

SHAPING THE PARKWAY

TOWN COUNCIL – RECOMMENDATIONS FOR PREFERRED LOCAL POSITION

HILTON HEAD ISLAND // 10.12.2021

MKSK 

OBJECTIVE OF LOCAL STUDY:

Use **local knowledge** to
create **community-based** solutions
to **enhance** SCDOT's preferred alternative.

OUR ROLE:

MKSK & HDR were selected to evaluate the SCDOT preferred alternative and recommend enhancements to **create a gateway to the island and improve the quality of life**, especially for those directly impacted by this project.

GUIDING PRINCIPLES GATEWAY CORRIDOR COMMITTEE

1

Fix transportation issues
for residents, workers, & visitors
to Hilton Head Island.

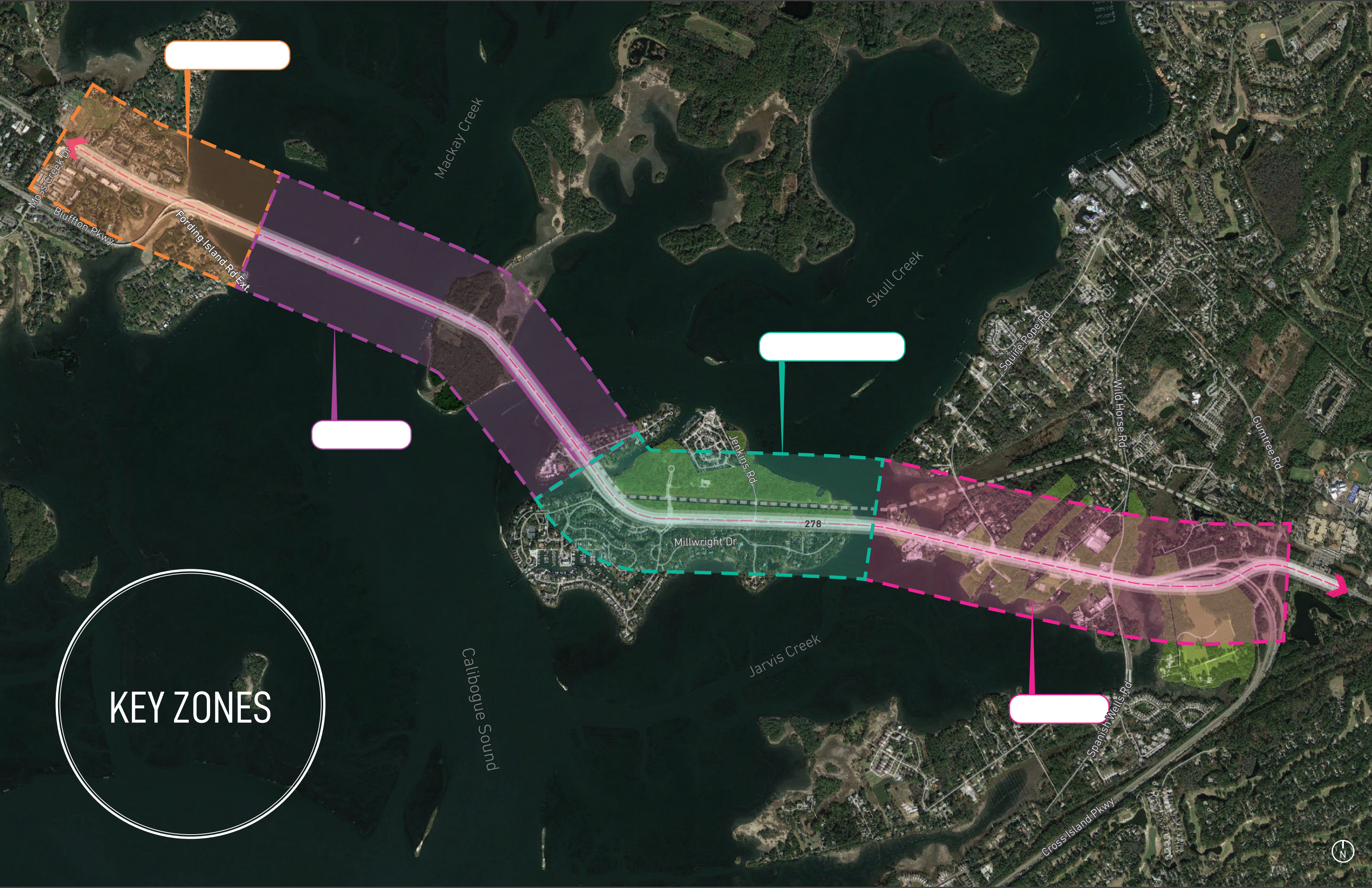
2

Improve quality of life
for those directly impacted
by the project.

3

Create a gateway
to Hilton Head Island that the region
will be proud of.

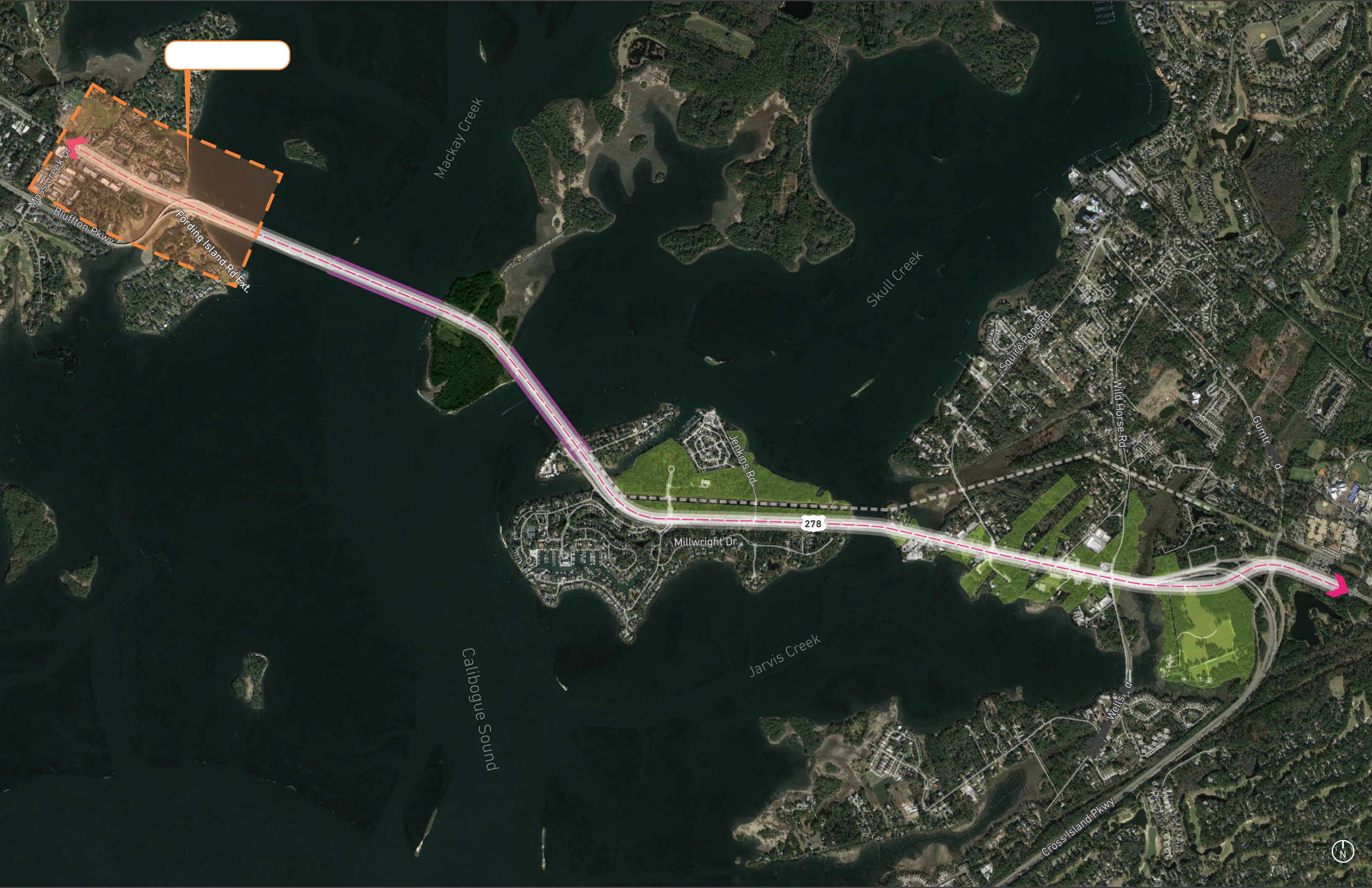
KEY ZONES



SUMMARY OF RECOMMENDATIONS

CORRIDOR-WIDE

1. Reduce lane widths to 11' to calm traffic & reduce property impacts
2. Eliminate raised curbs in medians wherever possible, encourage existing vegetation and natural drainage in these areas
3. Vary median widths and meander roadway alignments where possible for traffic calming and aesthetics
4. Take advantage of Town-owned property for sake of Parkway improvements
5. Utilize ITS smart signal technology throughout
6. Reduce curb cuts & provide for alternative/safer property access throughout
7. Provide trails on both sides of Parkway where possible with sufficient separation from road and in lieu of sidewalks
8. Create a comprehensive system of safe, comfortable, and attractive shared use paths for cyclists and pedestrians
9. Open/encourage views to the water wherever possible, as a part of the Island's "signature"
10. Ensure integration of unique, Hilton Head-specific signage, landscape schemes, public art program, architectural vocabulary, iconic features, and accent lighting that distinguish this parkway from all others
11. Reduce design & posted speeds throughout the corridor
12. Evaluate the island-wide transportation system



[Redacted]

Moss Creek Dr

Bluffton Pkwy

Fording Island Rd Ext.

Mackay Creek

Skull Creek

Jenkins Rd

Millwright Dr

278

Squire Pope Rd

Wild Horse Rd

Gumtr d

Wells d

Cross Island Pkwy

Calibogue Sound

Jarvis Creek

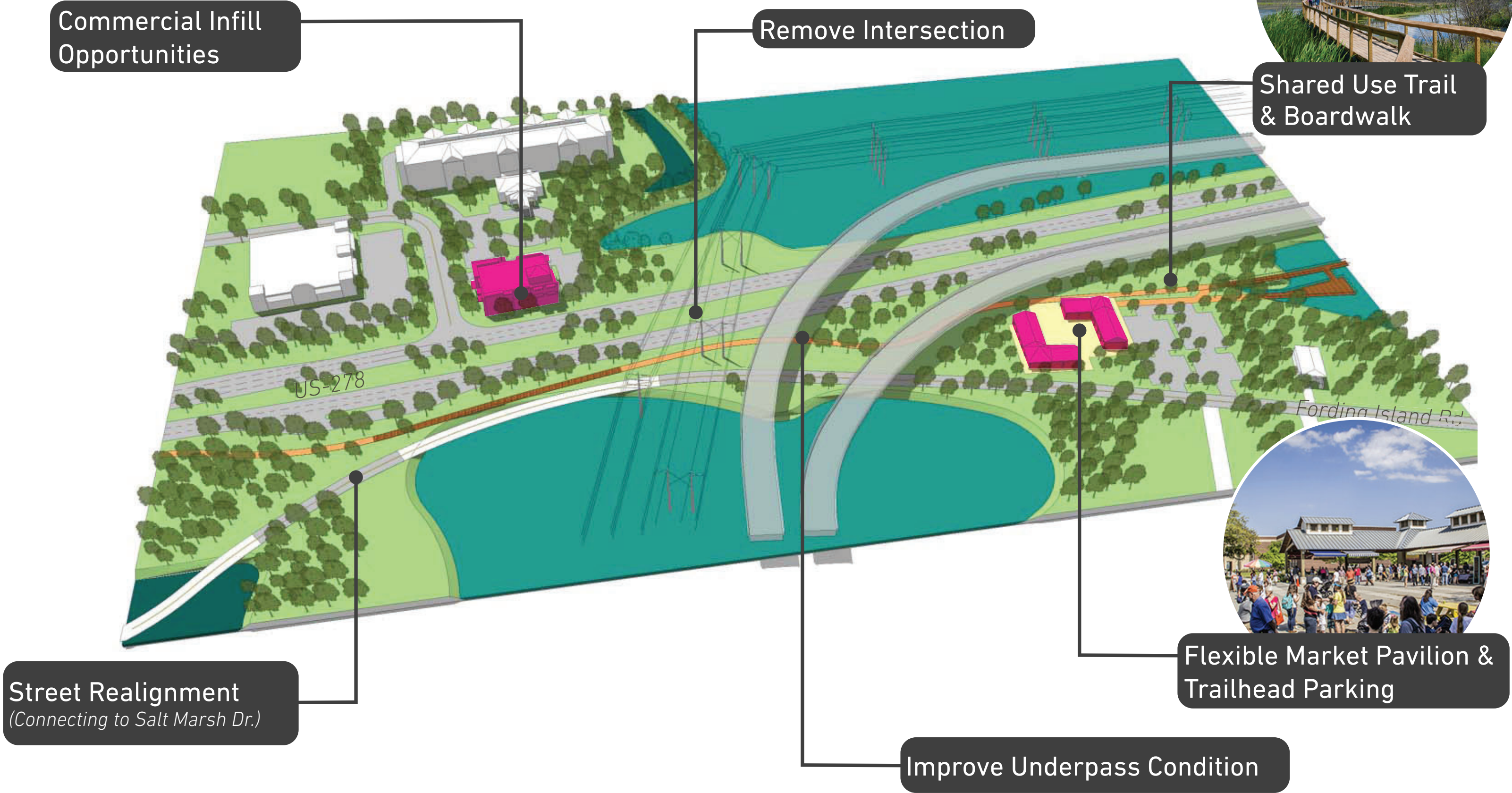


SUMMARY OF RECOMMENDATIONS

MOSS CREEK

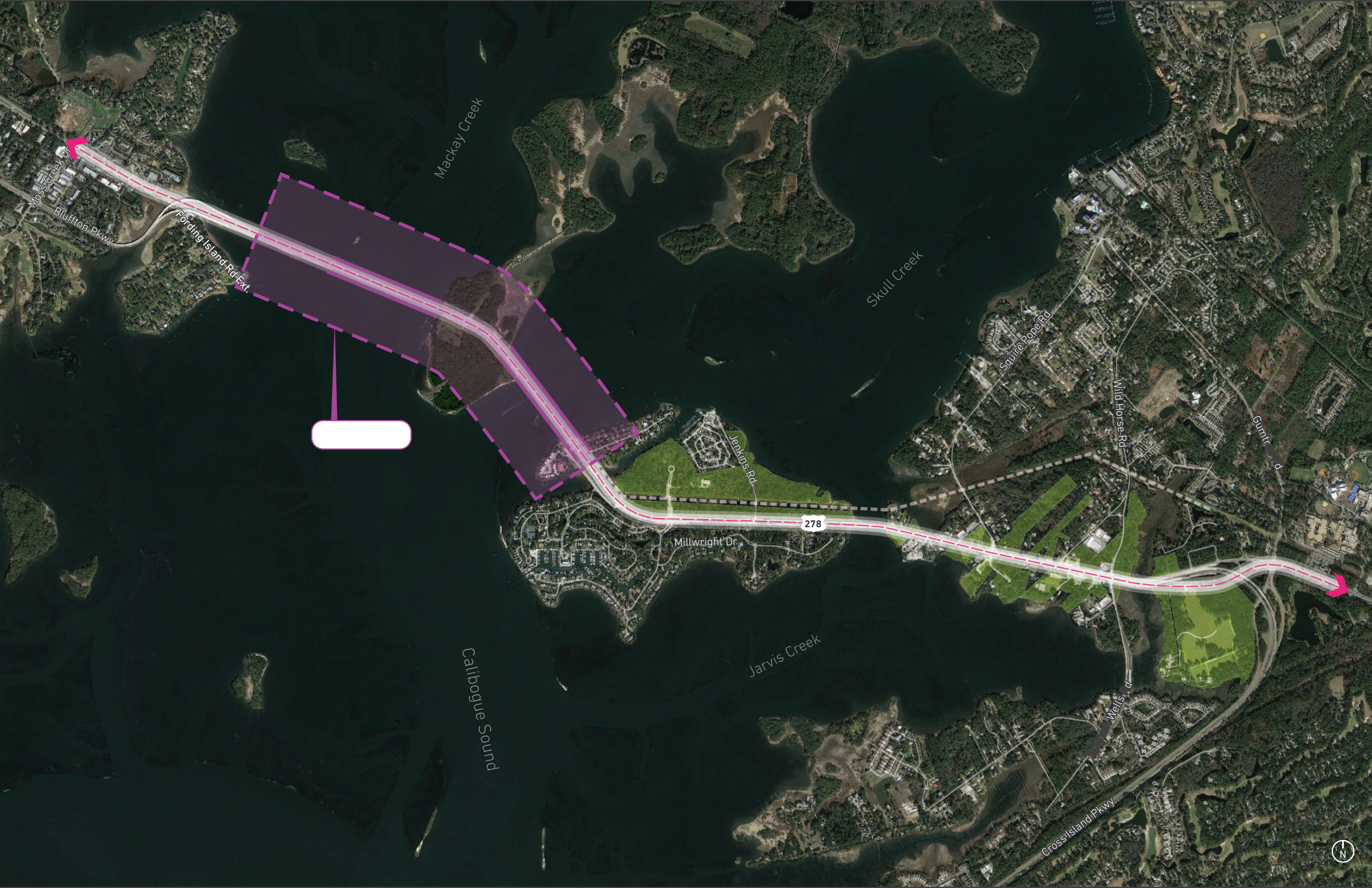
- 1. Encourage Moss Creek area improvements**
(commercial redevelopment, access/roadway improvements, trail connections)
- 2. Establish “Gateway Experience” threshold at west end of Mackay Creek bridges**
(landscape, island “icon”, art, lighting)

MOSS CREEK – LOCAL ALTERNATIVE



MOSS CREEK – LOCAL ALTERNATIVE





Moss Creek Dr

Bluffton Pkwy

Fording Island Rd Ext.

Mackay Creek

Skull Creek

Jenkins Rd

Millwright Dr

278

Jarvis Creek

Calibogue Sound

Squire Pope Rd

Wild Horse Rd

Gumtr d

Wells Rd

Cross Island Pkwy



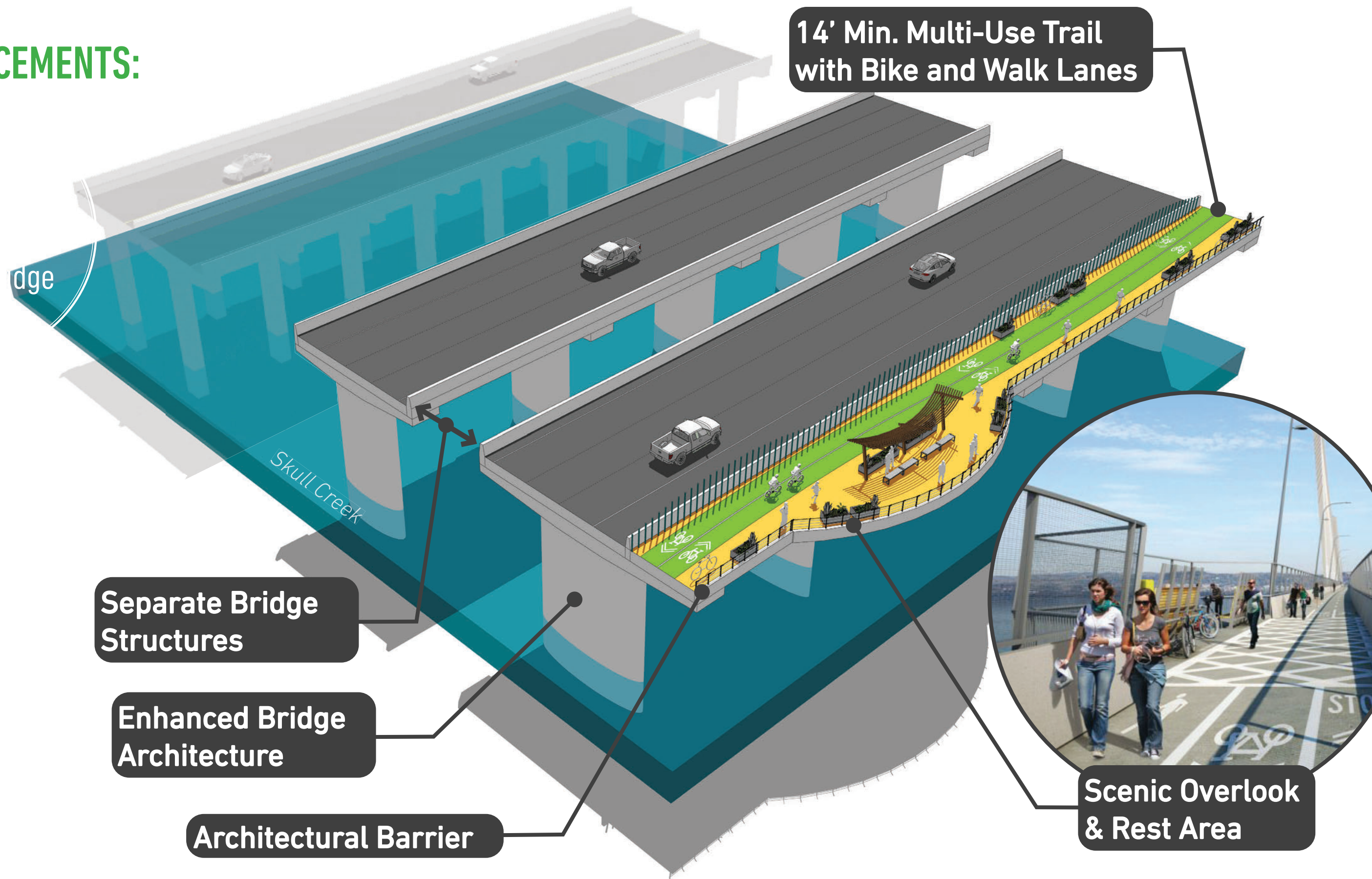
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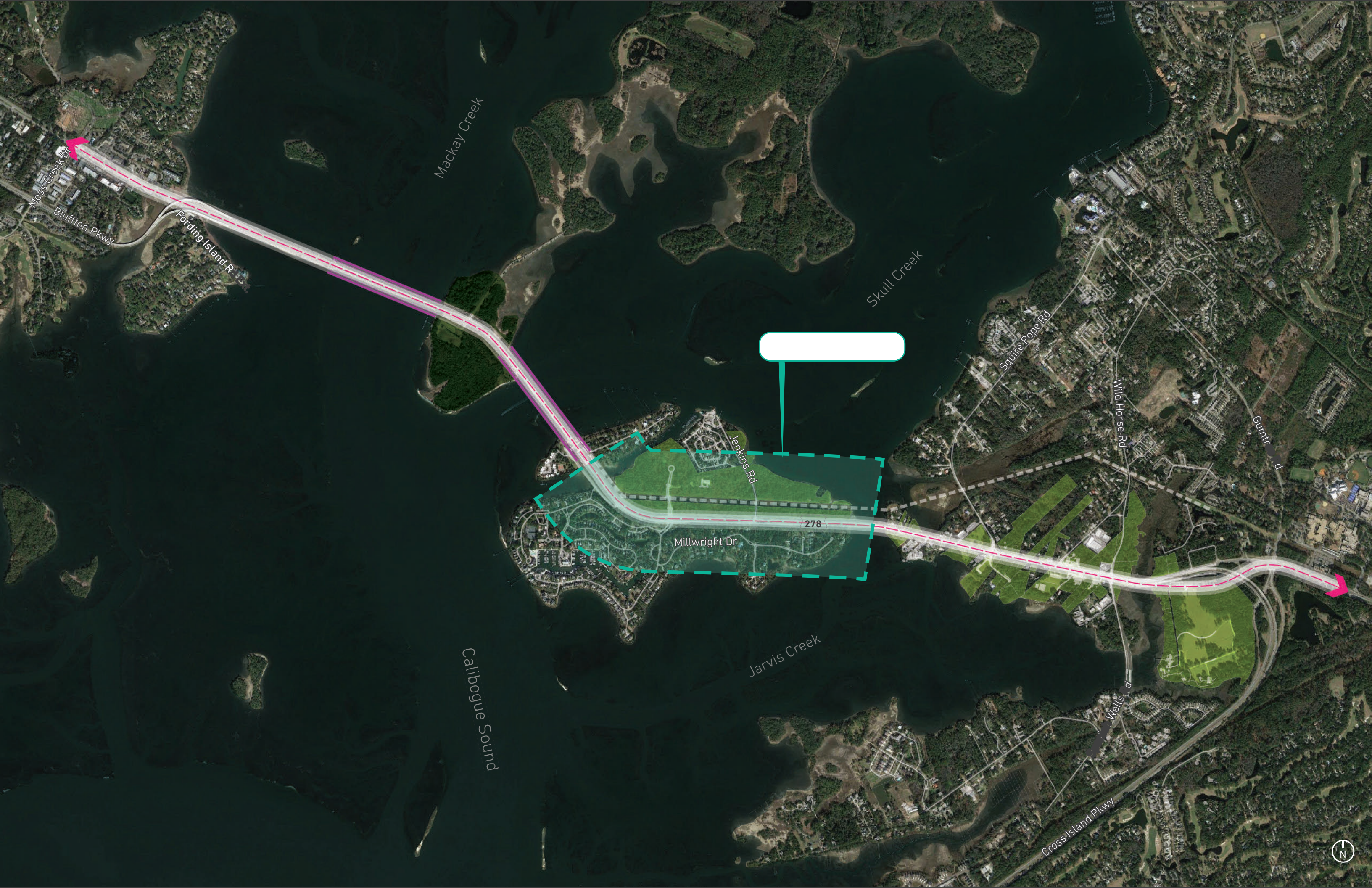
BRIDGES

1. **Reduce bridge mass with two separate bridges and Shared-Use Path on south side of eastbound bridge**
2. **Reduce bridge lane width to 11', reduce shoulder width on left, only one breakdown lane on right**
3. **Provide 14' minimum width non-motorized lane on bridge with multiple viewing areas and protection/screening of vehicles**
4. **Attention to bridge design/details as viewed from afar and on-deck** (parapet, railings, structural forms)

BRIDGE SECTION - LOCAL ALTERNATIVE

KEY ENHANCEMENTS:





Mackay Creek

Skull Creek

Jarvis Creek

Calibogue Sound

Moss Creek Dr

Bluffton Pkwy

Fording Island Rd

Jenkins Rd

Millwright Dr

Squire Pope Rd

Wild Horse Rd

Gumtr d

Wells d

Cross Island Pkwy

278



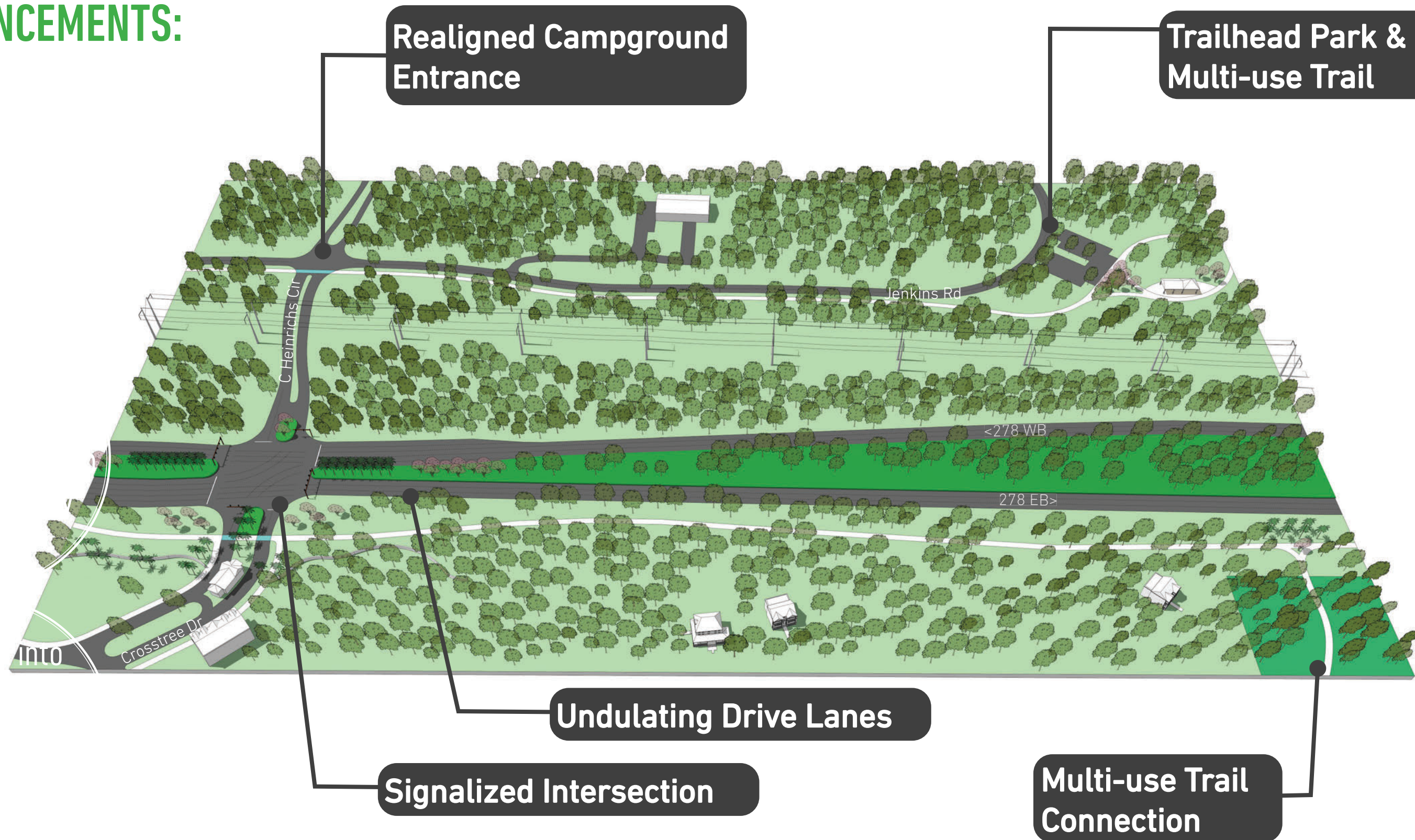
SUMMARY OF RECOMMENDATIONS

JENKINS ISLAND

1. Consolidate Jenkins Island access to one signalized location at C. Heinrichs Circle/Windmill Harbour Entrance
2. Create Parkway treatment with increased median width and landscaping

JENKINS ISLAND - LOCAL ALTERNATIVE

KEY ENHANCEMENTS:



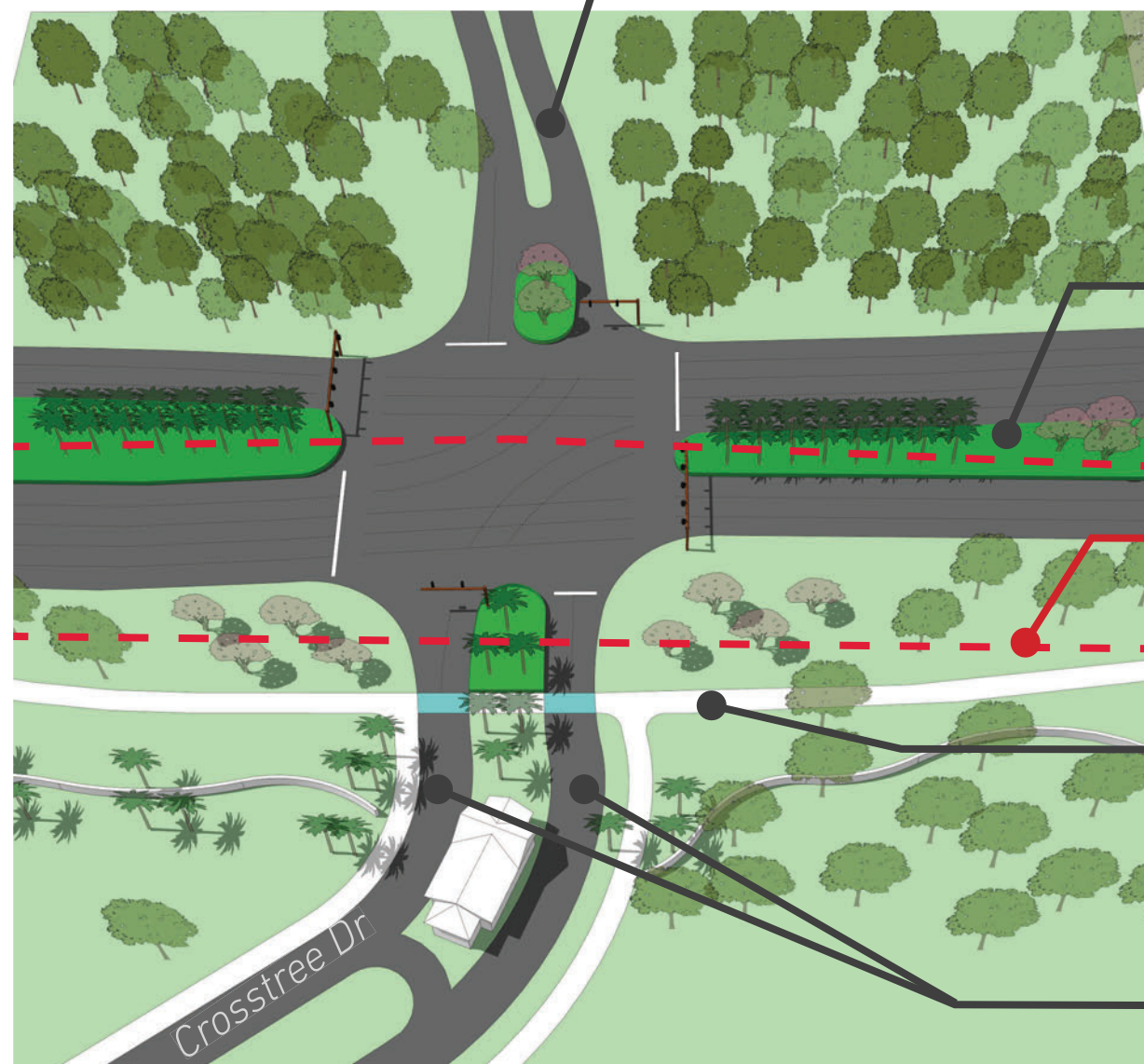
JENKINS ISLAND - LOCAL ALTERNATIVE



WINDMILL HARBOUR INTERSECTION

KEY ENHANCEMENTS:

Shift intersection north to allow more stacking through Windmill Harbour gatehouse



Consolidated access to north

Widened Median & Enhanced Landscape

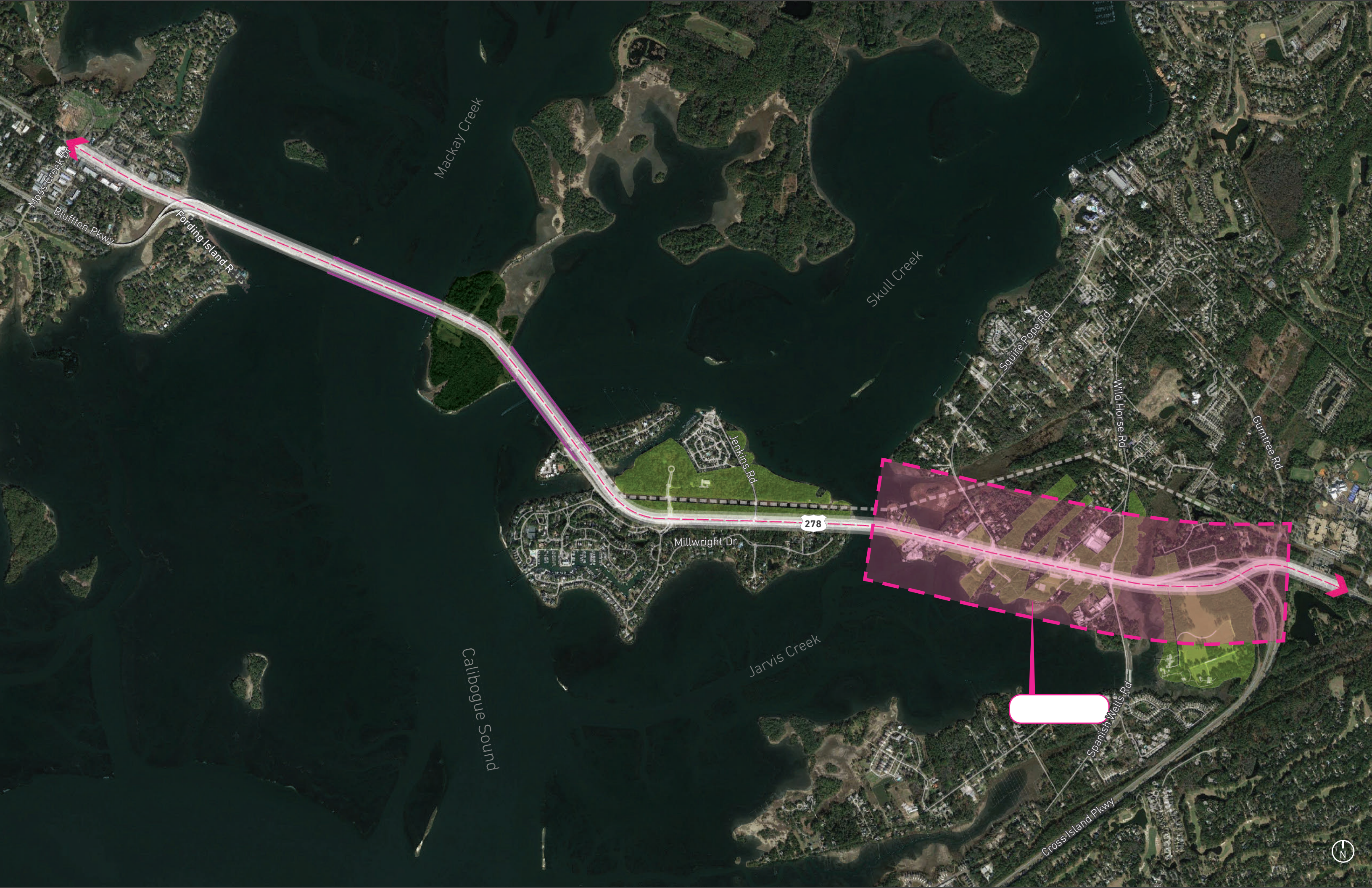
Existing Alignment

Multi-Use Trail

Additional Stacking Length

LOCAL CONCEPT

No crosswalks at traffic signal
- separate connection to new trails system



Moss Creek Dr

Bluffton Pkwy

Fording Island R

Mackay Creek

Skull Creek

Jenkins Rd

Millwright Dr

278

Jarvis Creek

Calibogue Sound

Squire Pope Rd

Wild Horse Rd

Gumtree Rd

Spanish Wells Rd

Cross Island Pkwy

[Callout Box]



SUMMARY OF RECOMMENDATIONS

STONEY

1. **Provide traditional turn lanes and intuitive intersection configurations throughout Stoney**
2. **Eliminate confusing SCDOT U-turns**
3. **Eliminate left turns and traffic introduction onto Old Wild Horse**
4. **Create new park south of Parkway in Stoney to authentically showcase Gullah Geechee culture/heritage**
5. **Consider a new Visitors Center as a part of this park that intentionally showcases this heritage while introducing visitors to the Island's offerings**

ADDITIONAL POLICY DECISIONS:

6. **Create a Stoney-authored vision plan for the next generation of that neighborhood**
7. **Create and professionally staff a Development Corporation as a vehicle for Stoney Advancement**

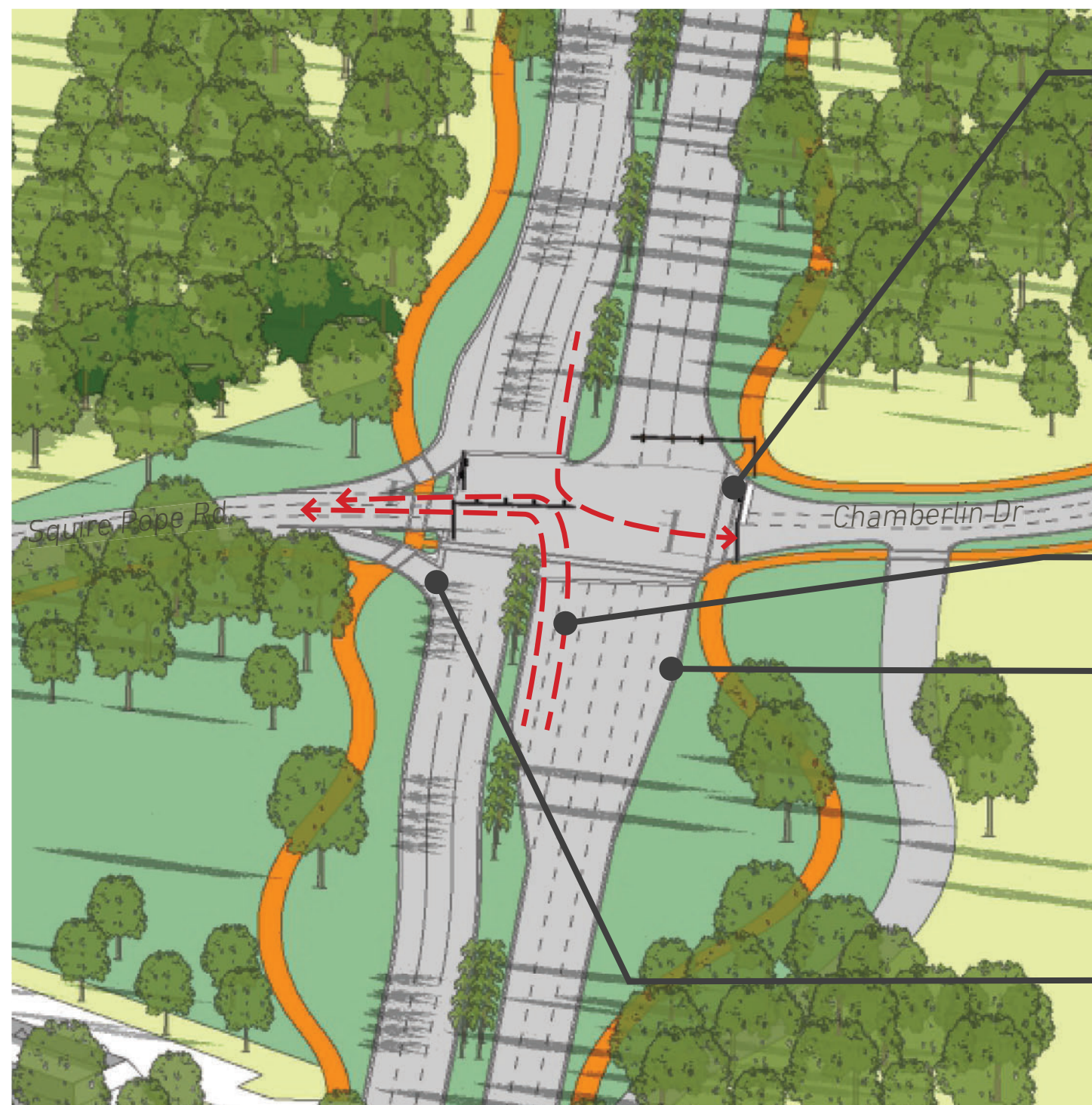
STONEY – LOCAL ALTERNATIVE

KEY ENHANCEMENTS:



SQUIRE POPE INTERSECTION

KEY ENHANCEMENTS:



Multi-Use Trail Crossing

(2) Left Turn Lanes

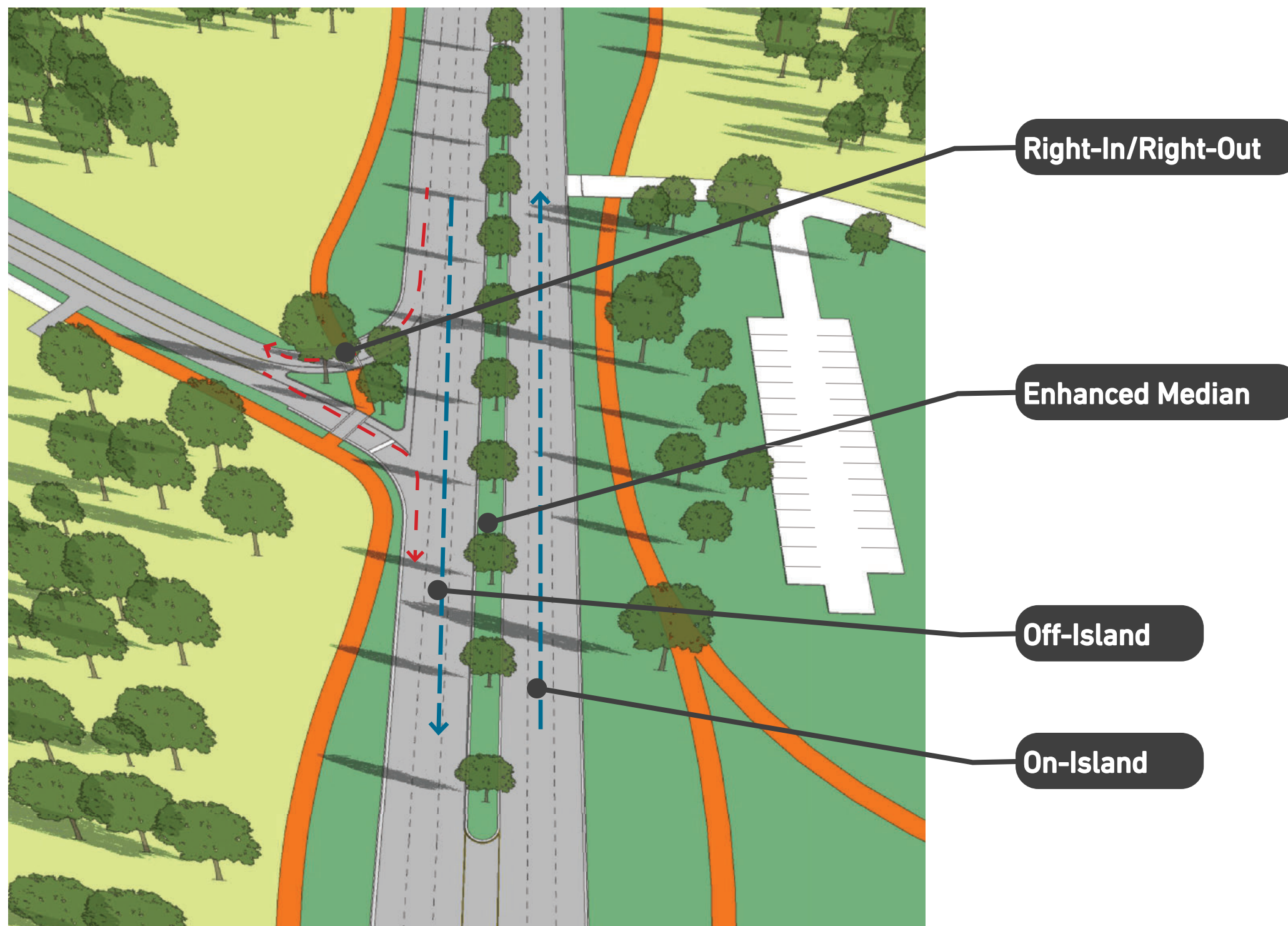
Right Turn Lane

Right Turn Lane
(no accel lane)

LOCAL CONCEPT

OLD WILD HORSE INTERSECTION

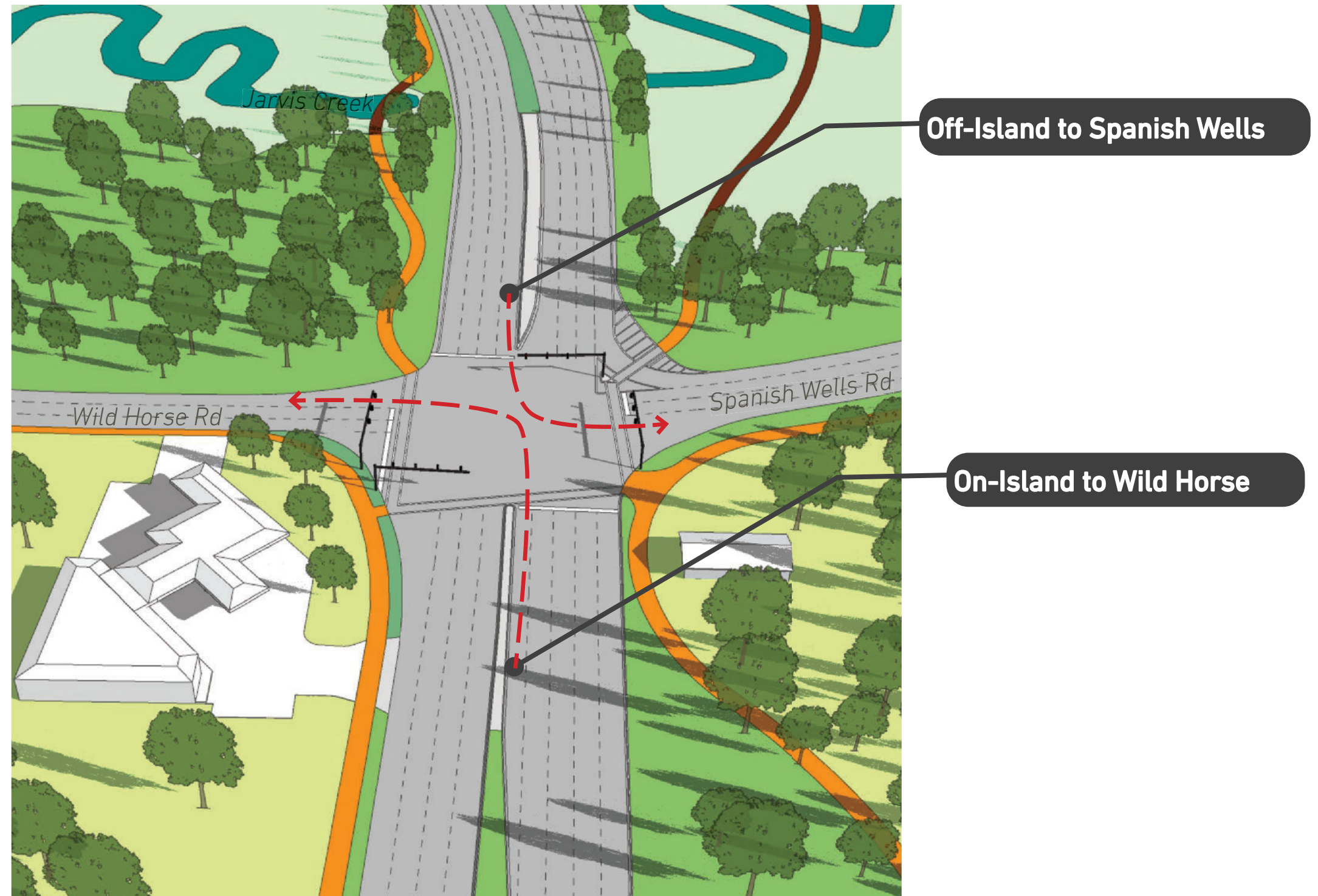
KEY ENHANCEMENTS:



LOCAL CONCEPT

SPANISH WELLS/WILD HORSE INTERSECTION

KEY ENHANCEMENTS:



LOCAL CONCEPT

STONEY – LOCAL ALTERNATIVE

Note: All trail and access roads shown are optional long-term improvements within the corridor. Backage roads and access drives could be implemented as short- or long-term improvements.

Multi-Use Trail to Jenkins Island

Private driveway for resident access

Potential new backage road connecting Squire Pope & Wild Horse

No change to Old Wild Horse

Multi-Use Trail to Coastal Discovery

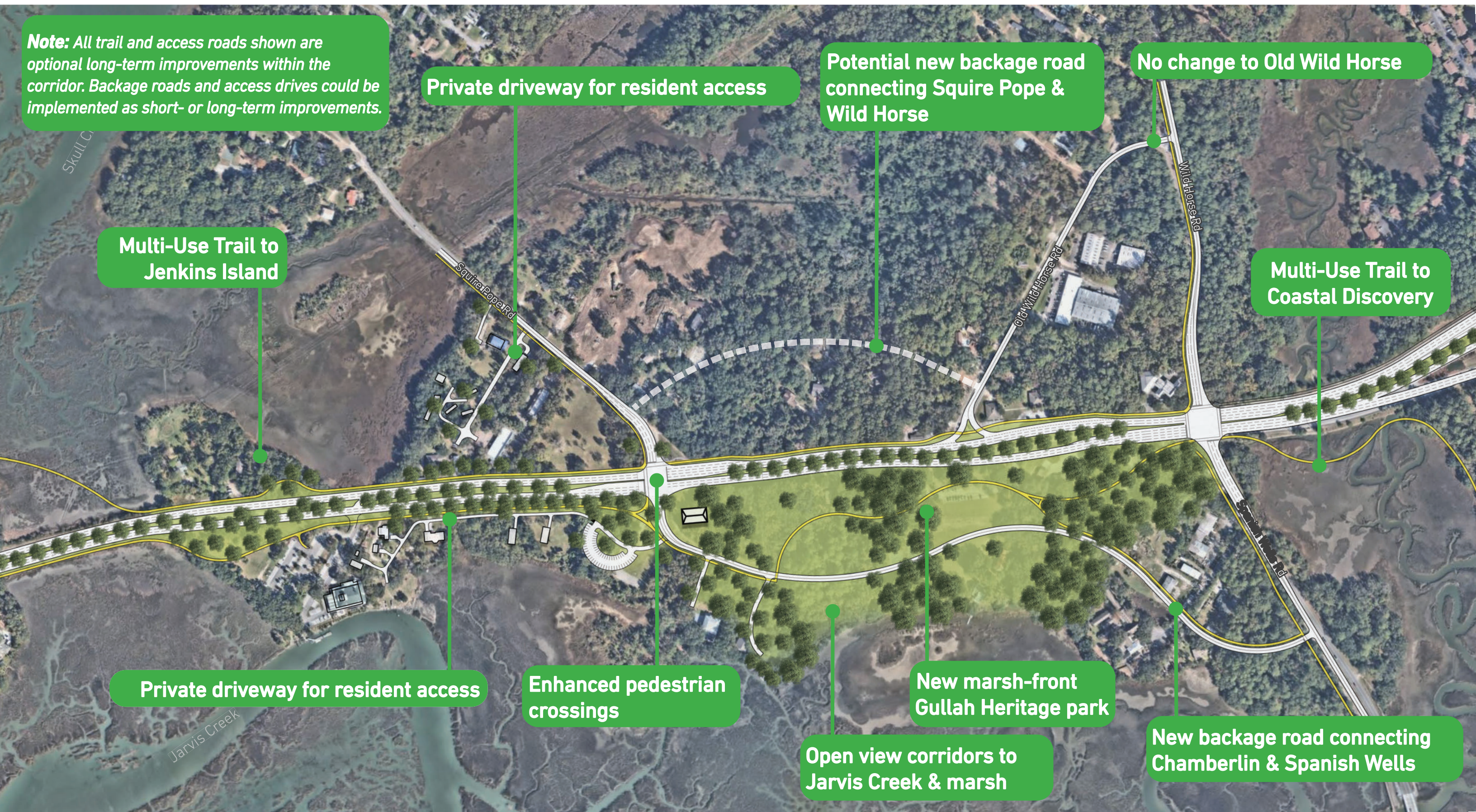
Private driveway for resident access

Enhanced pedestrian crossings

New marsh-front Gullah Heritage park

Open view corridors to Jarvis Creek & marsh

New backage road connecting Chamberlin & Spanish Wells

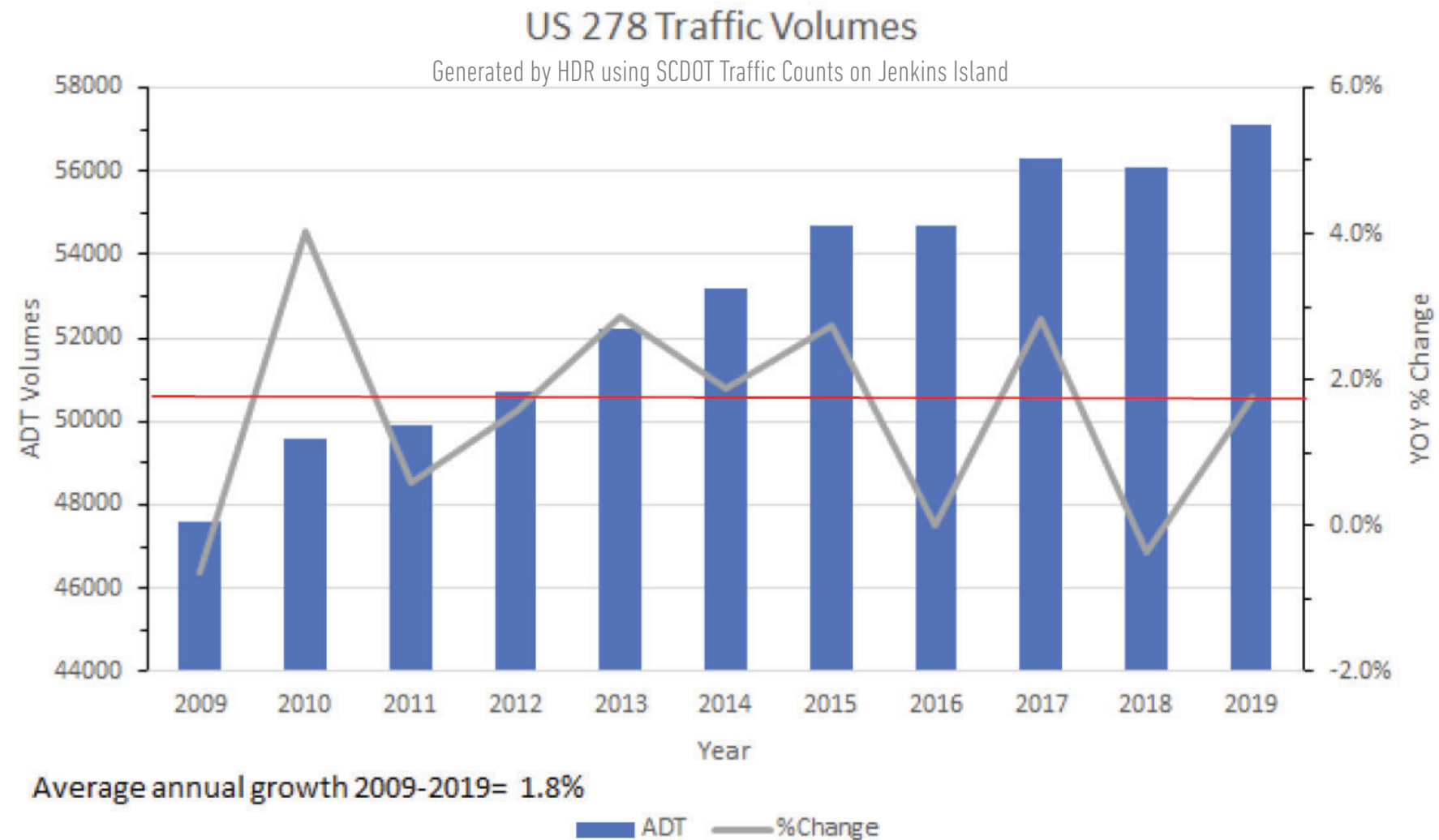


Key Issues

For Further Discussion

1 – FUTURE GROWTH PROJECTIONS

GROWTH DATA

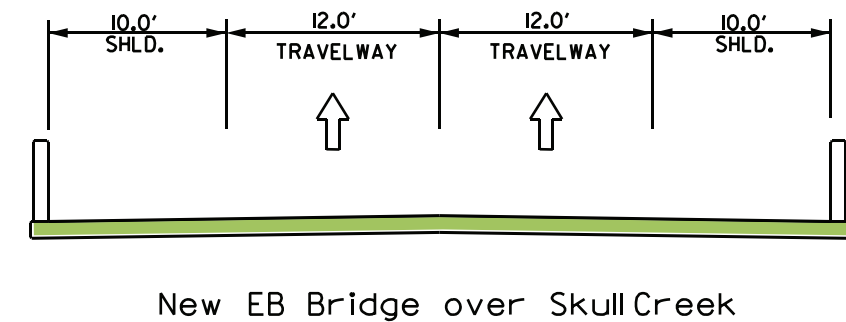
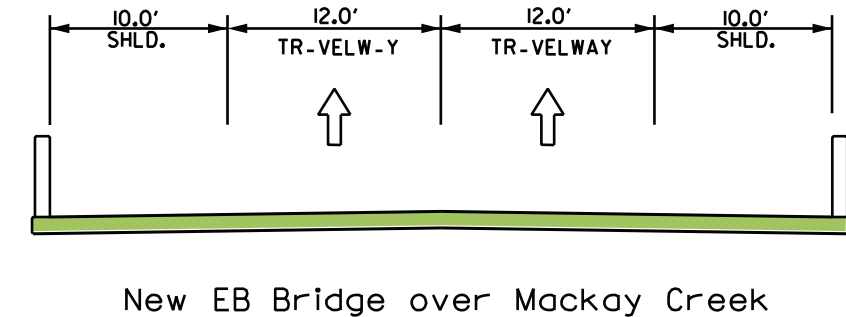
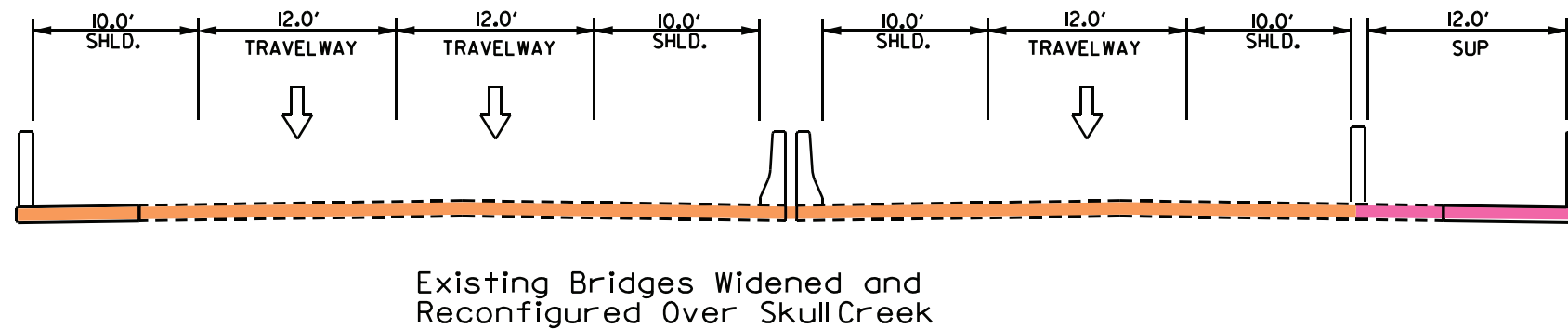
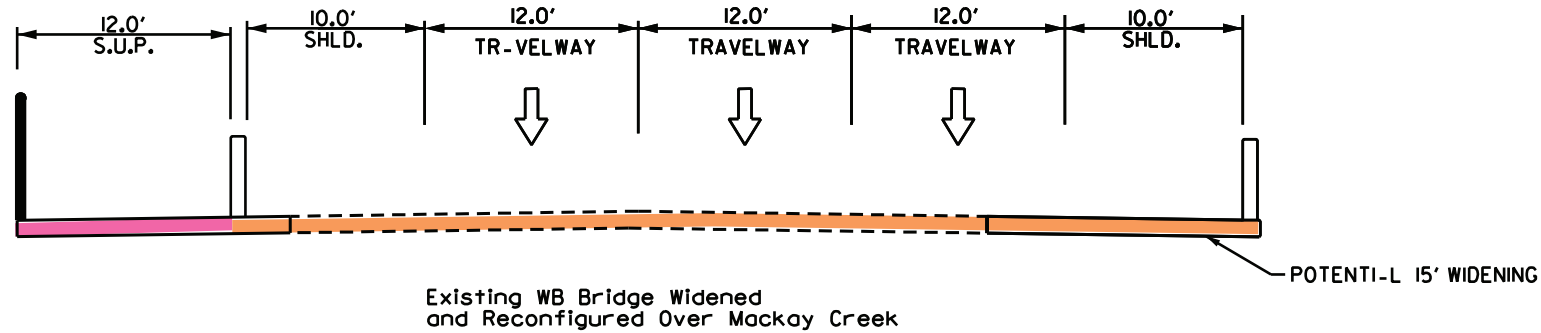


RECOMMENDATION

- The Traffic Model projections include a 1.19% annual growth rate in trips
- The Regional Traffic Model by LATs is the best tool available for forecasting. It was recalibrated based on actual trips in the region, and forecasts are consistent and in keeping with projected growth trends in trips to the Island.
- If no improvements are made, the corridor would reach maximum capacity (Level of Service F) by 2025.
- Forecasts for rate of growth and future trips are in keeping with best practices, warranting **3 lanes in both directions** throughout the corridor.

2 - NEW VS. REHABILITATED BRIDGES

REHABILITATED BRIDGE STUDY



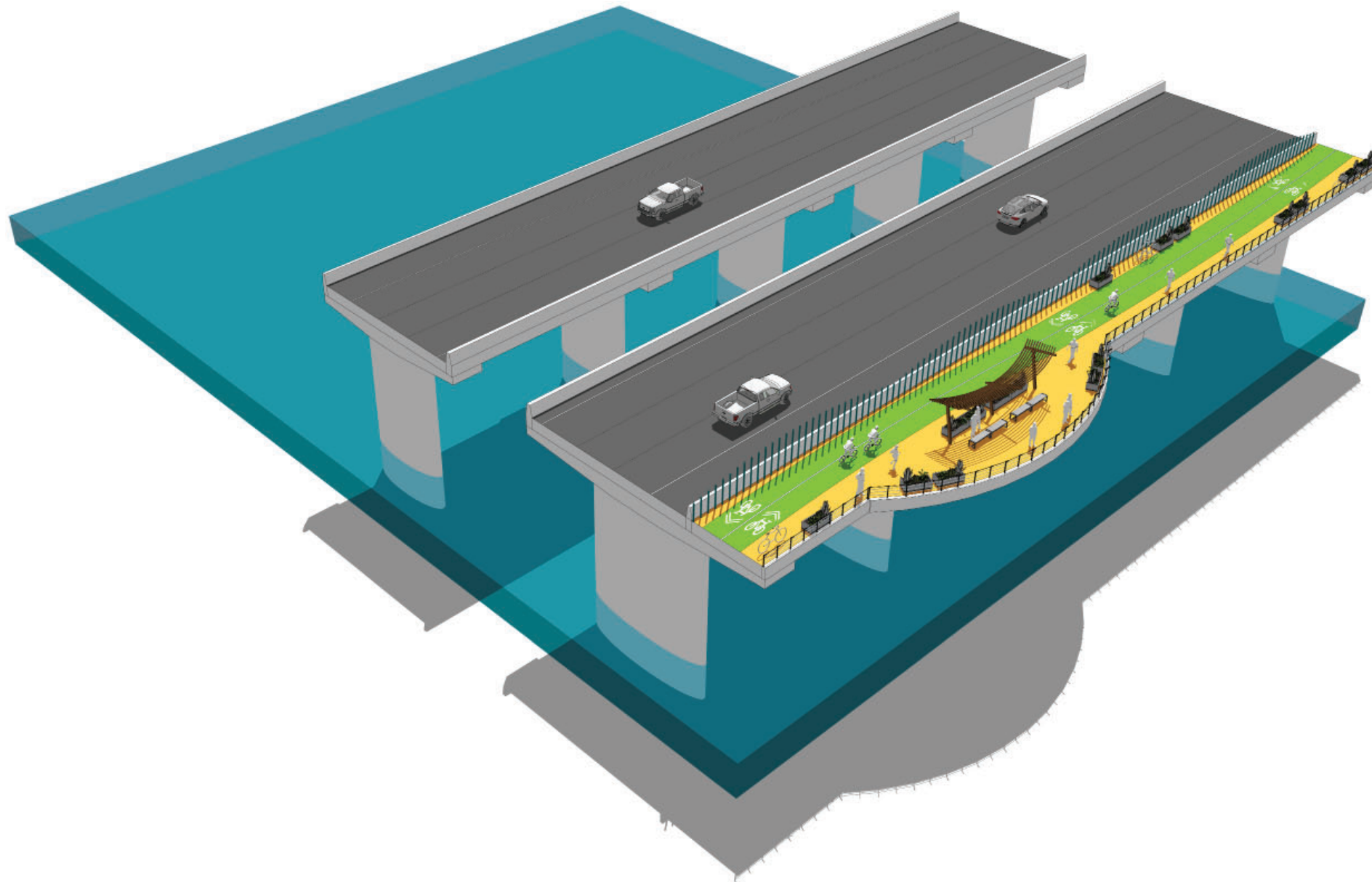
CONSIDERATIONS

- + Multiple bridges provide **redundancy for emergency evacuation** routes.
- + Bridge rehabilitation and construction estimated at approx. \$180M-200M, an overall **savings of \$20M-40M** from the current SCDOT estimate for bridge replacement (\$220M).
- + If repaired, the existing bridges would have a **remaining lifespan of approx. 30-35 years** (compared with new bridge lifespan of approx. 75 years).
- All **existing bridges must be modified** to accommodate retrofits and to meet seismic requirements
- Skull Creek bridge height approaching Pinckney Island from east **requires wetland impacts** to grade-separate the Pinckney Island at-grade intersection.
- 4 lanes of traffic open during construction requires complex phasing on bridges & **adds an estimated 2 years**, an overall project schedule of 5 years.
- An **extended timeline would incur additional project costs**, further reducing overall savings.

2 – NEW VS. REHABILITATED BRIDGES

RECOMMENDATION

- Provide 3 lanes in both directions on **2 new, separate bridge structures** to minimize amount of contiguous pavement
- Provide **quality bridge architecture** reflective of the Hilton Head brand
- Provide expanded trail and respite zones for an **improved pedestrian experience**



3 – WINDMILL HARBOUR INTERSECTION

GRADE-SEPARATED INTERSECTION STUDY



CONSIDERATIONS

- + Grade-separated intersection **maintains unhindered flow** through Jenkins Island
- + Ingress and egress **safety is improved** from existing conditions for Windmill Harbour, Hog Island, and RV park visitors
- + Consolidated Jenkins Island access **improves corridor efficiency**
- Geometry requires **increased wetland impacts**
- Grade-separated intersection **adversely impacts parkway character and diminishes gateway experience**
- Elevated intersection **increases noise disturbance** in Windmill Harbour
- Construction **requires significant cost increase** over SCDOT proposal

3 – WINDMILL HARBOUR INTERSECTION

RECOMMENDATION

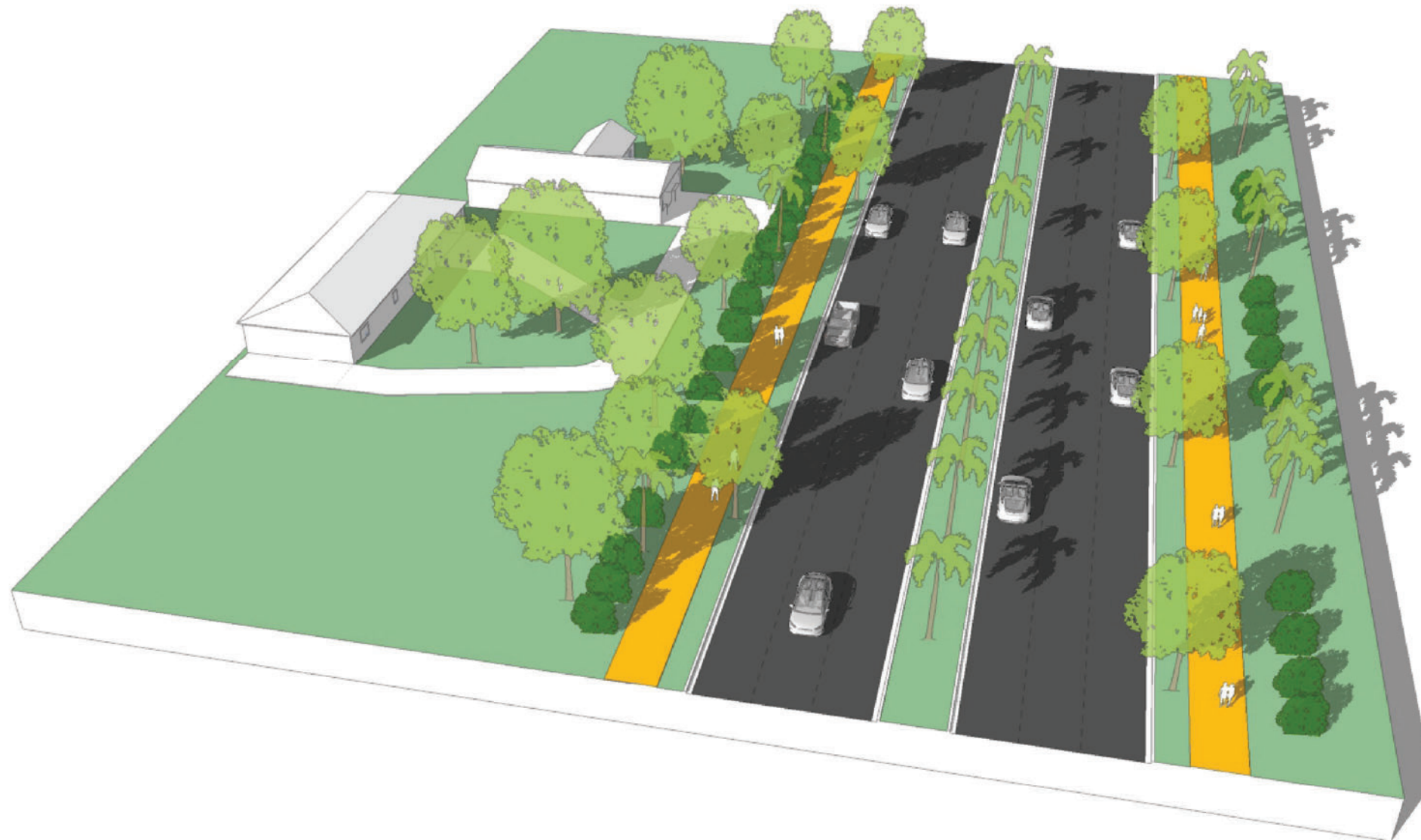
- Consolidate all Jenkins Island access into a **single intersection** for safety and efficiency
- Provide a **new smart signal** at the Windmill Harbour intersection
- Shift the intersection north from the current location to **provide additional clearance** from the Windmill Harbour entrance



4 - STONEY TYPICAL SECTION

RECOMMENDATION

- Improve the Stoney corridor by:
 - Reducing lane widths to 11'
 - Minimize or eliminate acceleration lanes
 - Optimizing curbless median widths while improving safety & character
 - Implementing trails & tree lawns on both sides of the parkway
 - Reducing design & posted speeds throughout the corridor



5 - STONEY TCP DISRUPTION (TRADITIONAL CULTURAL PROPERTY)

RECOMMENDATION

- SCDOT Alternate requires impacts along 278 with lane widening & acceleration lane, and improvements along Old Wild Horse Rd.
- Local Preferred Option requires impacts along Squire Pope Rd. due to eastbound dual left turns
- Local Preferred Option represents **a reduction in TCP impact** over SCDOT Preferred Alternate



6 – STONEY RESIDENT ACCOMMODATIONS

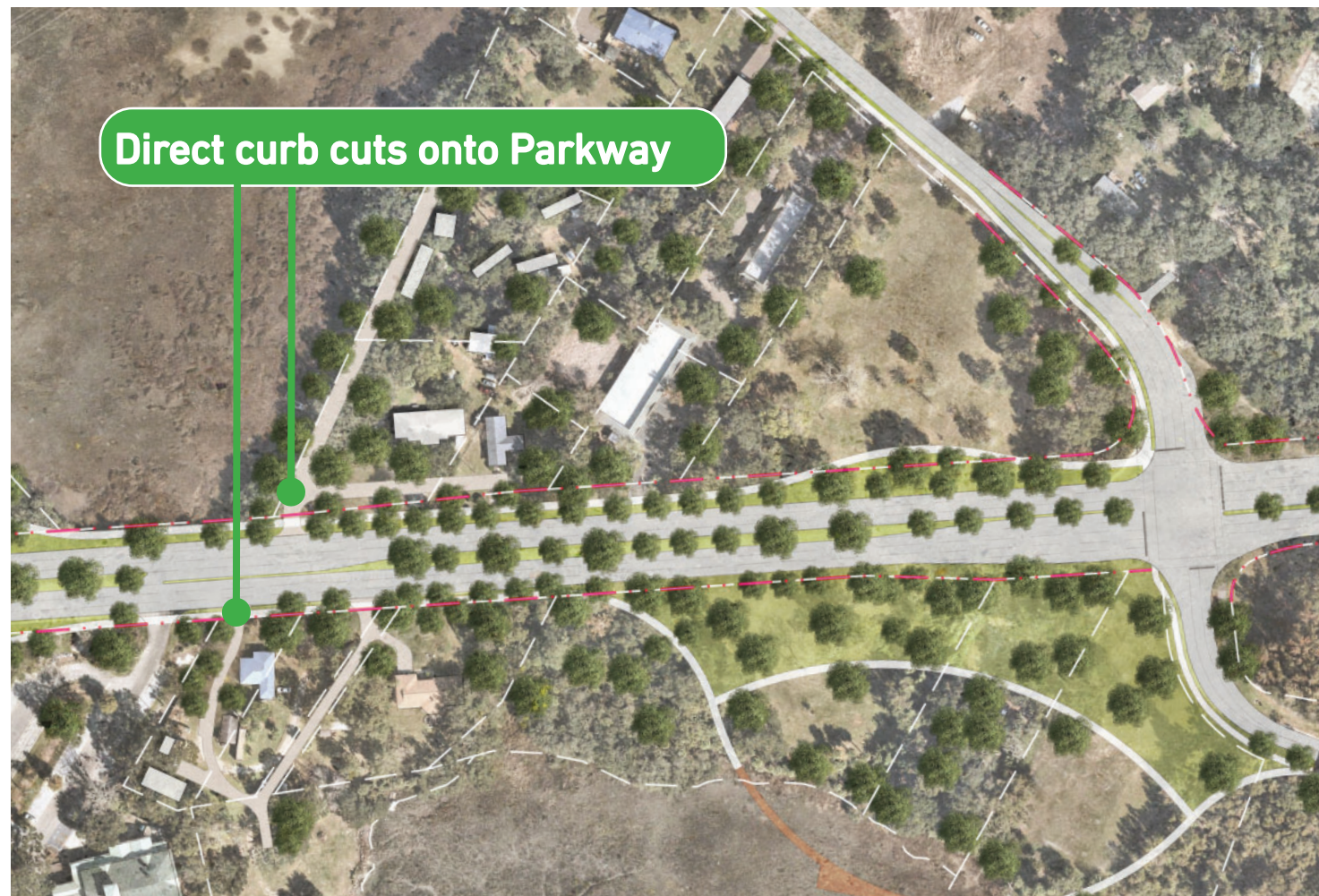
CONSIDERATIONS

- The Project Team conducted **10 meetings on-site** with Stoney property owners to discuss potential solutions for improvement to SCDOT plans, in addition to **10-15 phone calls** with property owners and their families.
- We heard critical feedback from numerous individuals highlighting key issues:
 - We need to consider **emergency evacuation routes**. Can there be another route onto and off of the island?
 - Can we **reroute the roadway somewhere else**?
 - Make recommendations that **avoid or minimize property impacts**
 - There are unsafe conditions along this section of 278. Please do something to **slow traffic and reduce noise**.
 - **Who will maintain access roads** if they're built? Is that a cost that will be placed on Stoney residents? If so, we don't want it.
 - **Don't change current traffic patterns** - we want to function like we do today (including curb cuts & left turns). There is also concern about **emergency vehicle access** to our property - please make sure we are not creating longer response time for first responders!
 - We need to **plan now for the next 25-50 years**.
 - We want opportunities to thrive here through **economic development, safe homesites, and celebration of culture**

6 – STONEY RESIDENT ACCOMMODATIONS

RECOMMENDATION

- Provide a short-term solution to **limit disruptions to Stoney residents** living along Parkway (*current resident preference*)
- Provide a design solution for long-term **safer residential access & separation from Parkway**
- Limit property impacts to Stoney property owners by **reducing/eliminating acceleration lanes, narrowing lane widths, & limiting ROW needed**
- Enhance **landscape screening for residences** and provide **median plantings in-line with the Parkway aesthetic**
- Provide a **marsh-front park** celebrating the culture and heritage of the Stoney community
- **Reduce design & posted speeds** throughout the corridor



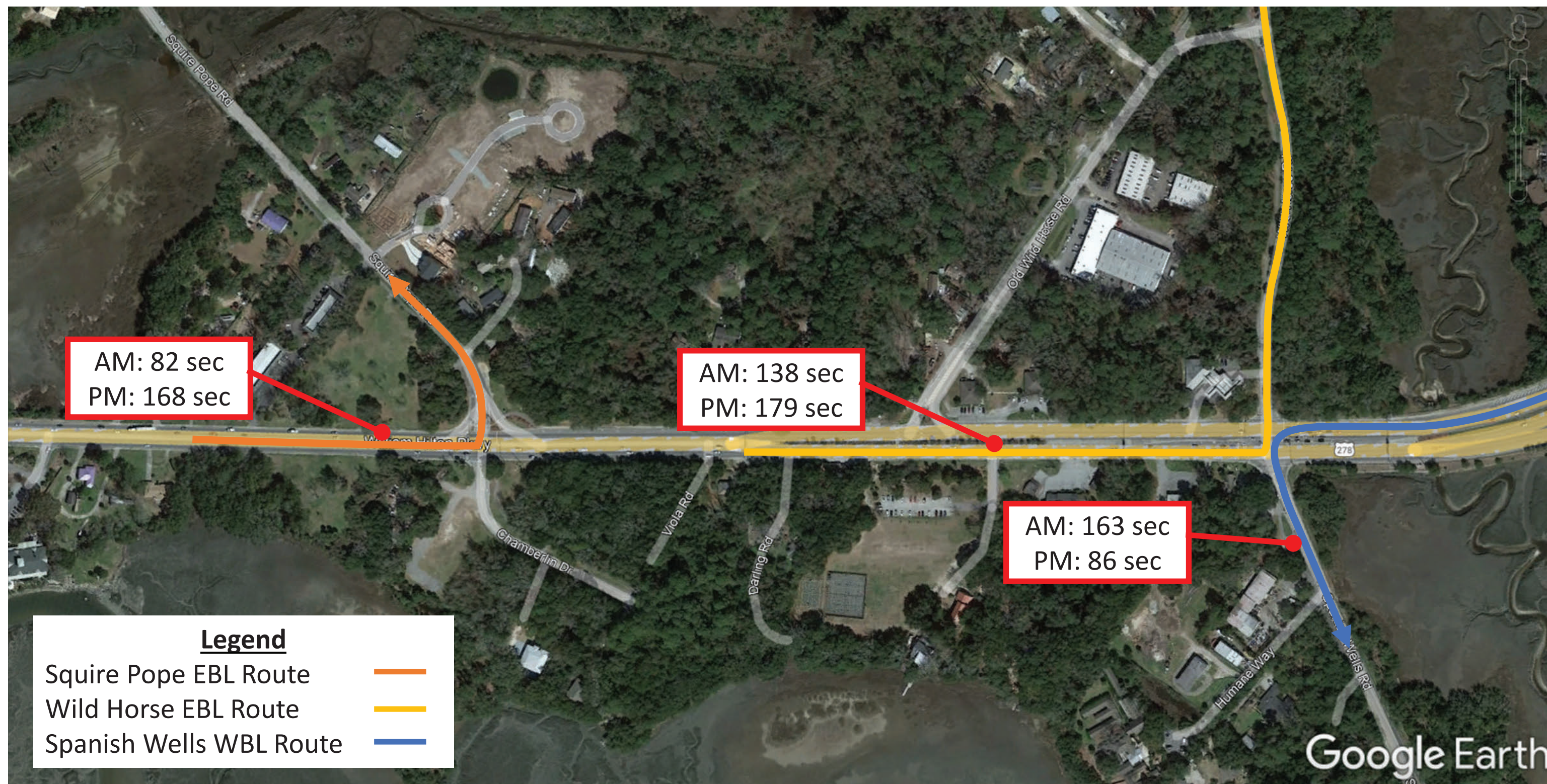
7 - STONEY CORRIDOR PERFORMANCE

TRAVEL TIMES (SCDOT ALTERNATIVE)



7 - STONEY CORRIDOR PERFORMANCE

TRAVEL TIMES (LOCAL PREFERRED CONCEPT)



7 – STONEY CORRIDOR PERFORMANCE

OVERALL TRAVEL TIME	WITHOUT IMPROVEMENTS	SCDOT PREFERRED ALTERNATE	LOCAL PREFERRED CONCEPT
AM Eastbound <i>(minutes)</i>	17.0	8.9	9.4
PM Westbound <i>(minutes)</i>	22.4	9.9	10.5

- The Local Preferred Alternative **meets the Town’s adopted standards** for Level of Performance (D)

EASTBOUND TURNS ONTO SQUIRE POPE

Configuration	Single Left	U-Turn at Old Wild Horse	Dual Lefts
<i>(PM, minutes)</i>	6.4	2.8	2.8

While similar in travel time, the Local Preferred Alternative maintains **legible & intuitive intersection design & traffic patterns**

RECOMMENDATION

- **No significant differences in travel times** between SCDOT Alternative & Local Concept
- Allow left turns at signals throughout Stoney with **no time of day restrictions**
- Provide **dual left hand turns at Squire Pope** intersection
- Keep Old Wild Horse at US278 in its **current configuration** *(one less signal within corridor vs. SCDOT alternative)*
- Improve Spanish Wells/Wild Horse intersection **maintaining all turning motions** as they currently exist

8 – DOWNSTREAM PERFORMANCE

CONSIDERATIONS

- Cross Island Parkway at Point Comfort Road and Sea Pines Circle **will reach LOS F by 2045 with current growth trajectory** and traffic pattern changes from the toll removal
- The intersections appear to be **within 5-10 years of reaching over-capacity conditions** during at least one peak hour of the day:
 - Sea Pines Circle may reach LOS F sooner than the Point Comfort Road signal
 - Point Comfort Road/Arrow Road LOS F could be mitigated with a westbound right turn lane
- The SCDOT project is **not expected to cause considerable change** in LOS at either intersection downstream (regardless of design alternate selected)
- No downstream eastbound impacts at Gumtree or Wilborn intersections for either alternative, but both will **improve westbound performance at Gumtree and Wilborn**

RECOMMENDATION

- The scope of the SCDOT project, regardless of alternate, **will not change the projected downstream performance** on the Island (inclusive of the Cross Island Parkway and William Hilton Parkway)

SUMMARY OF RECOMMENDATIONS

CORRIDOR-WIDE

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12. Evaluate the island-wide transportation system

SUMMARY OF RECOMMENDATIONS

ZONE-SPECIFIC

- 13. Encourage Moss Creek area improvements** *(commercial redevelopment, access/roadway improvements, trail connections)*
- 14. Establish “Gateway Experience” threshold at west end of Mackay Creek bridges** *(landscape, island “icon”, art, lighting)*
- 15. Reduce bridge mass with two separate bridges and Shared-Use Path on south side of eastbound bridge**
- 16. Reduce bridge lane width to 11’, reduce shoulder width on left, only one breakdown lane on right**
- 17. Provide 14’ minimum width non-motorized lane on bridge with multiple viewing areas and protection/screening of vehicles**
- 18. Attention to bridge design/details as viewed from afar and on-deck** *(parapet, railings, structural forms)*
- 19. Consolidate Jenkins Island access to one signalized location at C. Heinrichs/Windmill Harbour Entrance**
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- 22. Eliminate left turns and traffic introduction onto Old Wild Horse**
- 23. Create new park south of Parkway in Stoney to authentically showcase Gullah Geechee culture/heritage**
- 24. Consider a new Visitors Center as a part of this park that intentionally showcases this heritage while introducing visitors to the Island’s offerings**

ADDITIONAL POLICY DECISIONS:

- 25. Create a Stoney-authored vision plan for the next generation of that neighborhood**
- 26. Create and professionally staff a Development Corporation as a vehicle for Stoney Advancement**

NEXT STEPS

- + **Council Discussion & Vote on recommendations for Local Preferred Position**
- + **Discussion with State & County on Local Preferred Position & expectations to consider recommendations for the project**
- + **Continued coordination with Project Partners**

