

S.R. 524 Corridor Planning Study

How the Study Began

In 2016, FDOT initiated a Corridor Planning Study to evaluate the need for potential multimodal transportation improvements along S.R. 524 in Brevard County, extending 3.1 miles from S. Friday Road to Industry Road. The S.R. 524 Corridor Study engaged local agencies, community leaders and other stakeholders to provide the study team with a comprehensive understanding of the groundwork for determining the needs of current and future users, and establishing a long-term plan that appropriately balances land use and transportation planning. The collaboration between the FDOT Study Team and key stakeholders included establishing a Project Visioning Team comprised of agency staff from the City of Cocoa, Brevard County, the Space Coast TPO, Space Coast Area Transit, Port Canaveral as well as residents, businesses, and property owners. The Study Team engaged this group throughout the evaluation to seek input into the planning process and to promote a heightened awareness of context-sensitive design issues as part of the concept development process.

Understanding the Problem

S.R. 524 serves a variety of land uses including: residential, commercial and industrial, and this mixture of uses is set to continue as properties that are currently vacant are developed. In addition, users of the corridor travel in automobiles, trucks, on bikes and by foot and are making both local trips to destinations along the corridor, and also traveling to I-95 and S.R. 528 for regional trips. Existing traffic conditions along the S.R. 524 Corridor are currently operating at an acceptable level. However, there is considerable development underway and planned for this Corridor so that by 2040 most roadway segments are projected to operate at poor levels of service if no improvements are made. In addition to deteriorating traffic conditions, S.R. 524 also exhibits:

- High crash rates
- Limited sidewalk and bicycle network
- Gaps in the transit network
- Lack of lighting along the western portion of the Corridor
- Limited aesthetic enhancements along the Corridor

Guiding Principles

Five guiding principles were developed for the S.R. 524 Corridor. These guiding principles speak to what the Cocoa community views as important as it relates to the multi-modal transportation vision and associated land use goals of the S.R. 524 Study Area, and they are the first step in defining the vision for S.R. 524. These guiding principles include:

- Safety and Security
- Mobility, Connectivity, and Accessibility
- Environmental Stewardship
- Economic Vitality
- Land Use Coordination

Purpose and Need

The **Purpose** of the S.R. 524 Corridor Planning Study is to develop potential multi-modal transportation improvements along S.R. 524 to promote safe and efficient travel for all users, to, from and along the Corridor. The **Need** is to: respond to increasing land development demands which are placing additional strain on the transportation network; improve safety for vehicles and pedestrians; improve traffic flow; and provide enhanced accommodations for pedestrians and bicyclists.

Recommended Improvement Strategies

Through the development of the Purpose and Need statement, the Goals and Objectives, the Project Visioning Team and Public Meetings, a series of alternative concepts were developed. These concepts were vetted with the

stakeholders and the public, and refinements were made based on the feedback provided. The S.R. 524 Corridor varies in land uses along the 3.1-mile roadway section, each with a slightly distinct character. For that reason, the Study Team broke the corridor into four segments for analysis. Individual, but compatible typical sections were developed for each of the four segments. The following design features are consistent across all corridor segments.

- Two through travel lanes in each direction
- Center raised median
- Multi-use path on north side of roadway
- Sidewalk on south side of roadway
- Buffered bike lanes on both sides of roadway
- Enhanced crosswalks and pedestrian signals at all intersections
- 45mph posted speed limit
- Curb and gutter
- Grass buffer between back of curb and sidewalks/shared path
- [Stormwater treatment; floodplain compensation and wetland mitigation will be required along the corridor](#)

Segment 1: S.R. 524 at I-95 Typical Section - Consists of two 12' through travel lanes in the eastbound direction; a single left turn lane onto the I-95 northbound; a one 12' through lane and one 12' shared through and left turn lane (to provide dual left turn lanes) onto I-95 southbound; a 7' buffered bicycle lane on both sides of the roadway; and modification to the bridge abutments to provide 6' sidewalks on both sides of S.R. 524.

Segment 2: S.R. 524: N. Friday Road to Cox Road Typical Section – Generally consists of a 22' center median, raised and landscaped; two through lanes in each direction, the inside lanes at 11' and the outside lanes 12'; 7' buffered bicycle lanes on both sides of the roadway; a 6' shared path on the south side of S.R. 524 and a 12' shared path on the north side of S.R. 524. Grass buffers are to be provided between the bicycle lane and the shared use path/sidewalk, and to the edge of right-of way.

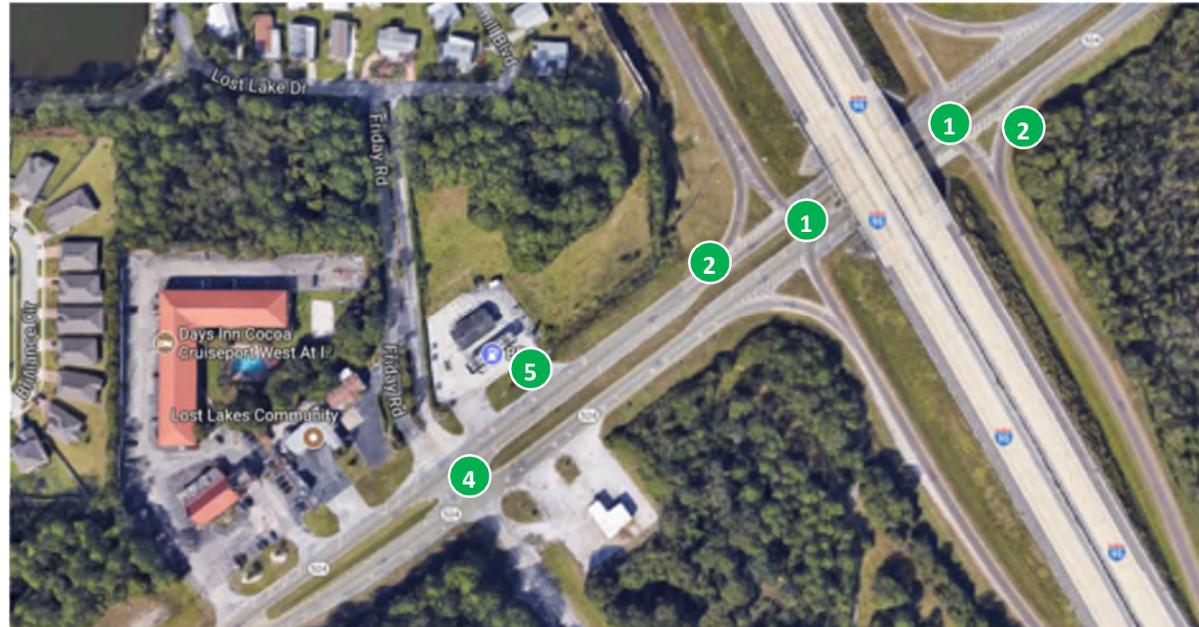
Segment 3: S.R. 524: Cox Road to Coventry Court Typical Section – this section continues the 22' center, landscaped and raised median; as well as the 12' shared path, 6' sidewalk, 7' buffered bicycle lanes and grass buffers between the bicycle lane and the sidewalk, as well as between the shared path/sidewalk and edge of right-of-way. This section reduces all travel lanes to 11'. It is within this roadway segment that potential roundabout candidates should be considered.

Segment 4: S.R. 524: Coventry Court to west of Industry Road Typical Section – this section replaces the raised, landscaped median with a raised impervious surface median. The median width will vary depending on the location along the segment. It also provides left and right turn lanes into the commercial shopping areas and consideration of green bicycle lanes. Two through travel lanes remain at 11', 7' buffered bicycle lanes, 12' shared path, 6' sidewalk and grass buffers remain consistent with segment to the west.

Recommended Improvement Strategies – Spot Locations

In addition to the typical sections, additional improvement strategies were identified at key locations along the corridor. These include:

1. Traffic signals are recommended for, and have been approved by FDOT along S.R. 524 at the following locations:
 - I-95 southbound ramps
 - I-95 northbound ramps
 - N. Friday Road
 - Main entrance into the new Walmart Distribution Center
2. Free-flowing right turn lanes at both the I-95 southbound and northbound off-ramps onto S.R. 524 should be eliminated, with right turns brought tighter into the new ramp.
3. Eastbound right turn lane provided on S.R. 524 into the entrance to the Walmart distribution center.
4. Traffic signal at S.R. 524 and S. Friday Road recommended for analysis.
5. Driveway reconfiguration at BP gas station and S. Friday Road.



Next Steps

The next step in the process is the Project Development and Environment Study (PD&E). During this phase, the proposed improvements will be developed in further detail and additional opportunities for public and stakeholder outreach will be provided. Once the PD&E Study is complete, final design will begin, right-of-way acquisition will occur (if needed) and construction will follow.