# W. Lake Hunter Trail Feasibility Study and Conceptual Design

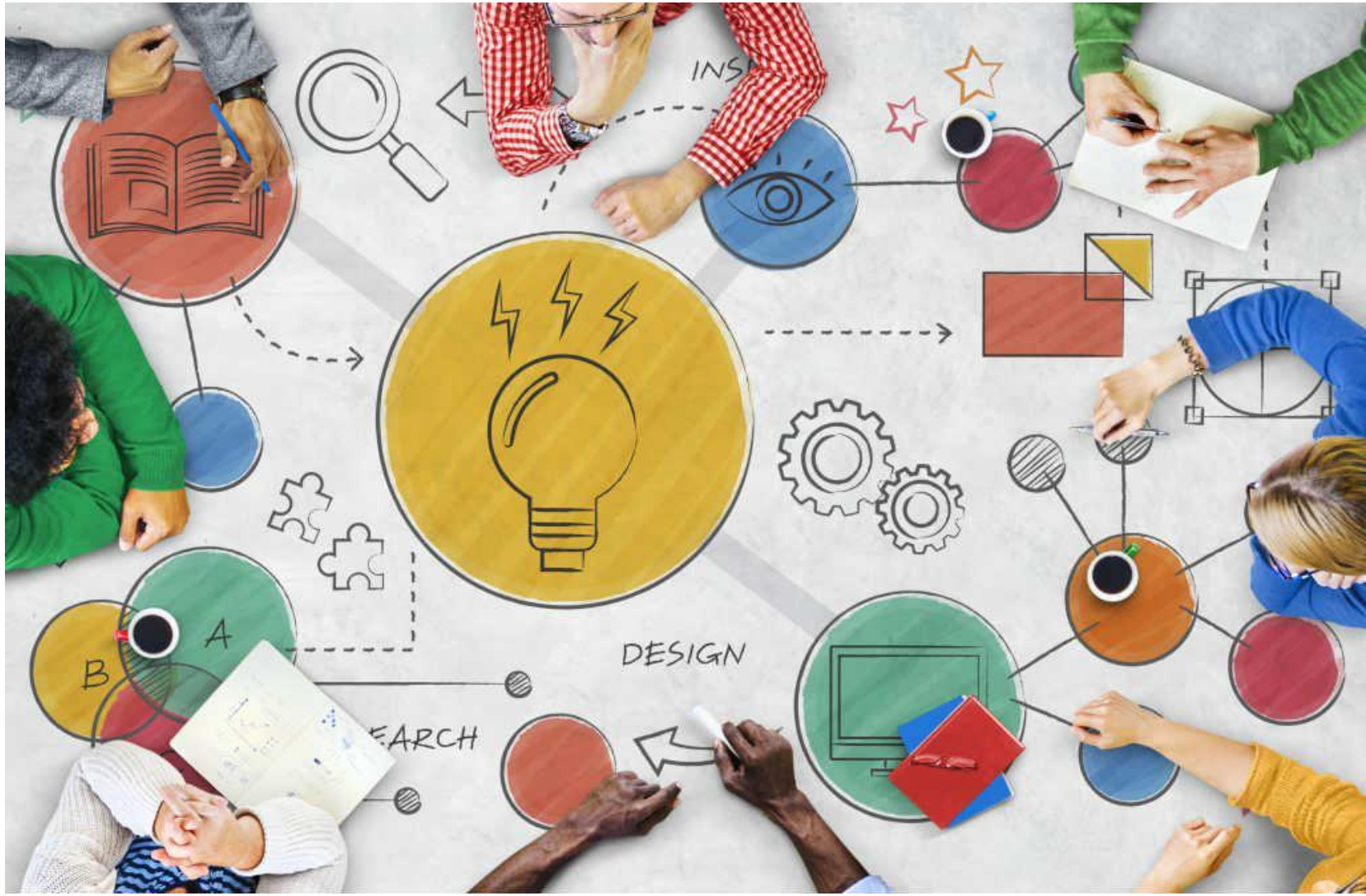
# Lakeland City Commission Workshop

October 18, 2021

# INTRODUCTION

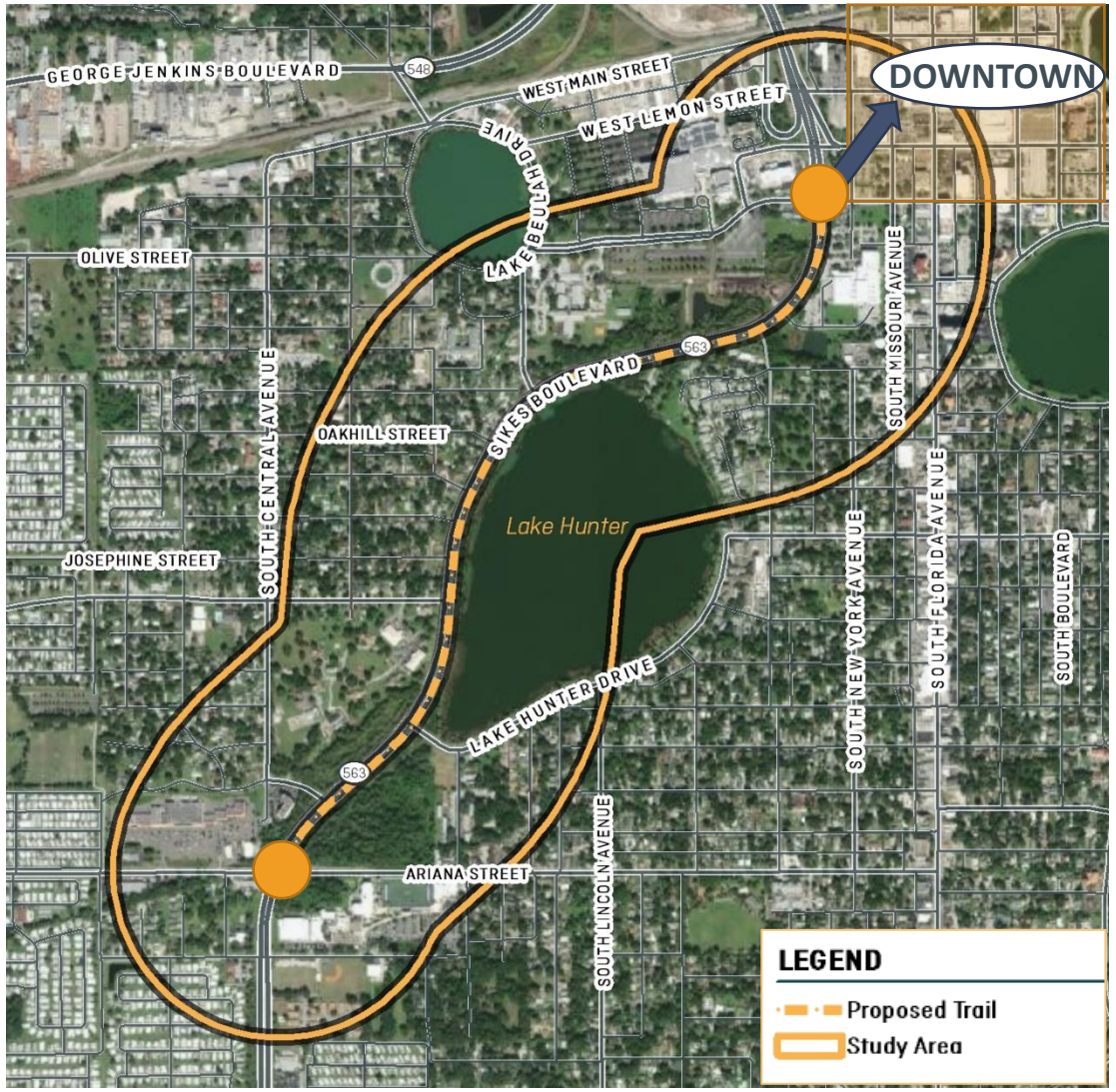
# Project Team

- FDOT District One
- City of Lakeland
- Agency partners
- Consultant team
- Stakeholders



# Project Background

- Five-foot sidewalk exists on the east side of Sikes Boulevard
- Evaluating feasibility of 10-12’ wide multi-use trail along Sikes Boulevard between Ariana Street and Lime Street
- Proposed trail is approximately 1.4 miles long
- Connects adjacent neighborhoods with downtown and New York Avenue cycle track



# Project Scope

- Review existing conditions
- Define trail feasible alternatives
- Evaluate trail alternatives
- Engage stakeholders (throughout the project)
- Provide recommendations

# Community Survey Results

# Survey by the Numbers

- 410 visits to web site, with 189 completed surveys
- 15 different zip codes, with areas near the trail most represented (33803 the most popular, followed by 33815 and 33801), but also completed surveys from throughout Lakeland and from Brandon, Bartow, and Winter Haven.
- Age groups represented:
  - 18-24 (2%)
  - 25-44 (35%)
  - 45-64 (44%)
  - 65+ (19%)

# How would you use the trail?

- Exercise – run, bicycle, kayak
- Enjoy lake – watch sunsets, look at wildlife, fish, walk along the shoreline
- Access restaurants and shops – downtown, Dixieland area
- Daily trips – work, school, church, shopping, visit friends and family
- Access to other amenities – Lake Beulah, Veterans' Memorial Park, Bonnet Springs Park

# What trail features are important to you?

- Amenities (96)
- Comfort of use (93)
- Safety considerations (93)
- Scenic overlook (87)
- Access to larger trail network (85)
- Educational placards (40)
- Transit stop access (13)

# What type of amenities would you like to see on the trail?

- Seating
- Shade
- Direct lake access
- Park or open space areas
- Parking
- Bike racks
- Water fountain
- Restroom

# What issues are you aware of along the trail?

- Traffic – high volume, speeders, red-light and stop sign runners, vehicle noise and exhaust smells
- Safety – hard to cross Sikes Boulevard and side roads - vehicles don’t look for pedestrians, no visibility at twilight hours, alligators sunning on grass banks
- Atmosphere – narrow space between road and trail does not create a comfortable place to walk
- Trail users – speed of bikes, rollerblades, and skateboards
- Trail width – hard to pass, especially at pinch points such as near poles and guardrails
- Homeless – beggars, drug use, people sleeping in cars
- Debris – trash on trail and in lake, overhanging vegetation

# Survey Comments

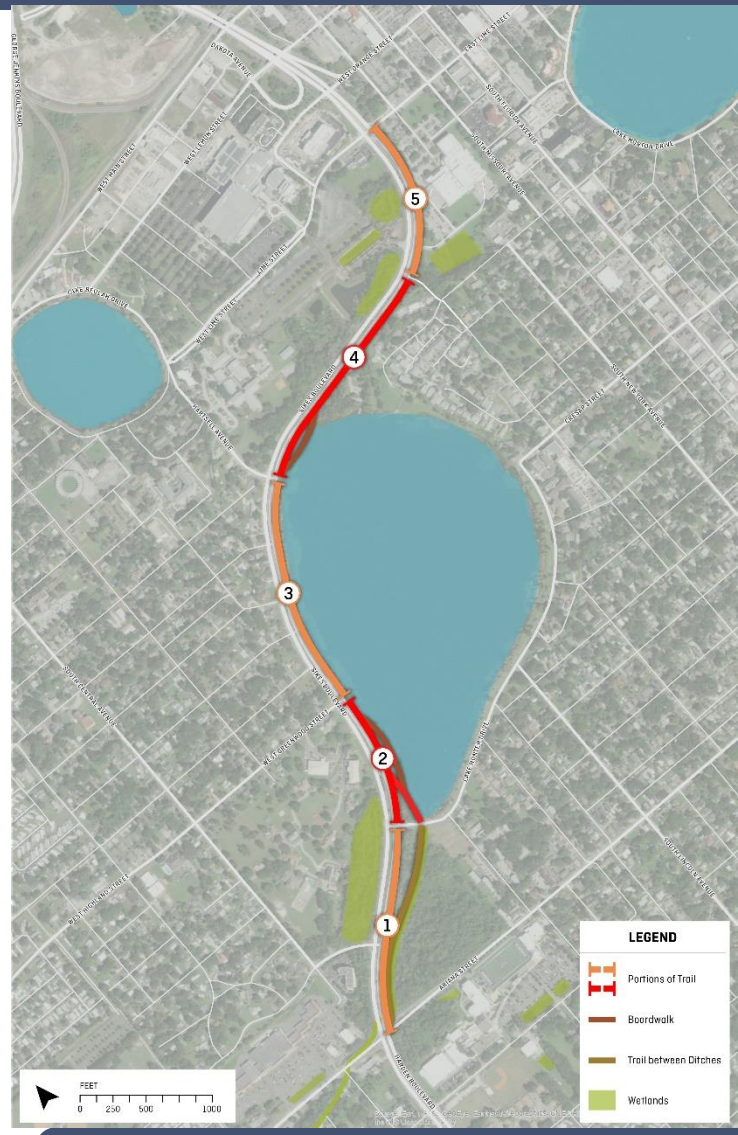
- Need a buffer between the road and trail
- Install cameras and emergency call boxes along trail and in parking areas
- Protect wildlife from going into road
- Add more/better lighting or replace burned-out bulbs
- Add wayfinding signage to downtown, neighborhoods, and other trails
- It takes a long time to cross Sikes at traffic signals – people end up jaywalking

# TRAIL ALTERNATIVES + ANALYSIS

# Trail Design Alternatives

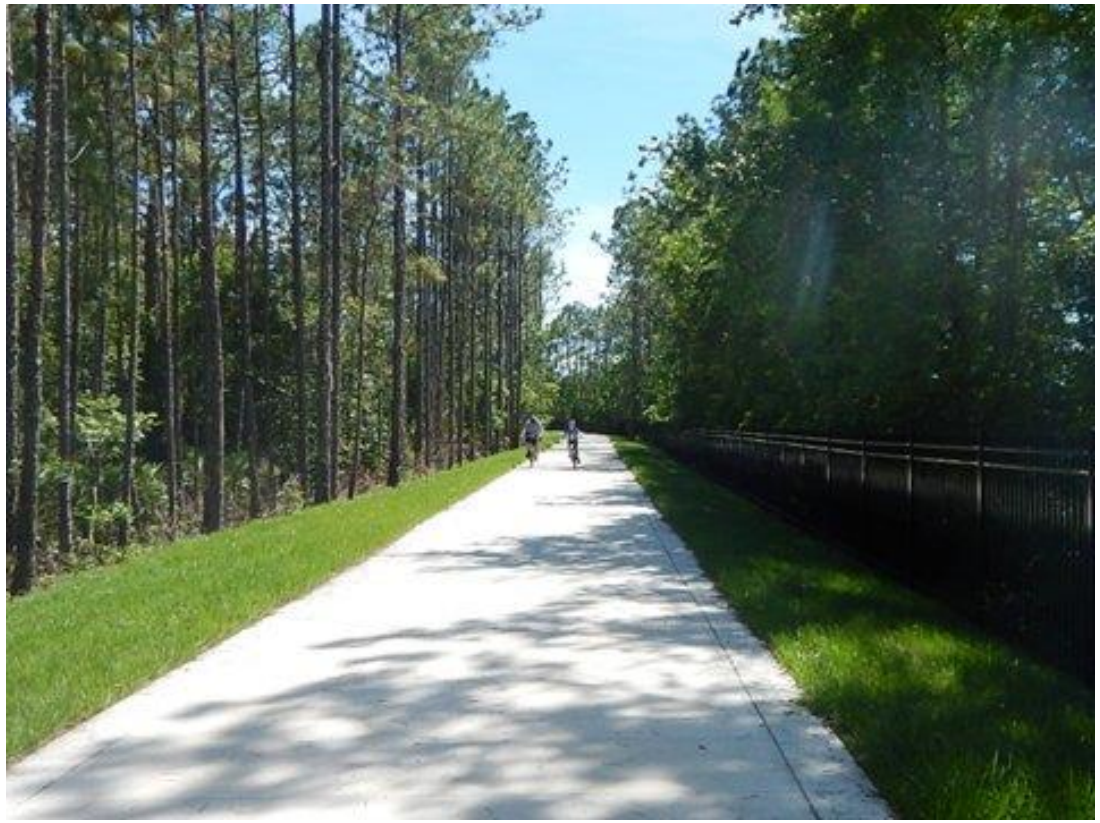
Five trail segments were identified, each containing different potential design solutions, including:

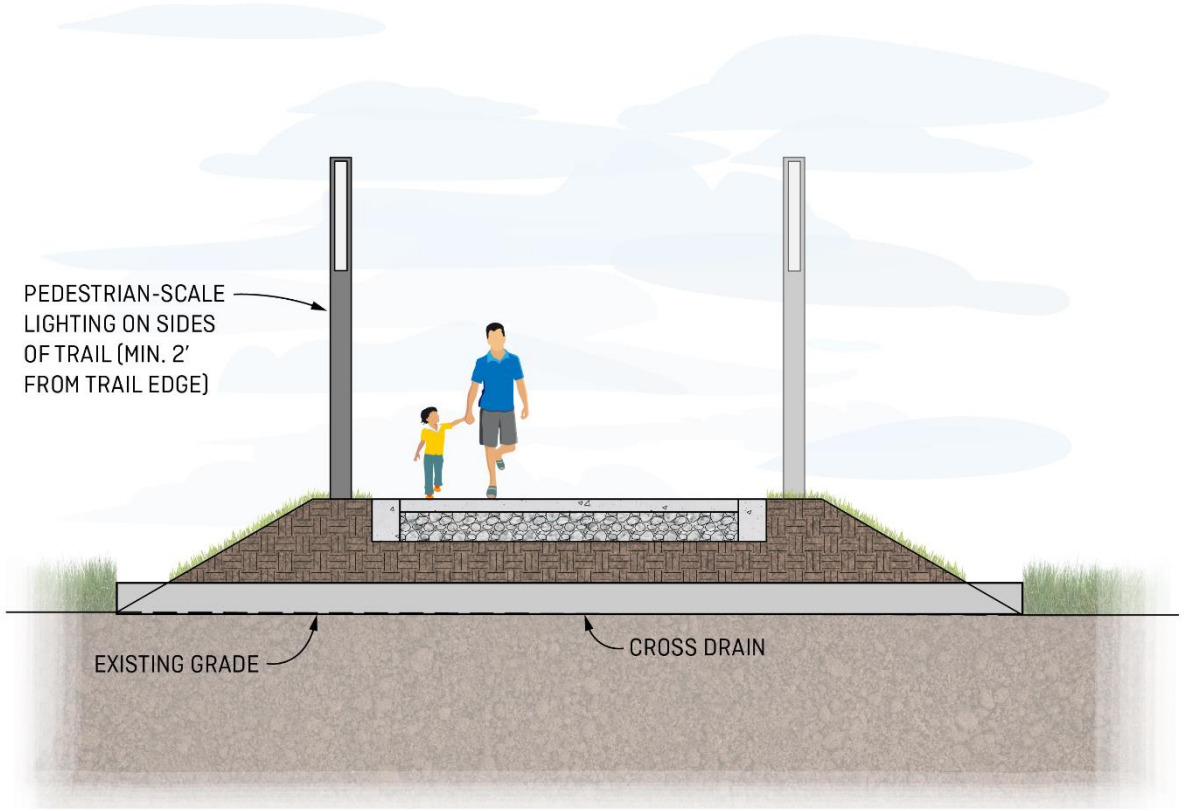
- Trail on existing grade
- Trail on fill with grassed slope
- Trail on fill with retaining wall
- Cantilever trail
- Boardwalk over land
- Boardwalk over water



# Trail on Existing Grade

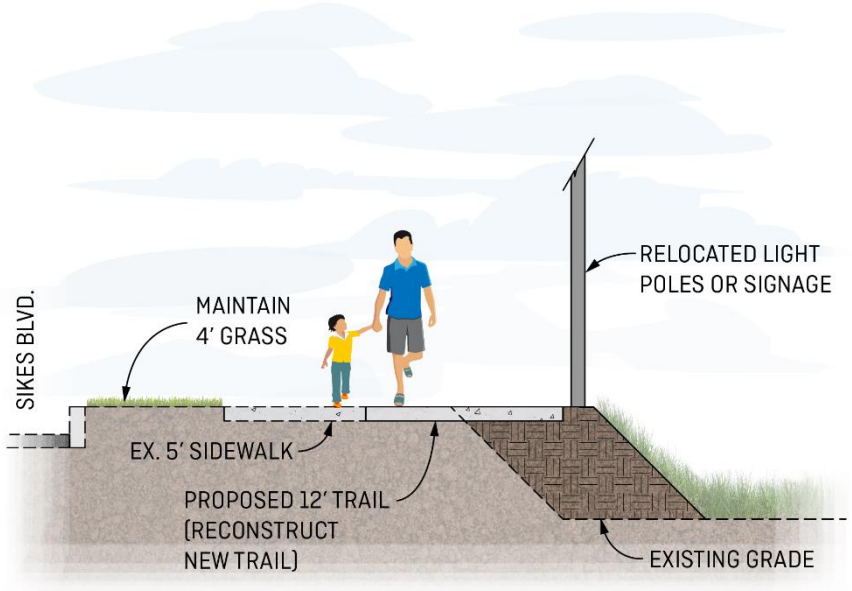
## Alternative within wooded segments





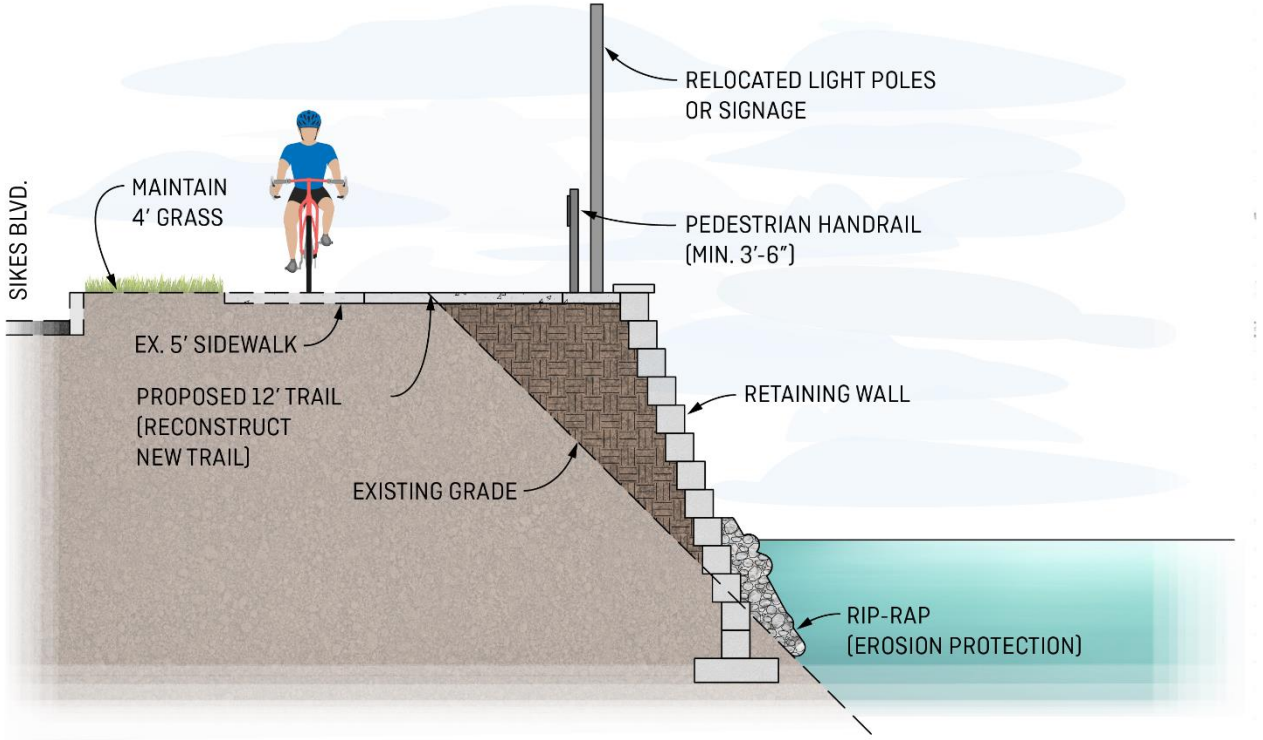
# Trail on Fill with Grassed Slope

Alternative for segments where existing width cannot accommodate 12’ proposed trail.



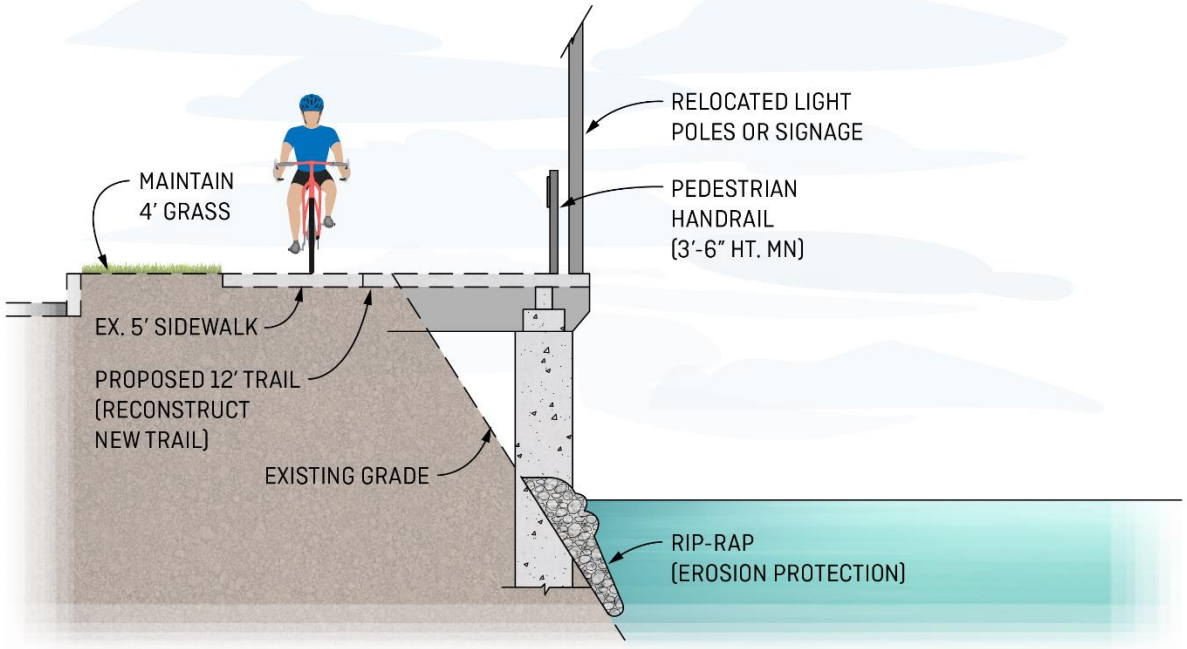
# Trail with Retaining Wall

Alternative for segments where lake edge is too steep or edge condition does not allow for 12’ trail.



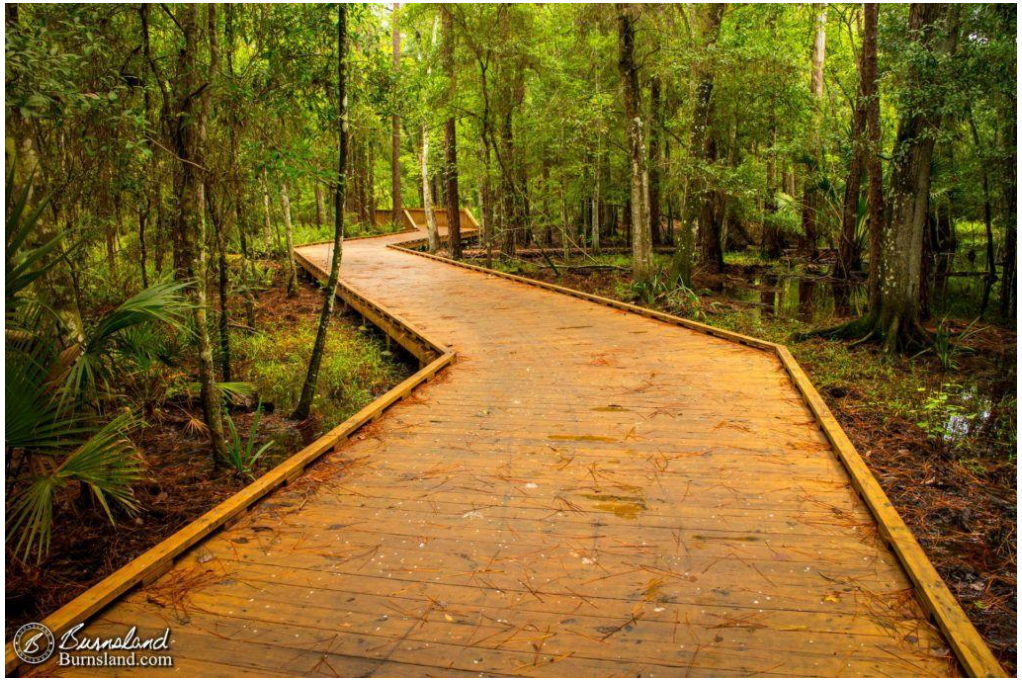
# Cantilever Trail

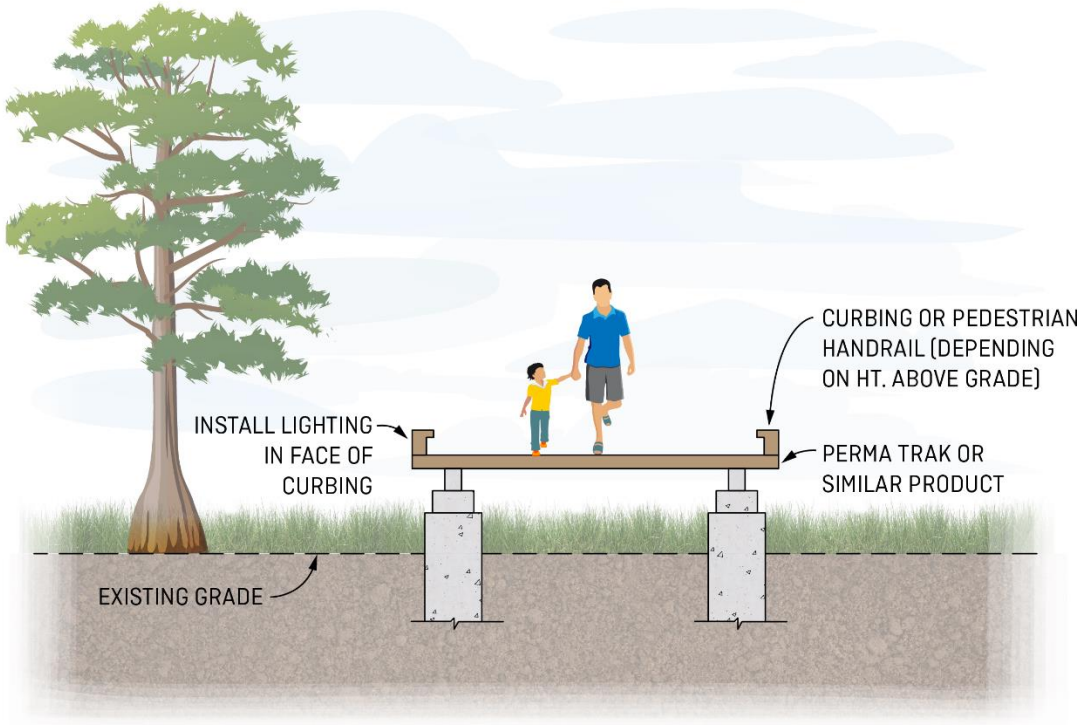
Alternative for segments where lake edge is too steep or edge condition does not allow for 12’ trail.



# Boardwalk (over land)

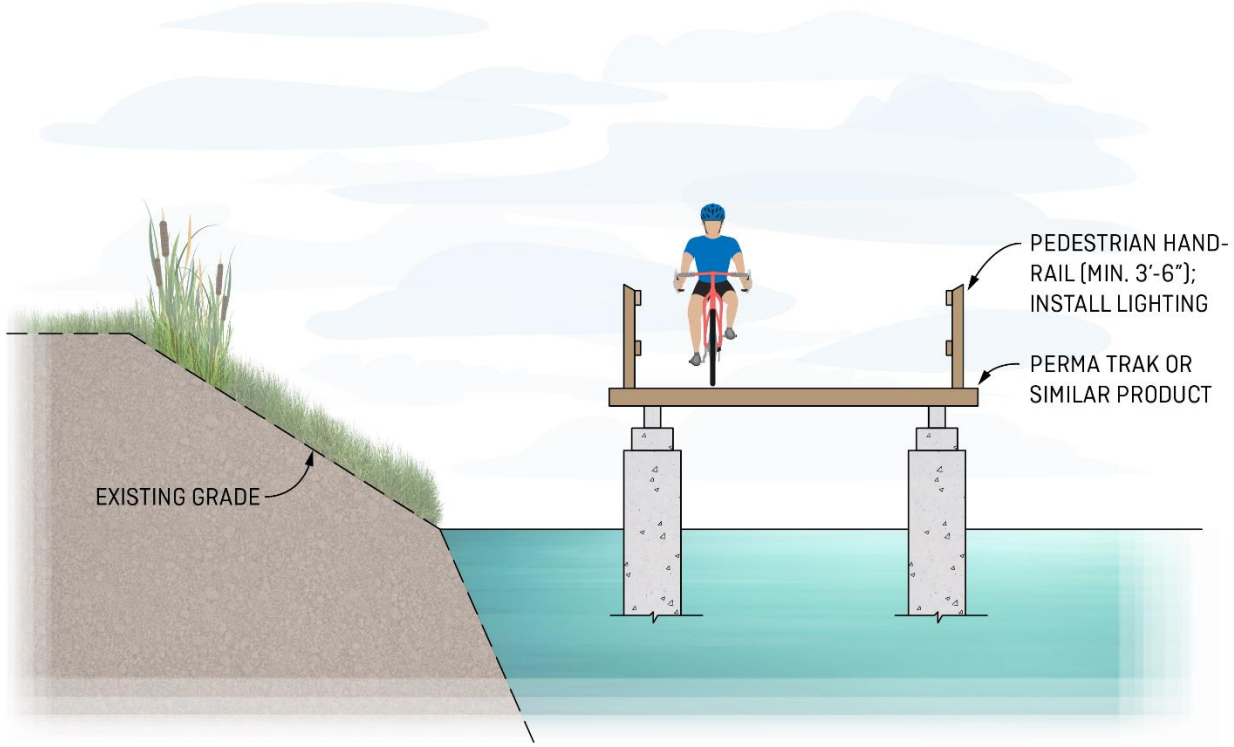
## Alternative within wooded areas near lake



# Boardwalk (over water)

Alternative for segments where lake edge is too steep or edge condition does not allow for 12’ trail.



# Alternatives Evaluation

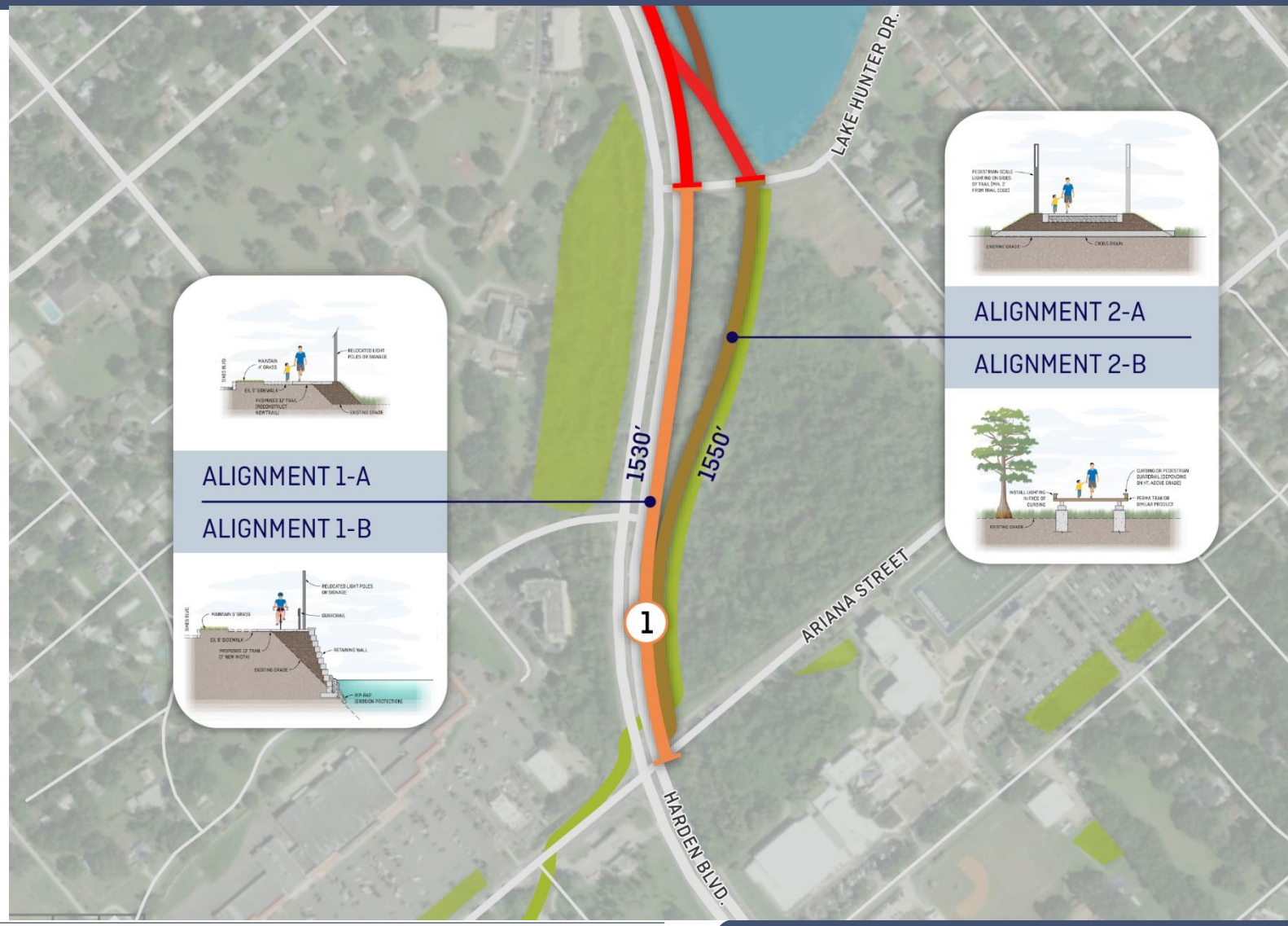
- For the identified feasible trail alternatives and alignments, analysis of potential impacts to community, cultural, and environmental resources, as well as physical constraints and engineering concerns was provided for:
  - Roadways
  - Drainage
  - Structures
  - Utilities
  - Environment
  - Safety

# Corridor-wide Analysis Considerations

- Roadway – A reduction of median width along Sikes Boulevard could provide additional lateral clearance/buffer on the east side between the road and trail.
- Utilities – Light poles and fiber/cable line will need to be relocated to accommodate the proposed trail.  At intersections with traffic signals, concrete signal poles will need to be relocated.
- Safety – Add pedestrian scale lighting, especially near intersections, to make trail users and people crossing streets more visible to motorists.
- Safety – Thin vegetation and provide lighting/other amenities where trail deviates from roadway.
- Safety - Trim back vegetation at intersections (maintain clear zones) so vehicles don’t have to nose out into crosswalks to see oncoming traffic on Sikes Boulevard.

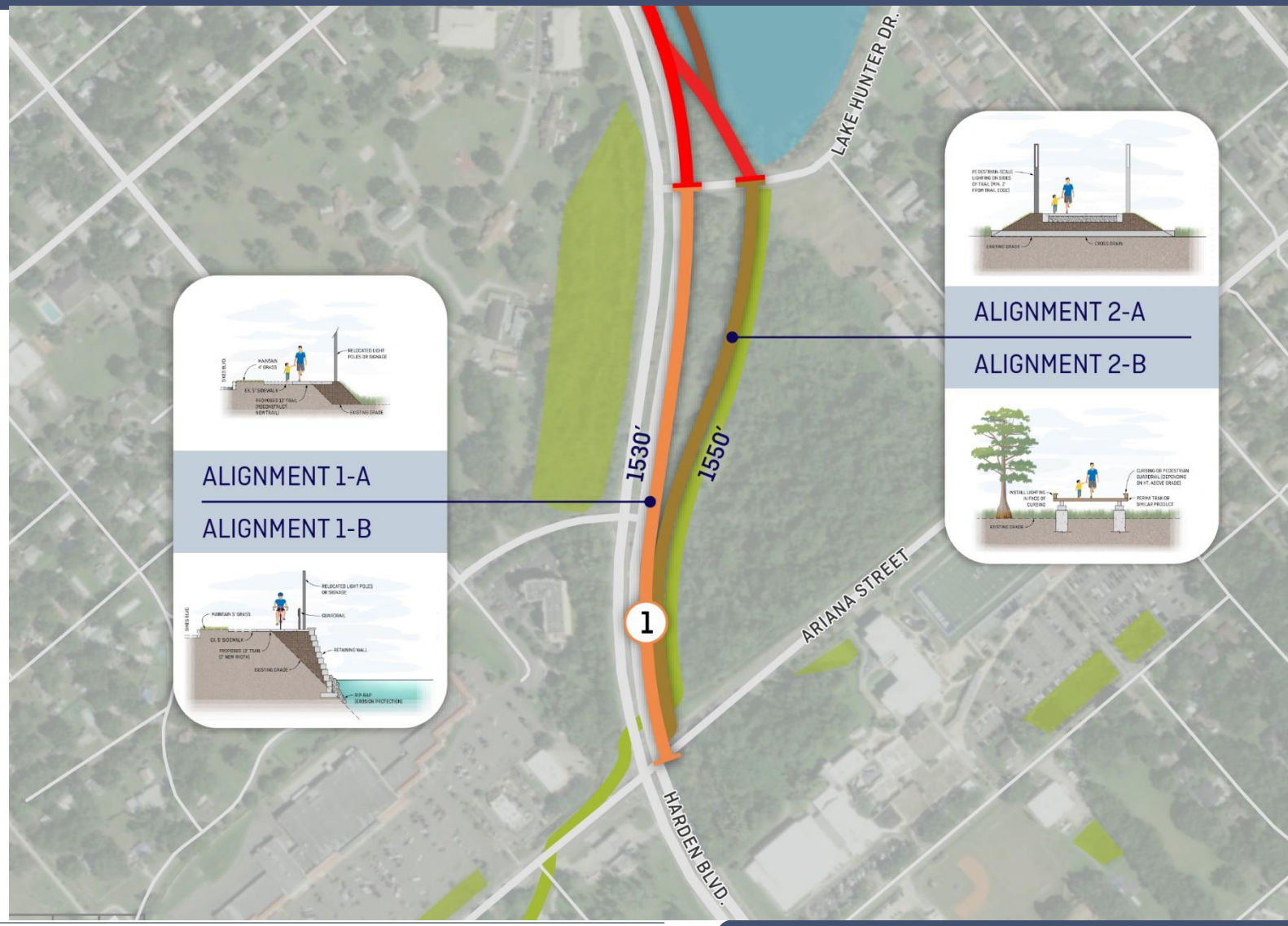
# Trail Segment 1 – Ariana St. to Lake Hunter Dr.

- Drainage (1-A): Expansion of the existing sidewalk on fill will result in direct impacts to the adjacent flood zone, requiring cup for cup compensation.
- Drainage (1-B): Addition of a retaining wall will reduce impacts, but compensation will be required.
- Drainage (2-A): This alignment falls between two flood zones – impact to one or both will require compensation for impacts.
- Drainage (2-B): Impacts to flood zones are negligible provided the boardwalk is constructed above the base flood elevation.
- Environment (1-A): Potentially direct impacts for wetland fill and secondary impacts for conservation area encroachment.
- Environment (1-B): Potentially no direct impacts, only secondary impacts.
- Environment (2-A/B): Potentially both direct and secondary impacts.



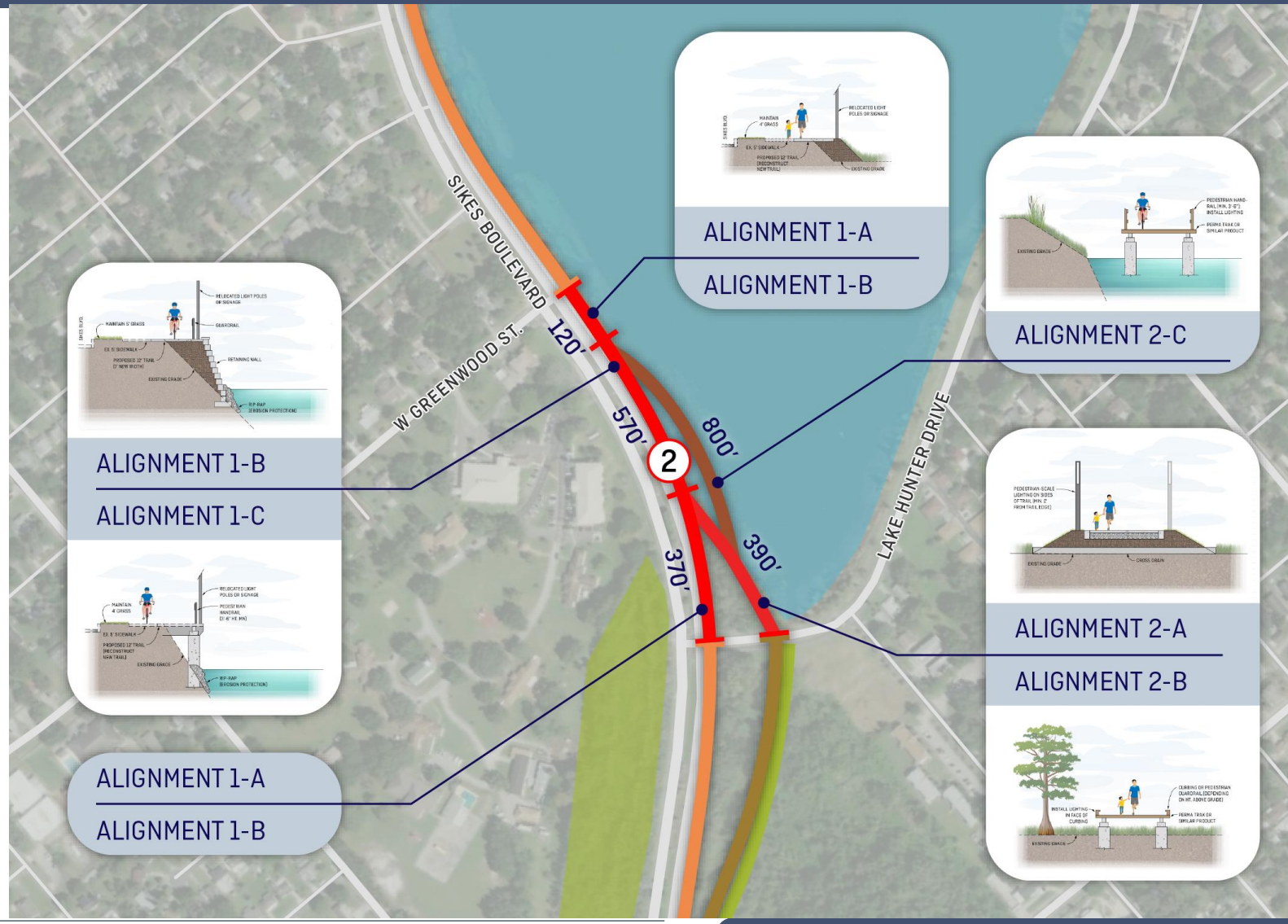
# Trail Segment 1 Recommendations

- Recommended alignments: 1-A and 1-B
- Alignments 2-A and 2-B pose potential issues in several areas, including safety (visibility from road), perception of homelessness and drug use in area, the possibility for this segment of the trail to be unusable during/after heavy rainfall due to flooding; cost; and location outside of FDOT right-of-way



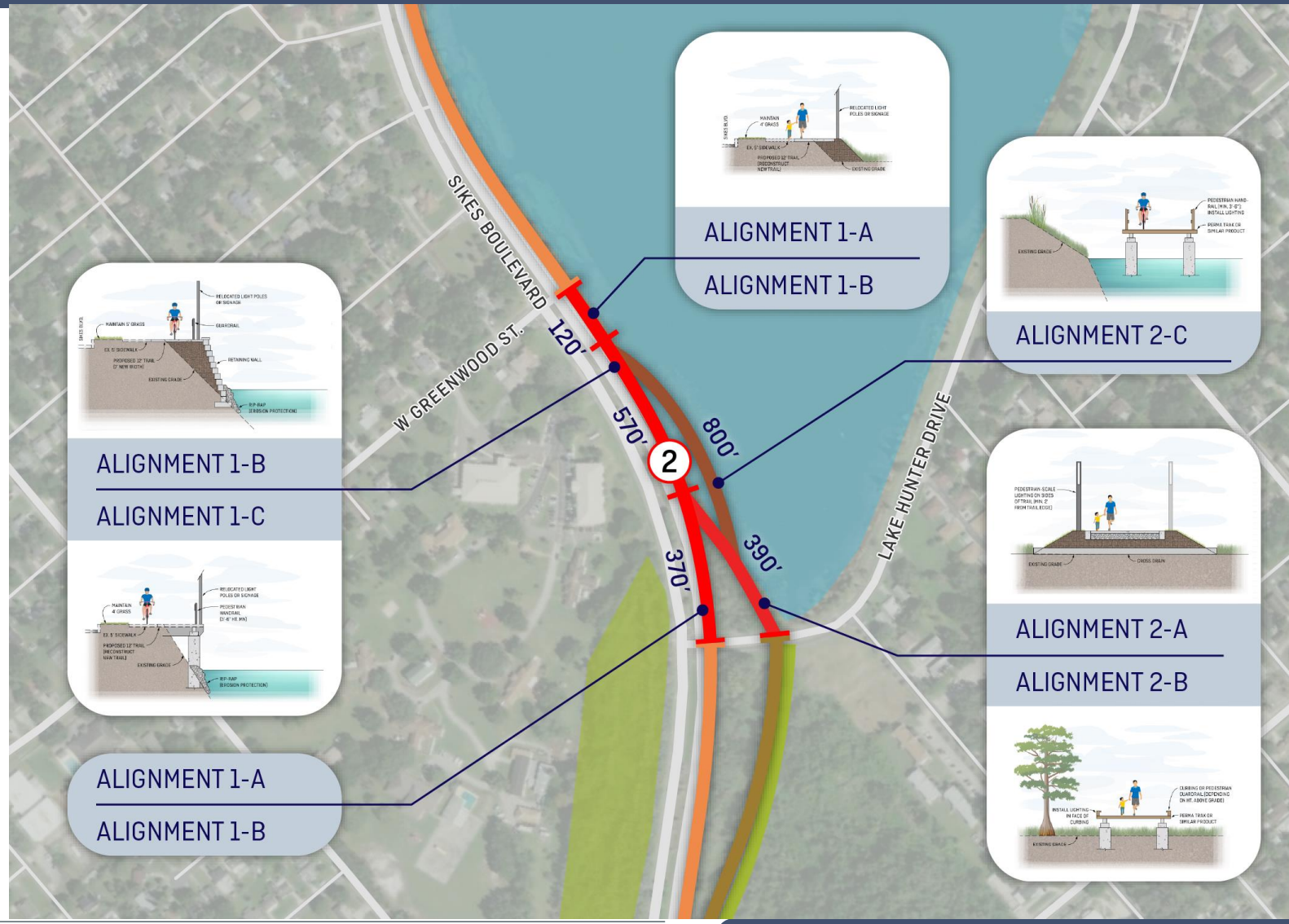
# Trail Segment 2 – Lake Hunter Dr. to Greenwood St.

- Drainage (1-A): Lake Hunter is designated as Flood Zone AE.  Impacts to the lake due to fill will require compensation and modification of existing permit.
- Drainage (1-B/C): Addition of retaining wall or cantilever reduces flood zone impacts and corresponding compensation.
- Drainage (2-A/B): Alignments pose minimal impacts to existing flood zones, buffers, and stormwater conveyance.
- Drainage (2-C): This alignment poses minimal impacts to flood zones or stormwater conveyance.
- Environment (1-A/B/C): Potentially direct impacts for wetland fill and secondary impacts for conservation area encroachment.
- Environment (2-A/B): Potentially both direct and secondary impacts.
- Environment (2-C): There will be shading impacts from the boardwalk that require mitigation.



# Trail Segment 2 Recommendations

- Recommended alignments: 1-A (southern portion) and 1-B (northern portion), used in combination for the segment.
- Alignment 1-C offers little additional benefit over 1-B and has increased construction costs and potential maintenance issues.
- Alignments 2-A and 2-B pose potential issues in several areas like Segment 1 (safety, visibility, and flooding).
- Alignment 2-C poses potential issues in several areas, including construction and maintenance costs, and location outside the FDOT right-of-way.



# Trail Segment 3 – Greenwood St. to Hartsell Ave.

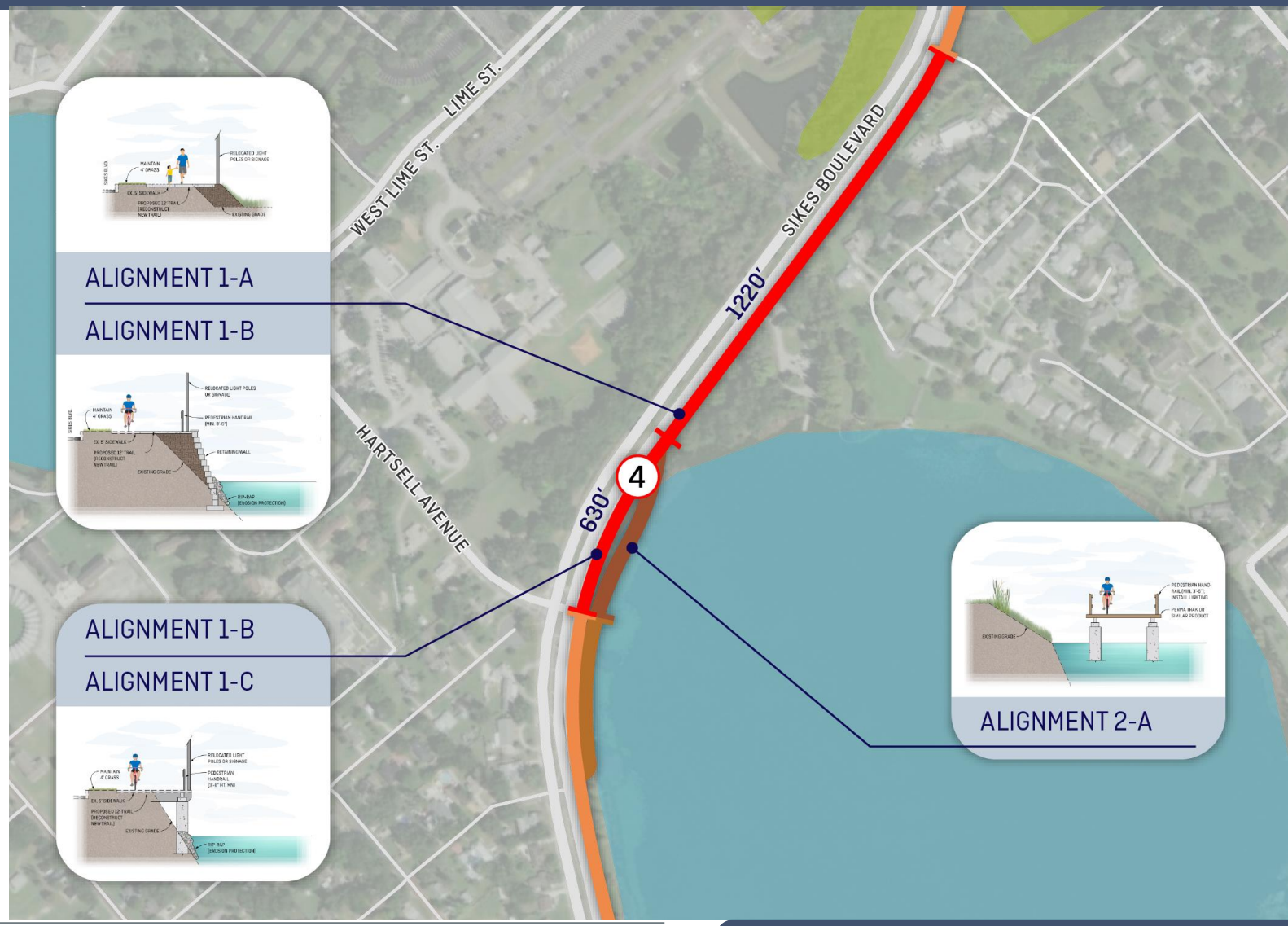
- Drainage (1-A): Lake Hunter is designated as Flood Zone AE.  Impacts to the lake due to fill will require compensation and modification of existing permit.
- Drainage (1-B/C): Addition of retaining wall or cantilever reduces flood zone impacts as well as corresponding compensation.
- Drainage (2-A): This alignment poses minimal impacts to flood zones or stormwater conveyance.
- Environment (1-A): Potentially direct impacts for wetland fill and secondary impacts for conservation area encroachment.
- Environment (1-B/C): Potentially no direct impacts, only secondary impacts.
- Environment (2-A): There will be shading impacts from the boardwalk that require mitigation.

# Trail Segment 3 Recommendations

- Recommended alignments: 1-A (southern portion) and 1-B (northern portion) used in combination for the segment.
- Alignment 1-C offers little additional benefit over 1-B and has increased construction costs and potential maintenance issues.
- Alignment 2-A poses potential issues in several areas, including construction and maintenance costs, and location outside the FDOT right-of-way.

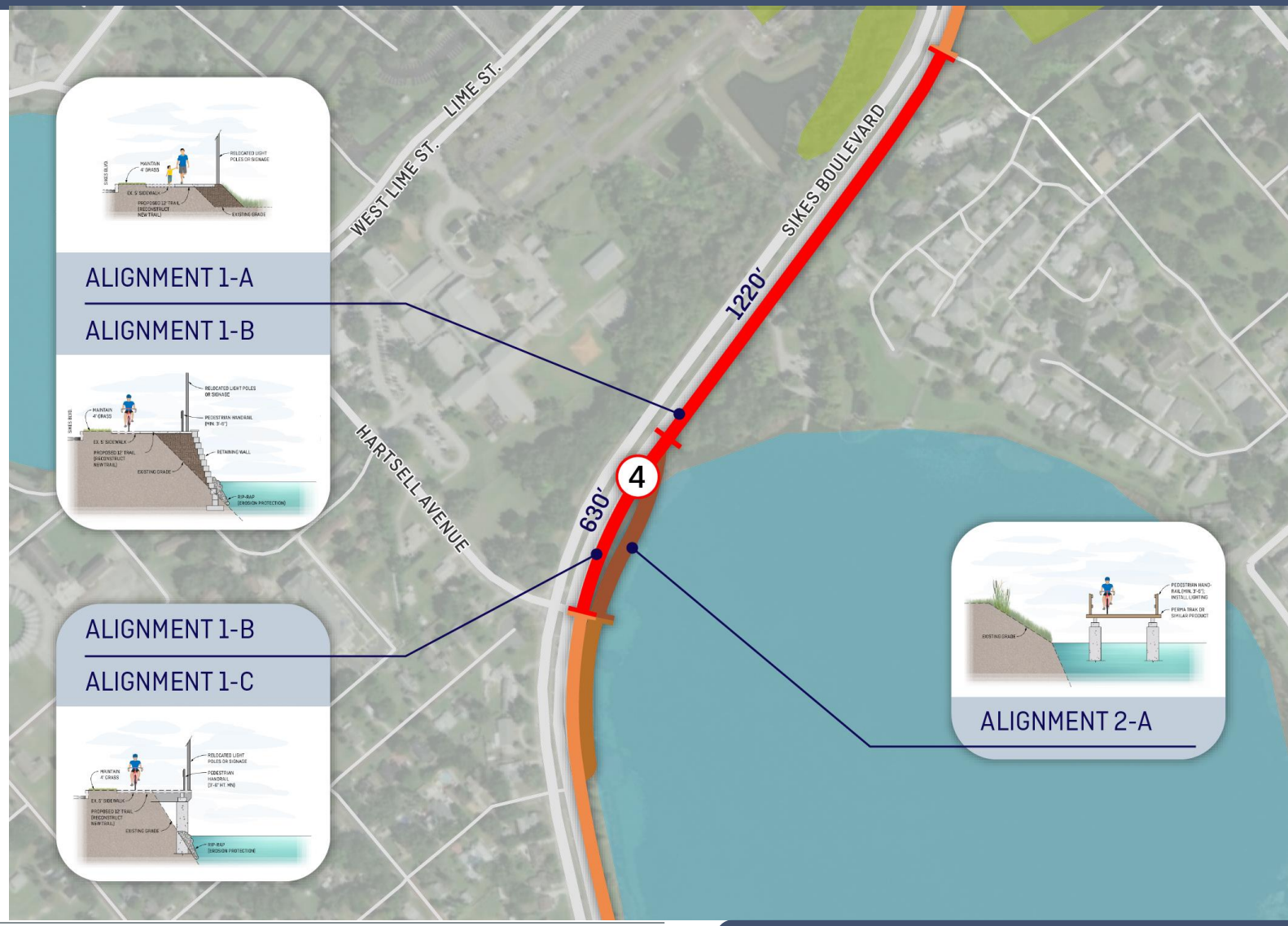
# Trail Segment 4 – Hartsell Ave. to Pedestrian Bridge

- Drainage (1-A): Lake Hunter is designated as Flood Zone AE.  Impacts to the lake due to fill will require compensation and modification of existing permit.
- Drainage: (1-A): This alignment runs parallel along a steeply sloped ditch.  The ditch slope begins within 5-10 feet od edge of sidewalk.  Fill within the ditch directly impacts the flow rate and conveyance of stormwater runoff.
- Drainage (1-B/C): Addition of retaining wall or cantilever reduces flood zone impacts as well as corresponding compensation.
- Drainage (2-A): This alignment poses minimal impacts to flood zones or stormwater conveyance.
- Environment (1-A/B/C): The area between Sikes and the lake is narrow – wetland impacts for fill here will require mitigation.
- Environment (2-A): There will be shading impacts from the boardwalk that require mitigation.



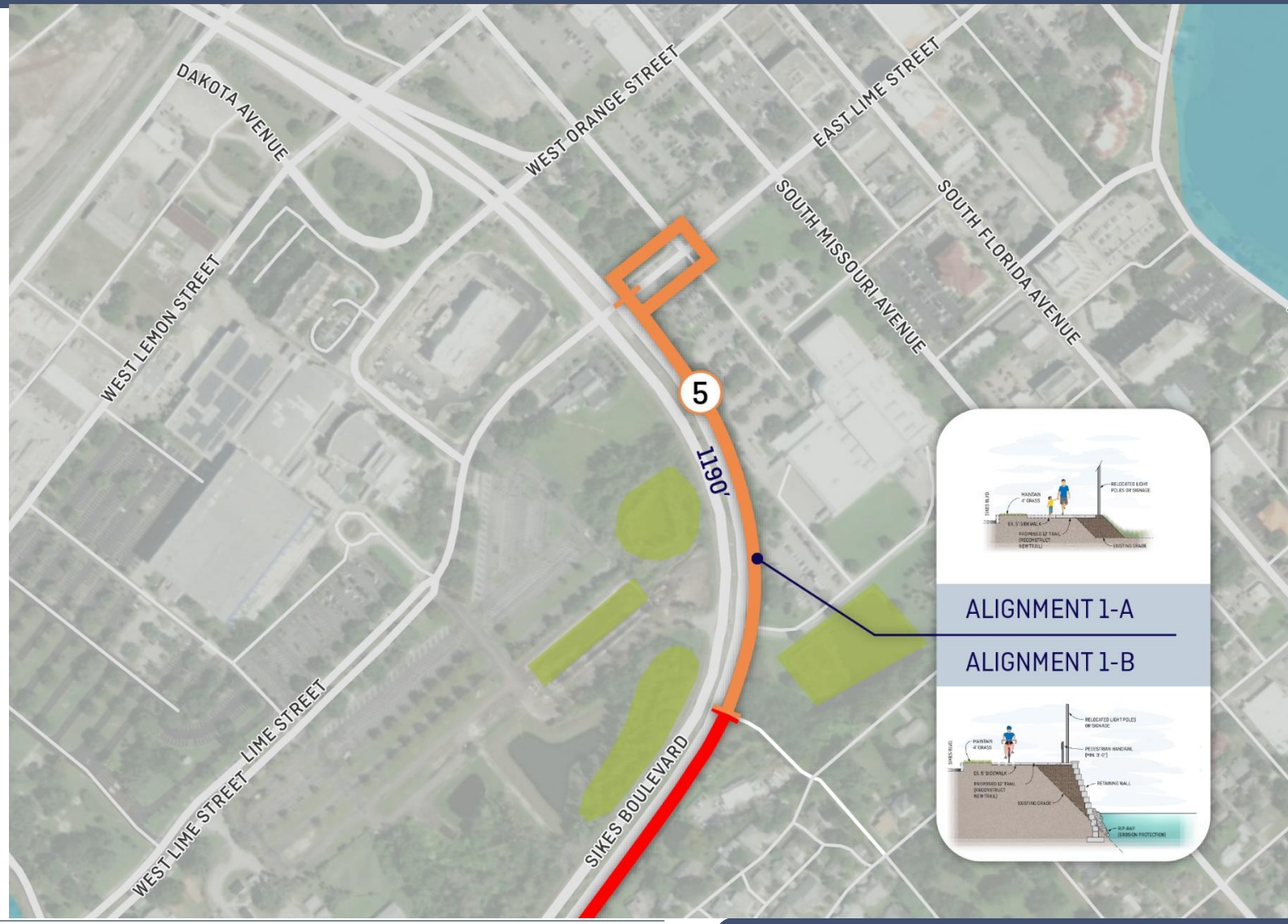
# Trail Segment 4 Recommendations

- Recommended Alignments: 1-A (northern portion) and 1-B (southern portion) used in combination for the segment.
- Alignment 1-C offers little additional benefit over 1-B and has increased construction costs and potential maintenance issues.
- Alignment 2-A poses potential issues in several areas, including construction and maintenance costs, and location outside the FDOT right-of-way.



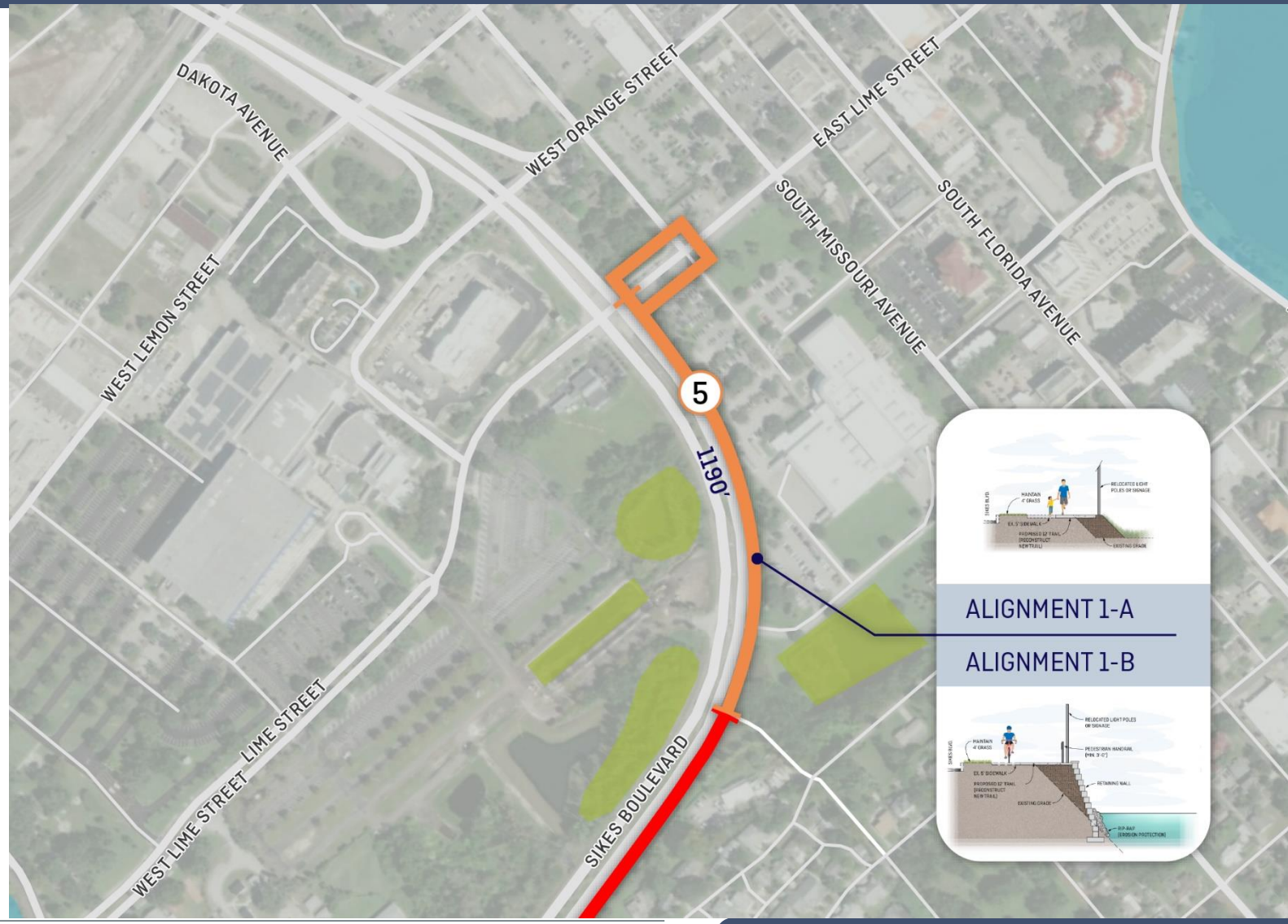
# Trail Segment 5 – Pedestrian Bridge to Lime St.

- Drainage (1-A): This alignment runs parallel along a steeply sloped ditch. The ditch slope begins within 5-10 feet of edge of sidewalk. Fill within the ditch directly impacts the flow rate and conveyance of stormwater runoff.
- Drainage (1-B): Addition of a retaining wall along this segment reduces impacts to the existing ditch.
- Environment: No wetland impacts.



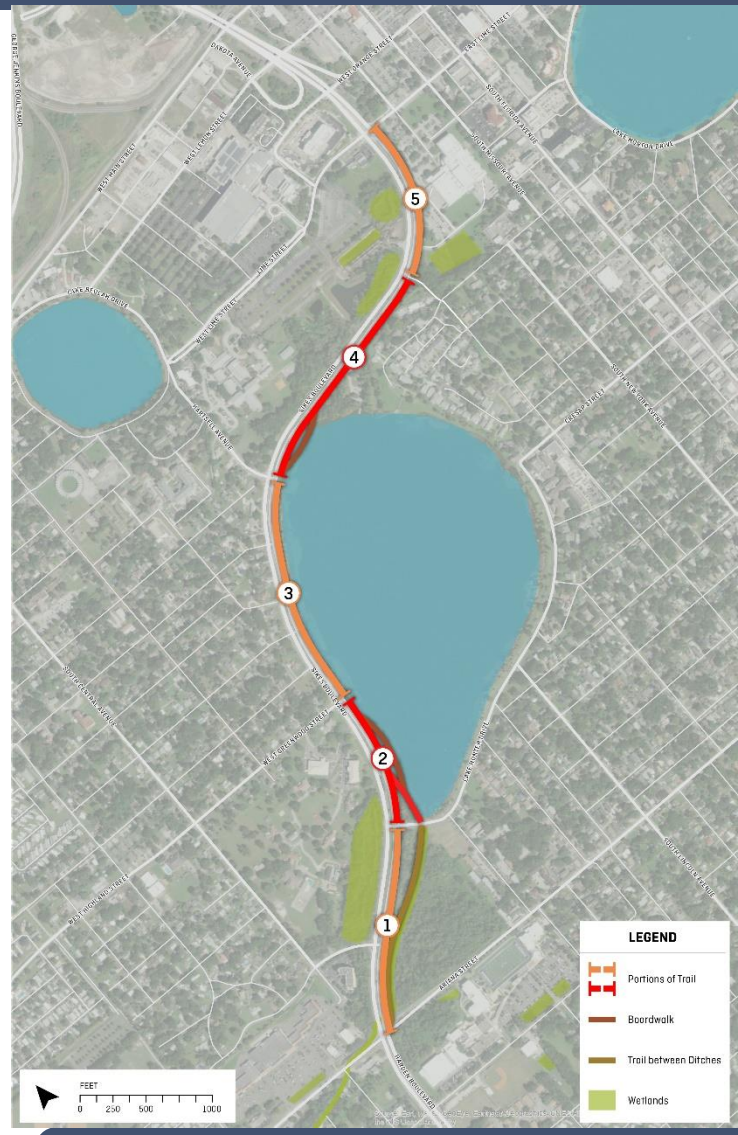
# Trail Segment 5 Recommendations

- Recommended Alignments: 1-A and 1-B.
- Impacts on conveyance of stormwater runoff will determine which alignment is chosen.



# Trail Phasing

- Phase I: Segments 4 and 5
- Phase II: Segments 2 and 3
- Phase III: Segment 1



# OTHER DESIGN INFORMATION

# Potential Trail Amenities

- Pedestrian scale lighting
- Street trees
- Benches and trash receptacles
- Bicycle repair station and bike racks
- Pergola or shade sail
- Public art
- Wayfinding signage and trail location markers
- Emergency call box

# Potential Pedestrian Intersection Improvements

- High visibility crosswalk striping
- Smart crosswalk: in-roadway LED warning lights
- All-direction pedestrian crossing phase
- Leading pedestrian interval in the signal timing cycle
- Shorter timing cycle lengths on sikes Boulevard
- “No right turn on red” restriction when pedestrian crossing button has been activated
- Rectangular rapid flashing beacon (RRFB) at pedestrian crossing locations

# Project Summary

Trails help build great communities.  The W. Lake Hunter Trail enhances the City's Lake-to-Lake Greenway and Bikeway Network and FDOT's active transportation goals by:

- Improving quality of life
- Connecting destinations
- Improving mobility choices for residents
- Increasing accessibility and equity
- Reducing vehicle trips/congestion/crashes
- Improving health and physical activities
- Maintaining a safe environment for everyone
- Providing opportunities for social engagement
- Increasing property values
- Protecting natural resources


# For additional information, contact:

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