

Frequently Asked Questions

US 41 at Bonita Beach Road PD&E Study in Lee County

FPID 444321-1

General Project Questions

Question: Can Beaumont Street be one way to Foley Street?

Response: Beaumont Road serves as back access to the businesses along US 41's west side and is primary access to the St. Leo Catholic Church. Making this a one-way road would limit their access and put more traffic on US 41 northbound.

Question: Can a right turn lane be added into Springs Plaza on the southeast corner of the intersection?

Response: We will study this possibility as the project moves forward.

Question: How will public transportation operate through this intersection?

Response: LeeTran has two transit routes serving the study area. Rt. 150 goes east-west and Rt. 600 goes north-south crossing the US 41 and Bonita Beach Road intersection. Both operate on a 1 hour 30 minute frequency. The Transit Development Plan adopted in November 2020, notes a goal for Rt. 150 to "Improve frequency to every 60 minutes by 2030." For Rt. 600, the goal is to combine with Rt. 240 and "Improve frequency to every 30 minutes by 2030." These routes will be accommodated by either of the build alternatives.

Question: Is the increased noise from the increased volume of traffic going to be mitigated? If so, how?

Response: Potential noise impacts will be studied. In the next phase of the PD&E study, we will prepare a noise study in which the project-related noise impacts will be determined, and potential abatement options will be evaluated. The findings of the noise study will be presented during the project's Public Hearing in 2024.

Question: How long will it take for this project to complete construction?

Response: From the time construction is initiated, the estimated construction time is 24 to 30 months.

Question: Is a fly over at this intersection with two lanes northbound and southbound and two surface lanes for turns still possible?

Response: The issue with a flyover or interchange is accommodating the intersection's high volume turning movements. There are two high volume left turn movements for the US 41 southbound to eastbound Bonita Beach Road and the eastbound Bonita Beach Road to northbound US 41. Further, the westbound Bonita Beach Road right turn movement to US 41 northbound has delays. These high

volume movements would be on ramps and merge and diverge with US 41 approximately 1/4 mile north of Bonita Beach Road.

The City of Bonita Springs is currently designing a northwest quadrant road to tie to the existing Center of Bonita Springs northern signalized access. The interchange ramps would need to be merged and terminated before this signal. With the bridge overpass being approximately 25-ft above the roadway below, there is not sufficient distance on US 41 for the roadway to get back to existing roadway elevation, accommodate the ramp merges and develop the intersection. We do not see this as a feasible alternative.

Pedestrian and Bicycle Comments

Question: How will Pedestrians and Bicyclists cross in the Partial Displaced Left Turn option?

Response: The intersection will have pedestrian crosswalks with countdown pedestrian signals for all intersection approaches. The Partial Displaced Left Turn (DLT) crosswalk pedestrian signals will be timed for a person to walk across all lanes. Further, US 41 will have traffic separator islands providing additional pedestrian refuge.

Question: How will Pedestrians and Bicyclists cross in the 8-Lane option?

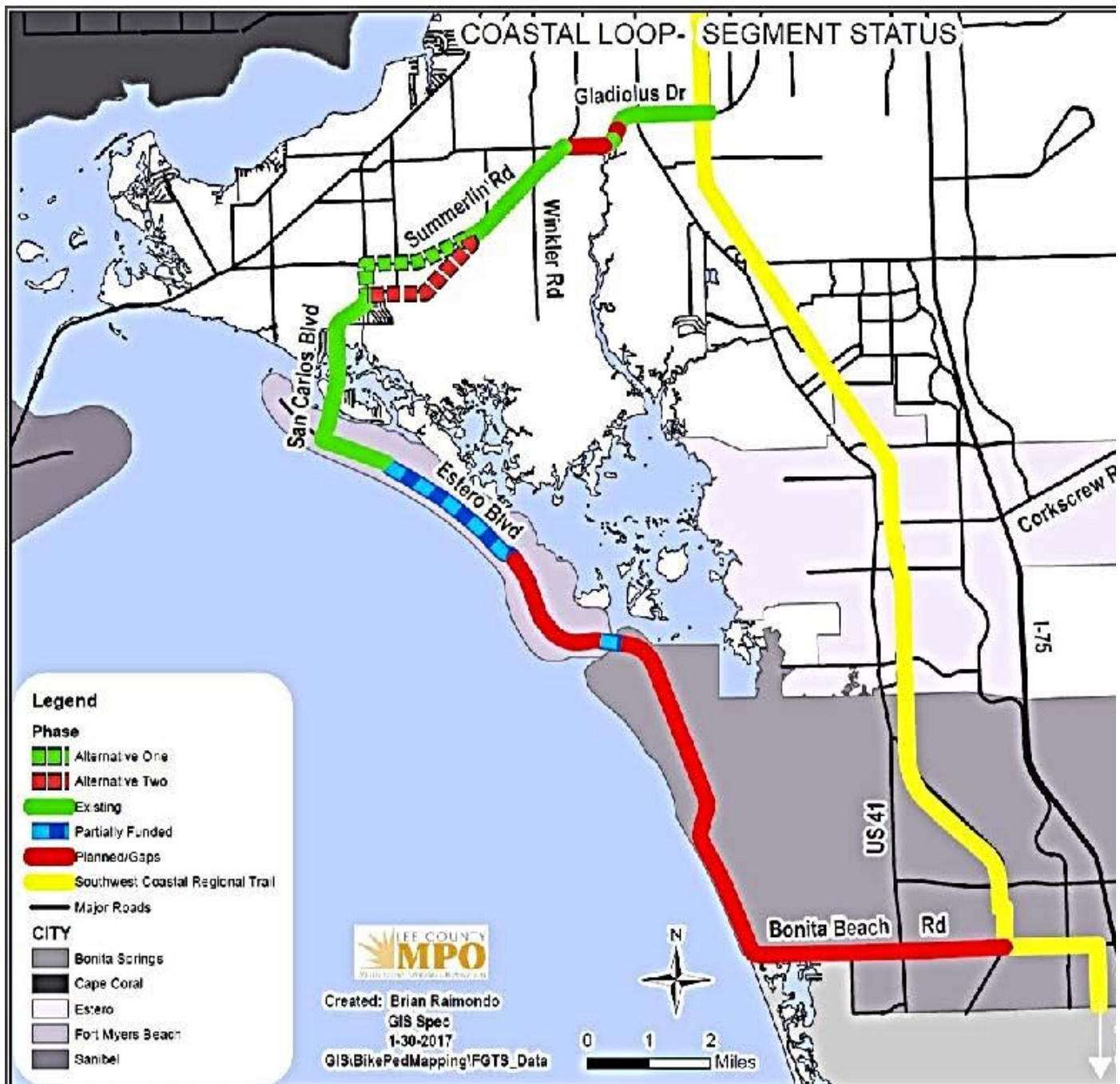
Response: The intersection will have pedestrian crosswalks with countdown pedestrian signals for all intersection approaches. The signalized crosswalks will be timed to have sufficient time for a person to walk across all lanes.

Question: What modes of transportation would be permitted on the 12-foot pathway?

Response: The 12-ft path is called a multi-use or shared-use path meaning it is for walkers, runners, cyclists, roller bladers, basically any non-vehicular use.

Question: What is the Coastal Beach Trail on Bonita Beach Road? Could railroad tracks be used for it?

Response: The Coastal Loop Trail is a project in the very early planning stages within Bonita Springs. It is a trail connecting to the Southwest Coastal Regional Trail in the vicinity of Old US 41 and Bonita Beach Road and goes along Bonita Beach Road to the barrier islands and northward through Ft. Myers Beach. As shown in the map below, it is called a "Loop" because it reconnects to the Southwest Coastal Regional Trail on both ends. The Southeast Coastal Regional Trail does follow the railroad tracks alignment for part of its route.



Traffic Operations Questions

Question: With the Displaced Left Turn, would the signal remain at the entrance to Center of Bonita Springs (3300 Bonita Beach Road) or would it be shifted west to Windsor Road? Will there be a light at Windsor and Bonita Beach Road in the Displaced Left Turn option?

Response: We are planning for both Windsor Road and the Center of Bonita Springs access on Bonita Beach Road to be signalized.

Question: Is the Carolina Street extension part of the study and if so, how is this proposed to alleviate the existing traffic problems? Existing southbound Arroyal Road traffic can already access northbound US 41 without going to Bonita Beach Road.

Response: The US 41 and Bonita Beach Road intersection currently has two high volume left turn movements (>500 vehicles per hour) being the US 41 southbound to eastbound Bonita Beach Road and the eastbound Bonita Beach Road to northbound US 41. The northeast (also known as the Carolina Street extension) and northwest quadrant roadways are intended to provide alternatives to these high-volume movements. Further, the westbound Bonita Beach Road right turn movement to US 41 northbound is currently about 400 vehicles per hour and has delays. Yes, traffic is currently using Crown Lake Blvd. to access US 41 northbound with about 150 vehicles per hour making this right turn movement. In looking at improving the US 41 and Bonita Beach Road intersection, the previously noted volumes will grow significantly as we look at Year 2050 traffic volumes. The northeast quadrant roadway will provide an alternative to travel to/from US 41 for those in the US 41 and Bonita Beach Road northeast quadrant.

We are continuing with our traffic analysis and the modeling activity shown at the public workshop. We will be preparing a Project Traffic Analysis Report during the next phase of the PD&E study to address both existing and future (2050) traffic operations both for the no-build and the build alternatives.

Question: Has AI been considered for traffic management at this intersection?

Response: AI or artificial intelligence is just starting to be applied to transportation projects. Federal Highway Administration (FHWA) published through its Exploratory Advanced Research Program a February 2022 report called *The Role of Artificial Intelligence and Machine Learning in Federally Supported Surface Transportation*. The report's introduction notes "The use of AI to enable computers to digest and analyze large amounts of data and form conclusions—a process known as machine learning—can create many improvements to transportation beneficial to the American public."

Highlights include:

- Improving traffic flows at signalized intersections along specific routes or as part of integrated corridor management.
- Aiding traffic management centers with improving crash detection, predicting traffic slowdowns, and recommending detours.
- Facilitating traffic safety by warning vehicles of pedestrians obscured by parked vehicles who are starting to cross the street and monitoring real-time traffic and weather conditions.
- Discerning and anticipating how drivers might react in certain traffic situations

The use of AI as machine learning from this perspective is in its infancy regarding transportation projects and has not been considered for traffic management at this intersection. The role of the PD&E study is to select the best alternative to improve the intersection's operations and safety. AI as an improvement alternative is not yet practical. However, advanced technologies will be considered as the build alternative is designed and implemented. The use of advanced traffic signal controllers, video detection cameras, full pan, tilt and zoom cameras, fiber optic communications will all be considered in the intersection's final design to enhance traffic operations efficiency.

Question: Is a traffic study available to the public for the project area?

Response: The Project Traffic Analysis Report is still being prepared. It will be part of the project documentation put on public display prior to the Public Hearing.

Drainage and Environmental Questions

Question: How much will Arroyal Pond stormwater capacity be reduced in these alternatives, and where would the resulting stormwater runoff go?

Response: In the PD&E study's next phase, we will be conducting a Location Hydraulics Report to investigate the impacts this project may have on floodplains and a Pond Siting Report to evaluate how the stormwater will be accommodated. Any increase in stormwater runoff or reduction in existing stormwater retention resulting from the proposed project improvements will be accommodated in new stormwater ponds that will maintain existing drainage patterns and runoff volumes.