

2022 PCI Gulf South Conference



Tim Colquett, P.E.

State Bridge Engineer

Alabama Department of Transportation

2022 PCI Gulf South



West Alabama Highway



Mobile River Bridge Update



12 Month Prognostication

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West Alabama Highway



2022 PCI Gulf South West Alabama Highway

US-43 From the Intersection of SR-5 in Thomasville to the Linden Bypass
and on SR-69 From Linden Bypass to North of Moundville to Include Bypasses
at Dixons Mills, Greensboro, Gallion, and Moundville

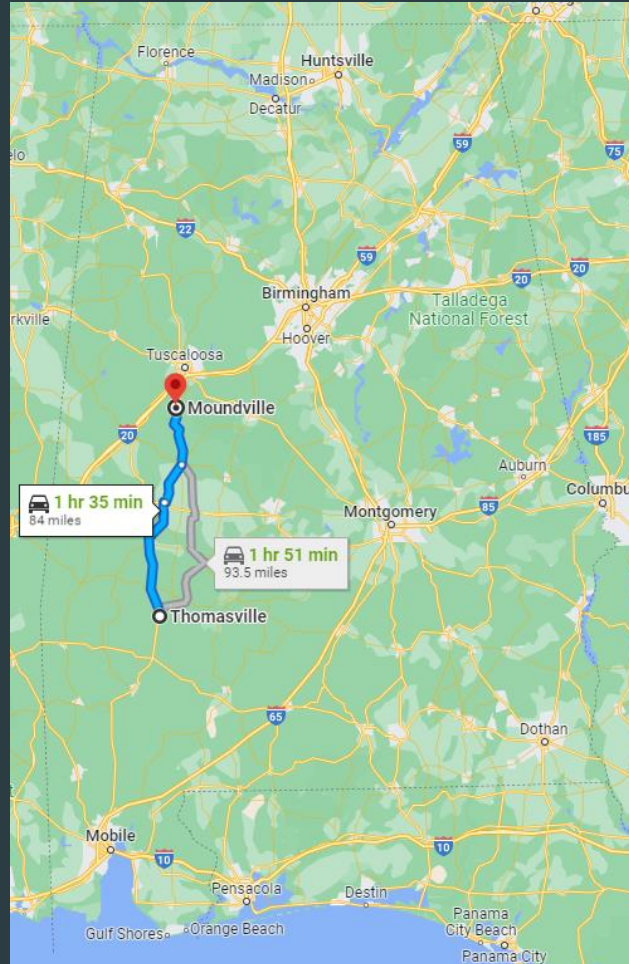
Project No. RAED-068-000-154

West Alabama Highway



ALDOT
Alabama Department of Transportation

2022 PCI Gulf South West Alabama Highway



West Alabama Highway



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PROJECT MAP

The purpose of the proposed project is to improve transportation connectivity from Thomasville, AL to I-20/59 by widening an existing two-lane facility to a four-lane facility from Thomasville, AL to Moundville, AL.

The route is through the heart of the Black Belt of Alabama and will provide four-lane access to many areas of the state that do not currently have a four-lane roadway.

West Alabama Highway



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PROJECT DESCRIPTION

The project will primarily utilize existing US-43 and SR-69 routes and construct a new two-lane facility parallel to the existing two-lane roadways to create a four-lane divided roadway.

There are proposed bypasses around the town of Dixons Mills, as well as the cities of Greensboro and Moundville.

The Dixons Mills and Moundville bypasses will be to the east of town and the Greensboro bypass will be to the west of town.

West Alabama Highway



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PROJECT DELIVERY: PROGRESSIVE DESIGN BUILD

The West Alabama Highway project will be Alabama's first PROGRESSIVE DESIGN-BUILD project. This unique project delivery method will allow the design and construction to be done under one contract, which will expedite the project delivery, and thus save Alabama taxpayers millions of dollars.

The Design-Build project delivery method is unique to Alabama, but not unique to the industry and has become standard practice in many states across the country.

West Alabama Highway



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LEGISLATION

In 2016, the Alabama Legislature passed Act No. 2016-257 (amending Section 23-1-40 of the Code of Alabama, 1975), which gave ALDOT the ability to enter into Design-Build agreements for certain large-scale projects. The Department is focused on utilizing Design-Build for effective and accelerated delivery of various transportation projects and programs, designed to have positive impacts on improving mobility for motorists and freight. In addition, ALDOT believes these projects make a positive contribution to growing the economy in rural Alabama.

West Alabama Highway



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WHERE IS THE \$ COMING FROM?

The project will be funded with State Funds from the Rebuild Alabama Act, which is legislation that was passed in 2019 to increase the gas tax in order to fund important highway and bridge projects such as this.

West Alabama Highway



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KEY DATES



Public Involvement : Fall 2021



Begin ROW Acquisition: Fiscal Year 2021-2022



**Selected Design-Builder: June 24, 2022
Brasfield and Gorrie, Birmingham AL**



Anticipated NTP: September 15, 2022

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WHAT DOES THIS MEAN FOR YOU?

- 27 Individual Bridges
- All cast-in-place with Prestressed Concrete Girders
 - Type I AASHTO: 21,618 Lin. Ft.
 - Type III AASHTO: 21,220 Lin. Ft.
 - Type BT63: 1,250 Lin. Ft.
 - Type FIB45: 19,550 Lin. Ft.
 - Type FIB72: 1,600 Lin. Ft.

West Alabama Highway



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WHAT'S IT GOING TO COST?

- Estimated \$750 million



West Alabama Highway



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PROJECT DESCRIPTION

Does not include Linden bypass. This project is divided into a North and South section both developed using traditional Design-Bid-Build.

The South section has been let to contract. The North section will let in August and includes 3 sites with dual bridges each over Chickasawbogue Creek, Whirl Creek #1 and #2.

5,600 Lin. Ft. Type III AASHTO
8,750 Lin. Ft. Type BT63

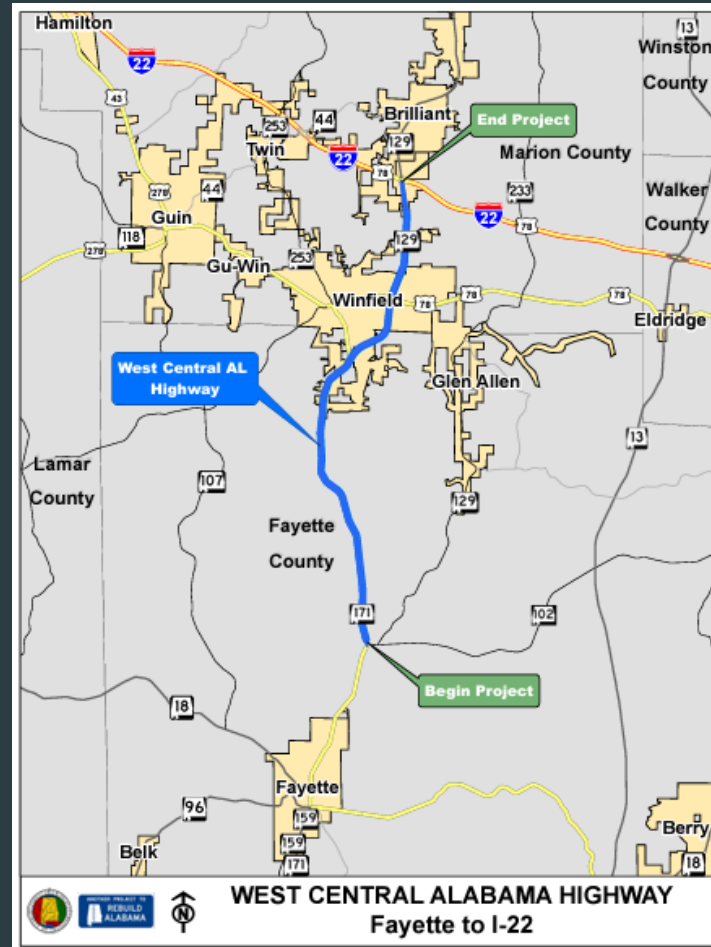


West Alabama Highway



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BUT WAIT, THERE'S MORE! WEST CENTRAL ALABAMA HIGHWAY



West Alabama Highway



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WEBSITE

<https://www.dot.state.al.us/business/DesignBuild.html>

Design Build Projects

Current Project

Projects

[West Alabama Highway Project](#)

This project will construct a 4-lane highway from Thomasville to Tuscaloosa.

[RFQ Proposer Short List](#)

[RFQ Project Proposer List](#)

[WAH Procurement Schedule Updated 7-01-2022](#)

[Public Involvement](#)

[Project Map](#)

[West Central Alabama Highway Project](#)

This project will construct a 4-lane highway from Fayette to I-22.

[Project Map](#)

To contact someone about a specific project, please see the project page (linked in the project list above) for contact information. To contact someone about ALDOT's Design Build projects program in general please email the Design Build team at designbuild@dot.state.al.us.

West Alabama Highway



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Mobile River Bridge



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MRB Update

Mobile River Bridge and Bayway Project

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Project Direction from MPOs

“MPO members are hopeful a feasible way can be found to build the phases concurrently....Accordingly, both MPOs request ALDOT broaden its study to enable it to report back to the MPOs as to what financial structure would be required to build all three phases simultaneously...”

*Letter from MPO Chairman Stimpson and MPO Chairman Burrell to ALDOT
September 1, 2021*

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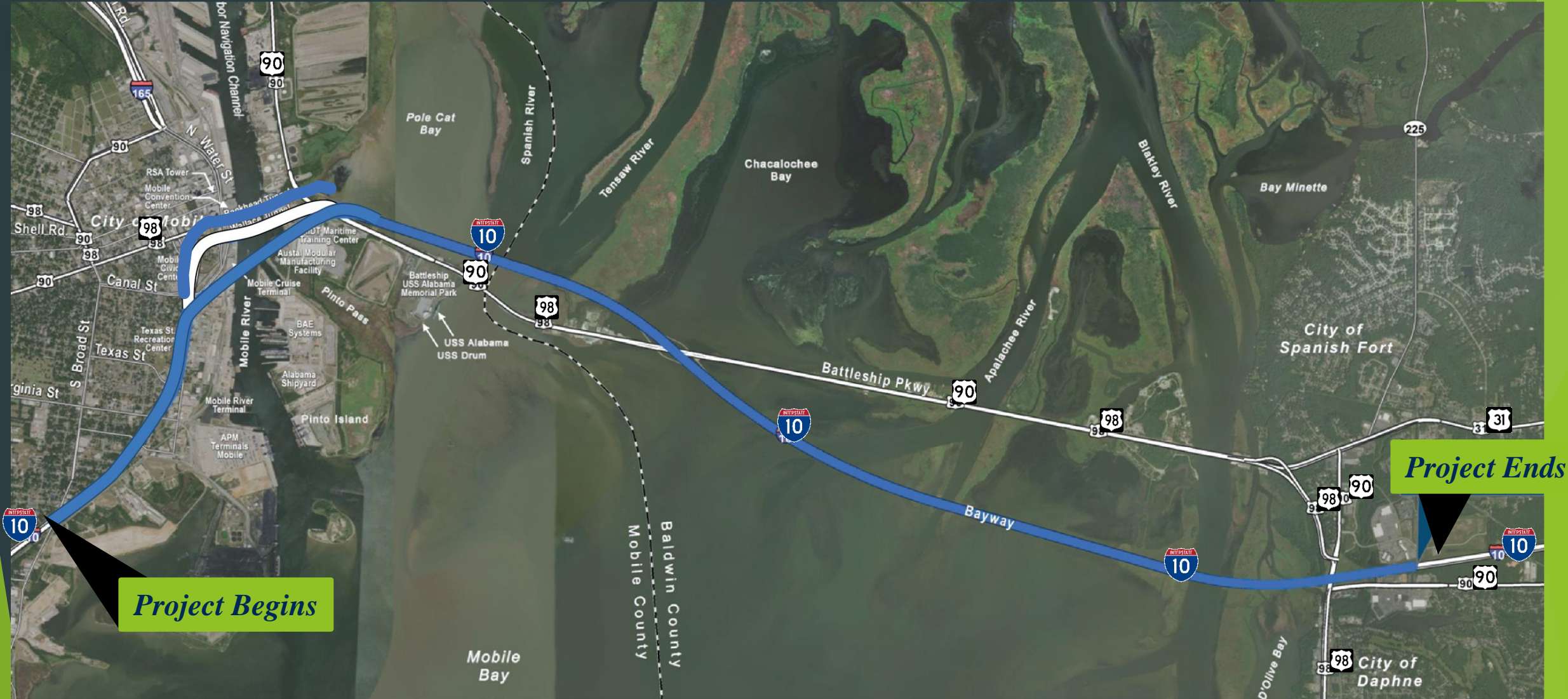
Project Direction from MPOs

December 15, 2021 letter from MPOs providing additional guidance:

- ▶ Be comprehensive and not phased/piecemeal plan
- ▶ Free, no toll options including Wallace Tunnel, Bankhead Tunnel, Africatown Bridge, and Causeway
- ▶ Need to protect \$125 million federal grant and anticipate at least \$250 million in State Funds
- ▶ Tolls for cars should be \$2.50 or less and \$18.00 or less for 18-wheeler trucks
- ▶ All infrastructure to be owned and operated by the State of Alabama

Base Design

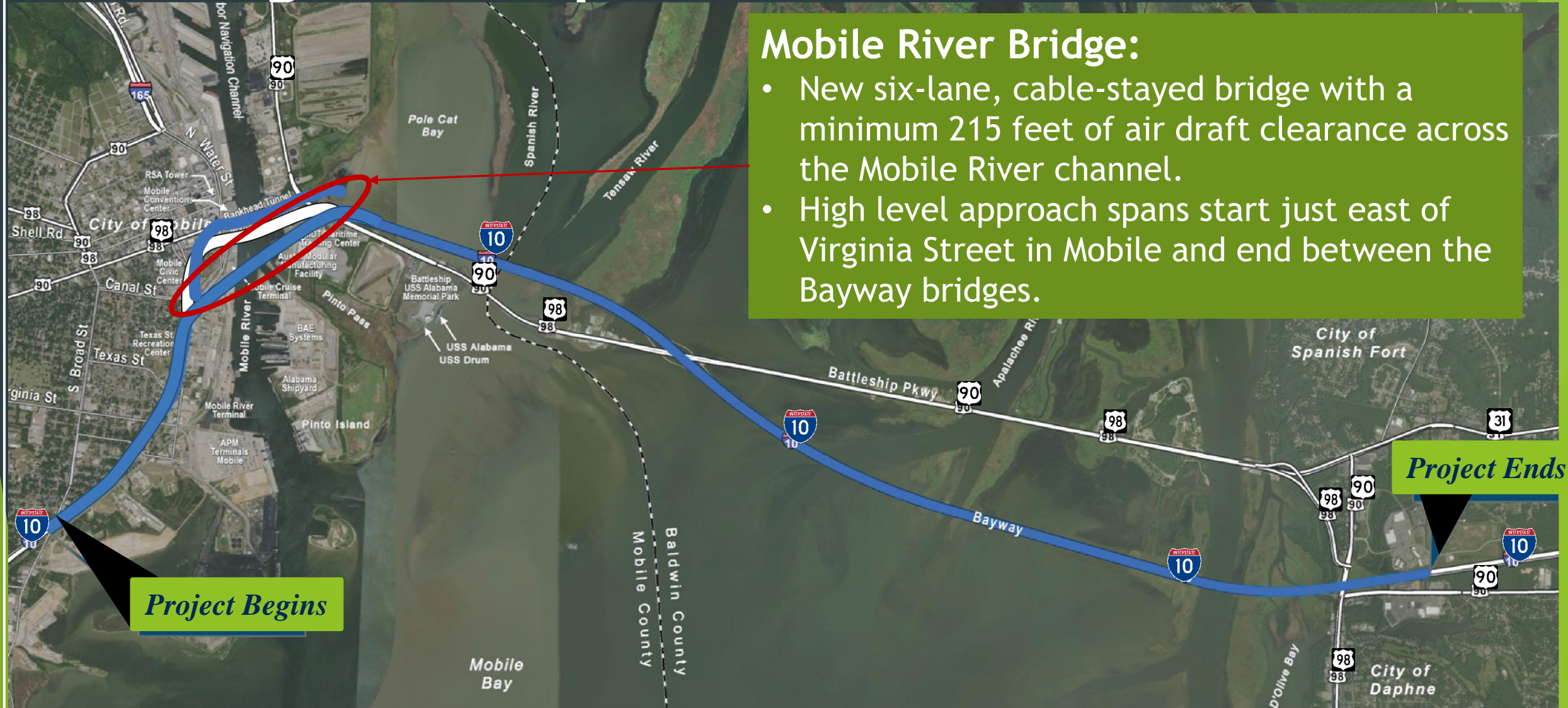
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2022 PCI Gulf South Base Design – Main Span

Mobile River Bridge:

- New six-lane, cable-stayed bridge with a minimum 215 feet of air draft clearance across the Mobile River channel.
- High level approach spans start just east of Virginia Street in Mobile and end between the Bayway bridges.



2022 PCI Gulf South Base Design – Bayway

Bayway:

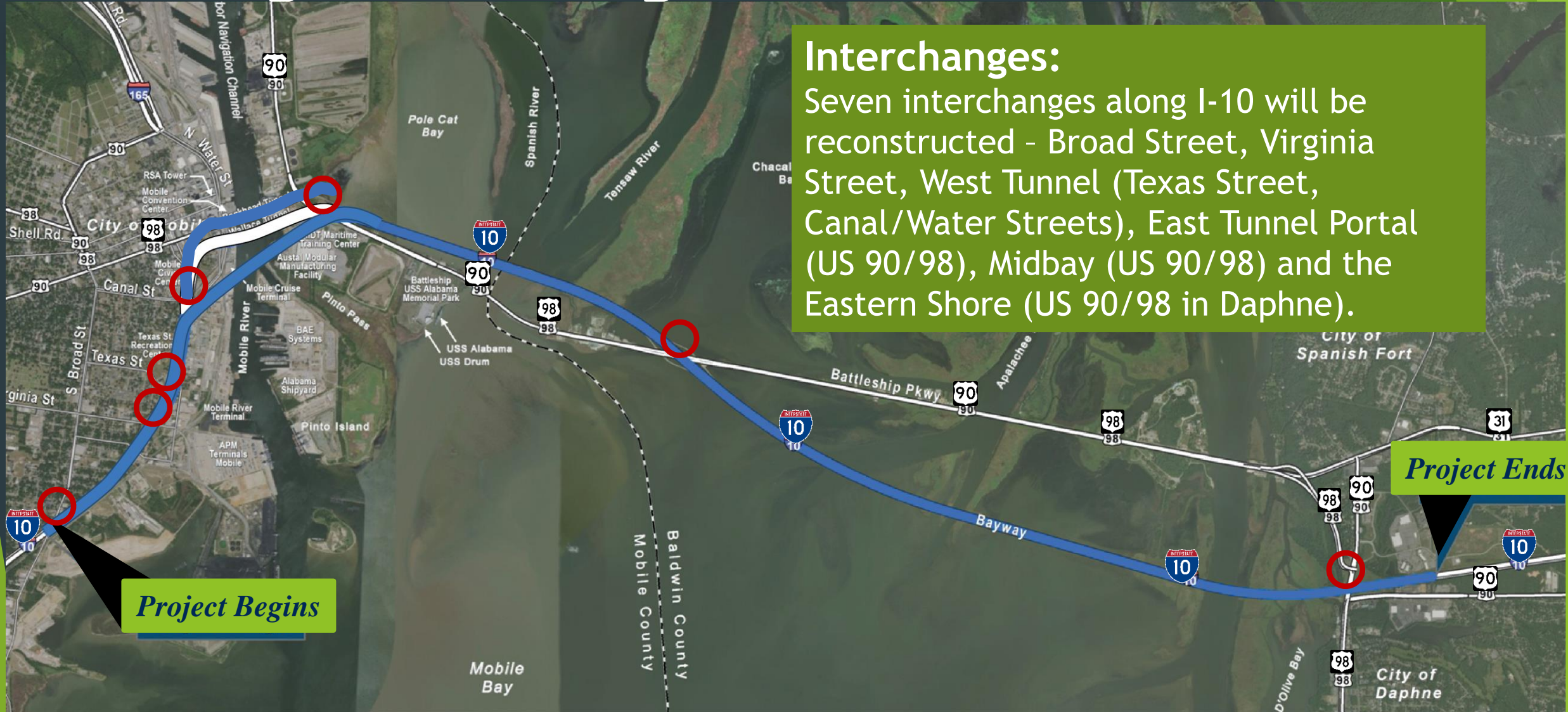
- Replace the existing four-lane I-10 Bayway bridges across the Mobile Bay with new bridges with additional capacity built to current safety and design standards.
- Will run approximately 7.4 miles from the high level approach spans to the US 90/98 Eastern Shore interchange in Daphne.



2022 PCI Gulf South Base Design - Interchanges

Interchanges:

Seven interchanges along I-10 will be reconstructed - Broad Street, Virginia Street, West Tunnel (Texas Street, Canal/Water Streets), East Tunnel Portal (US 90/98), Midbay (US 90/98) and the Eastern Shore (US 90/98 in Daphne).



Project Begins

Project Ends

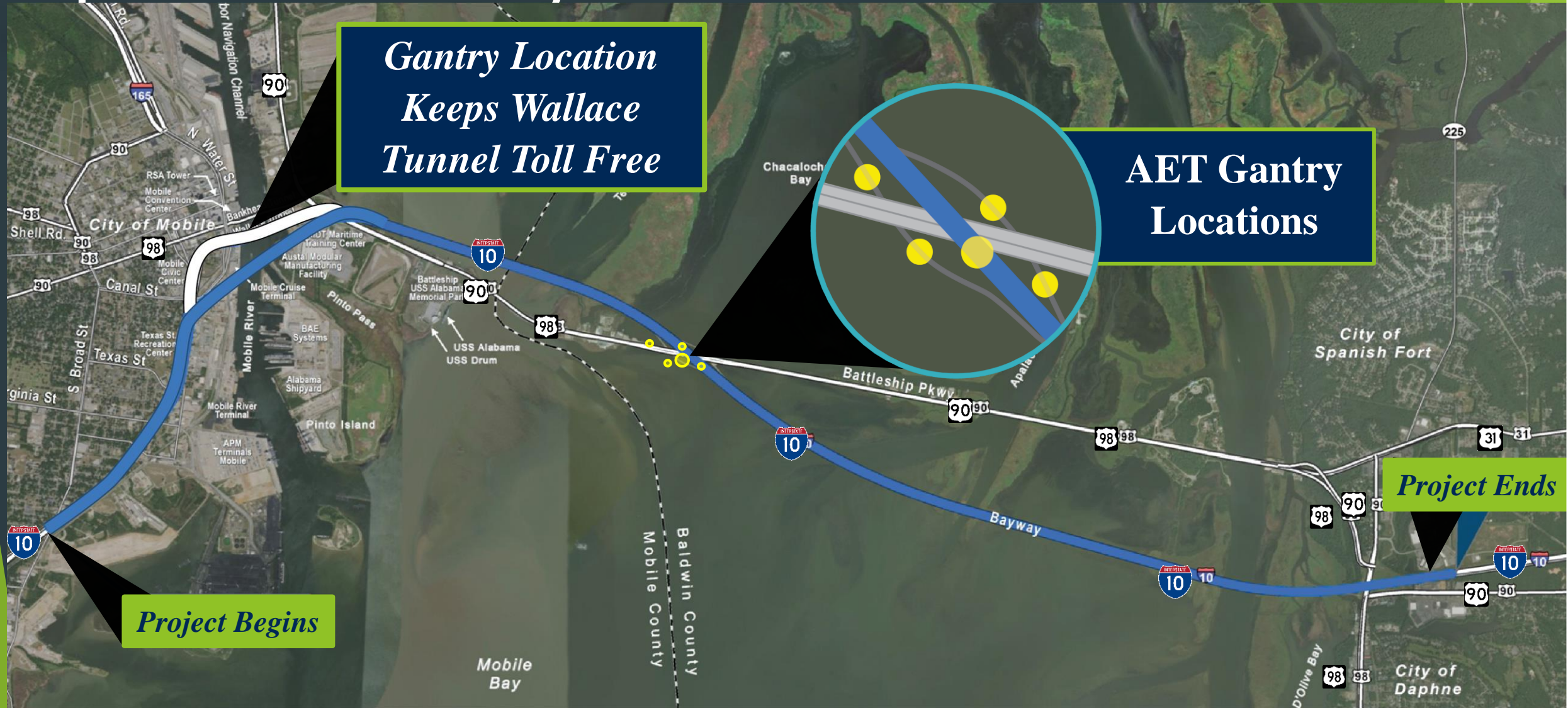
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Proposed Plan

Based on the guidance from the MPOs, the proposed plan for the Mobile River Bridge and Bayway Project is:

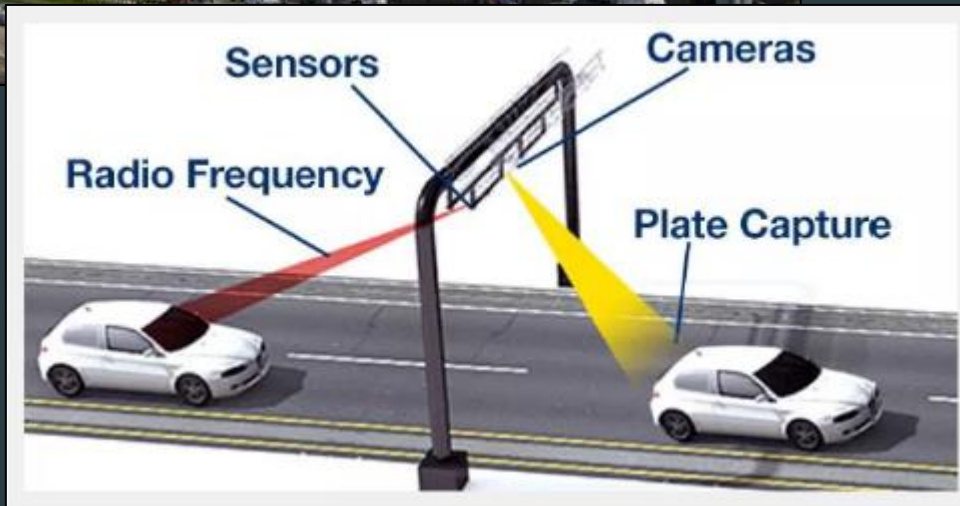
- ▶ Only the new main span bridge and new Bayway will be tolled
- ▶ Passenger Vehicles with an ALGO pass will be a maximum of \$2.50
- ▶ 18-wheelers with an ALGO pass will be a maximum of \$18.00
- ▶ Toll revenue to be used only to pay down project debt, with tolling to end once the debt is paid off

2022 PCI Gulf South Proposed Plan - Toll Gantry Locations



All Electronic Tolling

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Gantries with sensors and cameras will scan the ALGO pass or capture a picture of the license plate. No slowing or stopping.



Free - No Toll Routes

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Free - No Toll Routes

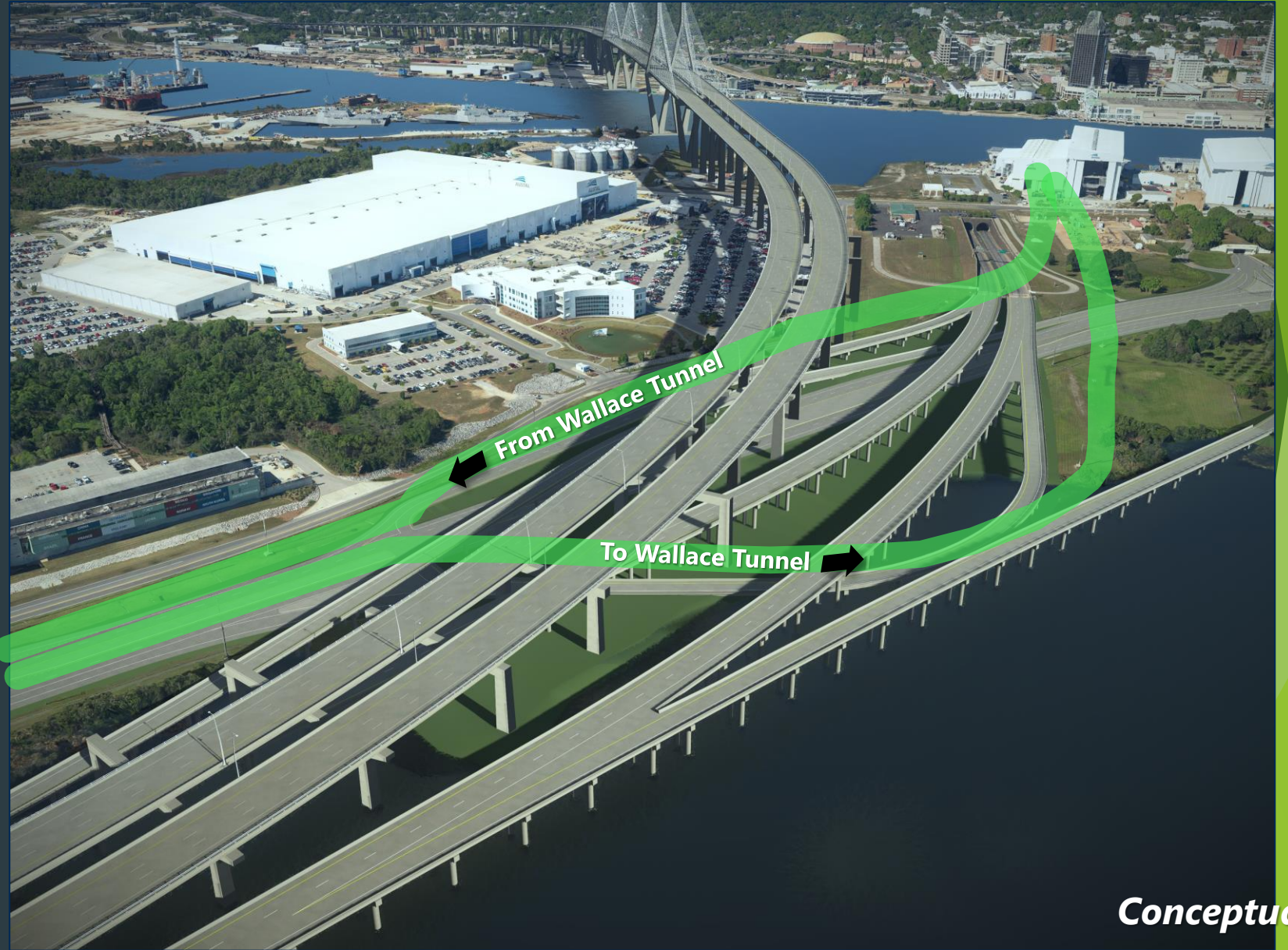
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Free - No Toll Routes

Wallace Tunnel - Causeway Connection

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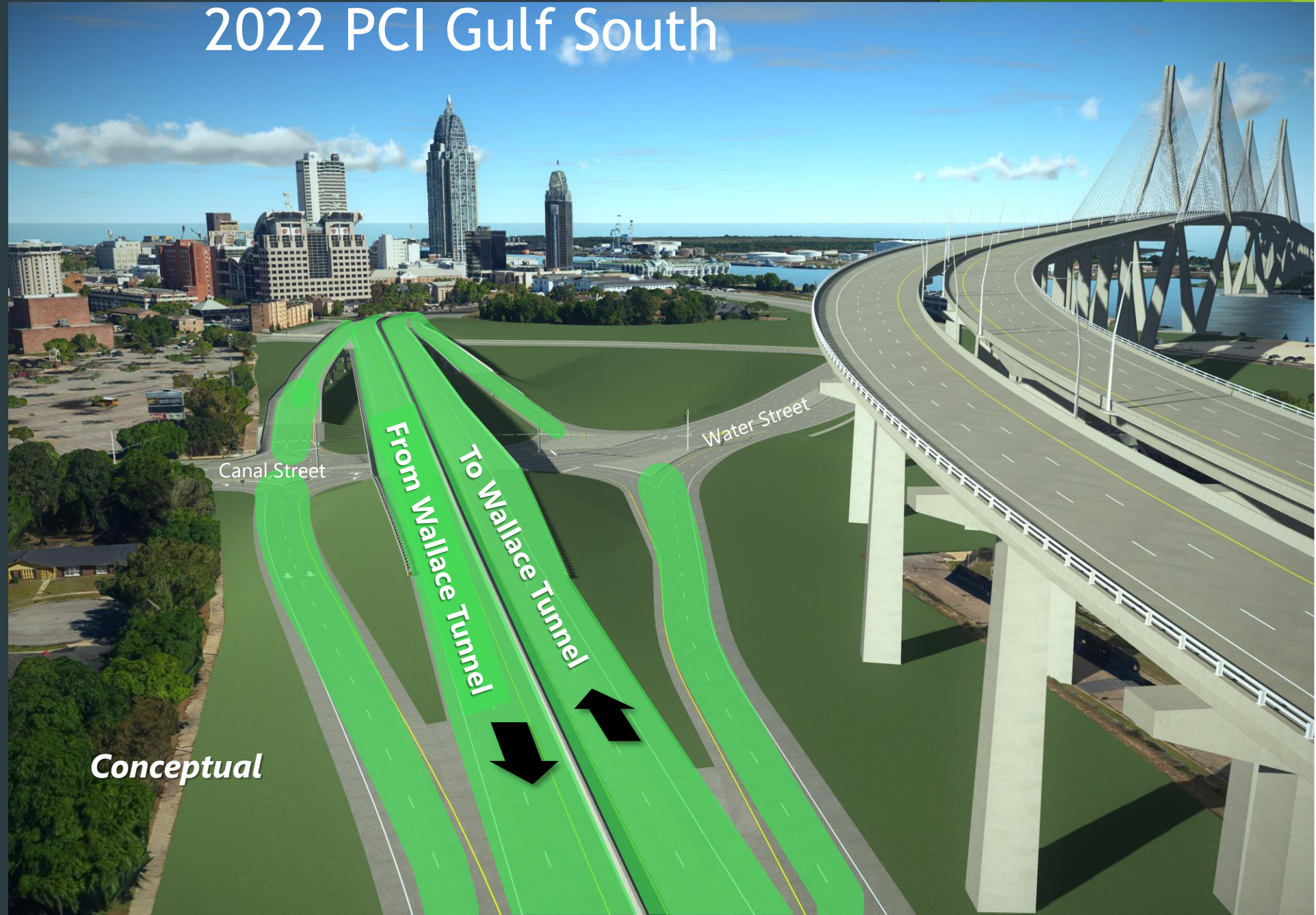


Conceptual

Free - No Toll Routes

Wallace Tunnel - Downtown Connection

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Conceptual

Toll Route

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Project Cost Estimate

- ▶ Previous Preliminary Engineering (PE) and Construction Estimate for entire project was \$2.1 billion (2019)
- ▶ Recent inflation has caused construction prices to drastically rise
- ▶ Latest PE and Construction estimate for entire project is \$2.7 billion (2024)
- ▶ Increase is consistent with inflation-driven cost increases on highway projects across the state

Toll Rate Information

- ▶ ALGO passes are not restricted to local residents. Anyone can get an ALGO pass and pay the lower toll rates
- ▶ Rates presented are maximum rates based on preliminary analysis.
- ▶ Final toll plan will be presented at future public meetings and to the MPOs
- ▶ There will be two classes of tolled vehicles: low height and tall height

Toll Rate Framework

SHORT VEHICLE CLASS:

Vehicle heights under 7.5 ft

- Passenger Cars
- SUVs
- Pickup Trucks
- Minivans
- Motorcycles

ALGO Pass Base Rate Max:

2-axles = \$2.50

-\$40/month unlimited use pass-

w/ 1- or 2-axle trailer = \$5.00

w/ 3- or 4-axle trailer = \$7.50



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Toll Rate Framework

TALL VEHICLE CLASS:

Vehicle heights over 7.5 ft

- Buses
- Delivery Trucks
- RV's
- Box Trucks
- Semi-Trailer Trucks
- 18-Wheeler Trucks

ALGO Pass Base Rate Max:

2-axles = \$9.00

Each additional axle is \$3.00

18-wheeler = \$18.00



Toll Rate Framework

Non-ALGO Pass Base Rates:





Short Class: additional \$1.50/axle

- **2-axles = \$5.50**

Tall Class: additional \$2.75/axle

- **5-axles = \$31.50**

2022 PCI Gulf South Common Vehicle Toll Rates Chart

Classification	Vehicle Description	ALGO Transponder Rate
Short Class Vehicles Height Less than 7.5 feet	2-axle 	\$2.50 or \$40/month
	2-axle w/ Trailer 	
Tall Class Vehicles Height More than 7.5 feet	2-axle 	\$9.00
	5-axle 	\$18.00

2022 PCI Gulf South Preliminary Funding Structure


State Funds - \$250 million

Federal INFRA Grant - \$125 million

Senior Financing - \$1.2 billion

Federal TIFIA Loan - \$1.1 billion

To be paid
back with
tolling
revenue

A diagram consisting of a vertical bracket on the left side, with a horizontal arrow pointing to the right from its center. The bracket groups the 'Senior Financing' and 'Federal TIFIA Loan' items. The arrow points to the text 'To be paid back with tolling revenue'.

Federal MEGA Grant (application submitted) - \$500 million

Procurement Plan

Procurement split into two projects constructed concurrently:

1. Progressive Design Build - Main Span Cable-Stayed Bridge and interchanges from Broad Street to the Mobile/Baldwin County Line
2. Progressive Design Build - Bayway and Interchanges from Mobile/Baldwin County Line to east of the Eastern Shore Interchange

Procurement Plan

Benefits of two Progressive Design-Build Procurements:

1. Two smaller projects instead of one larger project provides smaller construction and design firms more opportunity to participate
2. Lowers initial investment from teams
3. Allows early coordination between selected team and ALDOT during design to lower costs
4. Allows for quicker start to the design and construction

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Project 1- Mobile MPO



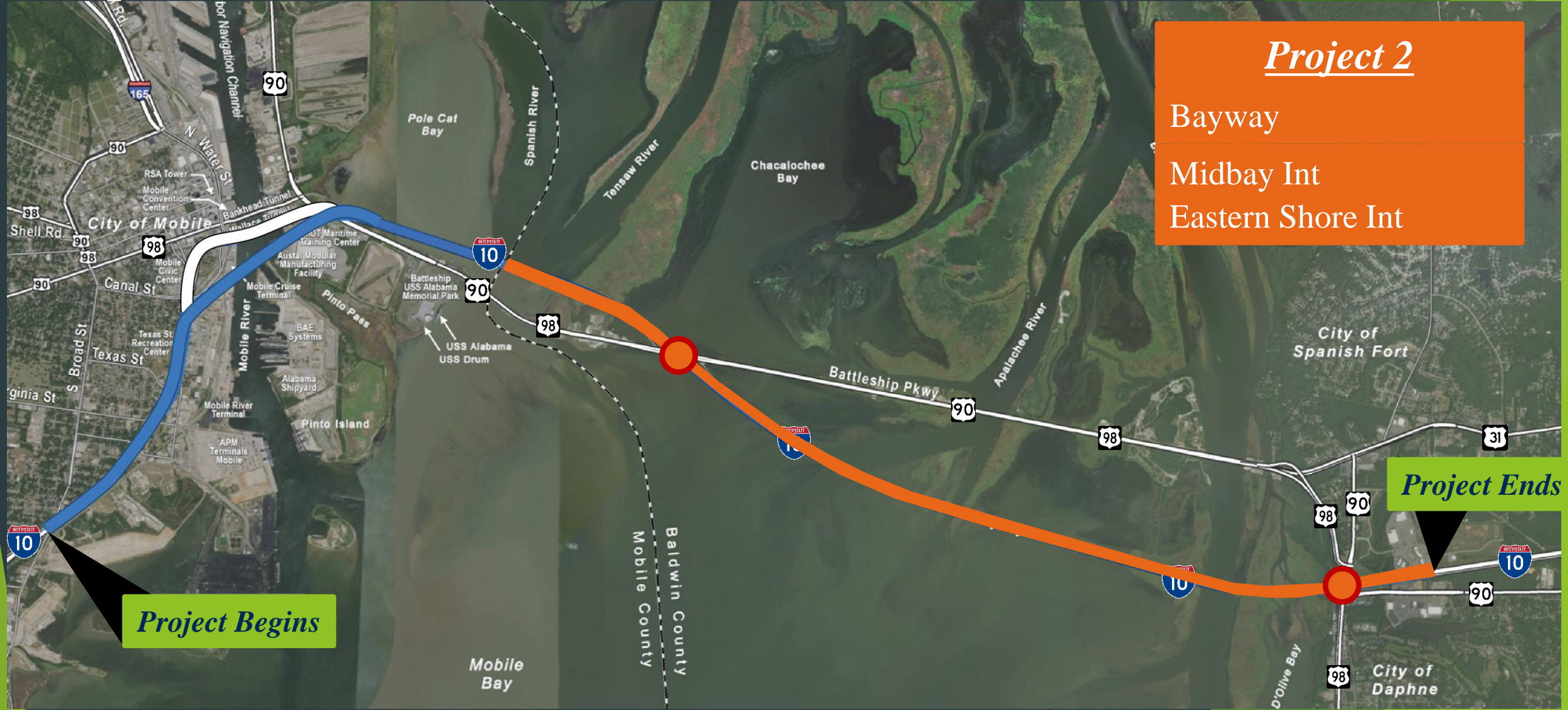
Project 1

- Cable-Stayed Bridge
- High-Level Approaches
- Broad Street Int
- Virginia Street Int
- Texas Street Int
- West Tunnel Int
- East Tunnel Int

Project Begins

Project Ends

Project 2 - ESMPO 2022 PCI Gulf South



Project 2
Bayway
Midbay Int
Eastern Shore Int

Project Begins

Project Ends

Full Project

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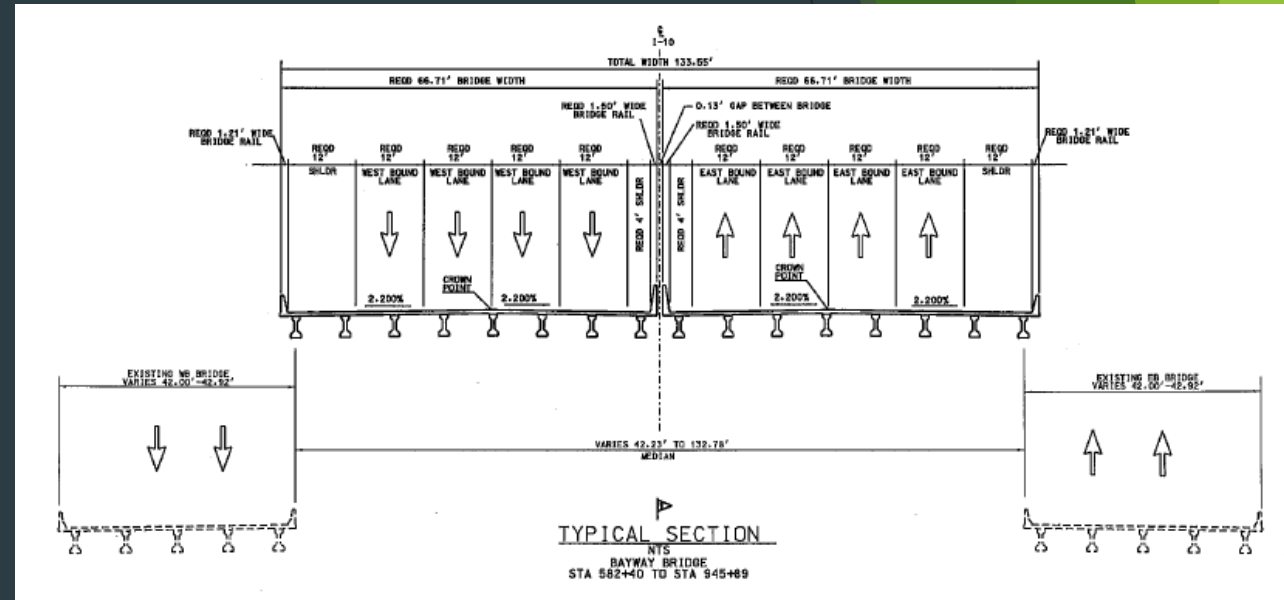
Next Steps

- MPOs vote on amendment
- Start Procurements
 - Industry Forum
 - RFQ/RFP release
- Update Environmental Document
- Finish Investment Grade Tolling and Revenue Modeling
- Additional Public Meetings
- Secure financing
- Start construction

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WHAT DOES THIS MEAN FOR YOU?

- Bayway Bridge Replacement
- Interchange Bridges
- Ramp Bridges
- High Level Approaches



Prestressed Gdrs., Piling, Cylinder Piling

Bayway alone: Potentially 625,000 Lin. Ft. Gdrs.

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12 MONTH PROGNOSTICATION

31 Projects

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July 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
FRANKLIN	BR-0247(501)	BT72 - 6,256	SR247 OVER CEDAR CR
MOBILE	BR-0217(501)	BT72 - 2,223	SR217 OVER BIG CR

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July 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
MARENGO	RAED-046- 303-001	TYPE III - 5,600 BT63- 8,750	LINDEN BYPASS

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August 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
MACON	BR-0081 (501)	FIB63-5,178	SR81 OVER UPHAPEE CR

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September 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
BALDWIN	ST-002-000-015	BT72 - 6,256	WATERWAY BLVD.
MGM/ MACON	IM-1085(365)	TYPE I-184 TYPE I MOD- 5,203	I85 OVER LINE CREEK

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September 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
CONECUH	IM-1065(497)	TYPE III-6,024 BT72-4,914	165 OVER SEPULGA RVR

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December 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
AUTAUGA	RACRNH-0006(587)	TYPE BT54-1,177 TYPE BT54 MOD-1,060 TYPE BT72-806	US82 OVER AUTAUGA CR AND AUTUAGA NORTHERN RR
MOBILE/ BALDWIN	BR-0016(522)	TYPE BT72-10,075	US98 OVER TENSAW RVR

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December 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
WALKER	ACBR-HSIP-005(534)	TYPE II-1,142	SR5 OVER US78
MADISON	NH-0001()	TYPE BT72-4,500	MEMORIAL PKWY OVER MASTIN LAKE RD.

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December 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
SHELBY	STPBH- 5914(250)	TYPE II - 503 BT54- 471	CR55 OVER NS RR
LEE	IM-1085(366)	TYPE I-1,598	I-85 BRIDGE WIDENINGS

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December 2022

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
BIBB	BR-0005(556)	TYPE II-2,112	SR5 OVER BLUE GIRTH CR

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January 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
RANDOLPH	BR-0001(612)	BT63-703	US11 OVER CORNHOUSE CR
TUSCALOOSA	BR-0001()	BT74MOD-2,106	US11 OVER NSRR

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January 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
WALKER	ACBRZ60970 -ATRP(008)	TYPE III-278	SMITH CHAPEL ROAD OVER MILL CREEK
MADISON	STPAA- CN11(901)	BT63-3,608	MARTIN RD OVER BRADFORD CR

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January 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
ETOWAH	STPOA- 2815(253)	TYPE II-720	HICKORY ST OVER BLACK CR CITY OF GADSDEN
JEFFERSON	STPBH- 1602(519)	TYPE II-400 TYPE III-320	PRATT HWY OVER BLACK CR

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January 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
JEFFERSON	STPBH- 3716(256)	TYPE I-200	OLD BROOK TRAIL OVER LITTLE SHADES CR

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February 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
WILCOX	RABRZ-6615()	PRECAST CHANNELS-1,836	CR24 OVER BEAR CREEK
WILCOX	ACBRZ-60499ATRP(008)	PRECAST CHANNELS-560	MARTIN RD OVER BRADFORD CR

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February 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
WILCOX	ACBRZ- 60499 ATRP(008)	PRECAST CHANNELS-560	CR190 OVER MUD CREEK
ETOWAH	BR- 0205(507)	BT54-660	SR205 OVER ATN RR

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March 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
LEE	IM- 1085(366)	TYPE I - 1,582	BRIDGE WIDENINGS I-85
WILCOX	BR- 0005(529)	TYPE III - 1,172	SR5 OVER MUD CREEK

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May 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
LAUDERDALE	BR-0002(579)	TYPE BT56 - 1,125	US72 OVER SR20
FRANKLIN	BR-0243(504)	BT54-630 BT72-2,430	SR243 OVER CEDAR CR

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June 2023

COUNTY	PROJ. NO.	GIRDER/LIN.FT.	DESCRIPTION
LIMESTONE	BR-0003()	BT56-1,820	US31 OVER NSRR
JEFFERSON	APDF- 1602(542)	TYPE III-1,170 BT72-23,850	BIRMINGHAM NORTHERN BELTLINE

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Totals

GIRDER TYPE	LIN. FT.
AASHTO TYPE I	3,564
AASHTO TYPE I MOD.	5,208
AASHTO TYPE II	4,877
AASHTO TYPE III	14,564

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Totals

GIRDER TYPE	LIN. FT.
BULB TEE BT54	2,938
BULB TEE BT54 MOD.	1,060
BULB TEE BT56	2,945
BULB TEE BT63	13,061
FIB63	5,178

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Totals

GIRDER TYPE	LIN. FT.
BULB TEE BT72	60,590
BULB TEE BT74 MOD.	2,106
PRECAST CHANNEL BEAMS	2,956

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Totals

	LIN. FT.
GRAND TOTAL	119,047

Last Year

	LIN. FT.
GRAND TOTAL	45,279

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QUESTIONS?

