

DURHAM • CHAPEL HILL • CARRBORO

DCHC

METROPOLITAN PLANNING ORGANIZATION

PLANNING TOMORROW'S TRANSPORTATION

US 70 East Corridor Study Phase 1 Final Report

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Andy Henry, DCHC MPO

Anne Redmond-Lenart, STV

May 14, 2024

DCHC MPO Technical Committee

<https://tinyurl.com/US70East>

Presentation Overview

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**Background
of the study**

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Background of the Study

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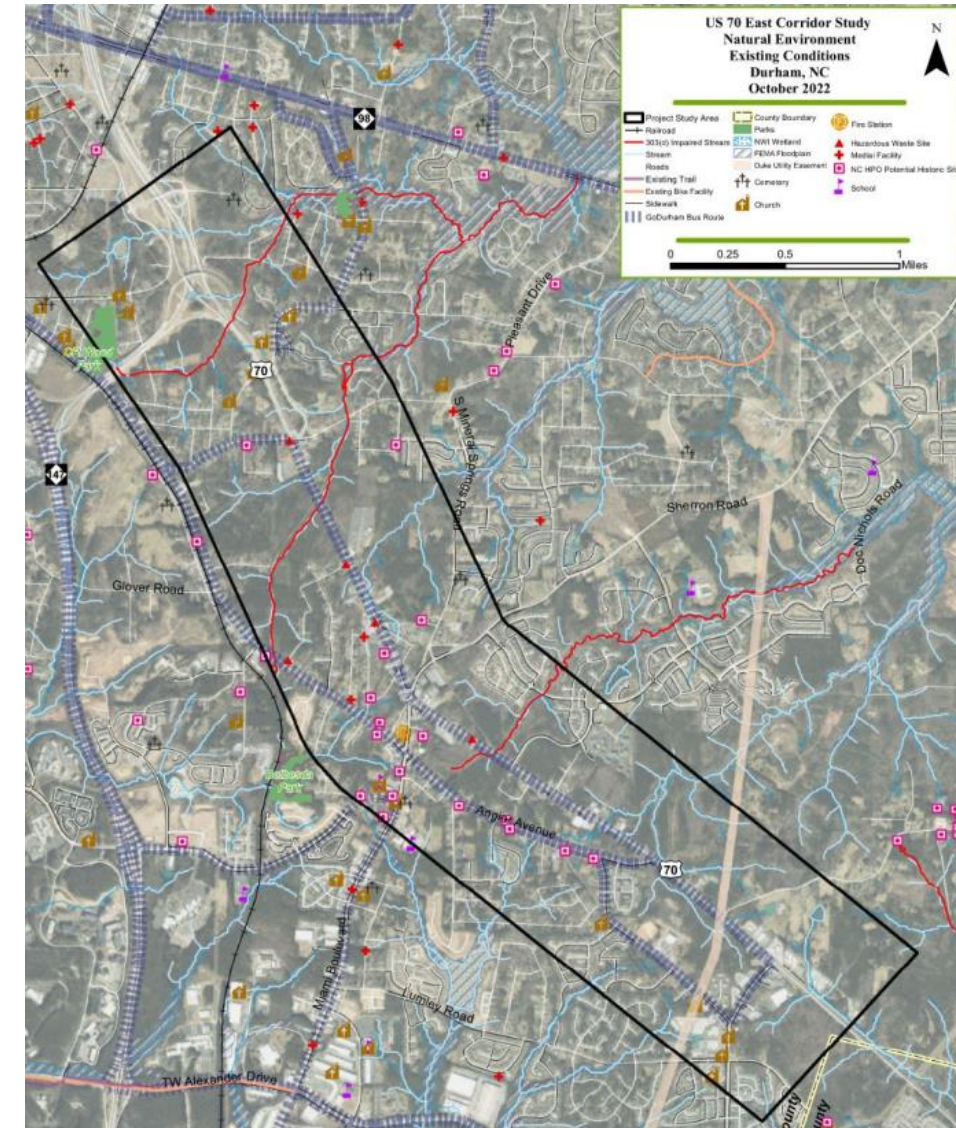
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Project Background

- **Study area:** 4 mile corridor, from I-885 to the future Northern Durham Parkway (near the Wake County border).
- Originally an NCDOT road widening and freeway conversion project (**U-5720**).
- Modernization in 2050 MTP, but was a 6-lane freeway conversion in previous MTPs.
- MPO staff was **directed to explore alternatives to consider multi-modal transportation options – including a boulevard option – along the corridor.**
- **Study began in July 2022.**



Consultant Team and Core Technical Team

- **STV** was selected as the prime consultant, and **Aidilisms** was selected as the subconsultant to lead public engagement efforts.
- A **Core Technical Team (CTT)** was developed to review and provide feedback on the development of alternatives. The CTT consisted of:
 - City of Durham
 - Durham County
 - Durham City-County Planning
 - GoTriangle
 - NCDOT Division 5
 - DCHC MPO



MPO Goal Alignment and Performance Measures

The Study team developed performance measures based on MPO goals to develop and analyze the alternative concepts during development.

DCHC MPO Goal	Focus	Performance Measure
Promote Safety, Health, and Well-Being	Walkability	Potential reduction factor for pedestrian involved crashes and exposure
	Bikeability	Potential bicycle-motorist involved crashes and exposure
Promote and Expand Multimodal & Affordable Choices	Walkability	Pedestrian experience and comfort
	Transit	Sidewalks / Multiuse Paths
Connect People & Places	Walkability	Pedestrian amenities along US 70 Y-lines (connecting side streets)
	Bikeability	Buffer protection from traffic, and bike network connectivity
Improve Infrastructure Condition & Resilience	Transit	Available ROW for Bus Stops / BRT Platforms
Protect the Human and Natural Environment and Minimize Climate Change	Greenspace	Impervious area
Manage Congestion & System Reliability	Vehicular Operations	Delay



Recap of the 2nd Round of Public Engagement

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Public Engagement – Round 2

In-person and Online Meetings:

- August 21 – Virtual Meeting
- August 26 and 31 – In-person at the P.O.O.F. Community Center
- September 7 – All-day drop-in at the Bethesda Ruritan Club facility

Community Engagement Ambassadors were used to extend outreach to minority and low-income community stakeholders to ensure equitable community engagement.



Feedback was requested on the design features of each alternative. Participants were requested to submit their thoughts to the **online survey** at each meeting so that all comments could be properly attributed to the right intersection and alternative.

- 81 people attended the in-person meetings
- 73 people attended the virtual meeting
- 195 survey responses received

Public Engagement – Round 2 Key Takeaways

- **Minimizing contact between bicyclists, pedestrians and cars was prevalent** for reasons of safety and making the experience of all travelers more pleasant.
- The concept's ability to **create greenway connections** was prevalent.
- **Concern that U-turns throughout the concept leads to longer travel times** and will not sufficiently address congestion.
- **More than 1/3 of comments were supportive of infrastructure that supports bicycle, pedestrian, and public transit along the corridor.**
- **22% are still interested in seeing the corridor converted to a freeway;** a portion of these respondents stated that the **parallel roads were a positive addition to the Alternative 2 concept.**



The Alternative Concepts

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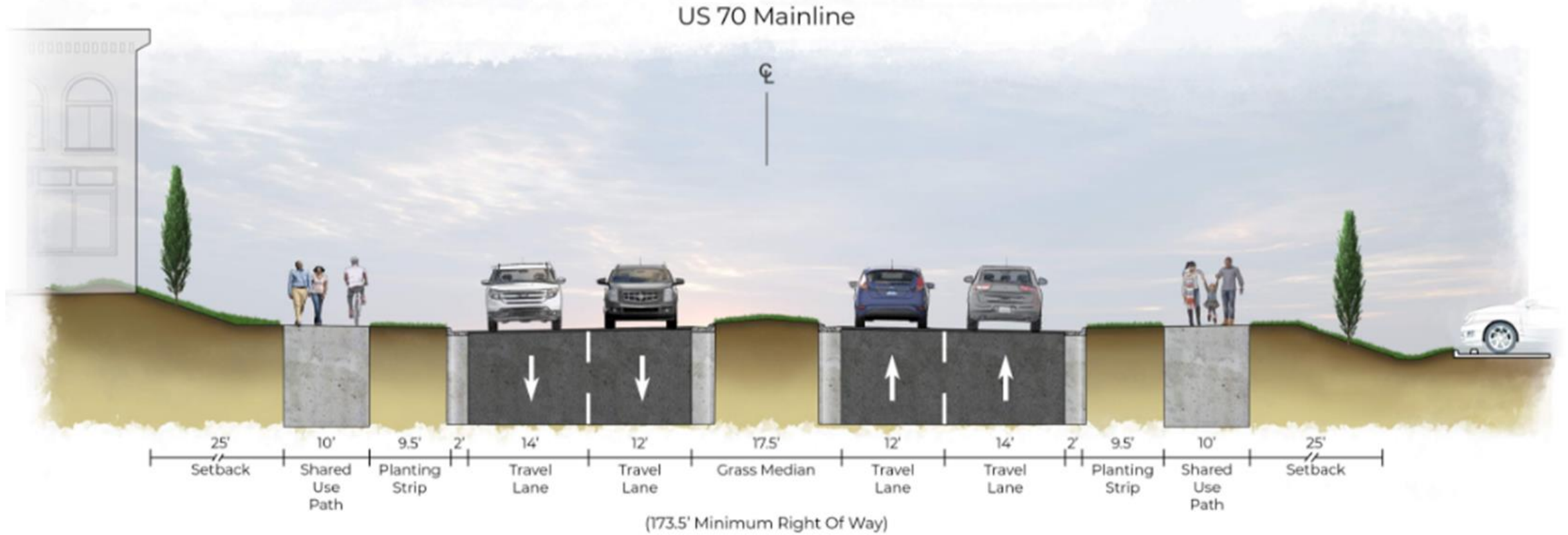
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KEY BENEFITS

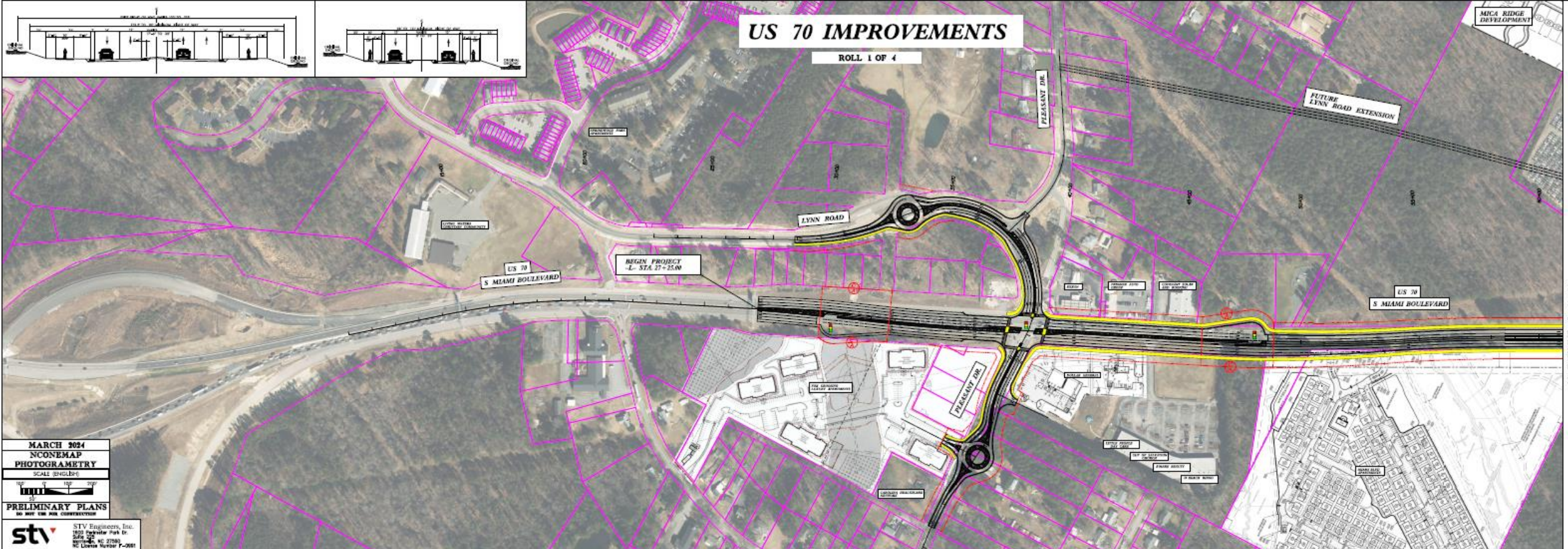
- **Improved Safety:** Reduces the number of conflict points where motorists, pedestrians and bicyclists may cross paths.
- **Increased Efficiency:** Eliminates left-turn movements from the main intersection, allowing for fewer traffic signal phases and reduces delay.
- **Shorter Wait Times:** Fewer traffic signal phases result in less time stopped at the main intersection.
- **Cost Effective:** More cost effective than adding additional through vehicular lanes.

Alternative 1 (4-Lane Boulevard)

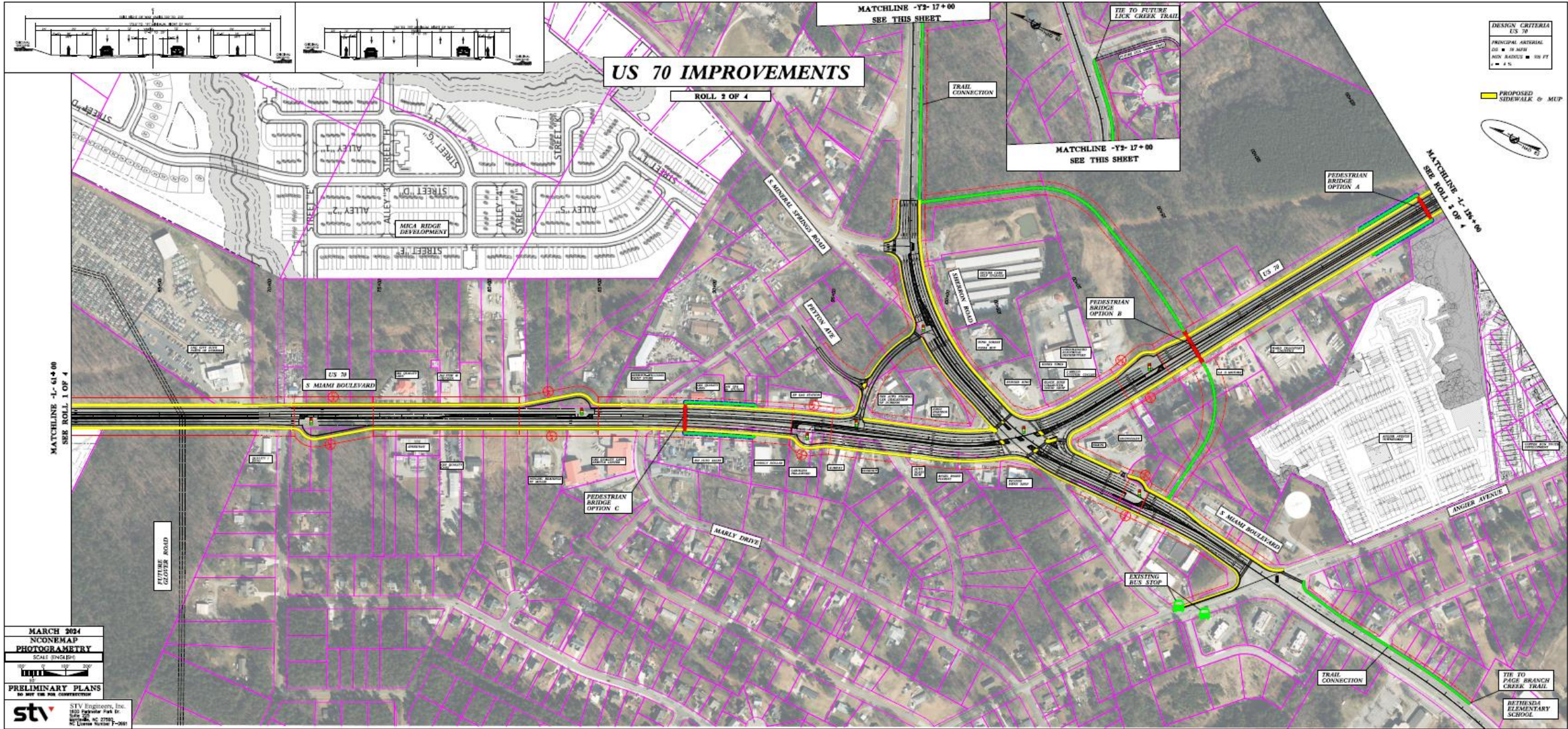


Existing Right-of-Way Varies:
180' From TW Alexander to Sherron Rd.
100' From Sherron Rd. to Pleasant Dr.
215' From Pleasant Dr. to I-885

Alternative 1 (4-Lane Boulevard)



Alternative 1 (4-Lane Boulevard)

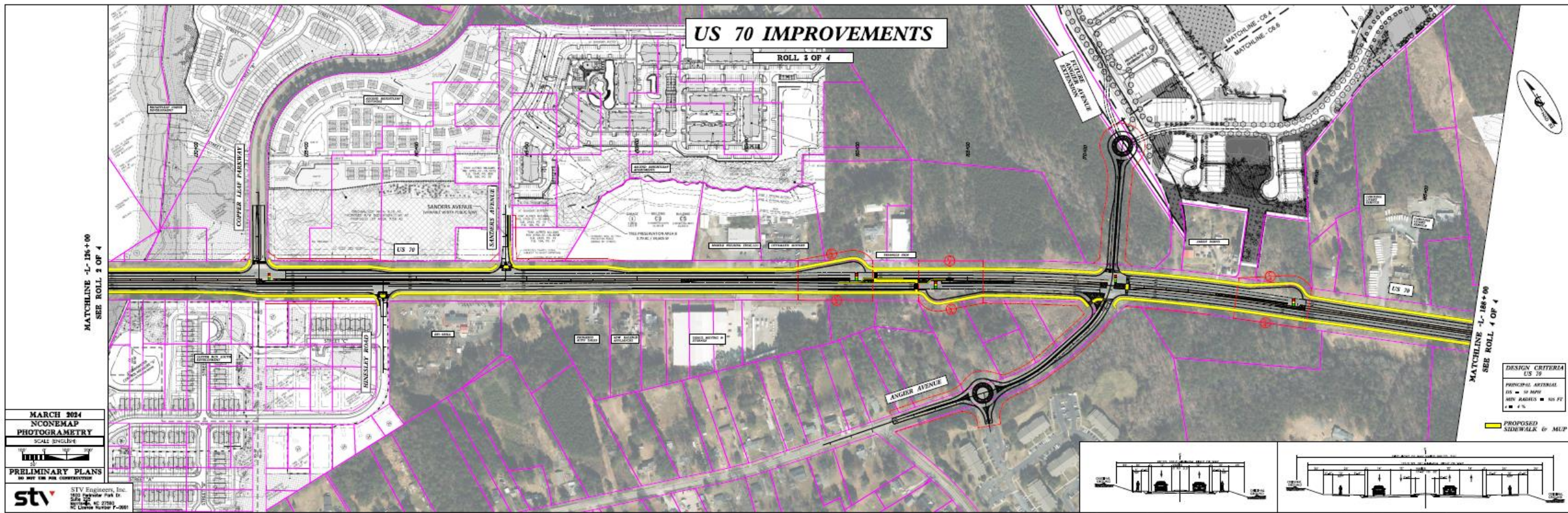


MARCH 2024
 NCONEMAP
 PHOTOGRAMMETRY
 SCALE ENGINEER

PRELIMINARY PLANS
 TO BE USED FOR CONSTRUCTION

stv STV Engineers, Inc.
 1833 Parkwater Park Dr.
 Suite 200
 Cary, NC 27513
 NC License Number E-0081

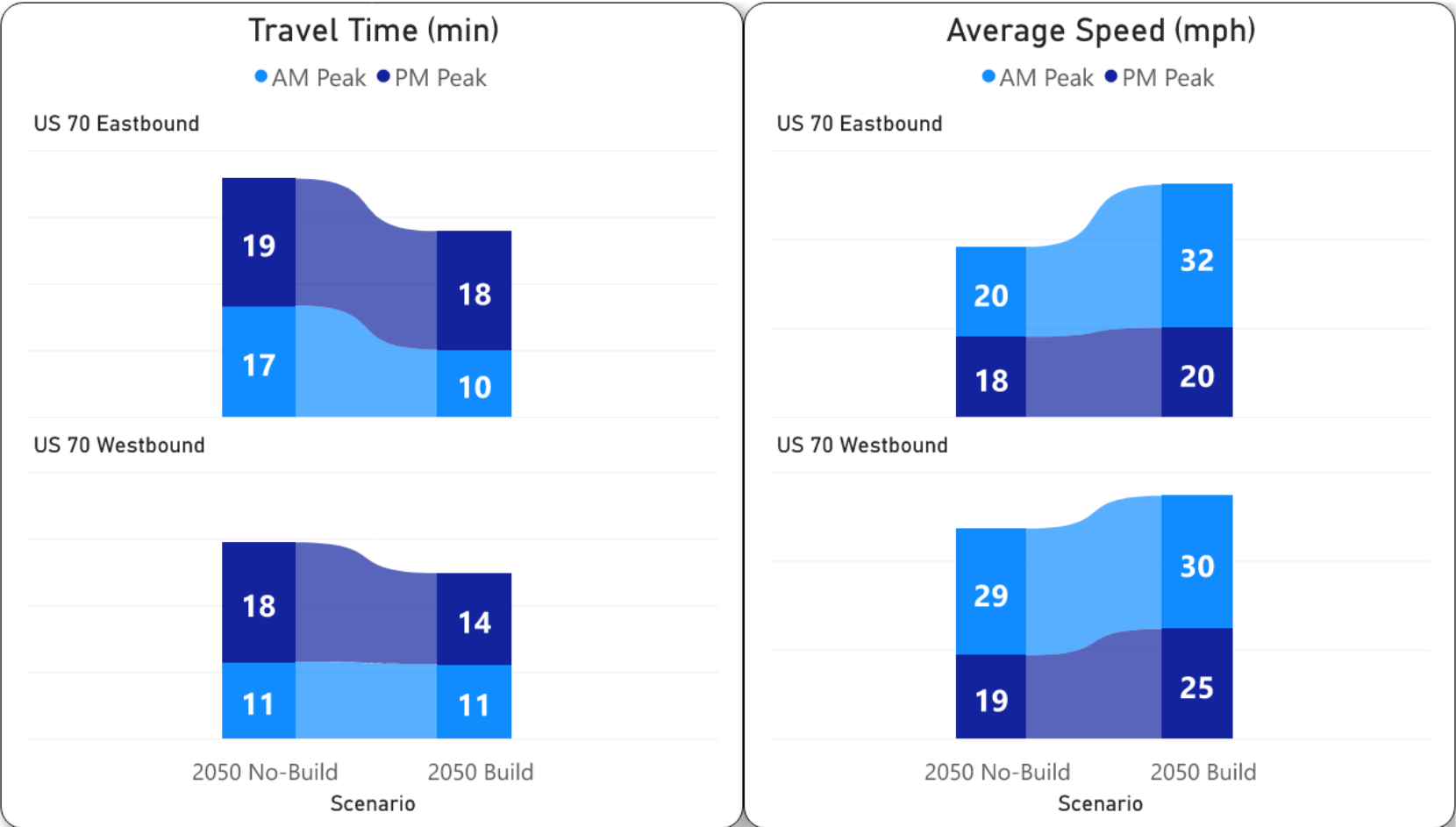
Alternative 1 (4-Lane Boulevard)



Alternative 1 (4-Lane Boulevard) Benefits

- This concept is a series of **innovative Median U-Turn intersections, also referred to as a Reduced Conflict Intersection (RCI) corridor.** Creating needed bicycle and pedestrian facilities with a multiuse path.
- **Enhancing safety by including crosswalks.**
- **Increased greenspace with upgraded stormwater treatment** to treat runoff leading to nutrient laden Lick Creek and Little Lick Creek.
- This concept does not include a parallel road network and therefore **will have fewer implementation barriers and substantially lower costs** than the Alternative 2 concept with the parallel road network.
- **Lick Creek Greenway and Brier Creek Trail/E. Fork Creek Trail connections** crossing US 70.

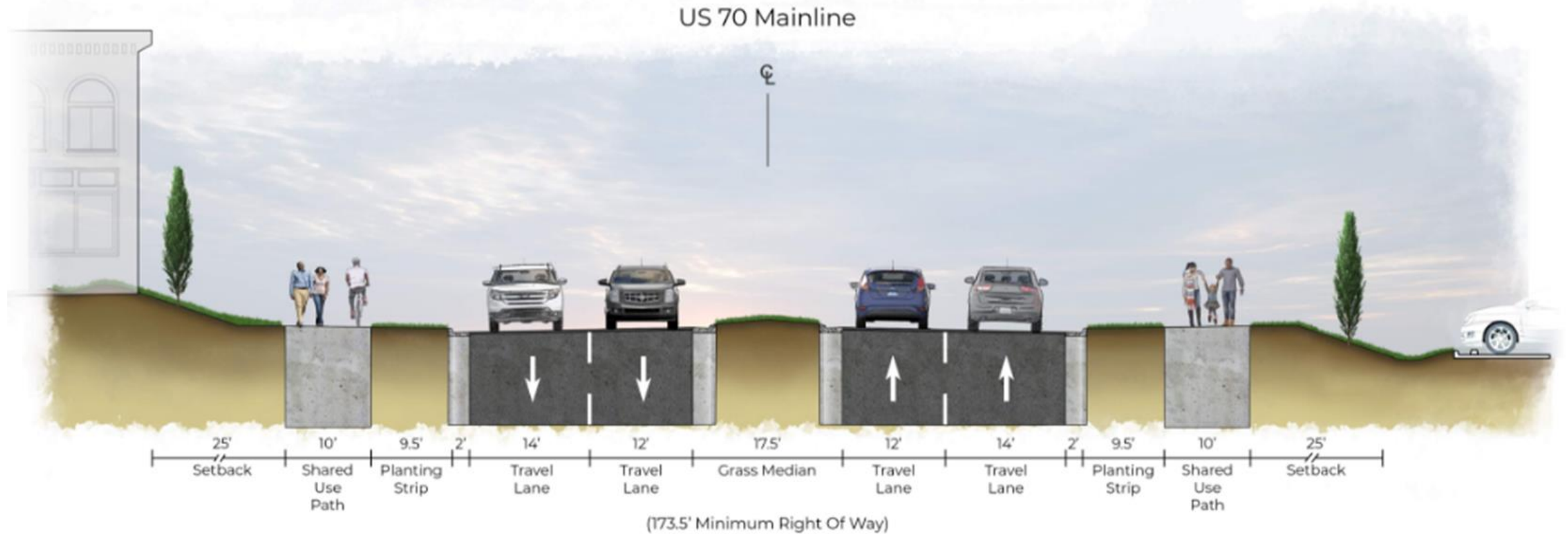
Alternative 1 (4-Lane Boulevard) Travel Time Savings



The travel times savings data shown was developed for Alternative 1. Travel time savings for Alternative 2 will be an output of the Study's Phase 2 Transmodeler scope of work, which is expected to produce increased travel time savings due to the addition of parallel roads.

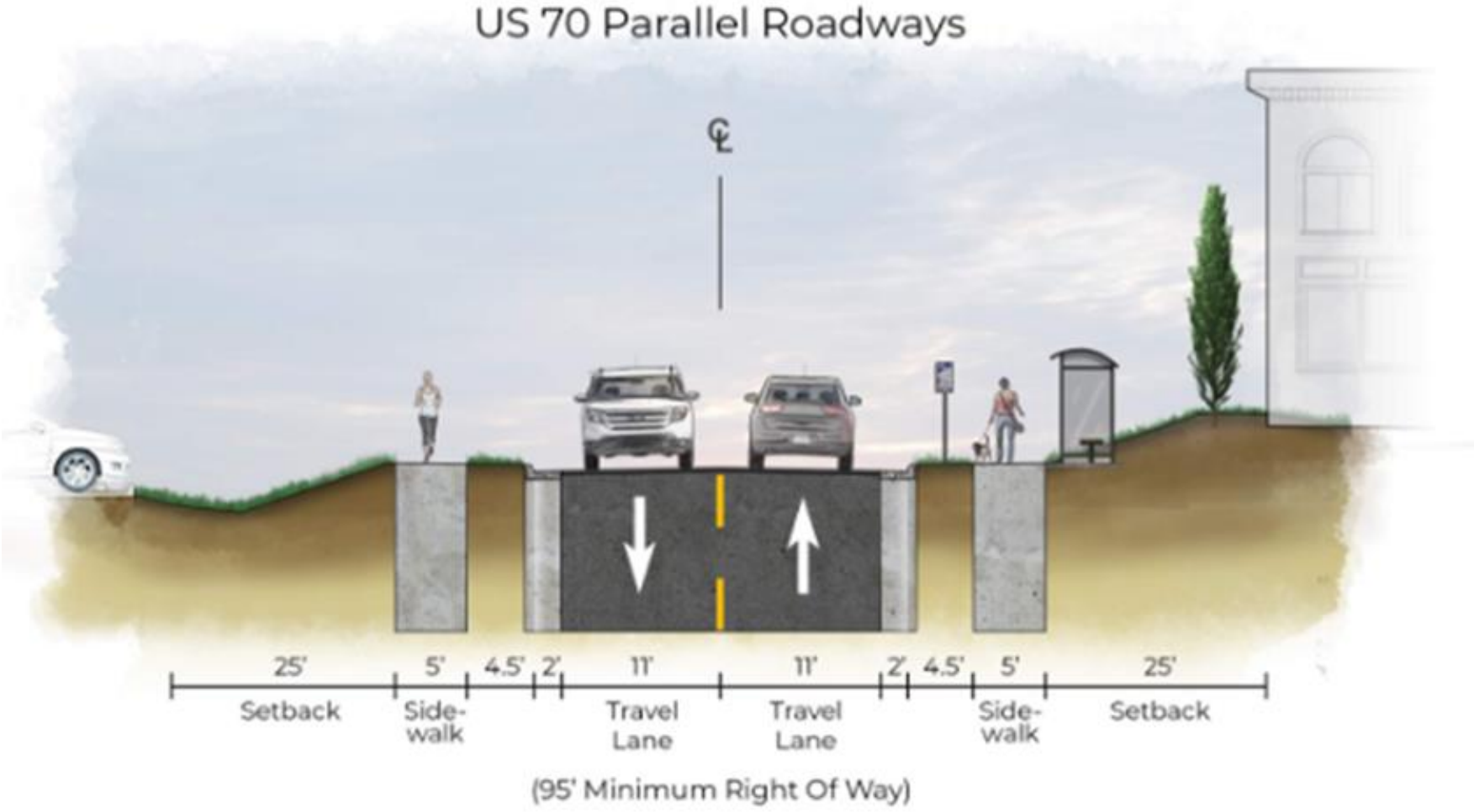


Alternative 2 (4-Lane Blvd w/ Parallel Road)

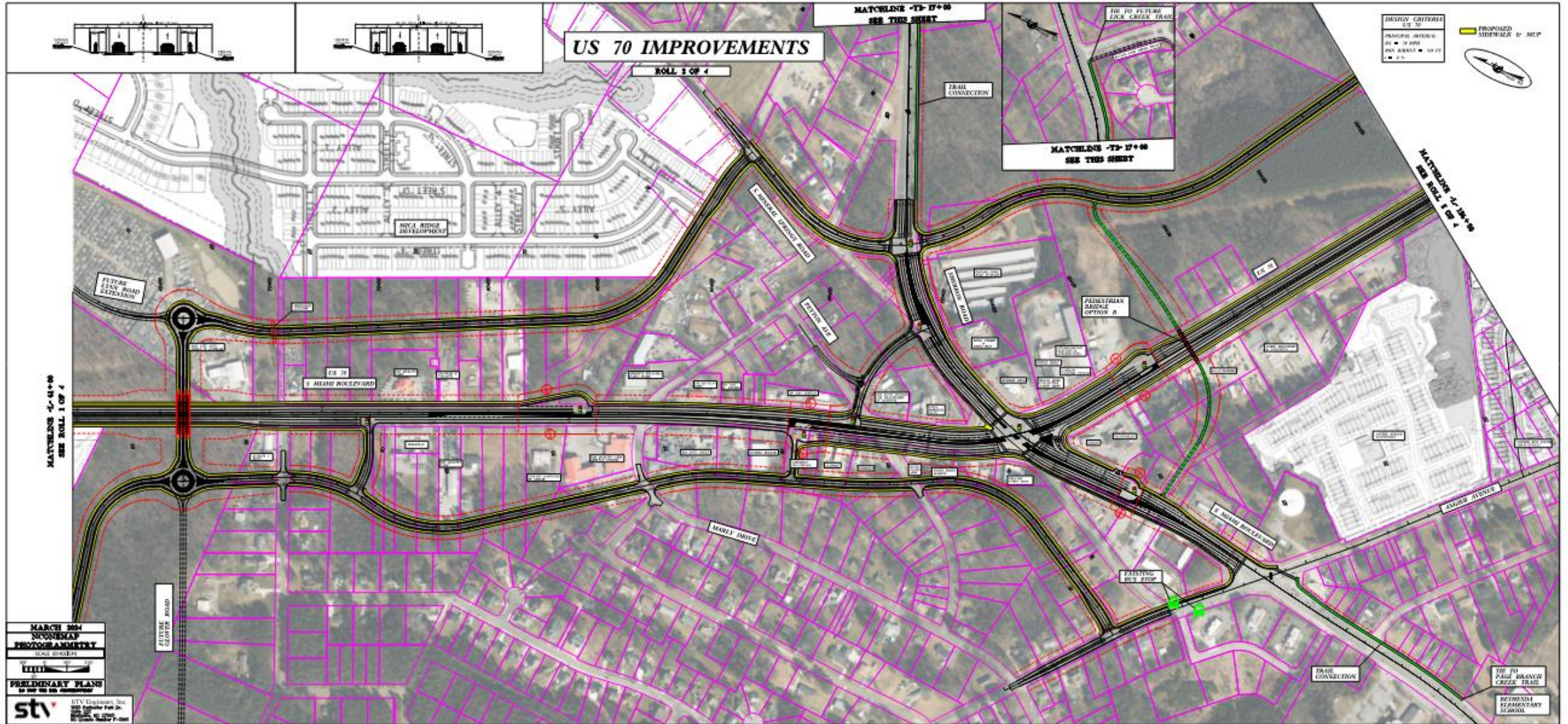


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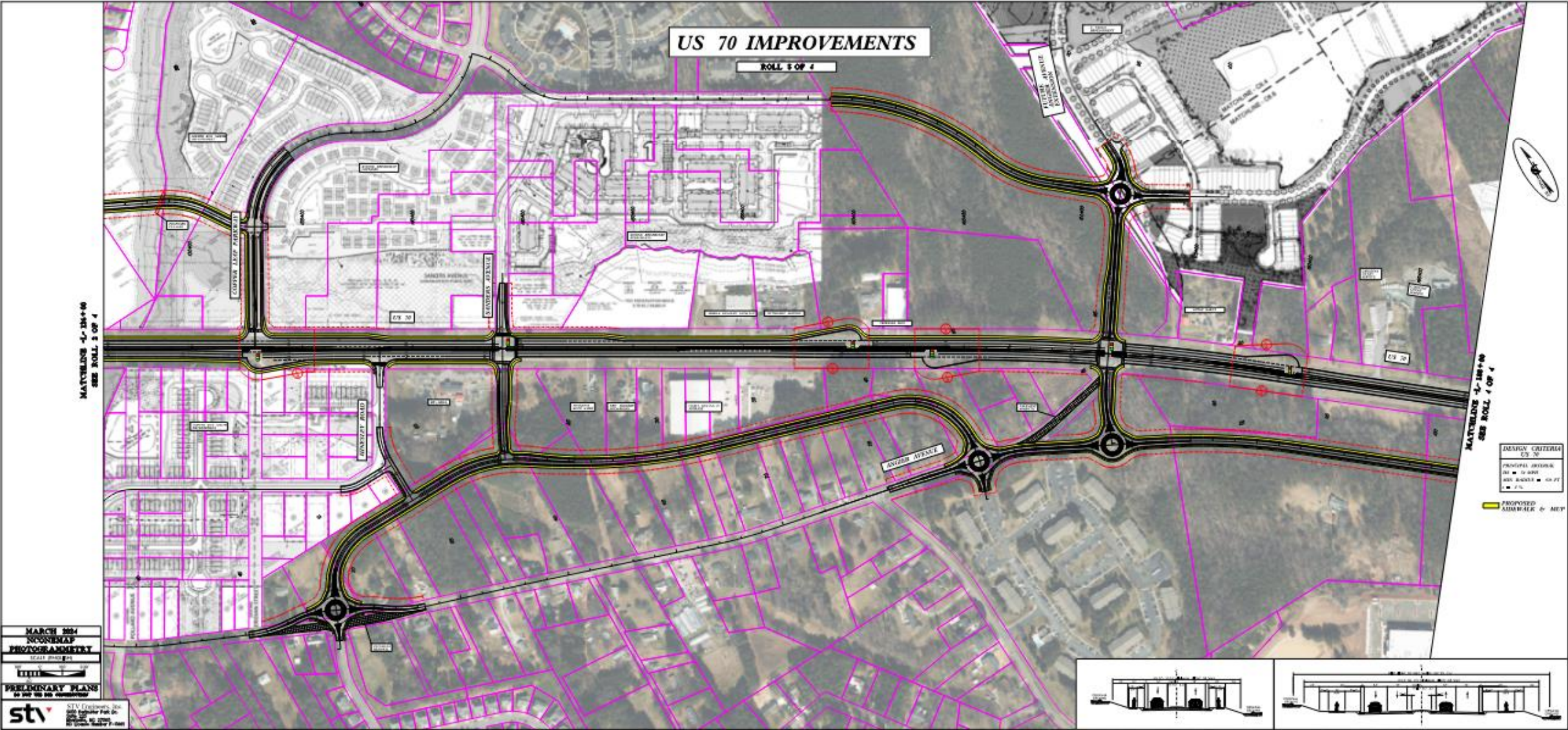
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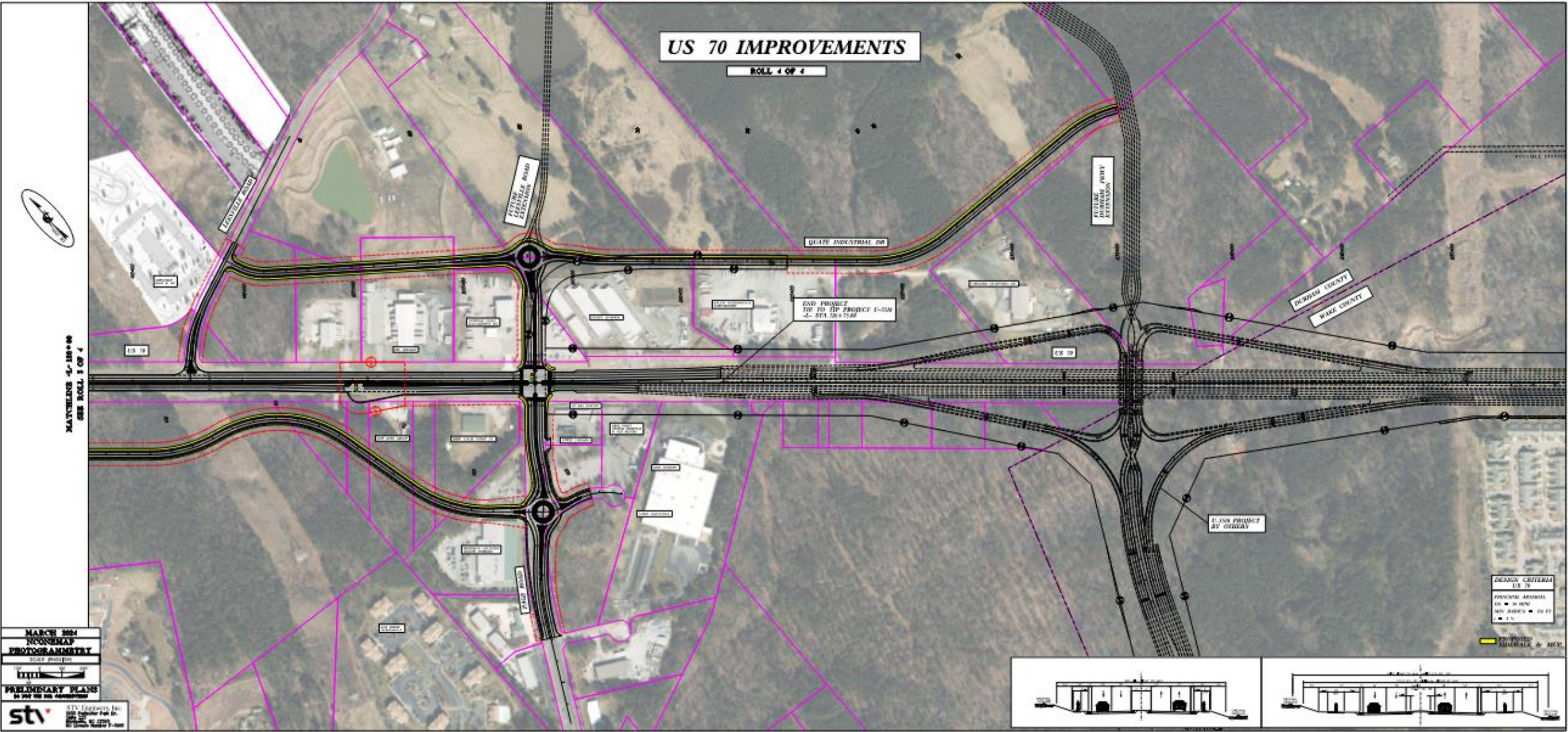
Alternative 2 (4-Lane Blvd w/ Parallel Road)



Alternative 2 (4-Lane Blvd w/ Parallel Road)



Alternative 2 (4-Lane Blvd w/ Parallel Road)



Alternative 2 (4-Lane Blvd w/ Parallel Road) Benefits

- Move high traffic volumes; separating through traffic from local traffic.
- Creating a generous bicycle and pedestrian space, and traffic calming on parallel roads.
- Increased greenspace.
- Opportunities to add community space.
- Offers sidewalks and bidirectional vehicular access to businesses.
- Improves safety on US 70 by reducing conflict points through access management.
- Better accommodates future transit opportunities on parallel roads.
- Offers commercial development opportunities to serve adjacent neighborhoods.
- Trail crossings of US 70 at Lick Creek Fork and Briar Creek/E. Fork Creek.

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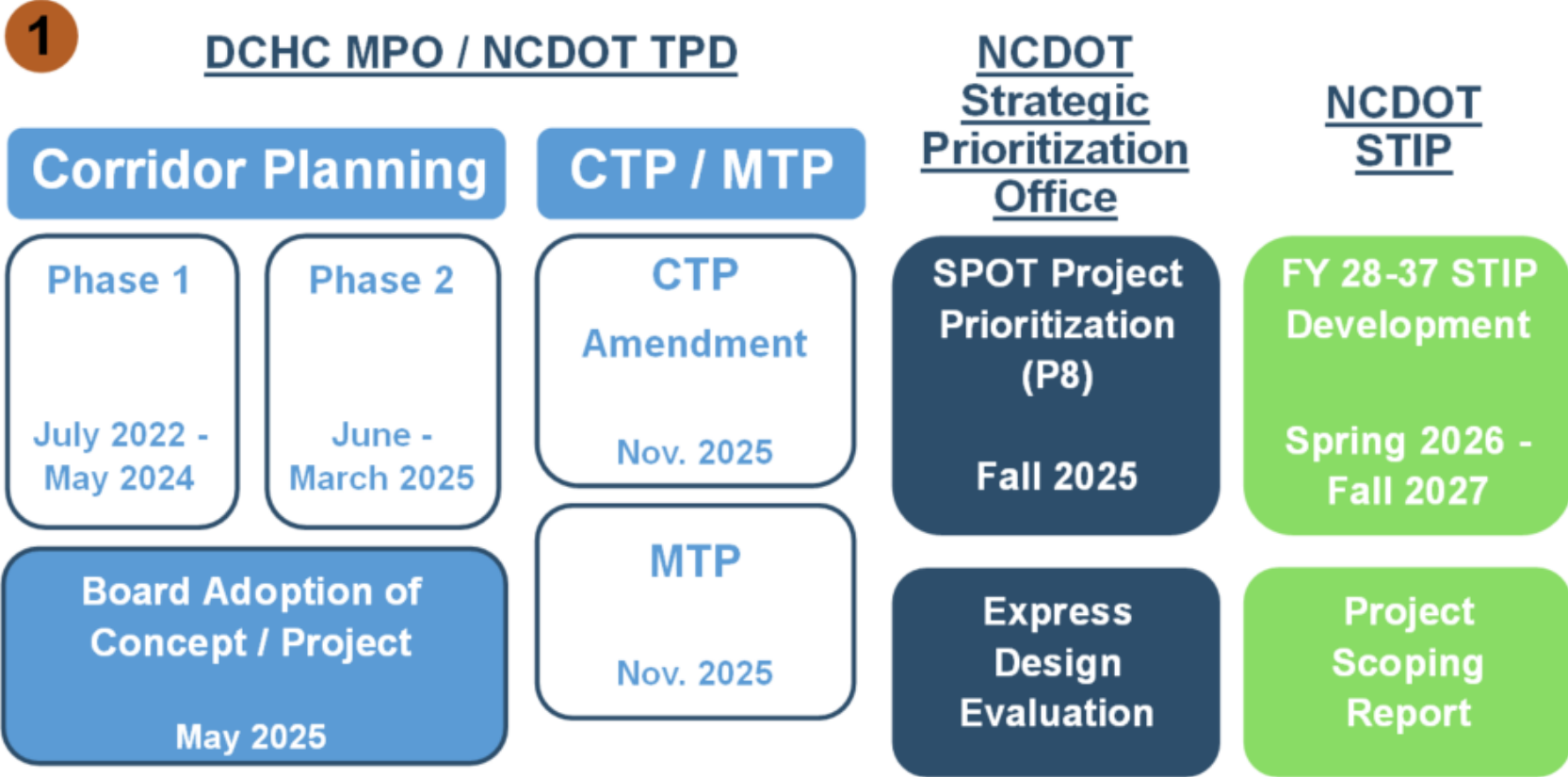
Next Steps: Phase 2

- To advance a thorough study of the US 70 East Corridor, DCHC MPO will partner with NCDOT and a consultant to commence a second phase of this study that will focus on:
 - **Additional traffic evaluation and analysis (Express Design Traffic Evaluation, or EDTE).** This process will analyze the recommendations from NCDOT and the MPO.
 - **High level evaluations** of the impacts and multimodal effectiveness of the recommendations.
 - **Public engagement** efforts that will entail a community education and concept refinement charette.
- Phase 2 is programmed in the MPO's FY2024 UPWP, and procurement is underway.



Next Steps: Project Planning Timeline

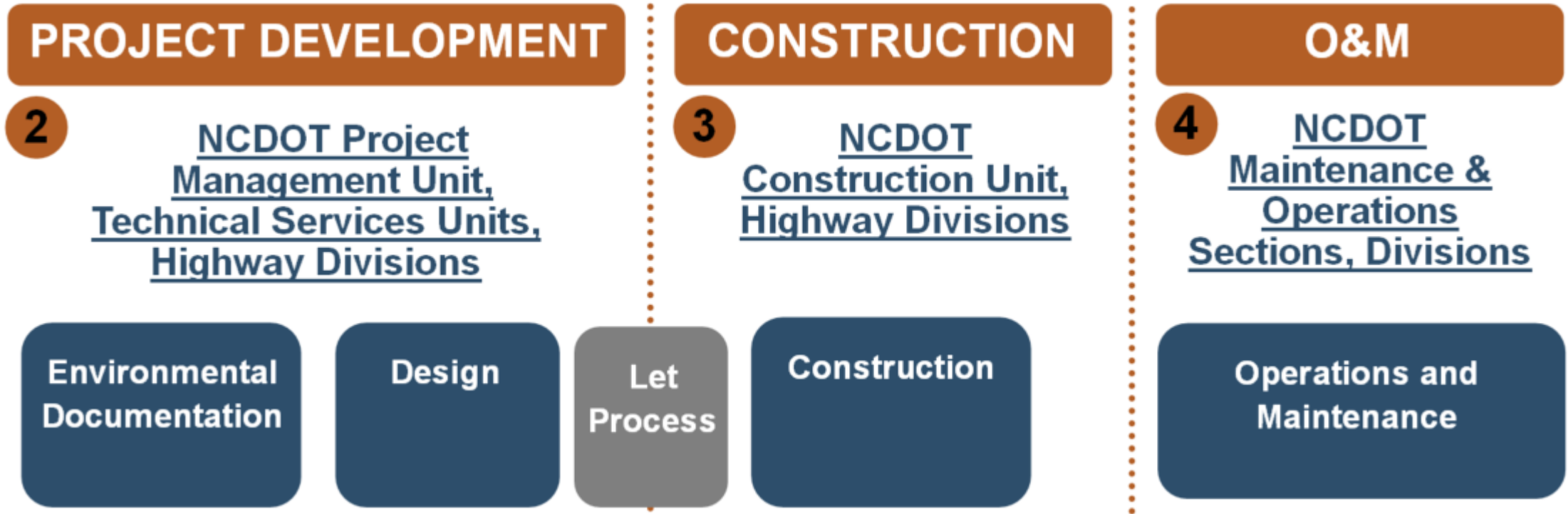
PROJECT PLANNING - MPO ALTERNATIVE SCENARIO



NCDOT ALTERNATIVE SCENARIO: U-5720A was submitted by NCDOT in SPOT P7 as an “Upgrade Arterial to Freeway/Expressway” improvement type on US 70 from Lynn Road to Page Road Extension. If funded and adopted as the preferred alternative by the MPO Board, this project would be programmed into the FY 26-35 STIP.



Next Steps: Project Timeline



2050 Metropolitan Transportation Plan (MTP) (adopted 2022)

- 4-lane modernization – [map link](#)
- Includes Northern Durham Parkway and adjacent thoroughfares

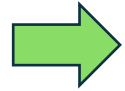
Comprehensive Transportation Plan (CTP) (adopted 2017)

- 6-lane divided with paved shoulders – [map link](#)
- Includes Northern Durham Parkway and adjacent minor thoroughfares

Wake-Durham Comprehensive Street Plan System (adopted 2000)

- US 70 is freeway – [map link](#)
- Includes Northern Durham Parkway and collector streets

Technical Committee (May 14, 2024)



- Receive the Phase 1 final report and presentation and provide comment, and forward to MPO Policy Board.

Policy Board (May 28, 2024)

- Receive the Phase 1 final report and presentation and provide comment.

Project updates, public engagement opportunities, past presentations, and the results from public engagement activities can be accessed at:

<https://www.dchcmpo.org/what-we-do/programs-plans/special-studies/us-70-corridor-study>

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