

# Community Leadership Meetings

April 24-25, 2018



## The goals of today's meeting are to:

- Provide you with an update since our last meeting.
- Present reasonable alternatives for the project.
- Answer questions related to the development process.
  - Gather your input and feedback.

# Project Goals

- Improved capacity along the corridor.
- Improved safety for bicyclists, pedestrians and commuters.
- Improved capacity at the intersection of Highway 41 and Highway 17.
- The completion of the Gregorie Ferry Road connector.

# Preliminary Purpose & Need

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- The primary purpose of the proposed SC 41 Corridor Improvements project is to **reduce traffic congestion within the SC 41 corridor** to accommodate future traffic projections.
- The secondary purposes of the proposed SC 41 Corridor Improvements project are to **enhance safety** throughout the corridor, **improve transportation system and community connections**, and **provide bicycle and pedestrian accommodations**, while **minimizing community and environmental impacts**.
- The proposed project is needed to **address anticipated local and regional growth**, increased traffic congestion, **safety and emergency response concerns**, and inadequate interconnections of transportation modes, including pedestrian and bicycle facilities.

# Project Phases

WE ARE HERE!

## PHASE 1

- Introduction of the Project Letter of Intent
- Traffic Analysis and Field Data Collection
- Development of Conceptual Alternatives
- Determine NEPA Class of Action

## PHASE 2

- Environmental Assessment or Impact Statement & Completion of NEPA process
- Perform preliminary alternatives development
- Conduct alternatives analysis
- Identify proposed alternative(s)

## PHASE 3

- Final Design and Permitting
- Procurement

## PHASE 4

- Construction

# National Environmental Policy Act (NEPA)

A NEPA document is required for projects requiring a federal action to:

- Provide for an informed decision-making process
- Include partners in the process
- Consider a wide variety of factors

## STEP 1

### Initiate the Environmental Process

- Develop purpose and need
- Collect baseline data
- Conduct agency and public scoping meetings
- Begin developing alternatives

## STEP 2

### Collect Data

- Analyze existing conditions
- Identify needed studies
- Begin preparation of the environmental report

## STEP 4

### Publish Draft Environmental Document

- Release Draft environmental report
- Conduct public meetings
- Hold public comment period
- Review all public/agency comments received

## STEP 3

### Analyze Alternatives

- Begin alternatives analysis
- Analyze the environmental impacts of alternatives

## STEP 5

### Publish Final Environmental Document

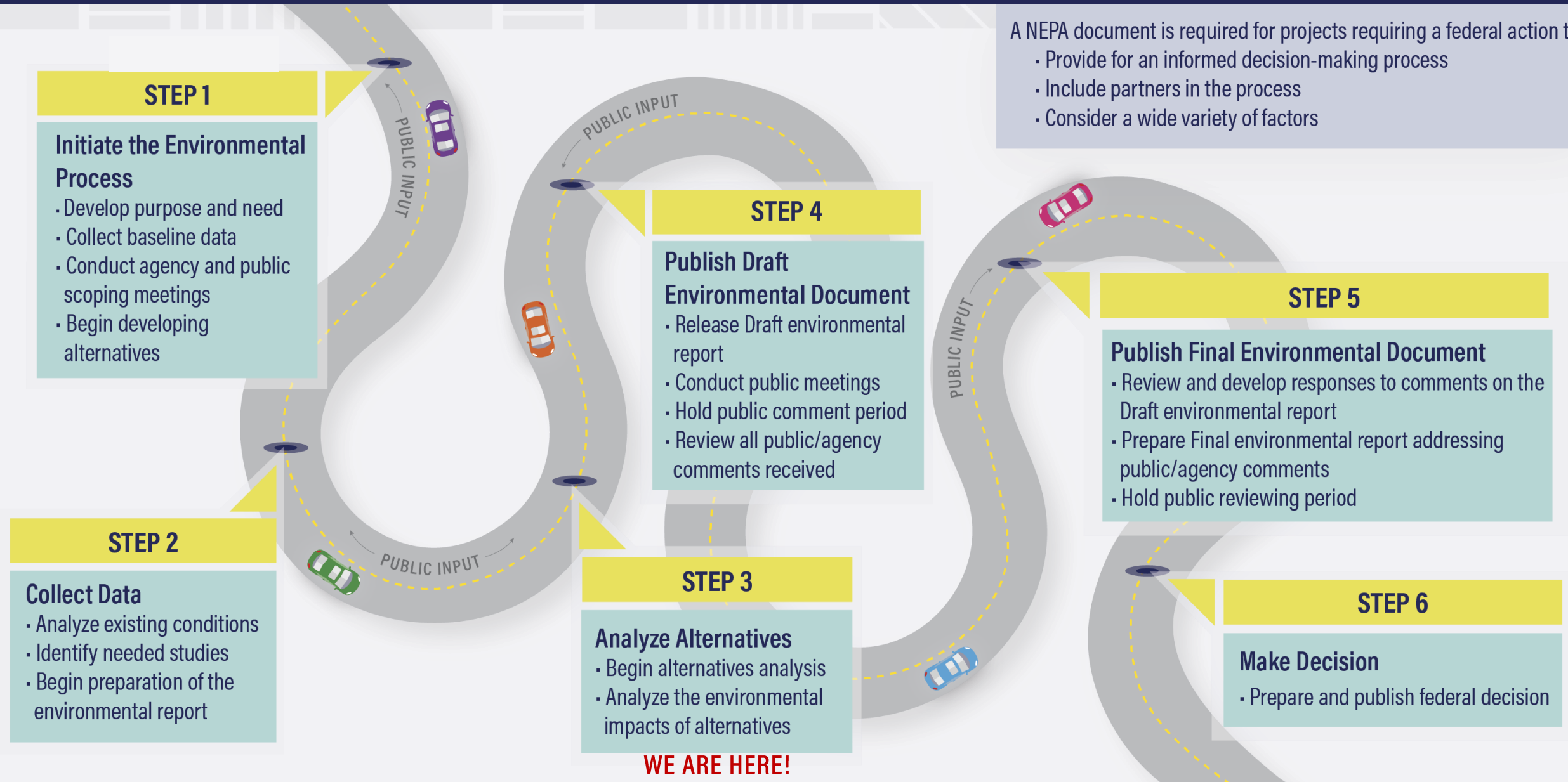
- Review and develop responses to comments on the Draft environmental report
- Prepare Final environmental report addressing public/agency comments
- Hold public reviewing period

## STEP 6

### Make Decision

- Prepare and publish federal decision

**WE ARE HERE!**





# Factors examined in the environmental review:



AIR QUALITY



COSTS



HISTORIC/CULTURAL RESOURCES



ARCHITECTURAL/ ARCHAEOLOGICAL RESOURCES



ENDANGERED SPECIES



NEW/PLANNED DEVELOPMENTS



BUSINESSES



EXISTING/PLANNED UTILITIES



NOISE



CEMETERIES



FARMLANDS



RESIDENTIAL AREAS



CHURCHES, SCHOOLS, PARKS



FLOODPLAINS



STATE/FEDERAL LANDS



CONSTRUCTION FEASIBILITY



HAZARDOUS MATERIALS



WETLANDS/ WATERWAYS





# Noise

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- Existing noise levels have been measured within the project area.
- Sensitive receivers, such as residences, churches, and parks, have been identified.
- Noise analysis of the reasonable alternatives will begin this summer.
- Noise barrier analysis will be completed on the preferred alternative.

All considerations will be made based on SCDOT's Noise Abatement Policy.

# Cultural Resources

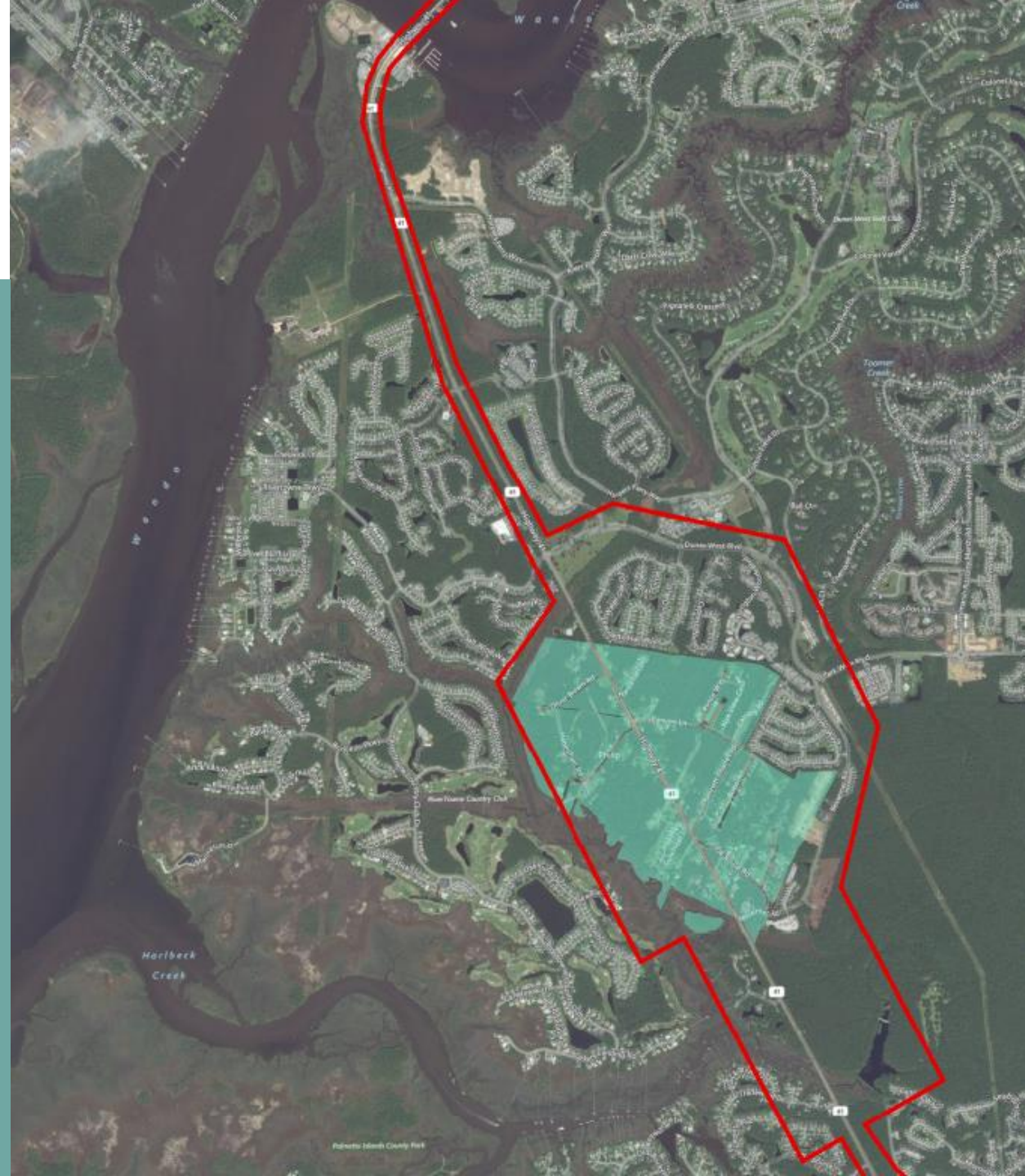
A separate cultural resources study was conducted to document the Phillips Community Cultural Landscape, a National Register of Historic Places-eligible historic district.

**05** Previously identified archaeological sites

**09** Newly identified archaeological sites

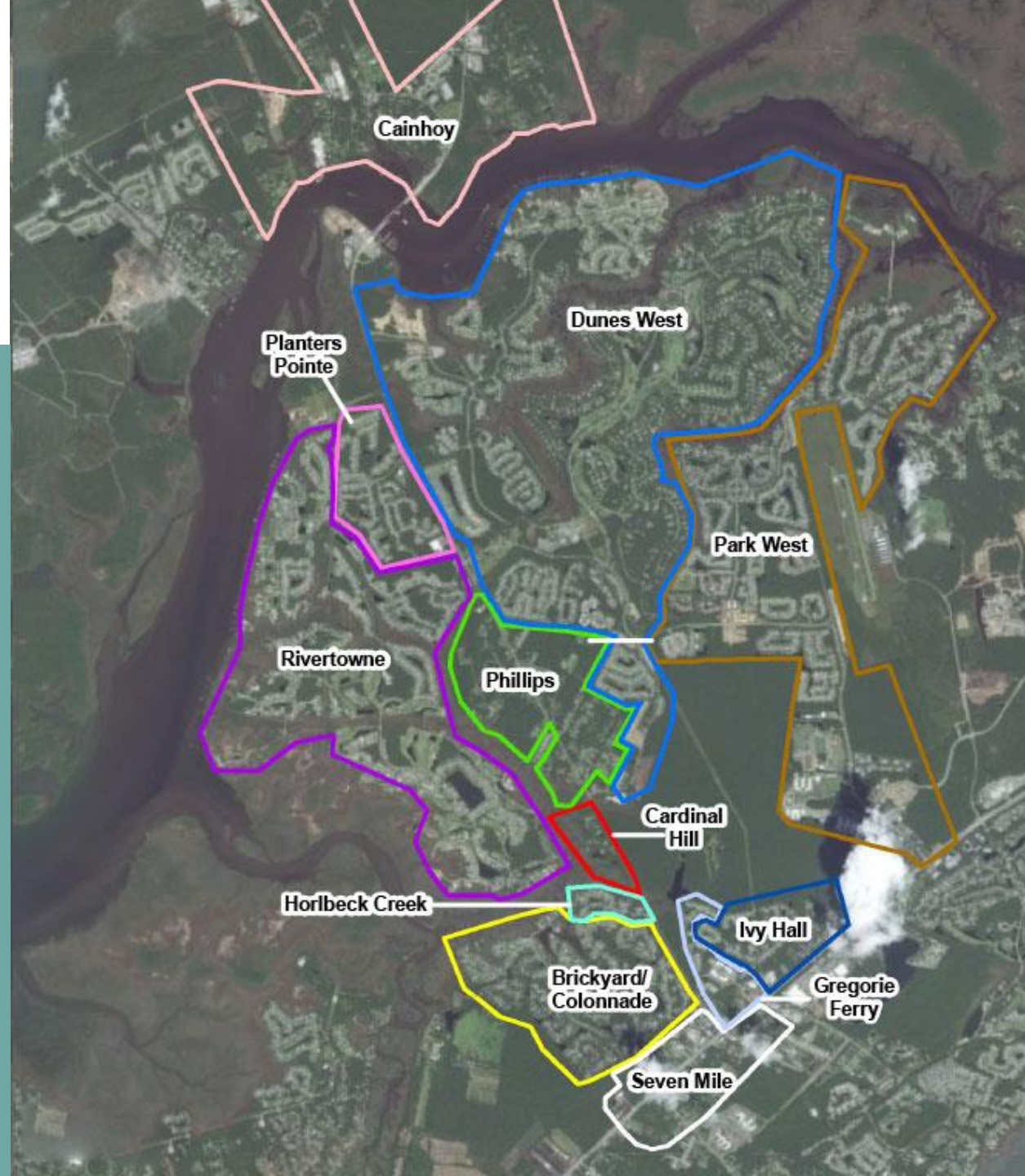
**36** Previously identified architectural resources

**11** Newly recorded historic architectural resources



# Community Characterization Report

Findings from the Community Characterization and Community Impact Assessment will be used to evaluate project impacts to the human environment in the environmental document for the proposed project.



# Alternatives Evaluation Considerations

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Traffic (existing and future)

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Environmental

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Utilities

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- Developments in Berkeley and Charleston Counties
  - Cainhoy Plantation
  - Clements Ferry Road
  - Planned and future developments
  - Proposed road improvements



# Preliminary Traffic Analysis

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## Data sources

- Charleston Area Transportation Study (CHATS) model
- SCDOT and project team traffic counts/data sources

## Assumptions

Alternatives were modeled by either adding capacity directly to Highway 41 or adding connecting parallel roadways, which consisted of:

- Various segments along Highway 41 and major cross-streets
- Bessemer Rd., Dunes West Blvd., Park West Blvd
- New alignments

## Metrics

Purpose and need, which consisted of:

- Level of Service
- Forecasted volumes



# Preliminary Traffic Results

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- By adding lanes, more traffic may be drawn to that route.
- If a new corridor alignment is added, more traffic may be drawn to that route.
- By connecting two existing routes, some traffic may be drawn to that new connecting route.



# Initial Screening of Alternatives

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**12**  
**Alternatives**

We looked at a range of 12 alternatives.



**3**  
**Reasonable Alternatives**

Three were carried forward for further analysis of impacts on the natural environment and community based on their ability to meet the Purpose and Need.



# Traffic: Level of Service

A standard measurement based on vehicle delay and speed, which reflects the relative ease of traffic flow on a scale of A to F.



Stable Traffic Flow



Unstable Traffic Flow





# Traffic Volumes

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- A 3-lane road section can handle approximately 17k-18k vehicles per day and still perform at an acceptable level of service C.
- Traffic forecasts predict that the Joe Rouse Rd/Dunes West Blvd segment will have a demand of 23k to 48k vehicles per day, which will exceed capacity for a 3-lane road.

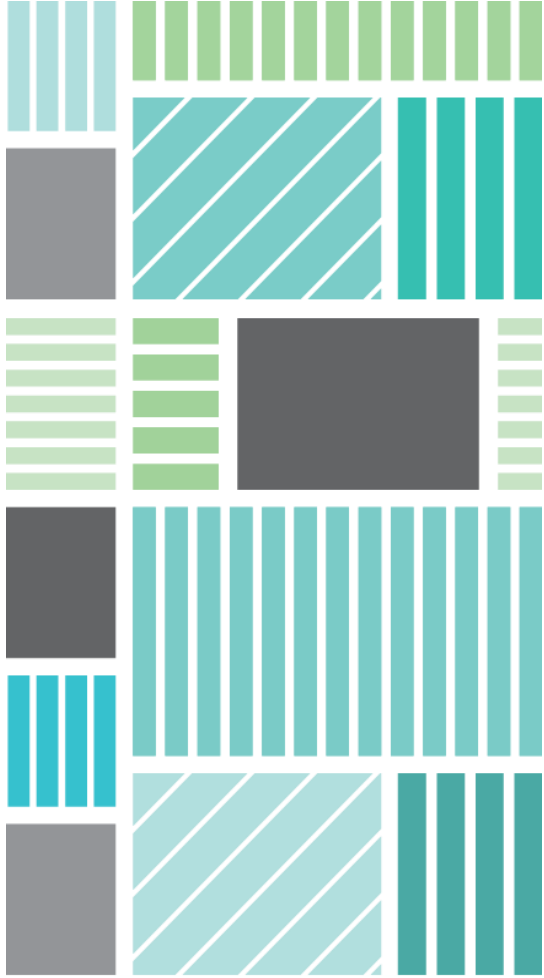


Stable Traffic Flow

Unstable Traffic Flow

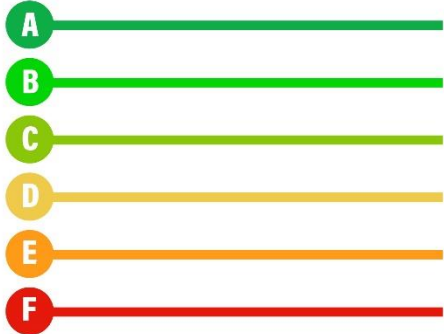


# Range of Alternatives



# No Build

## Level of Service (LOS)



In the No Build Alternative, the current conditions of Highway 41 would remain unchanged. The No Build option provides a baseline of comparison for the alternatives.



# Alternative 1

## Level of Service (LOS)



Alternative 1 would provide an acceptable LOS for design year 2045 and is moving forward for further evaluation.



# Alternative 2

## Level of Service (LOS)



Alternative 2 is moving forward for further evaluation as it provides an acceptable LOS for design year 2045 throughout the corridor, except for in the Phillips Community.



# Alternative 3

## Level of Service (LOS)



Alternative 3 is not moving forward because it cannot accommodate 2045 design year traffic and because of traffic flow issues involving the one-way roads.



# Alternative 4

## Level of Service (LOS)



Alternative 4 is not being carried forward because the new parallel roadway would not divert enough traffic from existing Highway 41 and traffic volumes would exceed capacity along the entire new roadway.



# Alternative 5

## Level of Service (LOS)



Alternative 5 is not being carried forward because the new parallel roadway would not divert enough traffic from existing Highway 41 and traffic volumes would exceed capacity along the entire new roadway.





# Alternative 6

## Level of Service (LOS)



Alternative 6 is not being carried forward because the new parallel roadway would not divert enough traffic from existing Highway 41 and traffic volumes would exceed capacity along the entire new roadway.



# Alternative 7

## Level of Service (LOS)



Alternative 7 is moving forward for further evaluation because it provides an acceptable LOS for design year 2045.



# Alternative 8

## Level of Service (LOS)



Alternative 8 is not moving forward because a five lane section meets the design year capacity needs and it would have major impacts throughout the corridor.



# Alternative 9

## Level of Service (LOS)



Alternative 9 is not moving forward because a five lane section meets the design year capacity needs and this alternative would have major impacts throughout the corridor.



# Alternative 10

## Level of Service (LOS)



Alternative 10 is not being carried forward because a five lane section meets the 2045 design year capacity needs.



# Alternative 11

## Level of Service (LOS)



Alternative 11 is not being carried forward because a five lane section meets the 2045 design year capacity needs.



# Alternative 12

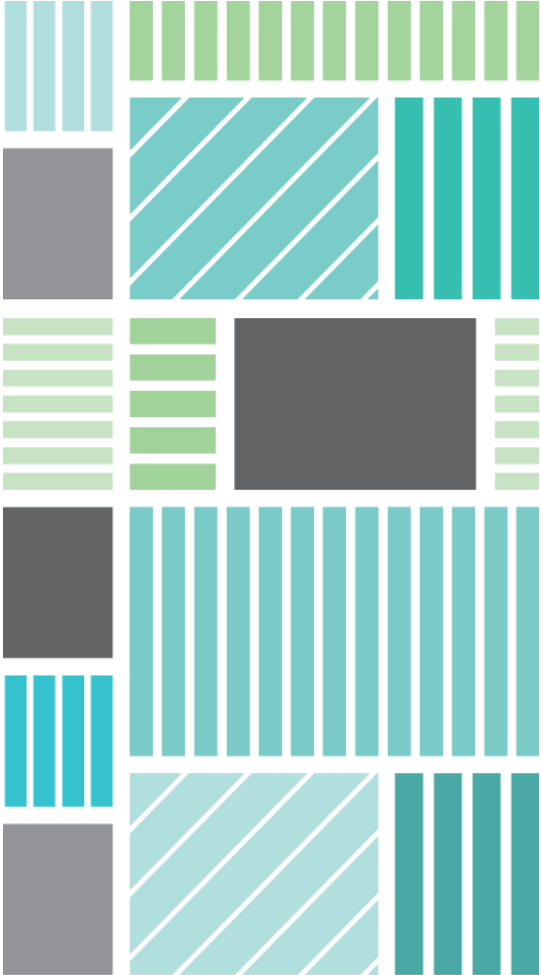
## Level of Service (LOS)



Alternative 12 is not being carried forward because a five lane section meets the 2045 design year capacity needs.



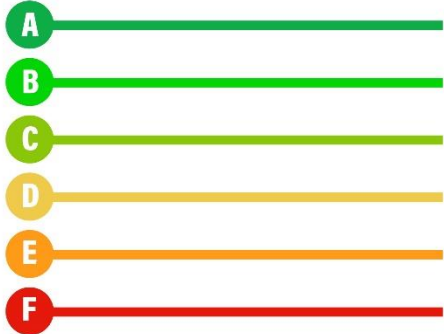
# Reasonable Alternatives





# No Build

## Level of Service (LOS)



In the No Build Alternative, the current conditions of Highway 41 would remain unchanged. The No Build option provides a baseline of comparison for the alternatives.



# Alternative 1

## Level of Service (LOS)



Alternative 1 would provide an acceptable LOS for design year 2045 and is moving forward for further evaluation.



# Alternative 2

## Level of Service (LOS)



Alternative 2 is moving forward for further evaluation as it provides an acceptable LOS for design year 2045 throughout the corridor, except for in the Phillips Community.



# Alternative 7

## Level of Service (LOS)

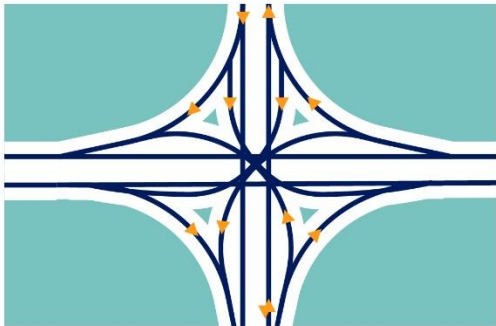


Alternative 7 is moving forward for further evaluation because it provides an acceptable LOS for design year 2045.

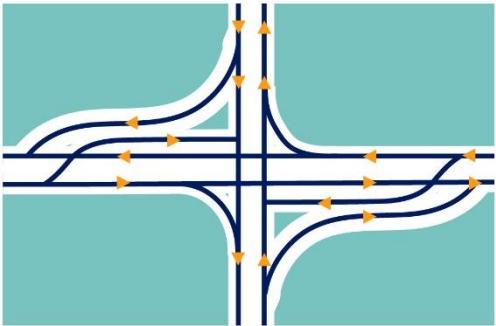


# Intersection Concepts – Highway 41 at Highway 17

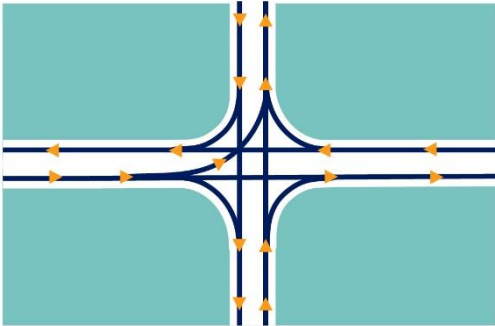
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Single Point Urban Interchange



Continuous Flow Intersection



Flyover Left Turn Mid



Flyover Left Turn



# Top Comments To Date

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Traffic Safety



Noise



Public Involvement



New Developments



Schedule

*\*As of 4/20/2018*



# Public Information Meeting

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## PUBLIC INFORMATION MEETING FOR ALTERNATIVES

**WEDNESDAY, MAY 16**

**5:30 - 7:30 p.m.**

Park West Gym

## ONLINE MEETING

Available between **MAY 16 - JUNE 16** at

**[hwy41sc.com](http://hwy41sc.com)**



# Contact Us

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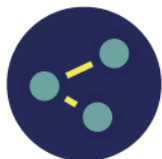
Visit: [www.Hwy41SC.com](http://www.Hwy41SC.com)



Email us to leave comments or join the project mailing list: [Hwy41SC@gmail.com](mailto:Hwy41SC@gmail.com)



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**843-972-4403**



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