

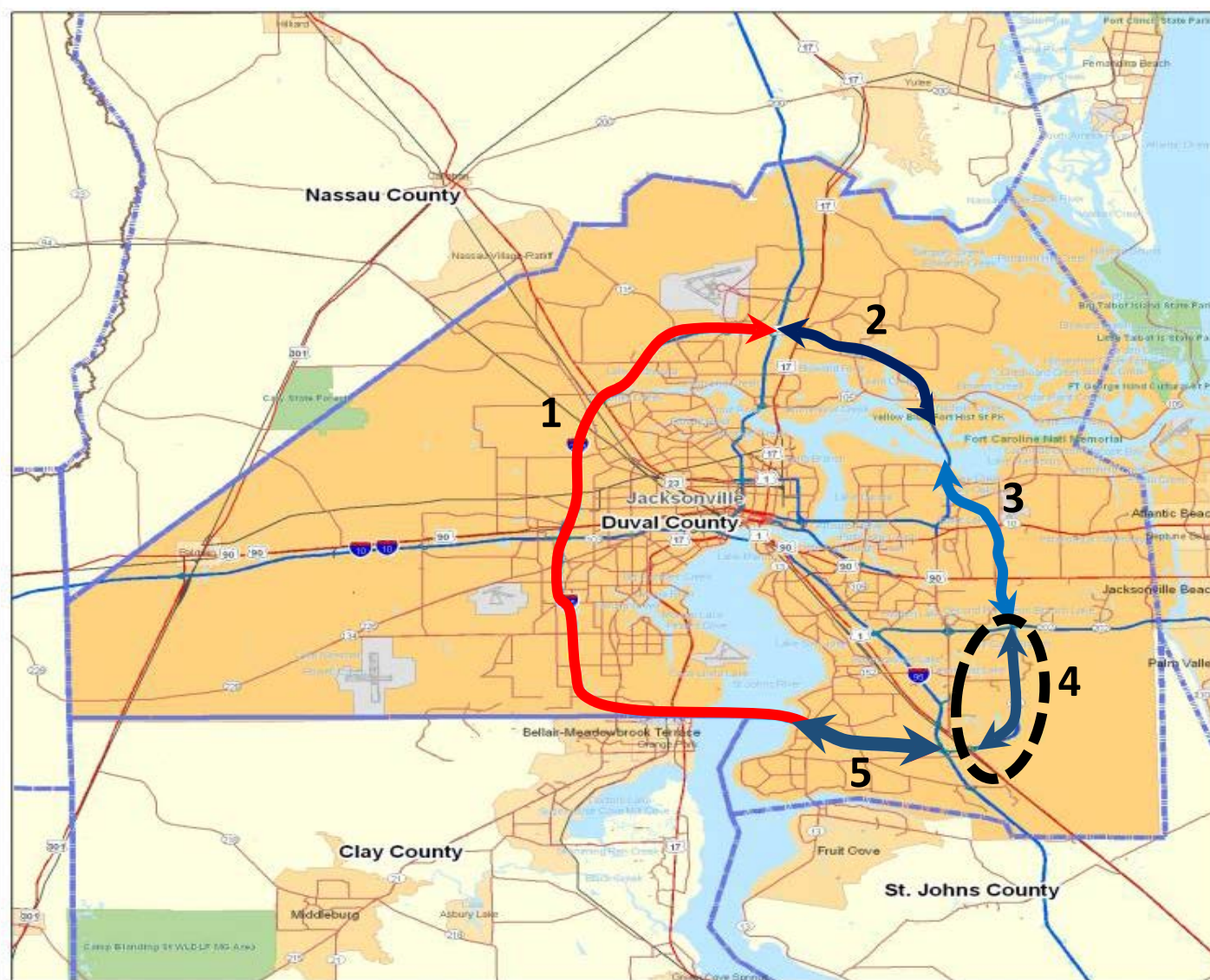
Making Our Freeways Better

I-295 East Express – Phase I (SR 9B to SR 202)

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1) What's happening along I-295?



Current FDOT Projects along I-295

Planning Phase:

1. I-295 Western Beltway Managed Lanes Study

Design Phase:

2. I-295 – Dames Point Bridge to North I-95 Interchange

PD&E Phase:

3. I-295 East Phase II – SR 202 to Dames Point Bridge

Construction Phase:

4. I-295 East Phase I – SR 9B to SR 202

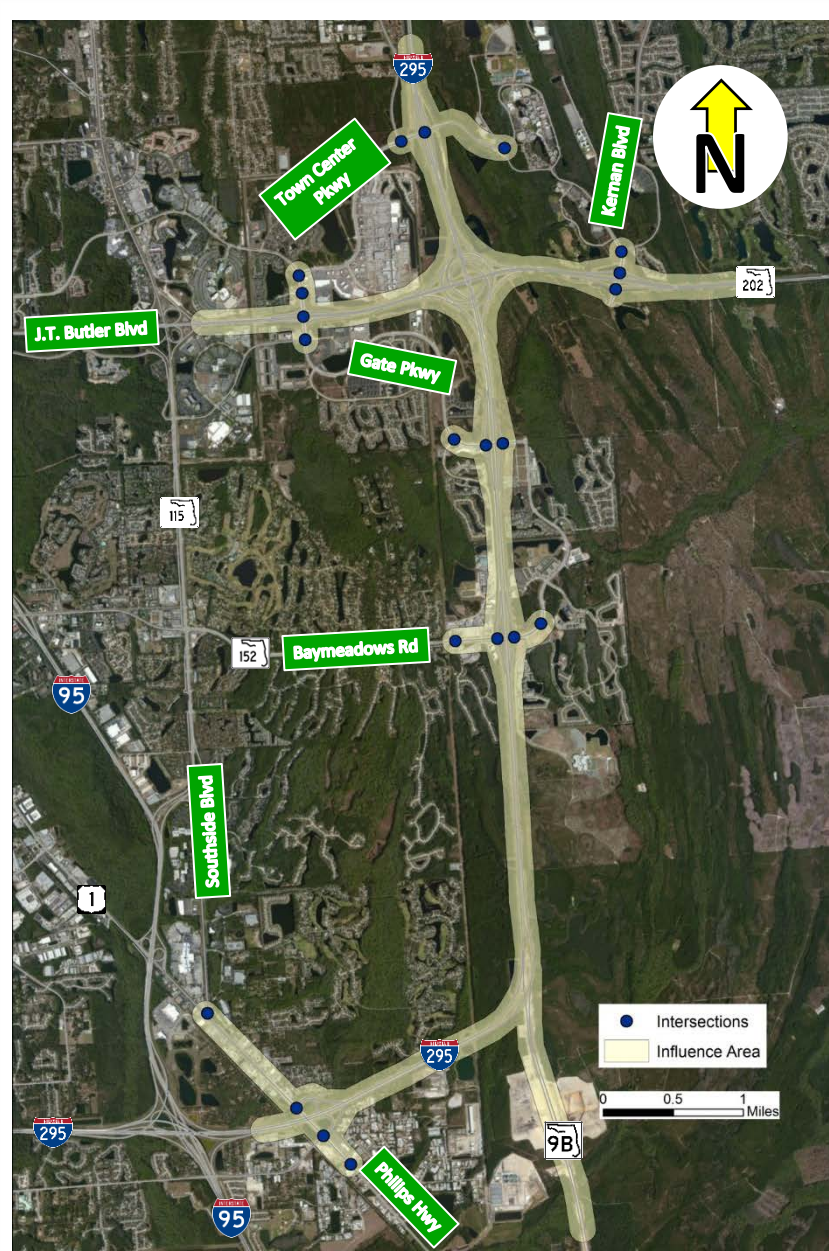
5. I-295 South – Buckman Bridge to South I-95 Interchange

2) Where is this project located?

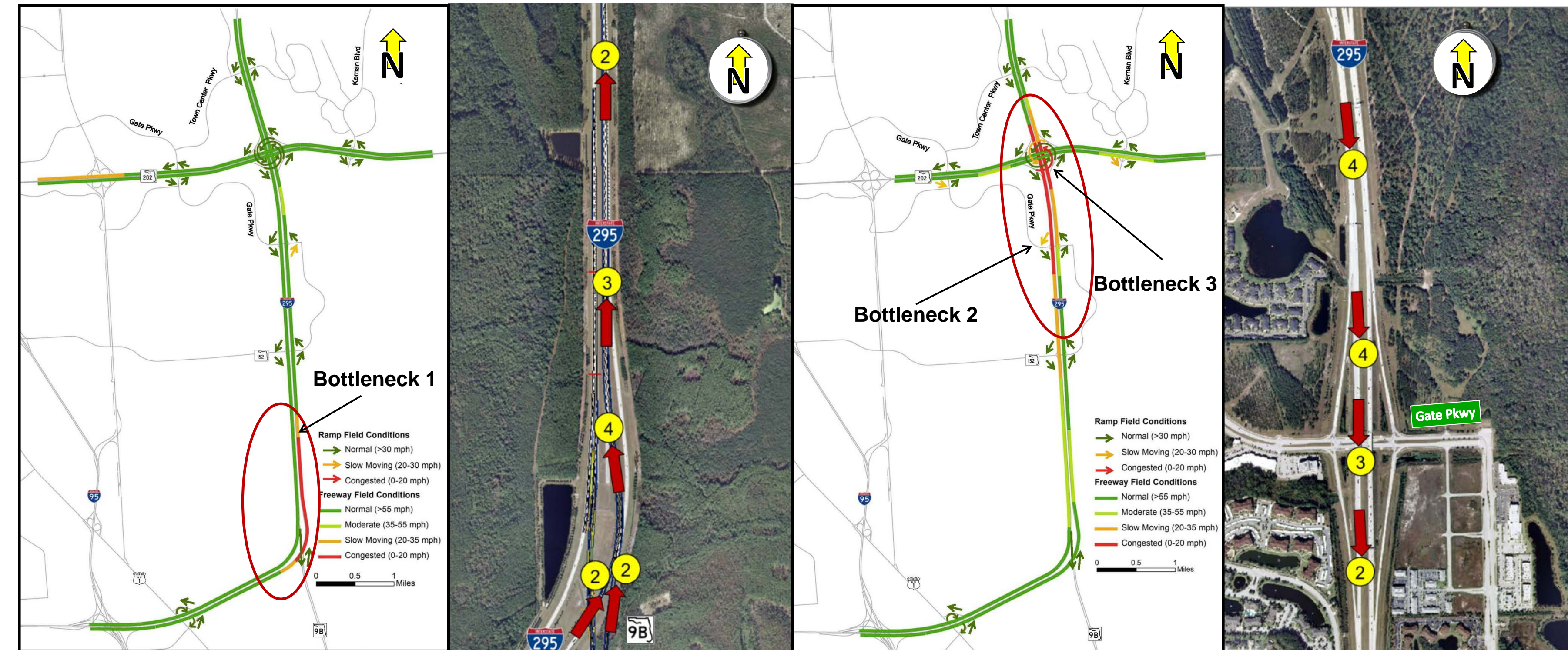
Project Study Area

I-295 between SR 9B and SR 202

- Approximately 5 miles in length
- Area of Influence includes two adjacent interchanges
- Along I-295:
 - 2 – System-to-System Interchanges
 - 4 – Service Interchanges
- Along SR 202 (J. T. Butler Blvd)
 - 2 – Service Interchanges
- Ramp terminals and one adjacent signalized intersection on either side



4) Where are the problems occurring?



Detailed and Accurate Calibration of Existing Conditions

- Identify data collection needs and modeling tools based on defined calibration criteria and performance measures.
- Customize calibration parameters based on field observed existing condition driver behaviors.
- Compile and understand the guidelines on changing the values of VISSIM model CC parameters.
- Conduct a sensitivity analysis for various combination of VISSIM model CC parameters to replicate existing condition driver characteristics, traffic volumes, travel times, and field observed bottlenecks.

3) What is the problem?

Current Issues

- Critical Beltway in the North Florida region that Serves Local, Tourist & Freight Traffic
- Existing traffic volumes exceed available capacity
- Peak spreading with a two hour peak period
- Corridor experiences high crash rates
- Unreliable travel conditions



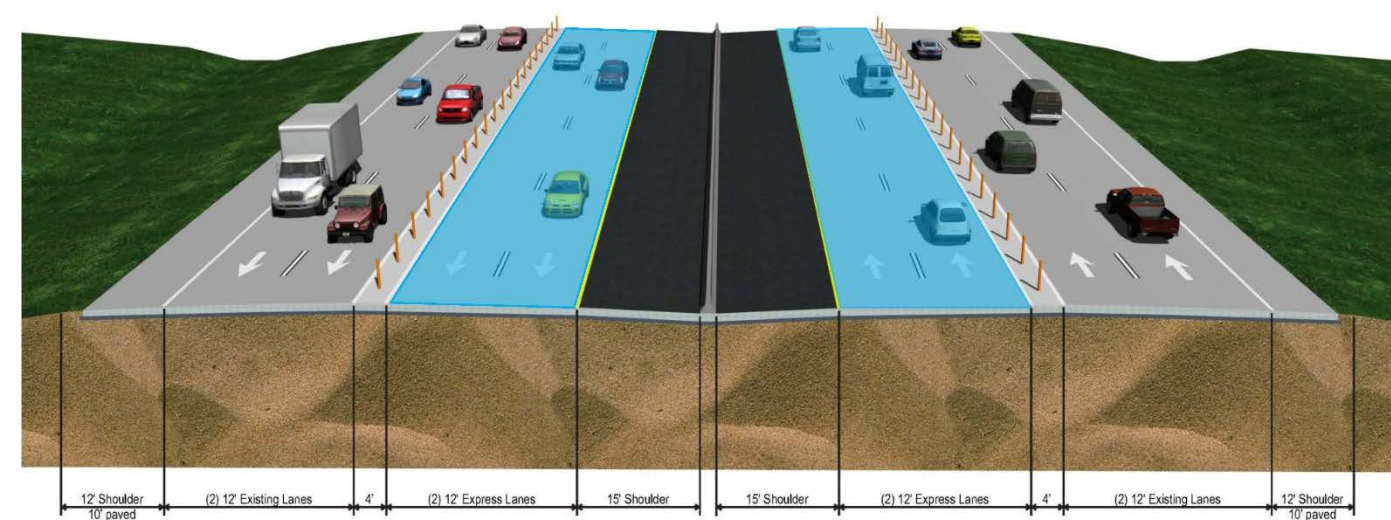
Need

The region's population is expected to increase by 20 percent from 2010 to 2035. This future demand will exceed current capacity. In addition, travel time is variable (8 to 30 minutes) throughout this portion of I-295.

Purpose

The purpose of the project is to add capacity, improve travel time reliability, provide long term mobility options and improve operations along the I-295 corridor from the SR 9B to the SR 202 interchanges.

5) What are the solutions?



Proposed Typical Section



Alternatives Evaluated

Alternative Name	Express Lane Access From/To SR 202	
	From I-295 NB	To I-295 SB
Alternative 1	Slip Access	Slip Access
Alternative 2	Braided Ramp	Braided Ramp from SR 202 westbound only
Alternative 3	Braided Ramp and Slip Access to Town Center Pkwy	Slip Access

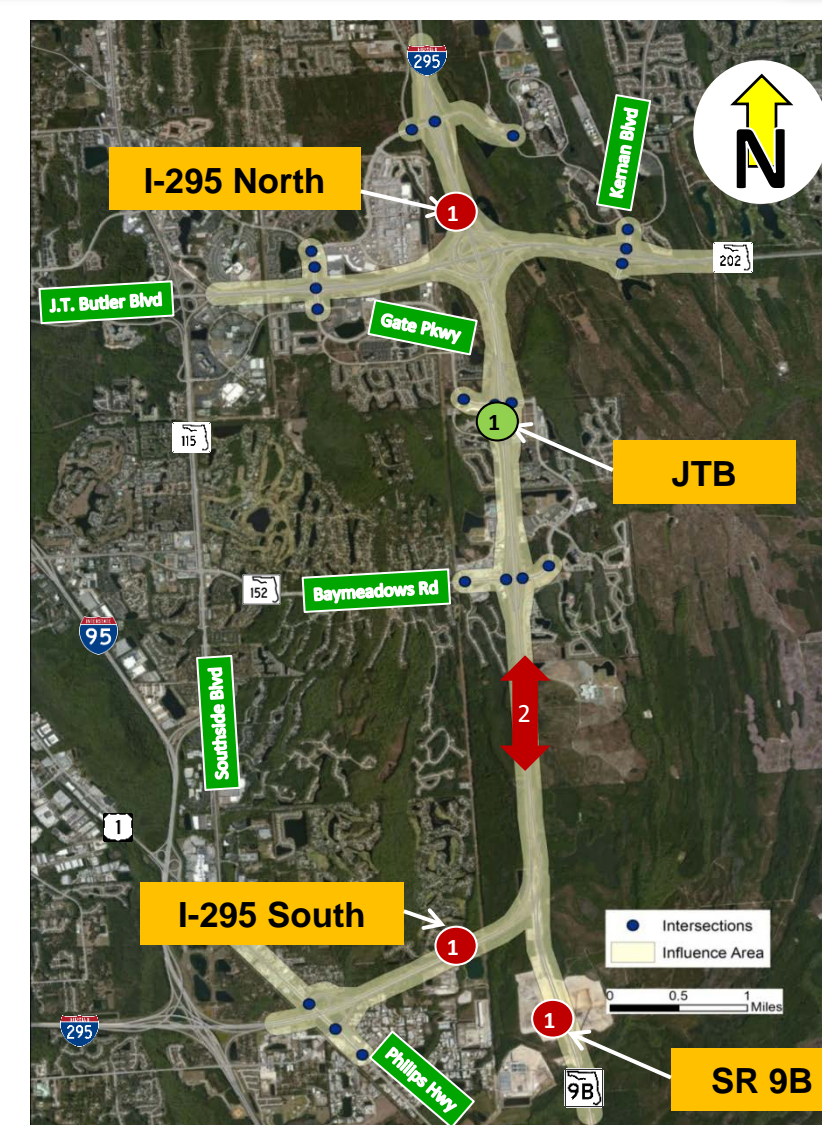
- Express Lane – Slip Access with number of lanes
- Express Lane Access types vary with alternatives

Improvements for General Purpose Lanes

- Add additional turn lane storage for off-ramps and improve arterial left-turn storages
- Increase acceleration and deceleration lane lengths and add auxiliary lanes
- Eliminate critical merge movement

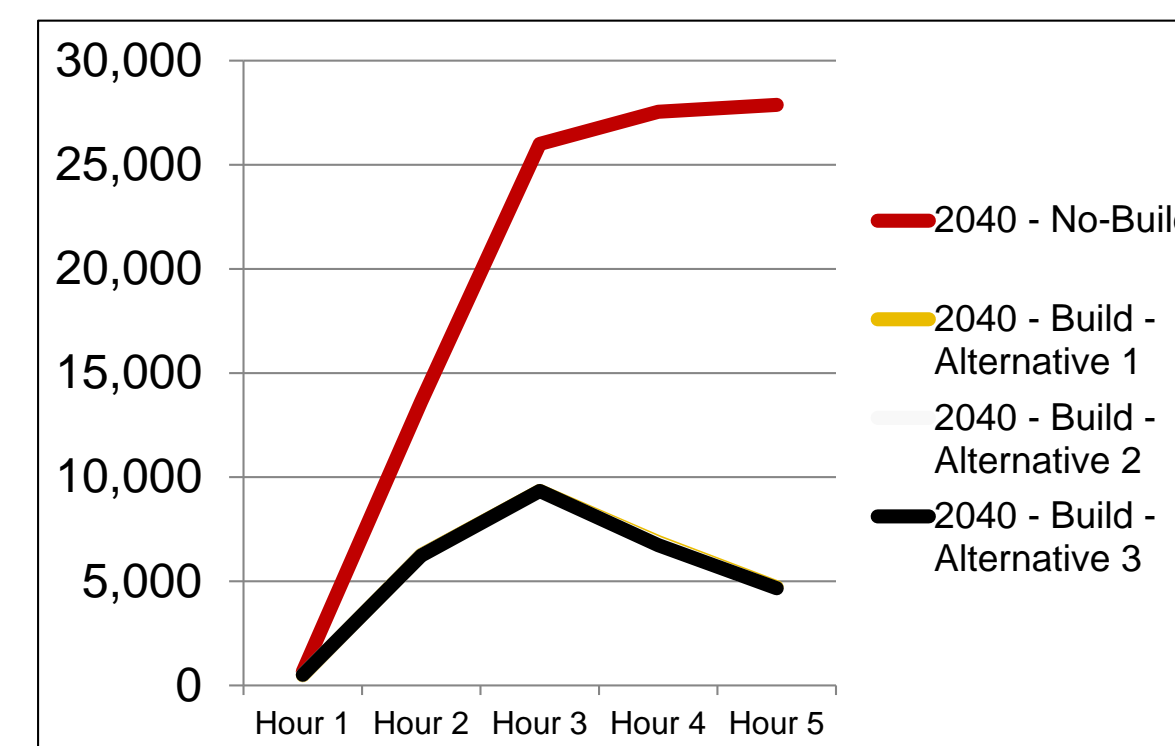
Note:

To ensure efficient express lane operations, improvements to general purpose lanes and arterial ramp terminals are critical. This assures improved performance of the roadway network in its entirety.



6) How do these solutions operate?

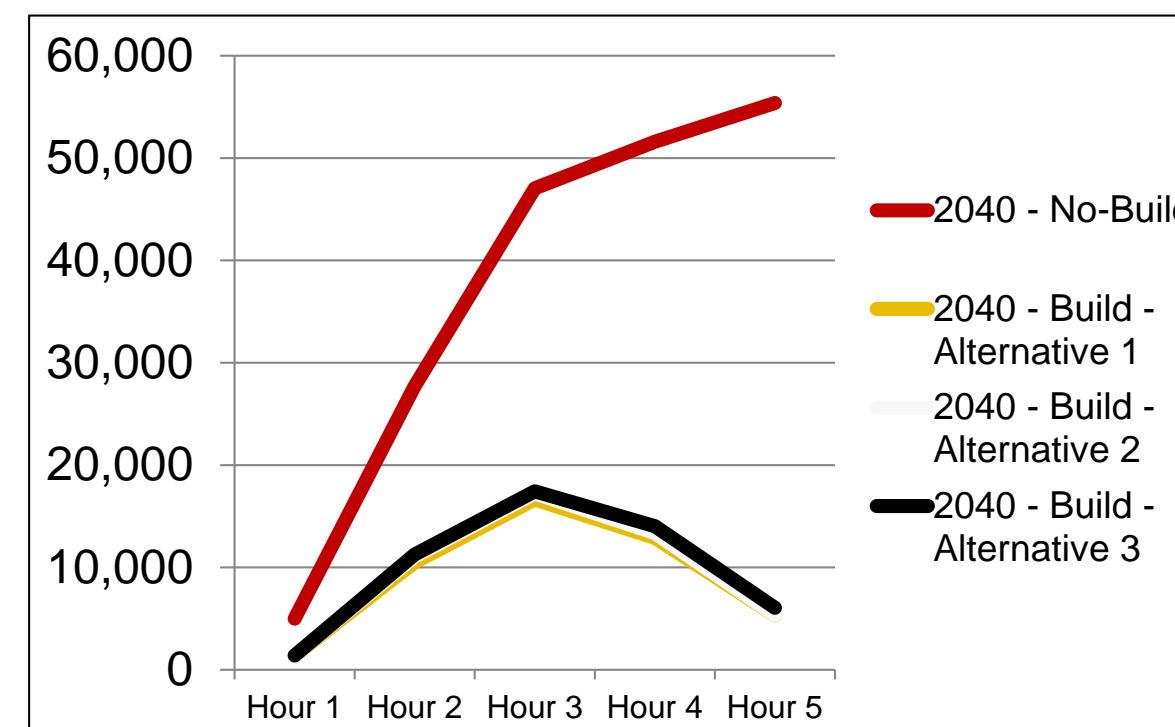
2040 AM Peak Denied Entry (veh)



Alts	Percent Denied Entry (2040)	
	AM	PM
NB	13%	26%
Alt 1	2 to 3%	
Alt 2		
Alt 3		

Latent Demand

2040 PM Peak Denied Entry (veh)



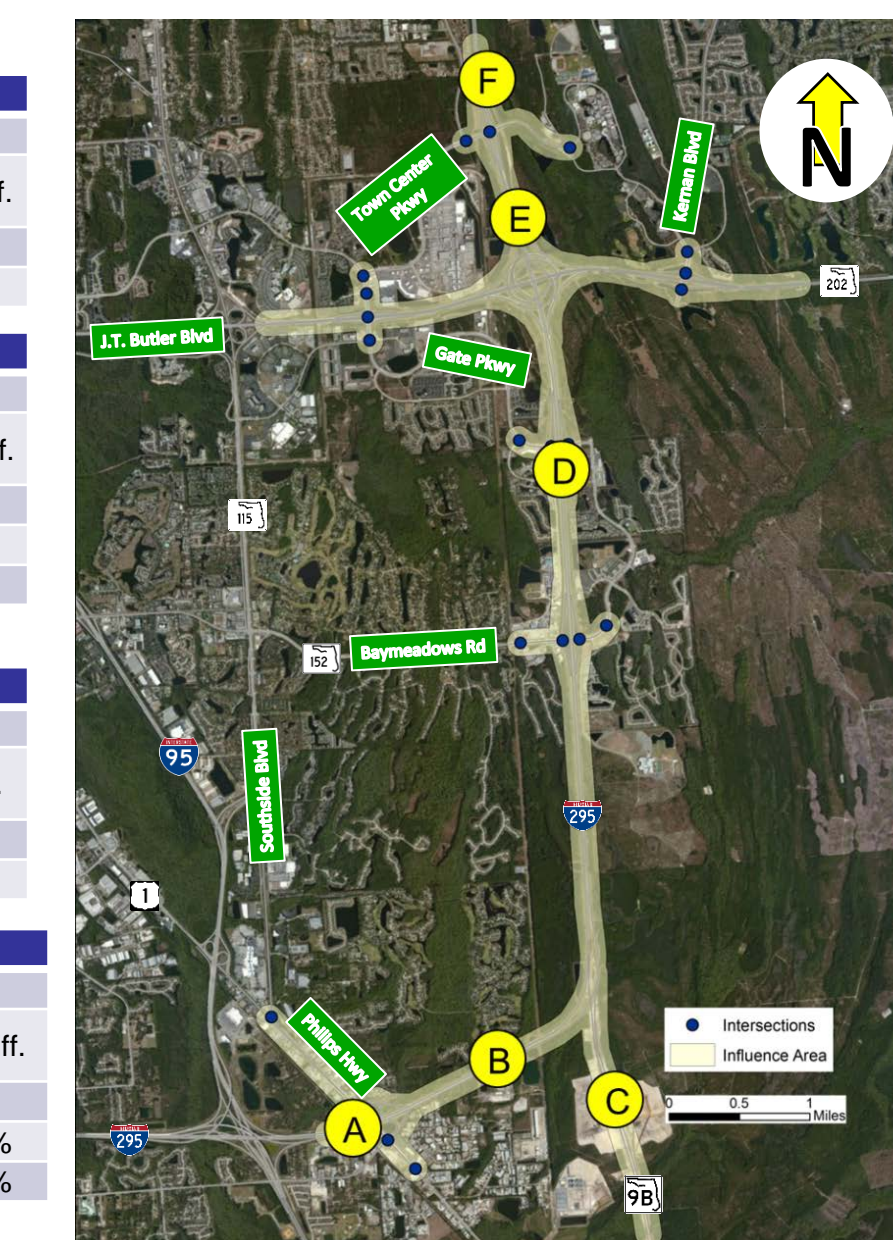
Travel Time

Scenarios	AM (min/veh)				PM (min/veh)				
	Hr 1	Hr 2	Hr 3	Hr 4	Hr 1	Hr 2	Hr 3	Hr 4	Hr 5
Existing	0.7	1.4	2.2	-	1.1	2.1	3.5	-	-
2020 – No-Build	0.7	2.5	6.4	3.8	1.2	1.4	5.0	14.0	15.5
2020 – Alt 1	0.6	1.4	2.3	0.7	0.5	0.7	1.1	1.2	0.5
2020 – Alt 2	0.6	1.4	2.2	0.7	0.5	0.7	1.2	1.2	0.5
2020 – Alt 3	0.6	1.4	2.3	0.7	0.5	0.7	1.1	1.2	0.5
2040 – No-Build	2.0	11.7	32.2	54.6	57.6	7.1	26.3	62.0	114.9
2040 – Alt 1	1.1	5.2	12.6	15.9	11.5	2.1	9.3	22.7	33.3
2040 – Alt 2	1.1	5.2	12.5	15.7	11.3	2.1	9.6	23.3	34.1
2040 – Alt 3	1.1	5.2	12.4	15.7	11.3	2.1	9.7	23.6	35.4

Scenarios	Percent Improvement	
	AM	PM
NB	46% - 80%	62% - 82%

Average Vehicular Delay ↑

Scenario	2040 Travel Time - Section A to F			2040 Travel Time - Section B to E		
	AM Peak	PM Peak	% Diff.	AM Peak	PM Peak	% Diff.
No-Build	11.3 - 32.7	26.4	11.9 - 46.1	10.1 - 28.7	21.8	
Build (1, 2, & 3)	8.1 - 8.9	8.4	8.1 - 8.6	6.0 - 6.6	6.2	72%



Acknowledgements

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