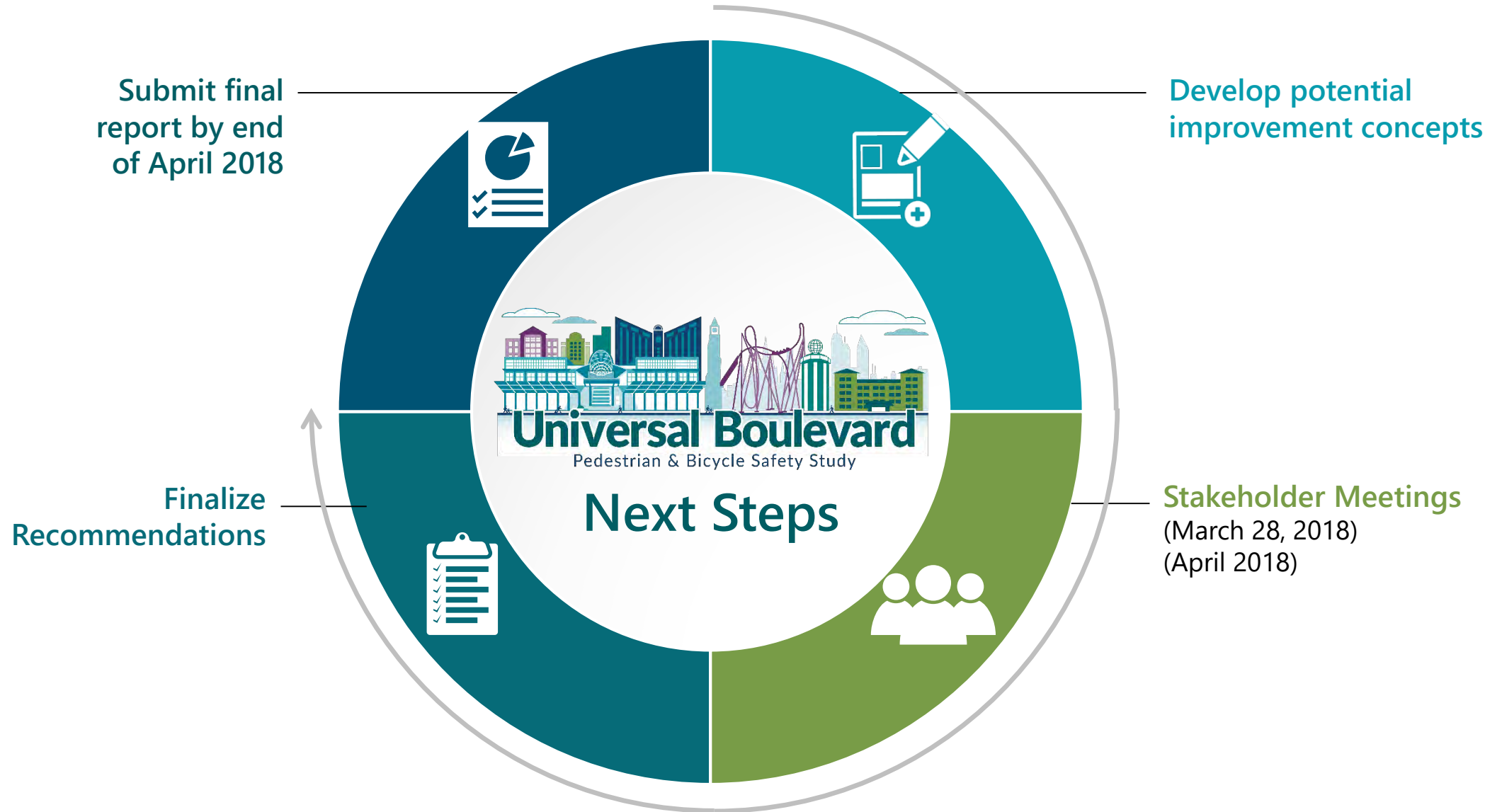
**18** Existing Trees to Remain





NEXT STEPS

# Universal Boulevard Pedestrian Safety Action Plan



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