



# SR 204 Corridor Study CORE MPO Meetings

PI 0019010, Chatham County, GA

August 2024

# Agenda

Background

Overview Maps

Existing Traffic and Crashes

Operations under No Build Alternative

Short Term Alternatives

Long Term Alternatives

Alternative Comparisons

Superseded Alternatives

Public Involvement and Study Schedule

# Background

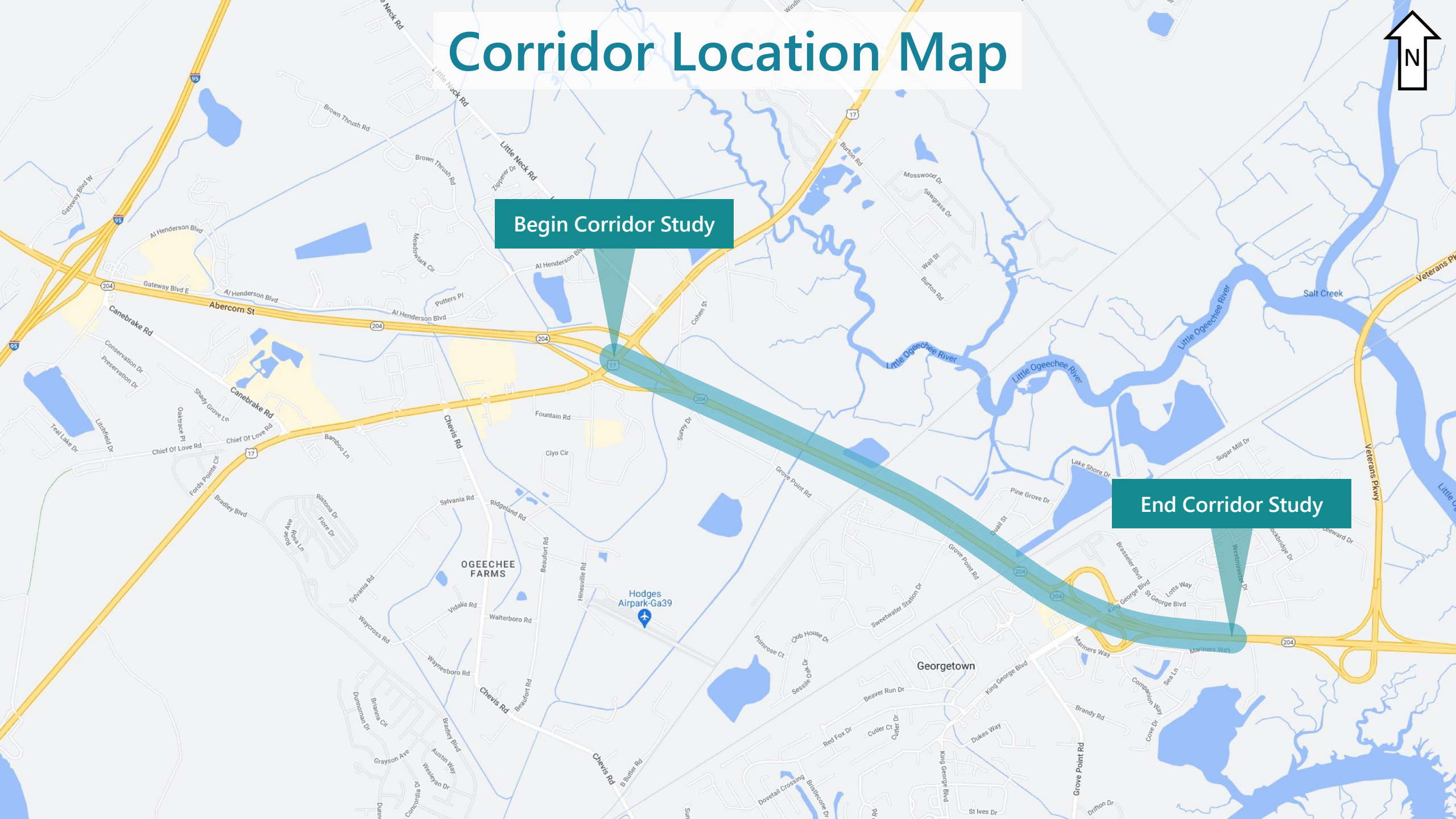
- Develop effective solutions for the SR 204 corridor through robust planning and public involvement
- Study Limits
  - SR 204 from US 17 to east of King George Blvd, focusing on:
    - SR 204/Ford Ave and SR 204/Pine Grove Intersections
    - US 17 and King George Boulevard interchange ramp terminals with SR 204
- Known Concerns
  - Congestion
  - Crashes
- Goals
  - Reduce congestion
  - Minimize crash frequency and severity

# Corridor Location Map



Begin Corridor Study

End Corridor Study



# Aerial Location Map



US 17

SR 204  
Grove Pt Rd

Ford Ave  
Canal

Canal

CSX RR

CSX RR

Grove Pt Rd

Pine Grove Dr

SR 204

CSX RR

CSX RR

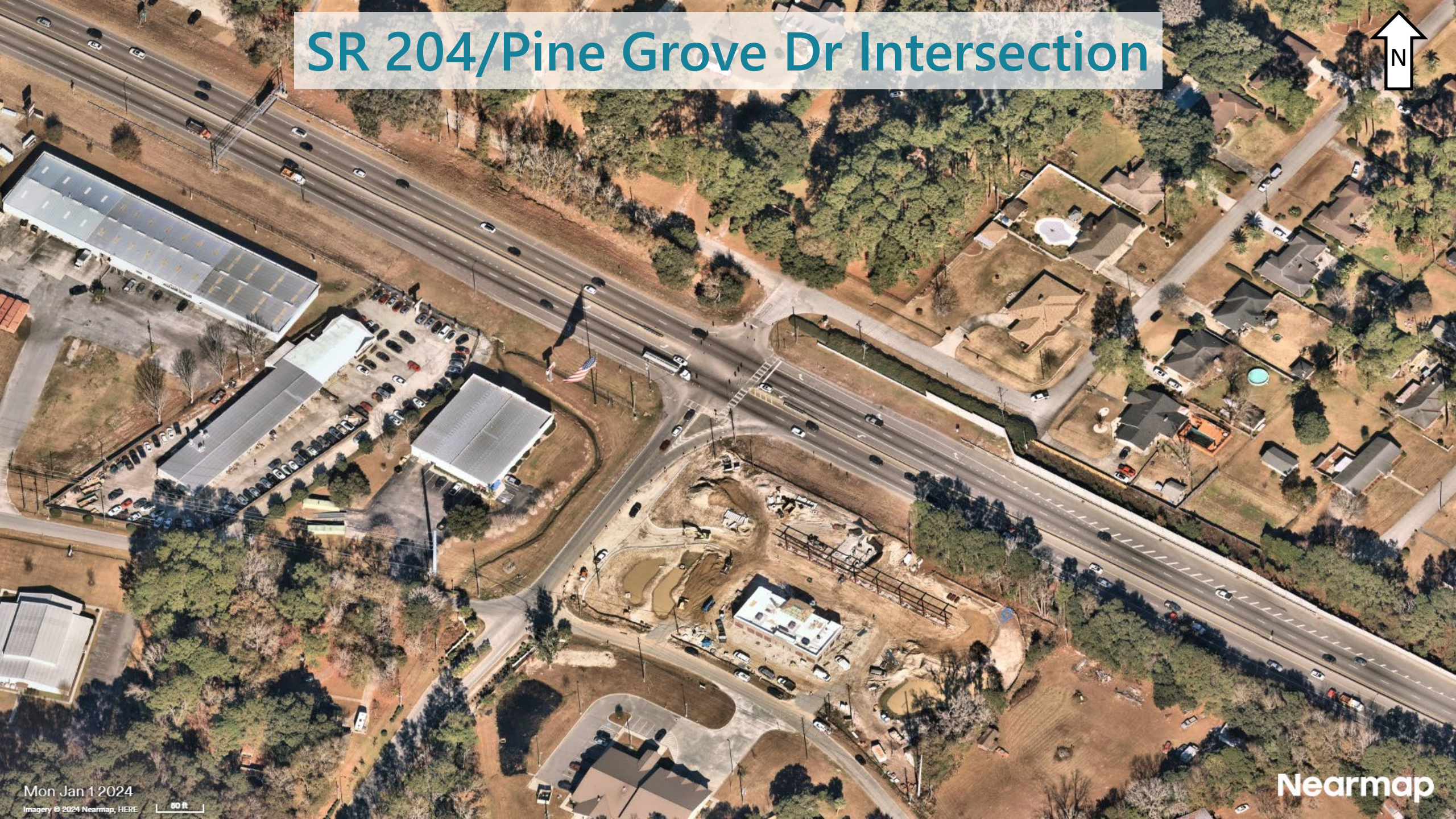
Grove Pt Rd

King George Blvd

# SR 204/Ford Ave Intersection



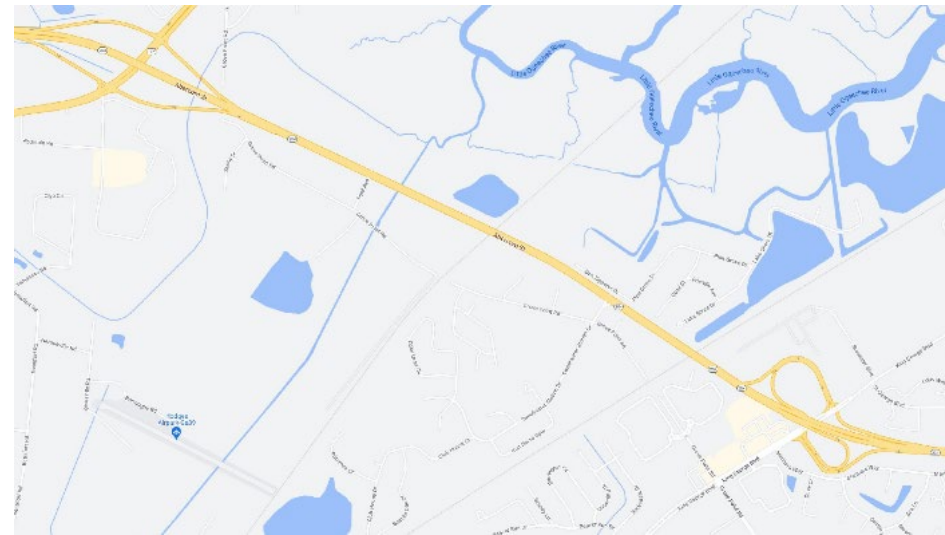
# SR 204/Pine Grove Dr Intersection



# Existing and Projected Traffic Volumes

	Existing	Open Year	Design Year
	2023	2030	2050
AADT	57,600	61,750	75,350
AM Peak	4,585	4,915	5,995
PM Peak	4,755	5,095	6,215
Truck % (AM/PM)	22% / 15%	22% / 15%	22% / 15%

1. SR 204 Bi-Directional Volume shown for segment between Ford Ave and Pine Grove Dr
2. 1.0% growth rate was used to grow volumes





# Arterial vs. Freeway



## Arterial

- A major road designed for collecting and distributing traffic
- **Speed Limit:** Generally between 30-45 mph.
- **Controlled Access:** Provides permitted access to local streets, driveways, businesses, and houses.
- **Traffic Lights/Stops:** Features multiple traffic lights and stop signs.
- **Crosswalks:** Pedestrian crosswalks are common for people to cross the street.

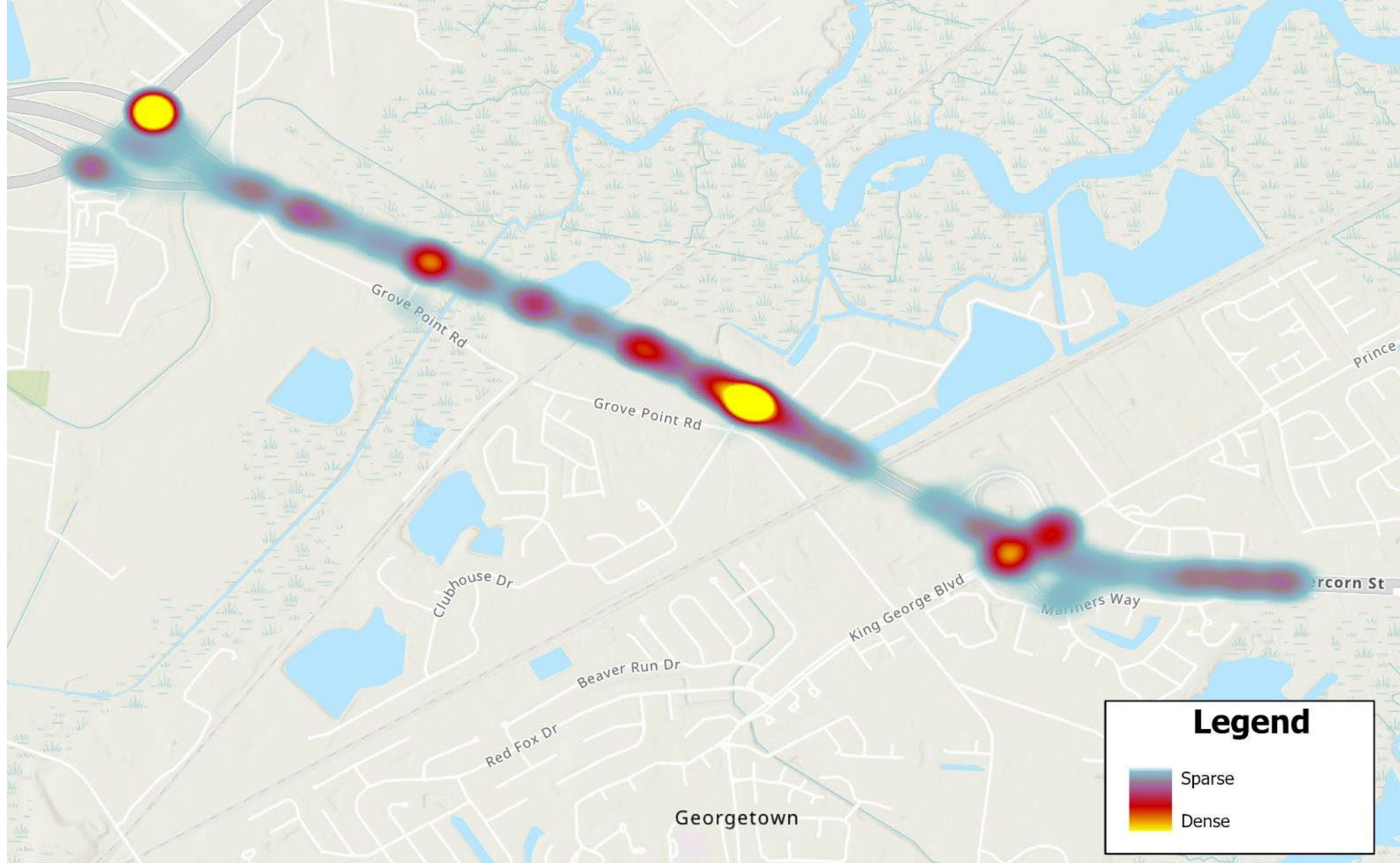


## Freeway

- A major highway designed for fast and efficient long-distance travel
- **Speed Limit:** Generally between 55-65 mph.
- **Limited Access:** Cars can only enter and exit using ramps; no direct access from local streets.
- **No Traffic Lights:** There are no traffic lights, allowing for continuous traffic flow.
- **No Crosswalks:** Pedestrians are not allowed to cross; crossing is done via overpasses or underpasses.

## Most crashes occur near:

- Pine Grove Dr
- US 17 WB ramps



Crash Heat Map (2018-2022)

SR 204 | Chatham County

# SR 204 Corridor Crash Rates

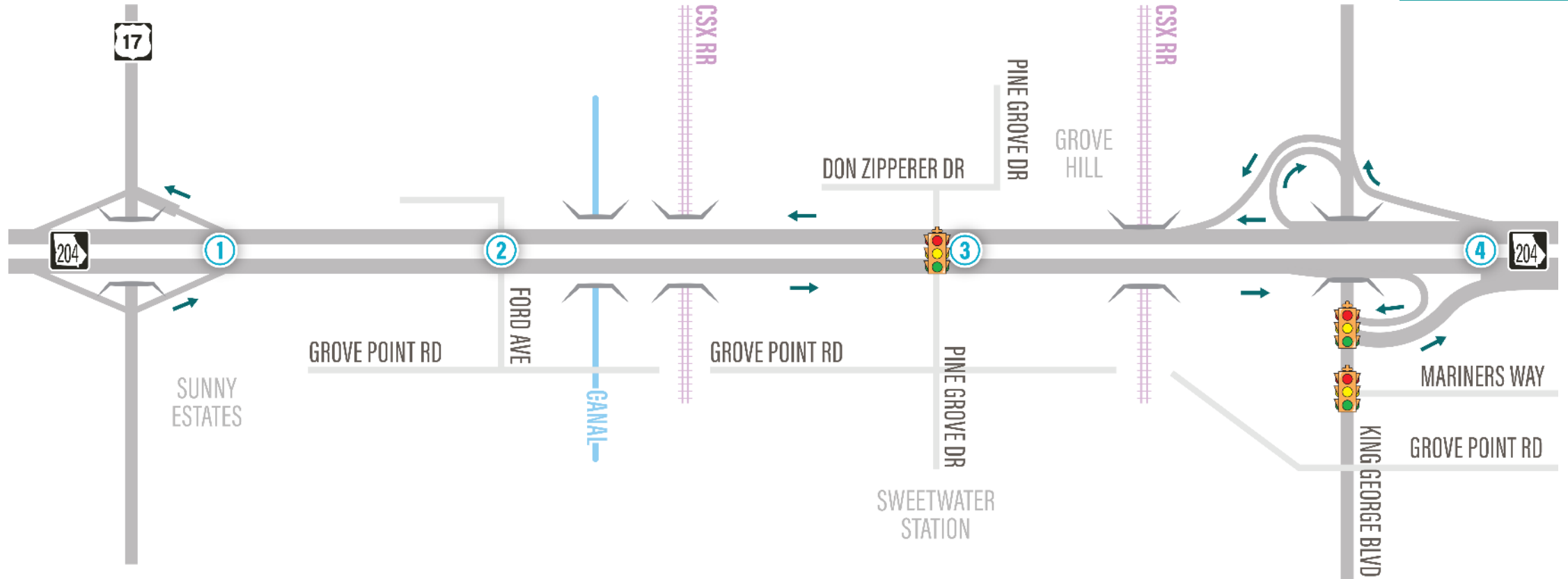
	2018	2019	2020	2021	2022
<b>Total Crashes</b>					
# of Crashes	135	141	80	169	166
Crash Rate	304	314	176	369	359
<i>Arterial Statewide Average*</i>	<i>581</i>	<i>559</i>	<i>469</i>	<i>542</i>	<i>568</i>
<i>Freeway Statewide Average**</i>	<i>199</i>	<i>176</i>	<i>152</i>	<i>161</i>	<i>155</i>
<b>Injury Crashes</b>					
# of Crashes	32	38	24	50	44
Crash Rate	72	85	53	109	95
<i>Arterial Statewide Average*</i>	<i>141</i>	<i>137</i>	<i>118</i>	<i>146</i>	<i>218</i>
<i>Freeway Statewide Average**</i>	<i>48</i>	<i>44</i>	<i>41</i>	<i>42</i>	<i>39</i>

\*Statewide average of Principal Arterial, Non-Freeway, Urbanized roadways

\*\*Statewide average of Principal Arterial, Freeway, Urbanized roadways

# Operations under No Build Alternative

 EXISTING ROADS  
 EXISTING BRIDGE



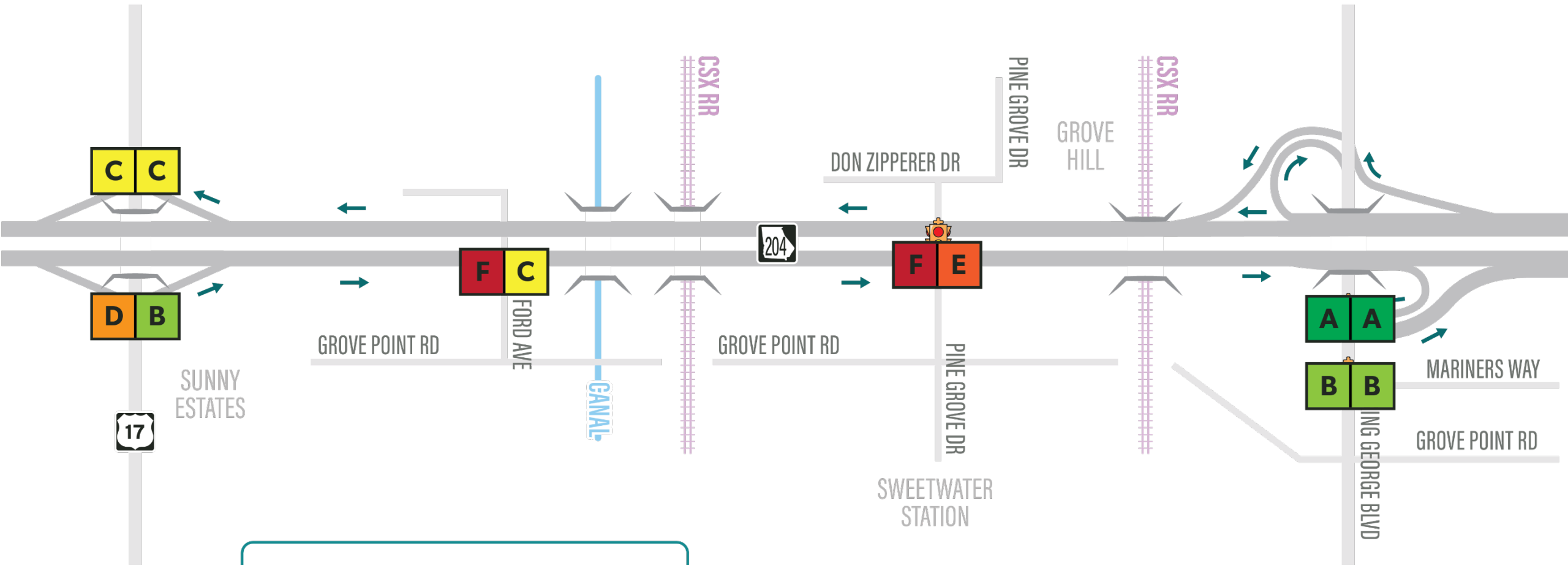
**1** SR 204 AND US 17 RAMPS  
EXISTING

**2** SR 204 AND FORD AVENUE  
EXISTING

**3** SR 204 AND PINE GROVE DRIVE  
EXISTING

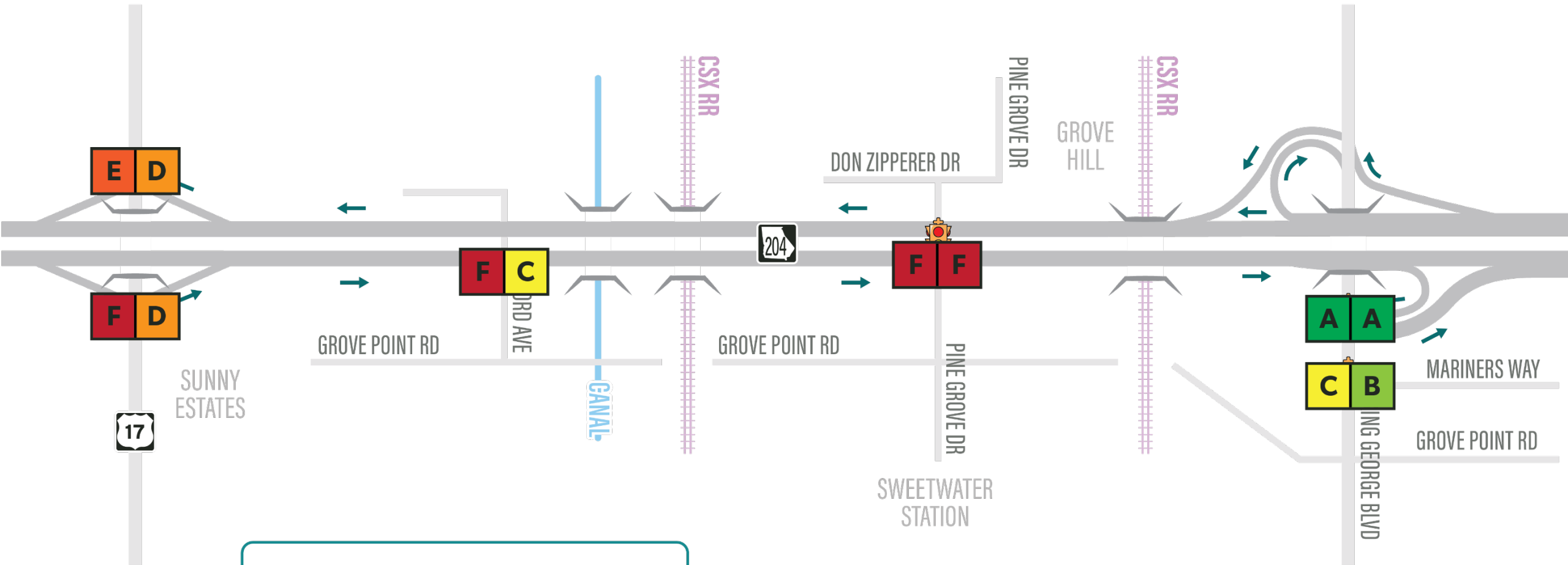
**4** SR 204 AND KING GEORGE BOULEVARD RAMPS  
EXISTING

# SR 204 Traffic | No Build Open Year (2030)



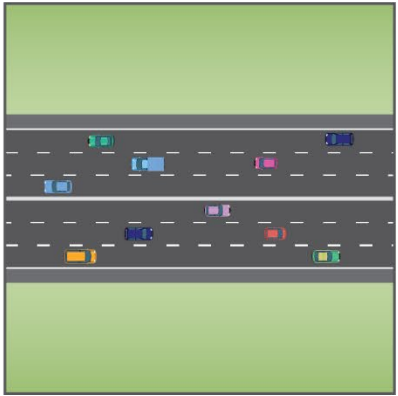
AM	PM	LOS A	LOS D
		LOS B	LOS E
		LOS C	LOS F

# SR 204 Traffic | No Build Design Year (2050)



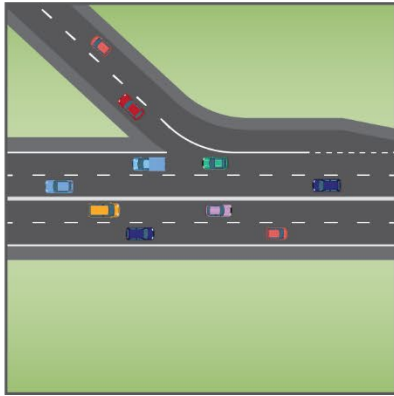
AM	PM	LOS A	LOS D
		LOS B	LOS E
		LOS C	LOS F

# Types of Improvements Considered



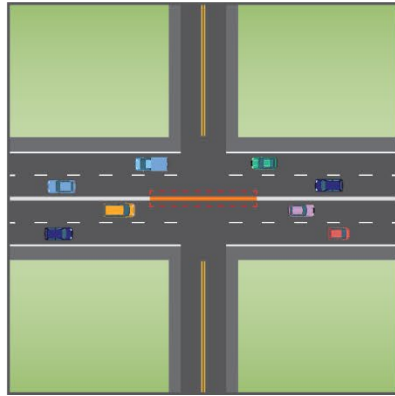
## Widening SR 204

- 4 lanes to 6 lanes



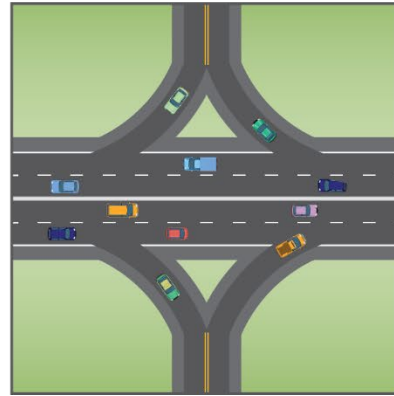
## Improving Off Ramp

- SR 204 WB off ramp to US 17



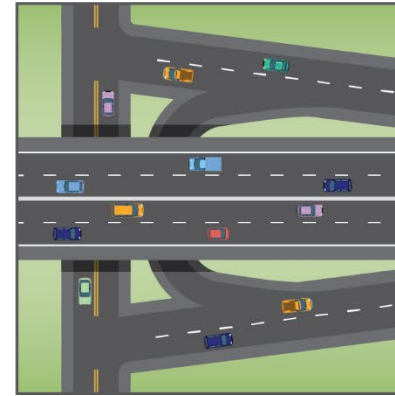
## Closing Medians

- SR 204 at Ford Ave
- SR 204 at Pine Grove Dr



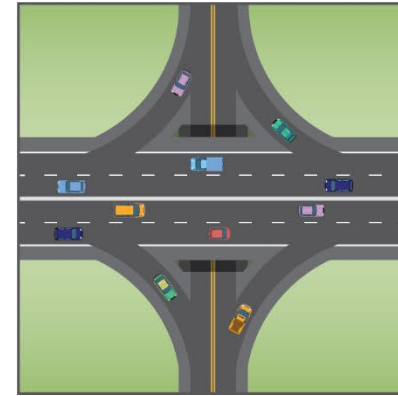
## Adding mini on ramp/off ramps

- SR 204 at Ford Ave
- SR 204 at Pine Grove Dr



## Adding U-Turn

- SR 204 WB to SR 204 EB at US 17



## Adding an interchange

- SR 204 at Pine Grove Dr

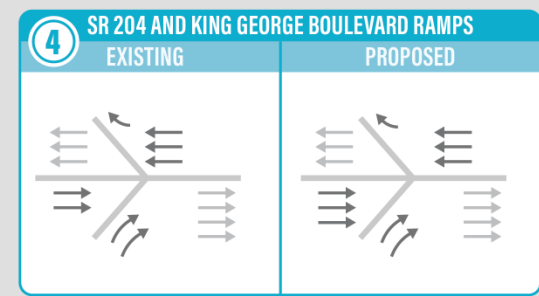
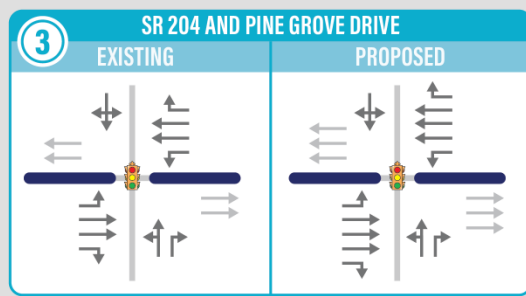
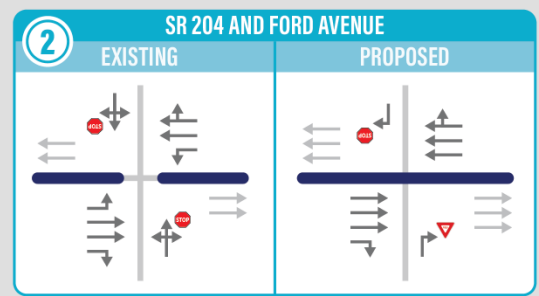
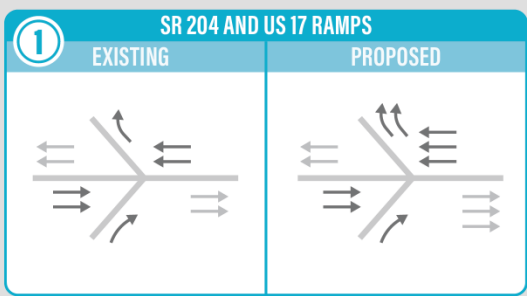
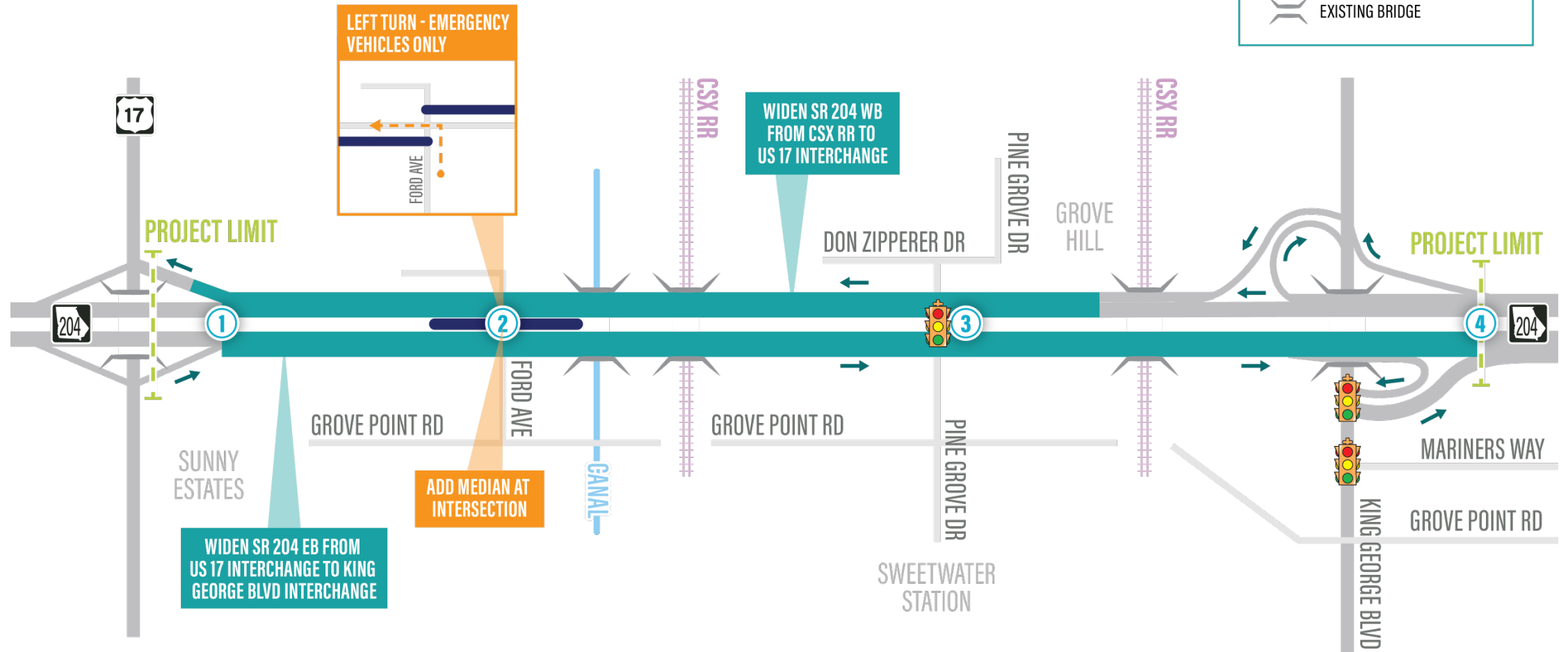
# Short Term Alternatives

- Analyzed for an Open Year of 2030
- **Alternative A**
  - Widen SR 204 from 4 to 6 lanes between US 17 and King George Blvd, closing median at Ford Ave, maintain signalized intersection at Pine Grove Dr
- **Alternative B**
  - Close median at Ford Ave and Pine Grove Dr; improve SR 204 WB off ramp to US 17
- **Alternative C**
  - Close median at Ford Ave and Pine Grove Dr; improve SR 204 WB off ramp to US 17; add U-turn underneath existing SR 204 bridge at US 17

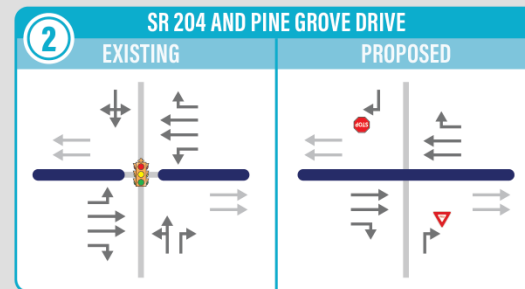
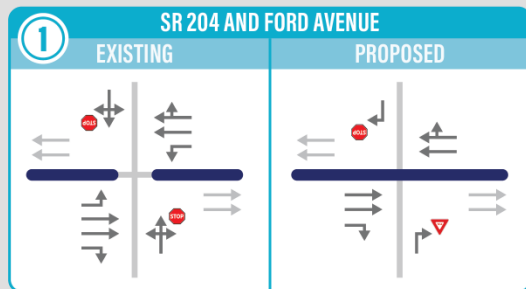
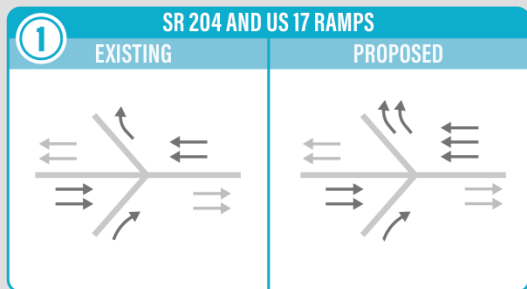
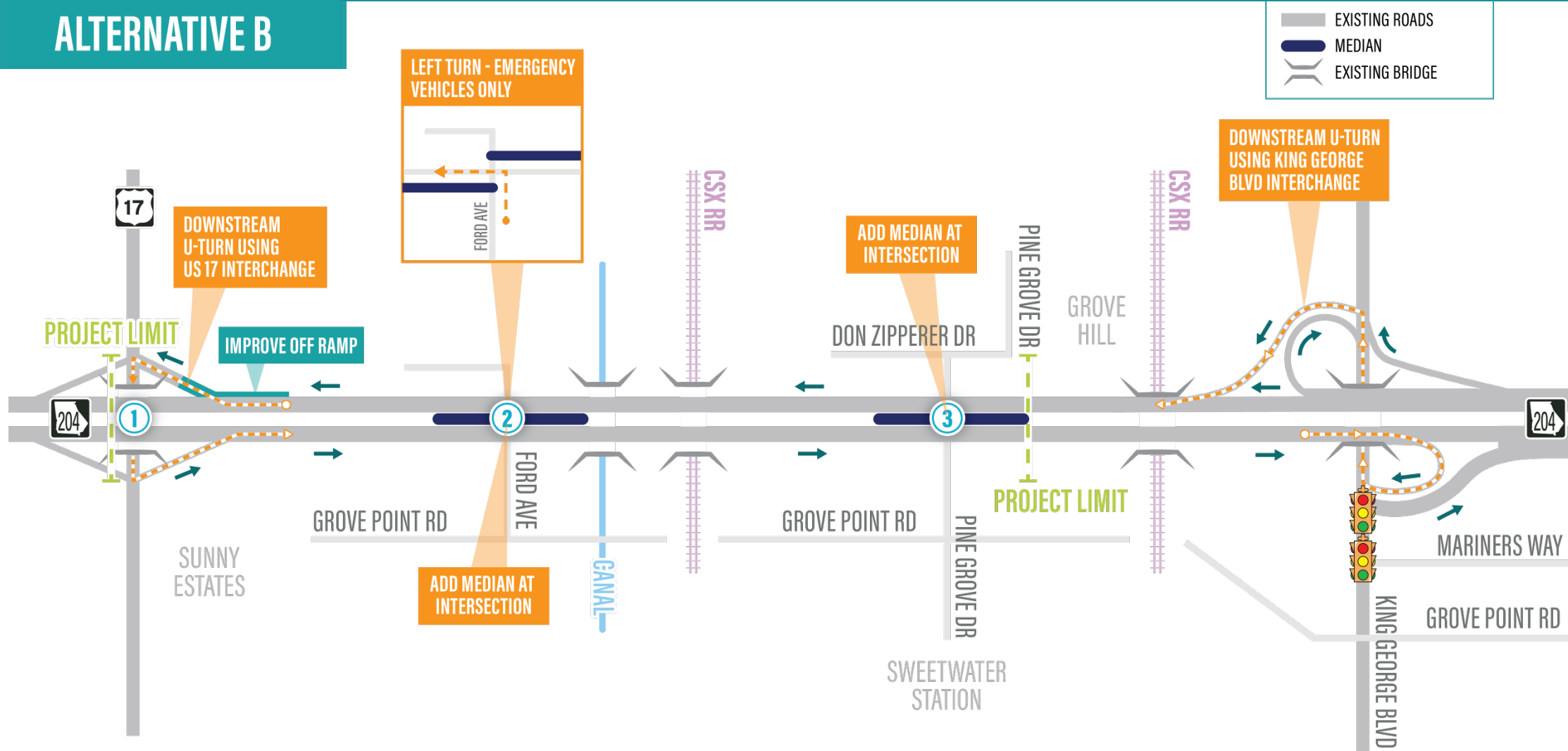


# ALTERNATIVE A

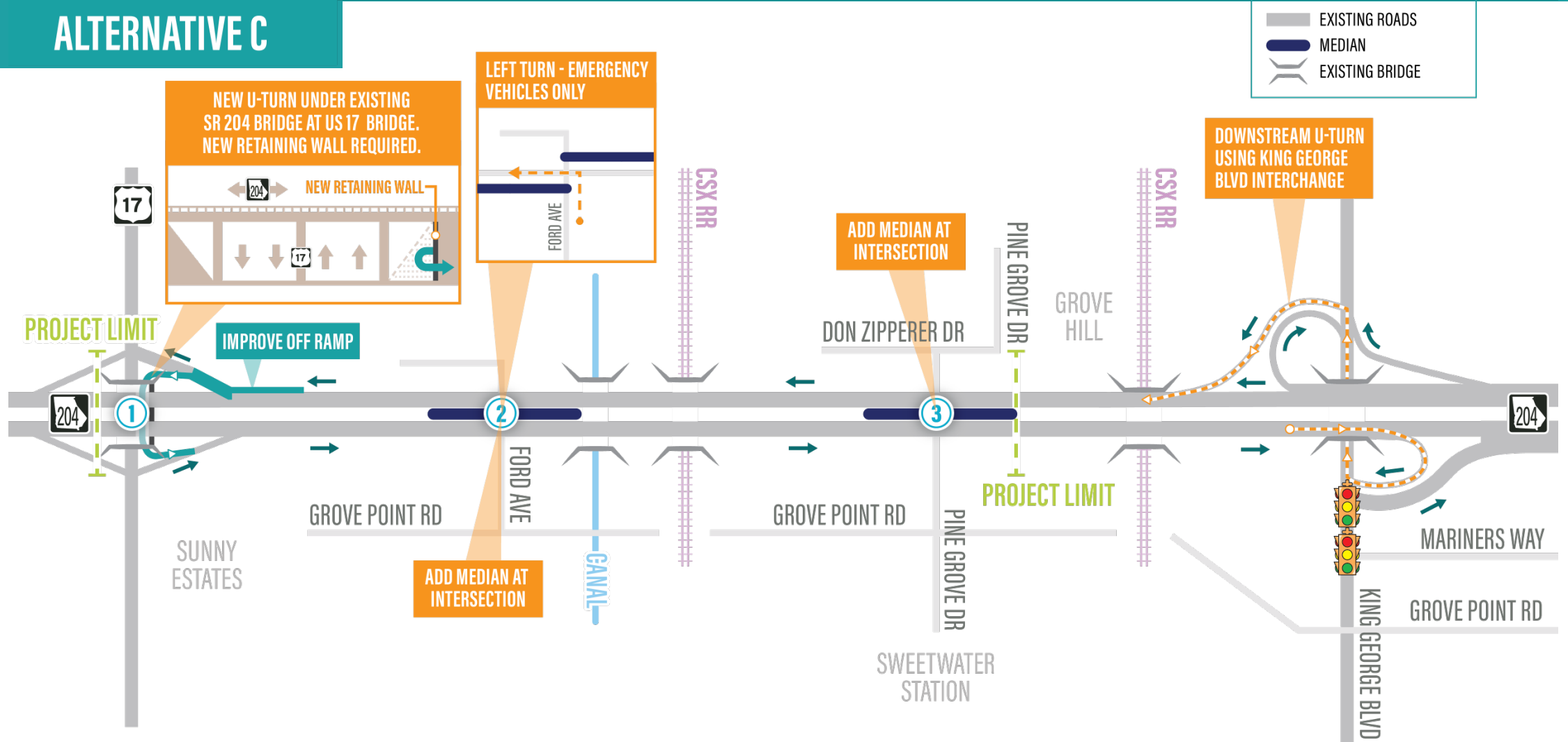
-  EXISTING ROADS
-  PROPOSED ROADWAY WIDENING
-  MEDIAN
-  EXISTING BRIDGE



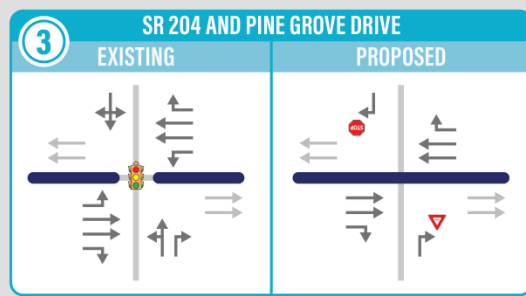
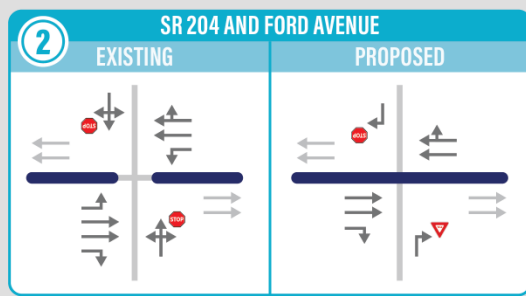
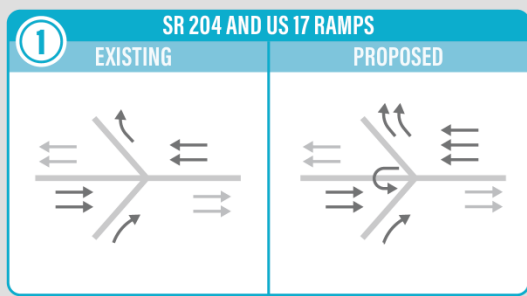
# ALTERNATIVE B



# ALTERNATIVE C



- EXISTING ROADS
- MEDIAN
- EXISTING BRIDGE



# Short Term Alternatives Comparison

## Alternative A

Widen SR 204 from 4 to 6 lanes between US 17 and King George Blvd, closing median at Ford Ave, maintain signalized intersection at Pine Grove Dr

## Alternative B

Close median at Ford Ave and Pine Grove Dr; improve SR 204 WB off ramp to US 17

## Alternative C

Close median at Ford Ave and Pine Grove Dr; improve SR 204 WB off ramp to US 17; add U-turn underneath existing SR 204 bridge at US 17

### SR 204 Alternative Matrix - Short Term

Alternatives	A	B	C
<b>Safety Benefit</b>	■ Low	■ Medium	■ Medium
<b>Traffic Operations*</b>			
<b>Overall Delay</b>	▼ Medium Reduction	▼ Small Reduction	▼ Small Reduction
SR 204 Travel Time	▼ Medium Reduction	▼ Medium Reduction	▼ Medium Reduction
Ford Ave Travel Time	▲ Medium Increase	▲ Large Increase	▲ Medium Increase
Pine Grove Travel Time	▼ Small Reduction	▲ Large Increase	▲ Medium Increase
<b>Environmental Impacts</b>	■ Medium	■ Small	■ Small
<b>Community Impact</b>	■ Small	■ Small	■ Small
<b>Cost</b>	\$ 30,000,000	\$ 4,500,000	\$ 9,700,000

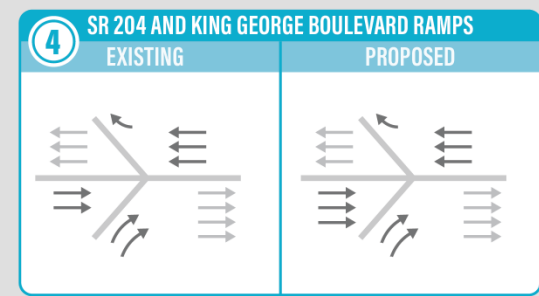
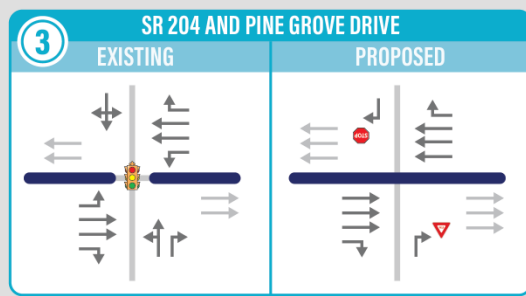
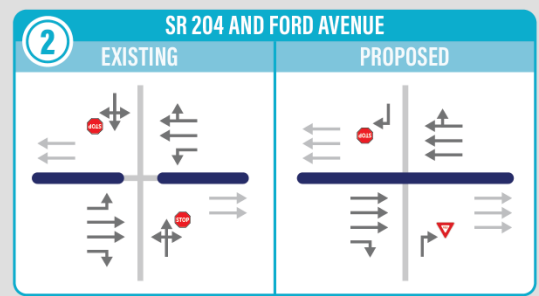
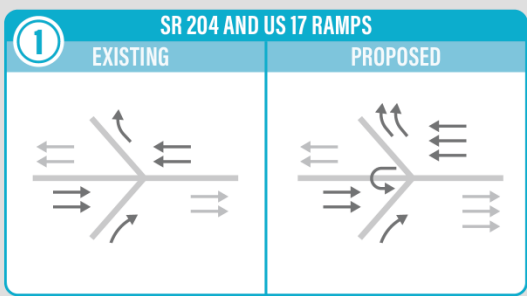
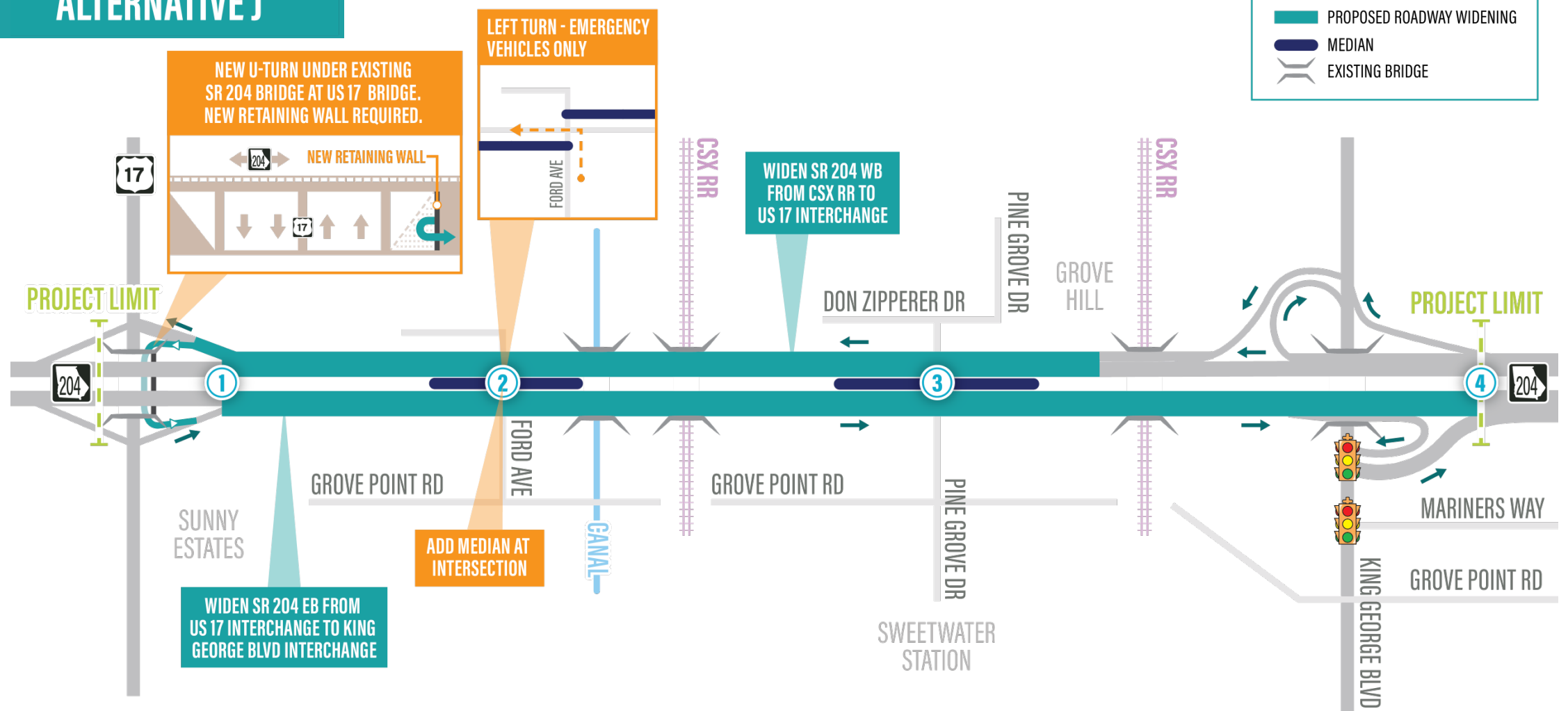
\*Compared with Open Year No Build Conditions in 2030

# Long Term Alternatives

- Analyzed for an Open Year of 2050
- **Alternative J**
  - Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; close median at Ford Ave and Pine Grove Dr; add U-turn underneath existing SR 204 bridge at US 17
- **Alternative K**
  - Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; close median and add mini on ramps/off ramps at Ford Ave and Pine Grove Dr; add U-turn underneath existing SR 204 bridge at US 17
- **Alternative M**
  - Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; grade separate Pine Grove Dr with ramps and roundabout terminals

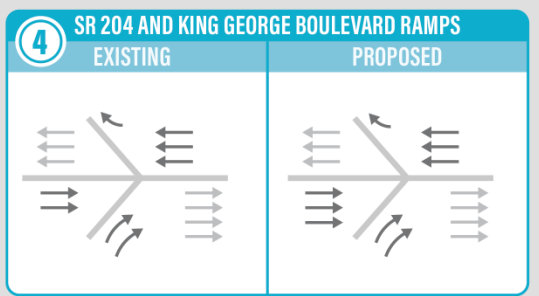
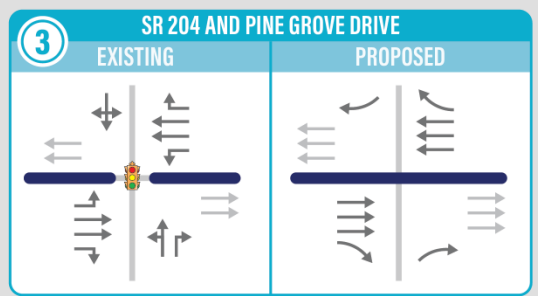
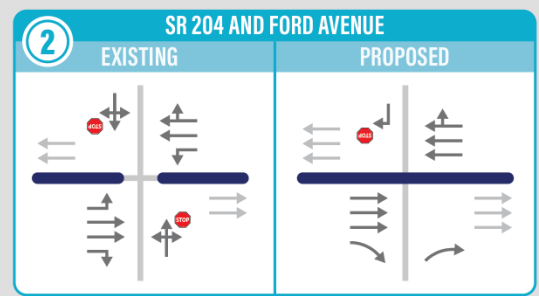
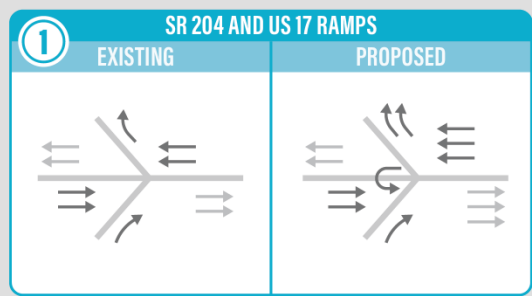
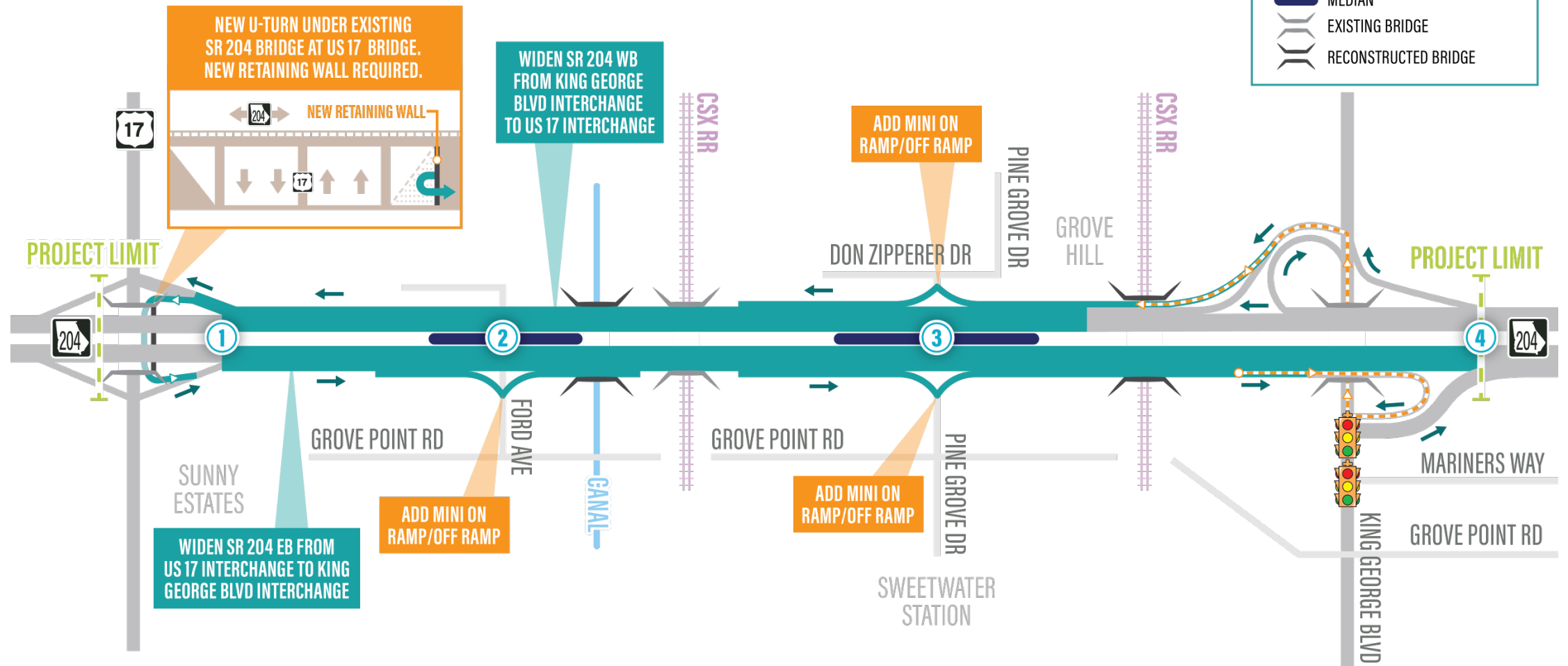
# ALTERNATIVE J

- EXISTING ROADS
- PROPOSED ROADWAY WIDENING
- MEDIAN
- EXISTING BRIDGE

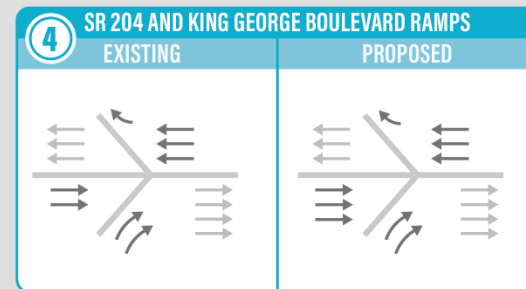
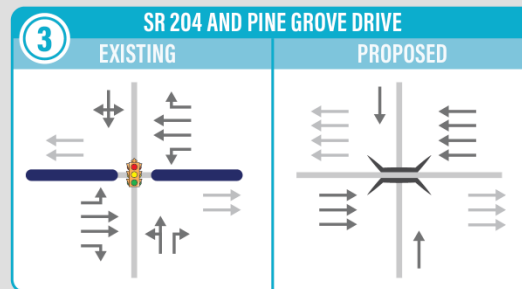
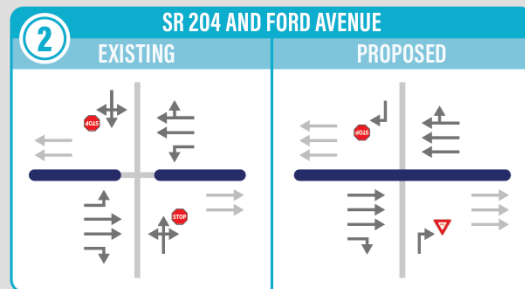
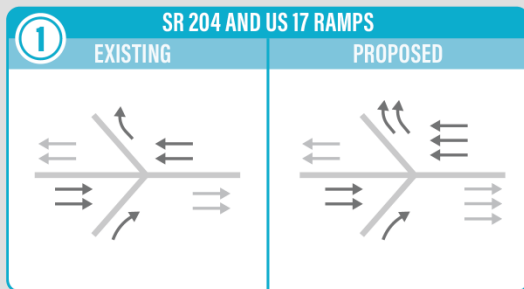
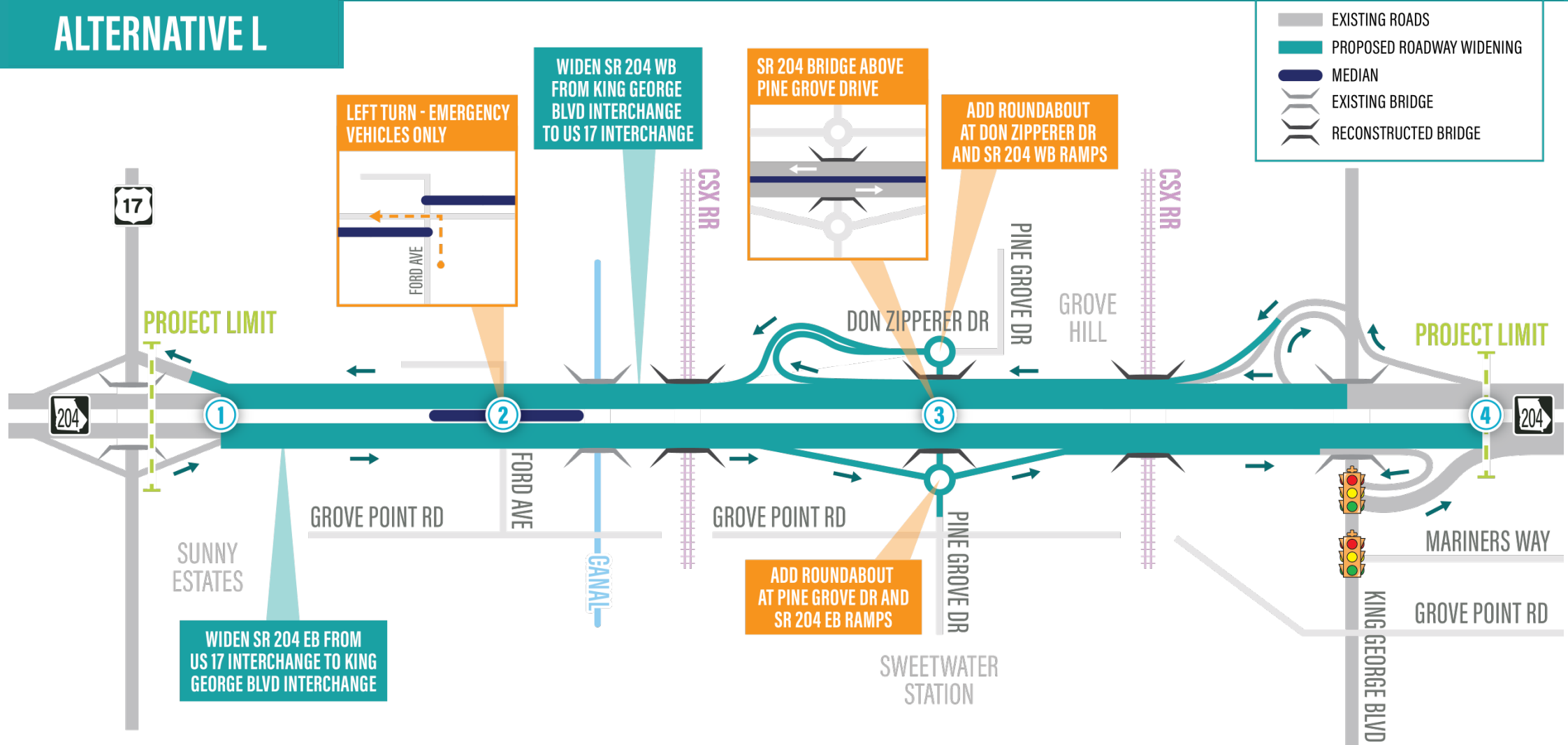


# ALTERNATIVE K

-  EXISTING ROADS
-  PROPOSED ROADWAY WIDENING
-  MEDIAN
-  EXISTING BRIDGE
-  RECONSTRUCTED BRIDGE



# ALTERNATIVE L





# Long Term Alternatives

Analyzed for a Design Year of 2050

## Alternative J

Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; close median at Ford Ave and Pine Grove Dr; add U-turn underneath existing SR 204 bridge at US 17

## Alternative K

Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; close median and add mini on ramps/off ramps at Ford Ave and Pine Grove Dr; add U-turn underneath existing SR 204 bridge at US 17

## Alternative L

Widen SR 204 from 4 to 6 lanes between SR 17 and King George Blvd; grade separate Pine Grove Dr with ramps and roundabout terminals

### SR 204 Alternative Matrix - Long Term

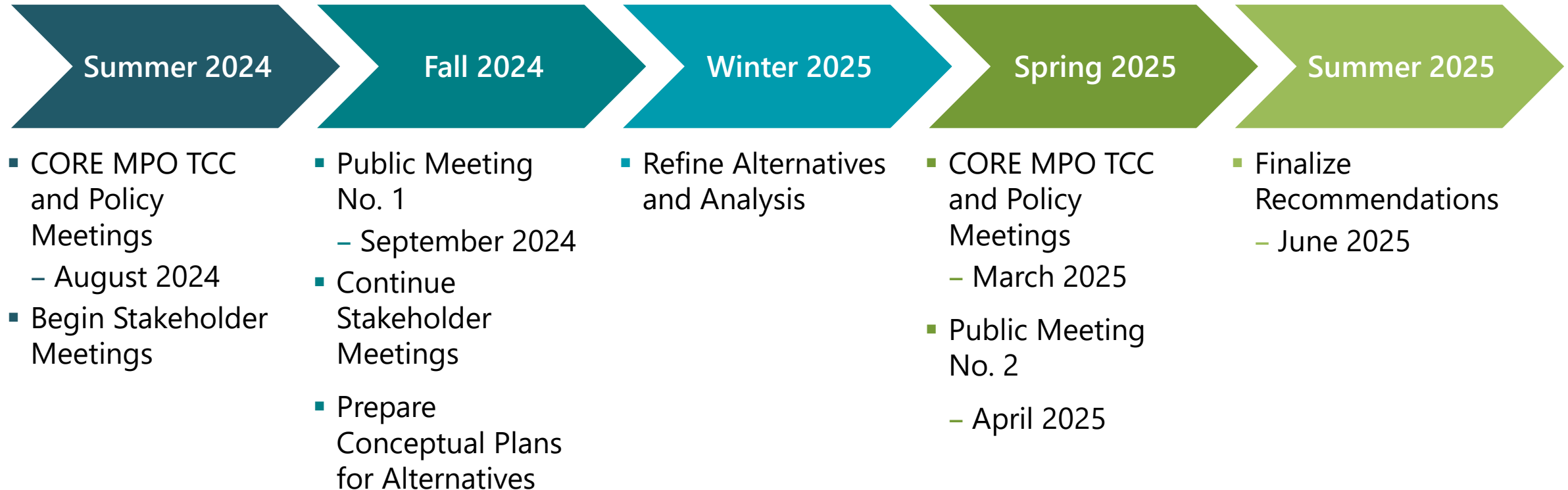
Alternatives	J	K	L
Safety Benefit	■ Medium	■ High	■ High
Traffic Operations*			
Overall Delay	▼ Large Reduction	▼ Large Reduction	▼ Large Reduction
SR 204 Travel Time	▼ Large Reduction	▼ Large Reduction	▼ Large Reduction
Ford Ave Travel Time	▲ Small Increase	▲ Small Increase	▲ Small Increase
Pine Grove Travel Time	▲ Small Increase	▼ Small Reduction	▼ Large Reduction
Environmental Impacts	■ Medium	■ High	■ High
Community Impact	■ Small	■ Medium	■ Medium
Cost	\$ 36,000,000	\$ 58,000,000	\$ 96,000,000

\*Compared with Design Year No Build Conditions in 2050

# Superseded Alternatives

Alternative Design Concept	Reason Eliminated
Widening to three lanes eastbound from west of Pine Grove Rd to the King George Blvd eastbound on-ramp and widening to three lanes westbound from the King George Blvd westbound off-ramp to west of Pine Grove Rd	The partial widening provided less benefit compared with Alternative A (widening to US 17)
Convert the SR 204 at Pine Grove Rd intersection to a signalized RCUT (Restricted Crossing U-Turn Intersection)	The signalized intersection would have continued to cause excess delay on SR 204 and would see a much smaller reduction in crashes than fully closing the median
Convert the SR 204 at Ford Ave intersection to an unsignalized RCUT (Restricted Crossing U-Turn Intersection)	Left turns would be difficult and would see a much smaller reduction in crashes than fully closing the median
Connect sections of Grove Point Road to King George Blvd using bridges over both railroads	Bridges would cause excessive impacts to surrounding properties and would conflict with electric transmission lines
In conjunction with alternatives that close the Pine Grove Rd median opening, connect Grove Point Rd to Don Zipperer Dr with a new roadway underneath the SR 204 bridge over the western branch of the railroad	Cost of constructing the new roadway and impacts to commercial properties likely outweigh benefits of the new connection, and may not be allowed by CSX Railroad
Connect Grove Point Rd with Fountain Rd to the west	The extension would impact the flea market

# Public Involvement and Study Schedule





# Discussion