



NORTH LAKE TRAIL PHASE 3
CORRIDOR PLANNING STUDY
EXISTING CONDITIONS REPORT



NORTH LAKE
TRAIL

FPID # 441626-1
August 2018

Florida Department of Transportation
District Five
719 South Woodland Boulevard
DeLand, FL 32720-6834

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1. REPORT PURPOSE

This report documents the analysis of the existing and planned future engineering and environmental conditions for the North Lake Trail Phase 3 Corridor Planning Study from County Road 450 (C.R. 450) / Bulldog Lane in Umatilla to State Road 40 (S.R. 40). These conditions were evaluated by performing a review of existing plans and documents, coordination with regulatory agencies, and field reconnaissance. The following report provides a description of the existing roadway and bridge conditions, as well as the social and environmental characteristics for the study area.

1.1. PROJECT BACKGROUND AND PURPOSE

The Florida Department of Transportation (FDOT) District Five is conducting a Corridor Planning Study to assess alternative alignments for a multi-use trail from C.R. 450 in the City of Umatilla to S.R. 40. The corridor is anticipated to follow S.R. 19, though potential alternative paths will also be evaluated. The 19-mile study area includes Eastern Marion County and Northern Lake County. The study area is in both the Ocala/Marion Transportation Planning Organization and the Lake~Sumter Metropolitan Planning Organization. The purpose of the study is to identify reasonable alternatives to carry forward to a preferred trail alignment.

The North Lake Trail was first established in 2008 with the development of the North Lake Trail Phase 1 which would begin at the Tavares Station Trailhead, and connect a five-mile shared-use path to the City of Eustis. The construction of Phase 1, which has not begun, was the first step in the overall completion of a 29-mile trail which will cross through various communities along S.R. 19 and C.R. 445, and will serve as the “Gateway to the Ocala National Forest.” Phase 2 of the trail is planned to begin just north of Ferran Park in Eustis and ends in the City of Umatilla. This section is anticipated to also occupy the inactive CSX railroad right of way (R/W) until it reaches C.R. 450. At C.R. 450 the trail will cross S.R. 19 to the east side of the road to connect with an existing ten foot sidewalk, and then continue north, within City of Umatilla owned R/W, until reaching Bulldog Lane. Phase 2 of the North Lake Trail has not yet been constructed.

The North Lake Trail Phase 3 will begin at C.R. 450 (Bulldog Lane) and ultimately connect to S.R. 40. The path of the trail will be determined by the end of this Corridor Planning Study, however two potential ending points at S.R. 40 have been identified. The North Lake Trail may terminate at the intersection of S.R. 19 and S.R. 40, or the intersection of C.R. 445A and S.R. 40. The termini at S.R. 19 would provide a signalized opportunity for bicyclists and pedestrians to cross S.R. 40. The C.R. 445A termini, however, would provide a connection to the community of Astor Park.

A large portion of the North Lake Trail corridor is within the Black Bear Scenic Byway, including S.R. 19 from S.R. 40 to Twin Lake Circle (south of Altoona), the entirety of C.R. 445 from S.R. 19 to C.R. 445A, and C.R. 445A from the intersection with C.R. 445 to S.R. 40. The Florida Black Bear Scenic Byway Corridor Management Entity (CME) is a group of volunteer citizens that provide support for the corridor. The CME holds monthly meetings at locations along the byway and all are welcome to attend to learn more about the corridor.

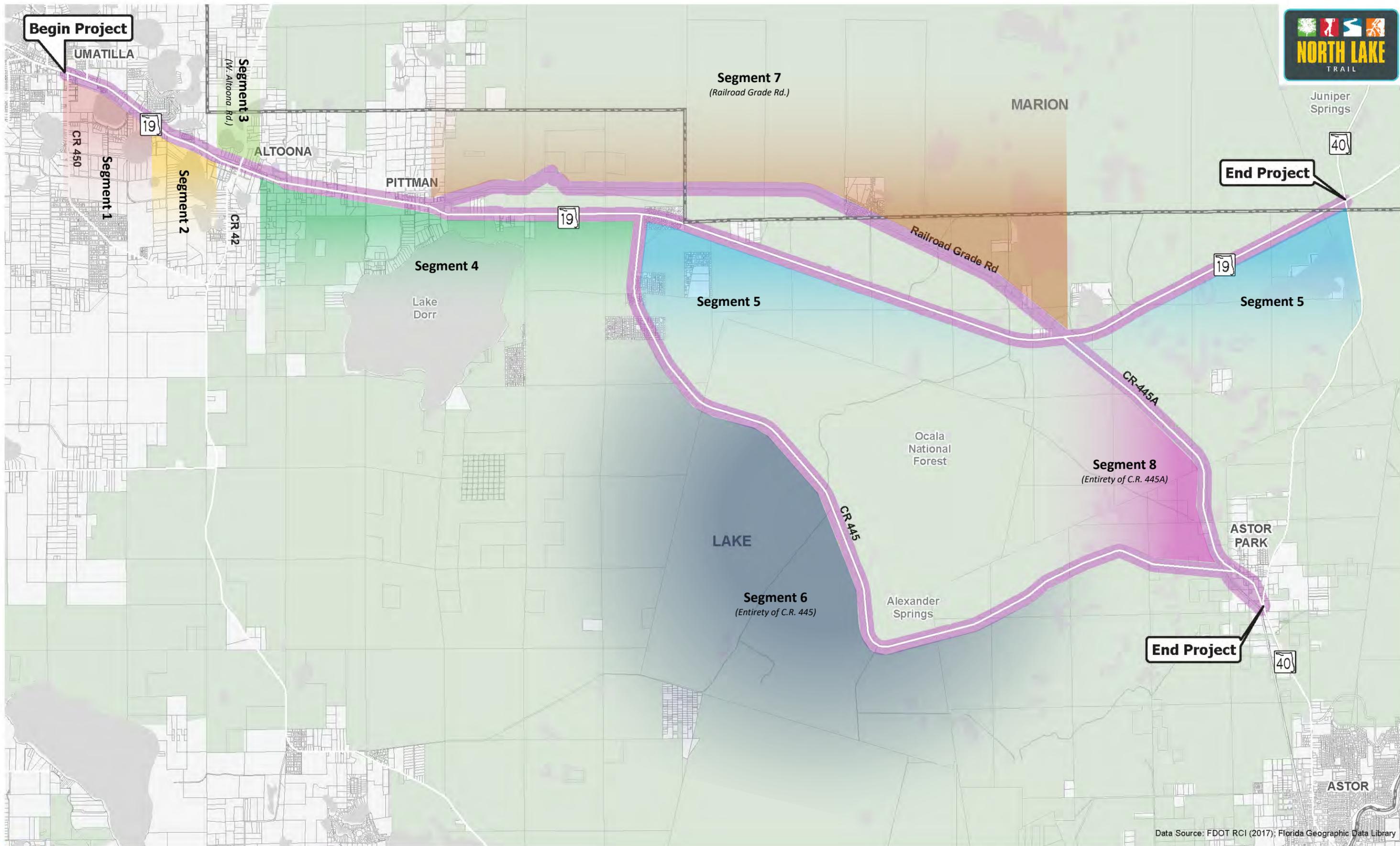
1.2. PROJECT DESCRIPTION

The North Lake Trail Phase 3 Corridor Planning Study will analyze alternatives to identify a preferred multi-use trail alignment from C.R. 450 to S.R. 40. The trail will begin at C.R. 450 (Bulldog Lane) in the City of Umatilla, and end approximately 19 miles north by connecting with the S.R. 40 Black Bear Trail either at S.R. 19 or C.R. 445A, contingent upon the selected trail alignment. Three potential alignments have been identified, and are shown in the Project Location Map in Figure 1 . One alternative follows S.R. 19, while the second travels along Railroad Grade Road and C.R. 445A, and the third utilizes C.R. 445.

The potential trail corridor will create a new pathway for Florida residents and visitors to experience Central Florida. It may link the City of Umatilla and the local communities of Altoona, Pittman, and Astor Park with the Ocala National Forest, by providing a connection to the proposed Black Bear Trail in addition to other trails in the area.

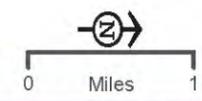
1.3. PROJECT LOCATION MAP

The Project Location Map is shown in Figure 1 .



Data Source: FDOT RCI (2017); Florida Geographic Data Library

Corridor Study Area
North Lake Trail Corridor Planning Study
Figure 1



- Conservation Area
- Study Corridor(s)

1.4. PROJECT SEGMENTATION

The study area is divided into eight general segments based on changing characteristics of the corridor and adjacent land uses. These segments will be referred to as follows:

- Segment 1 – S.R. 19 from C.R. 450 to Beach Street
- Segment 2 – S.R. 19 from Beach Street to Lakeview Terrace Drive
- Segment 3 – W. Altoona Road from Lakeview Terrace Drive To Lake Daisy Drive
- Segment 4 – S.R. 19 from Lakeview Terrace Drive to C.R. 445
- Segment 5 – S.R. 19 from C.R. 445 to S.R. 40
- Segment 6 – C.R. 445 from S.R. 19 to C.R. 445A
- Segment 7 – Railroad Grade Road from Dorr Road to S.R. 19
- Segment 8 – C.R. 445A from S.R. 19 to S.R. 40

2. SUMMARY OF TRANSPORTATION PLANS

2.1. LOCATION IN LOCAL PLANS

A review of local transportation plans was performed to demonstrate the consistency of this project with regional and local transportation planning efforts, as summarized in Table 1. A list of documents and data sources referenced is included in Appendix A. Excerpts from each of the referenced documents related to the North Lake Trail Phase 3 are included in Appendix B.

Table 1 | Consistency with Regional and Local Transportation Planning

Agency	Applicable Standard	Consistent with Project	Source
Lake County	Consider increasing the number of miles of off-street bicycle and pedestrian trails Trail is also included on the Future Land Use Map series	Yes	<i>Lake County Comprehensive Plan: Planning Horizon 2030</i> , p. 273 https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf
Lake County	Policy 1-5.1.3 Rural Protection Area Principles: Designation of scenic rural roadways and trails	Yes	<i>Lake County Comprehensive Plan: Planning Horizon 2030</i> , p. 113 https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf
Lake County	Policy 1-7.6.2 Reduction of Emissions from the Transportation Sector Require bikeways, trails, and pedestrian paths, wherever practical and appropriate, to provide alternatives to motor vehicles	Yes	<i>Lake County Comprehensive Plan: Planning Horizon 2030</i> , p.136 https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf

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CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Table 1 | Consistency with Regional and Local Transportation Planning (Cont.)

Agency	Applicable Standard	Consistent with Project	Source
Lake County	<p>Policy III-2.3.6 Create Open Areas within Springsheds</p> <p>Create open areas through the connection of trails, amongst other amenities to form a greenway system</p>	Yes	<p><i>Lake County Comprehensive Plan: Planning Horizon 2030, p.229</i></p> <p>https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf</p>
Lake County	<p>Policy VI-1.9.8 Trails Program</p> <p>Lake County shall work towards expanding and improving its trails program by working with other entities to implement the <i>Lake County Trails Master Plan</i> of September 2008, or its successor document</p>	Yes	<p><i>Lake County Comprehensive Plan: Planning Horizon 2030, p.290</i></p> <p>https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf</p>
Lake County	<p>Policy VIII-1.5.1 Enhance Bicycle and Pedestrian Mobility</p> <p>Provide Bike Lanes and Sidewalks on collectors and arterials in urban settings. Evaluate need to expand facilities. Consider increasing number of off street trails based on master plan. Enhance and provide trails to connect to other facilities such as schools.</p>	Yes	<p><i>Lake County Comprehensive Plan: Planning Horizon 2030, p.303</i></p> <p>https://www.lakecountyfl.gov/pdfs/2025/2030_comp_plan.pdf</p>
Lake County	<p><i>Trails Master Plan (2008)</i></p> <p>Develop a cohesive county wide trail system that will connect people and places through a regional network</p>	Yes	<p><i>Lake County Trails Master Plan, 2008, p. 1-1</i></p> <p>https://www.lakecountyfl.gov/pdfs/parks/masterplan/trails.pdf</p>
Lake~Sumter Metropolitan Planning Organization	<p>Identifies corridor of S.R. 19 as being part of a planned trail</p>	Yes	<p><i>Lake~Sumter Metropolitan Planning Organization Long Range Transportation Plan 2035, p. 47</i></p> <p>http://www.lakesumtermpo.com/pdfs/2035/long_range_transportation_plan_executive_summary.pdf</p>

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CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Table 1 | Consistency with Regional and Local Transportation Planning (Cont.)

Agency	Applicable Standard	Consistent with Project	Source
City of Umatilla	Support for the application to the FDOT Work Program for North Lake Trail Phase 3	Yes	<i>City of Umatilla Letter of Support – North Lake Trail Phase 3, 2015, p. 1</i> http://umatillafl.org/Pages/UmatillaFL_CouncilAgendas/2015/03172015/TAB03a.pdf

While the *Marion County Comprehensive Plan 2035* and the Ocala/Marion Transportation Planning Organization (Ocala/Marion TPO) do not specifically identify the North Lake Trail Phase 3. The *Lake County Comprehensive Plan Planning Horizon 2030 (2018)* recommends adding non-invasive amenities to scenic roads, which includes a portion of S.R. 19. These amenities include sidewalks and bicycle paths.

Importantly, the *City of Umatilla Comprehensive Plan (2014)*, under the conservation element, calls for promoting public access to lakes through the use of pedestrian paths, trails, walkways, and other viable means. The *City of Umatilla Comprehensive Plan* identifies the North Lake Trail Phase 2, planned to run along S.R. 19 from Bulldog Way in Umatilla to Ferran Park in Eustis, as being in the conceptual planning stages for northern Umatilla, and in the planned stages for southern Umatilla. The City of Umatilla submitted an FDOT Project Information Application Form in January 2015 to include the North Lake Trail Phase 3 in the FDOT Work Program. As shown in Appendix B, the proposal requested a study to develop the North Lake Trail Phase 3 from C.R. 450 in Umatilla to S.R. 40 and intersect with the planned Black Bear Scenic Trail.

North Lake Trail Phase 3 was not included within the following referenced documents:

- *Lake~Sumter MPO Transportation Improvement Plan 2017/18-2021/22*
- *Marion County Comprehensive Plan 2035*
- *Ocala/Marion TPO 2035 Bicycle and Pedestrian Master Plan*
- *Ocala/Marion TPO Long Range Transportation Plan 2040*
- *Ocala/Marion TPO Transportation Improvement Plan 2017/18-2021/22*

2.2. FUNDING AND SOURCES

Upon review of local transportation plans, Lake~Sumter Metropolitan Planning Organization (Lake~Sumter MPO) and the City of Umatilla identified potential funding for the North Lake Trail Phase 3. Although there is no direct reference to the North Lake Trail Phase 3 project, \$38,000,000 has been reserved for all trail projects in the *Lake~Sumter MPO 2035 Long Range Transportation Plan*.

2.3. PREVIOUS / ONGOING PLANNING STUDIES

There are no current trail planning efforts within the study area.

The Florida Department of Environmental Protection (FDEP) Office of Greenways and Trails (OGT) has identified the North Lake Trail Corridor from north of Umatilla to Astor Park on C.R. 445A as a 2018 Land Trail Opportunity Corridor, as shown in Appendix B.

3. STUDY AREA DESCRIPTION

3.1. EXISTING LAND USE

Phase 3 of the North Lake Trail plans to traverse through Lake and Marion Counties, the City of Umatilla, and the local communities of Altoona, Pittman, and potentially Astor Park between C.R. 450 and S.R. 40. An overview of the existing land uses across the study area is shown in Figure 2. A large portion of the corridor crosses through the Ocala National Forest.

3.1.1. LAKE COUNTY

Existing land uses in unincorporated Lake County on S.R. 19 north of Umatilla include low density residential and rural areas, with small pockets of agricultural areas. The vast majority of the corridor is located within the public/conservation area of the Ocala National Forest.

3.1.1.1. City of Umatilla

The City of Umatilla is located at the southern end of the study area along the S.R. 19 corridor. The land uses within the study area include commercial immediately adjacent to S.R. 19, surrounded by residential and institutional lands, and a recreation area. A few industrial land uses are also located within the City of Umatilla.



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3.1.1.2. Altoona

Altoona is a census-designated place (CDP) within unincorporated Lake County, and is located on both sides of S.R. 19 just north of the City of Umatilla. Altoona is a rural community primarily comprised of low-density residential with a few commercial and institutional properties.

3.1.1.3. Pittman

Pittman is a CDP located on both sides of S.R. 19 near Lake Dorr in unincorporated Lake County. Pittman is a rural community with some low density residential, with agricultural land use and an industrial use property. Pittman is bordered by public/conservation lands.



Data Source: Central Florida Regional Planning Council

Existing Land Use
 North Lake Trail Corridor Planning Study
 Figure 2



- | | | | | |
|--------------|-------------------|---------------------|---------------|-------------------|
| Residential | Commercial/Office | Public/Conservation | Recreation | Study Corridor(s) |
| Agricultural | Industrial | Institutional | Other/No Data | |

3.1.1.4. Astor Park

Astor Park is an unincorporated community located within Lake County, and generally extends along both sides of S.R. 40 near the intersection of S.R. 40 with C.R. 445. Existing land uses within the community are largely rural residential and agricultural, with institutional and a few commercial facilities nearby. All of these areas are bordered by public/conservation land within the Ocala National Forest.

3.1.2. MARION COUNTY

Unincorporated Marion County existing land uses within the study area consist entirely of public/conservation land within the Ocala National Forest, with one residential community located on Railroad Grade Road.

3.2. FUTURE LAND USE

The adopted Future Land Use Maps (FLUMs) and aeriels of these areas were reviewed to determine the potential future uses adjacent to the study corridor, as shown in Appendix C. An overview of the future land uses across the study area is shown in Figure 3, with land use changes from existing conditions described in the following sections. The communities of Altoona, Pittman, and Astor Park are located within unincorporated Lake County, and therefore are analyzed within the County's FLUM.

3.2.1. LAKE COUNTY

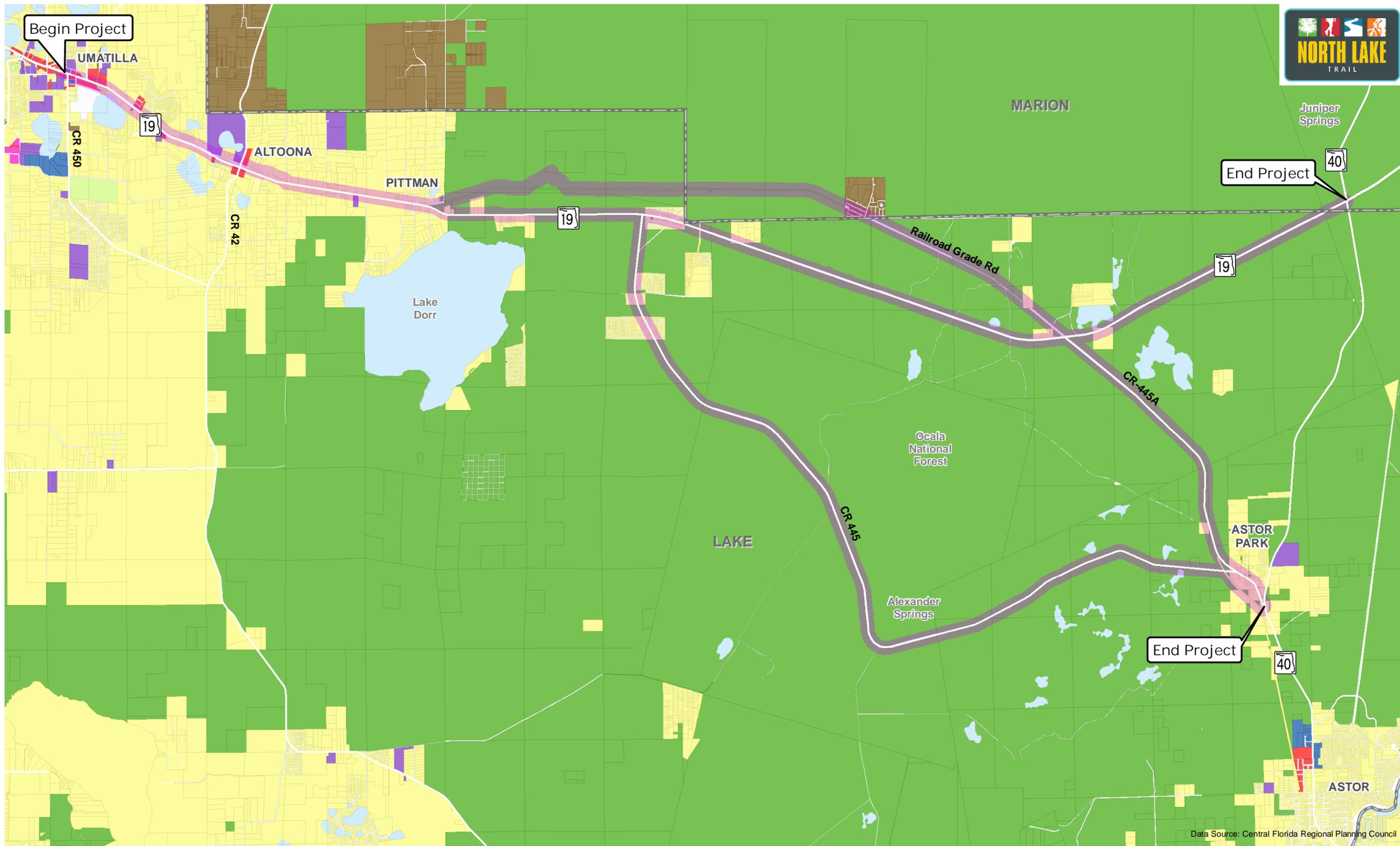
The adopted FLUM was used to identify future land uses along the corridor in Lake County. The future land use designations within the study area are largely public/conservation areas within the Ocala National Forest. Rural residential areas in Astor Park expanded to replace former agriculture uses, and an institutional property grew significantly in size. Similar residential expansions are expected in both Pittman and Altoona, replacing much of the existing agricultural lands within both communities.

3.2.1.1. City of Umatilla

The adopted FLUM was used to identify future land uses within the City of Umatilla within the study corridor. The future land use designations within the study area are predominantly commercial with large areas of single family medium density residential and multi-family residential. The residential areas expanded to replace agricultural land use properties. Institutional lands remained the same just north of C.R. 450, however commercial properties expanded along S.R. 19 towards northern Umatilla.

3.2.2. MARION COUNTY

The Marion County FLUM was used to identify future land uses along the study corridor. The future land use designations within the study area are quite similar to existing conditions. The agricultural land use, however, expanded to include a rural residential area on Railroad Grade Road.



Data Source: Central Florida Regional Planning Council

Future Land Use
North Lake Trail Corridor Planning Study
Figure 3



- Residential
- Commercial / Office
- Conservation
- Mixed Use
- Study Corridor(s)
- Agricultural
- Industrial
- Recreational
- Institutional / Public

3.3. PLANNED OR PROGRAMMED ROADWAY PROJECTS

Other transportation studies and design projects currently planned or in process within or adjacent to the North Lake Trail Phase 3 Corridor Study as of March 2018 include:

- S.R. 19 Signing and Pavement Markings – Bulldog Way to C.R. 445 and C.R. 445A – Lake County
- *Via Lake~Sumter MPO Transportation Improvement Program (TIP) – <http://lakesumter.dtstiptool.com/report/temp/uTI9lciXGG.pdf>*

3.4. SOCIOECONOMIC DATA

The study area of the North Lake Trail Corridor is defined as 0.5 miles in each direction from the centerline of the SR 19 corridor, creating a one mile wide buffer, and has a population of approximately 1,580 people and over 640 households based on the 2016 American Community Survey (ACS) data for census block groups intersecting the study area. The population is 91.7% Caucasian, 5.8% African American, 0.8% Asian, 0.1% American Indian or Alaska Native, and 1.6% indicated other or claimed two or more races. However, there are small pockets of minority identified populations located on the northwest perimeter of the City of Umatilla, along the corridor by the area of Pittman, and near Astor Park. Approximately 92% of the population speaks English well, and the remaining 8% either do not speak English well or do not speak English at all.

The dominant age groups are ages 50-64 (18.7%) and age 65 and over at 32.5%. The median age is 48 years old. The median household income is \$37,071 (2016 ACS) and 19.4% of households are below the poverty level. The Lake and Marion County average for households below the poverty level are 12.8% and 15.7%, respectively. High school graduates (or higher) make up 84.3% of the population.

4. SUMMARY OF EXISTING FACILITY

Several data sources were utilized to evaluate the existing facilities within the study area, including as-built plan sets, right of way (R/W) maps, and datasets from several different environmental agencies. A complete list of data sources is included in Appendix A. As-built plan sets are included in Appendix D and in Table 1. R/W maps are included in Appendix E.

Table 2 | As-Built Plan Sets Summary

Contract Number	Year	Construction Limits	
		From:	To:
11100-3512	1985	Umatilla Boulevard	Bent Tree Road
11100-3515	1985	Appx. 300' South of Palmetto Street	Appx. 400' South of Umatilla Boulevard
11190-3502	1986	Appx. 1 Mile South of CR 445	Marion County / Lake County Line
11100-3519	1994	Ravenswood Road	Appx. 2300' South of Dorrwood Lane

Source: Florida Department of Transportation

4.1. TYPICAL SECTION

4.1.1. S.R. 19 FROM C.R. 450 TO BEACH STREET

S.R. 19 from C.R. 450 to Beach Street consists of a two lane typical section. The typical section includes one 11-foot travel lane in each direction. As illustrated in Figure 4, each side of the roadway has 4-foot paved shoulders. Bicyclists are accommodated on the existing paved shoulders. East of the FDOT R/W is an apparent Lake County owned R/W. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.2. S.R. 19 FROM BEACH STREET TO LAKEVIEW TERRACE DRIVE

S.R. 19 from Beach Street to Lakeview Terrace Drive consists of a two lane typical section. The typical section includes one 11-foot travel lane in each direction. As illustrated in Figure 5, each side of the roadway has 4-foot paved shoulders. Bicyclists are accommodated on the existing paved shoulders. West of the FDOT R/W is an apparent Lake County owned R/W. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.3. W. ALTOONA ROAD FROM LAKEVIEW TERRACE DRIVE TO LAKE DAISY DRIVE

W. Altoona Road from Lakeview Terrace Drive to Lake Daisy Drive consists of two unmarked lanes. The typical section includes a two-way, 22-foot unpaved roadway, as illustrated in Figure 6. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.4. S.R. 19 FROM LAKEVIEW TERRACE DRIVE TO C.R. 445

The typical section for S.R. 19 from Lakeview Terrace Drive to C.R. 445 includes one 11-foot travel lane in each direction. As illustrated in Figure 7, each side of the roadway has 4-foot paved shoulders. Bicyclists are accommodated in the existing paved shoulders. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.5. S.R. 19 FROM C.R. 445 TO S.R. 40

S.R. 19 from C.R. 445 to S.R. 40 consists of a two lane typical section. The typical section includes one 11-foot travel lane in each direction. As illustrated in Figure 8 each side of the roadway has a 4-foot paved shoulder. Bicyclists are accommodated on the existing paved shoulders. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.6. C.R. 445 FROM S.R. 19 TO C.R. 445A

The typical section for C.R. 445 from S.R. 19 to C.R. 445A includes two 11-foot travel lanes with no paved shoulders, as illustrated in Figure 9. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.1.7. RAILROAD GRADE ROAD FROM DORR ROAD TO S.R. 19

The typical section for Railroad Grade Road from Dorr Road to S.R. 19 consists of two unmarked and unpaved travel lanes, as illustrated in Figure 10. Typically, drainage is conveyed through an open swale system. See Section 4.8 for additional study area information.

4.1.8. C.R. 445A FROM S.R. 19 TO S.R. 40

C.R. 445A from S.R. 19 to S.R. 40 consists of a two lane typical section. The typical section includes one 12-foot travel lane in each direction. As illustrated in Figure 11, each side of the roadway has a two-foot paved shoulder. Typically, drainage is conveyed through an open swale system. See Section 4.8 Drainage Features for additional information for the study area.

4.2. MULTI-MODAL / BICYCLE AND PEDESTRIAN FEATURES

There are no existing sidewalks or bicycle lanes along C.R. 445, C.R. 445A, Railroad Grade Road, nor S.R. 19 outside of Umatilla. Within the City of Umatilla, a ten-foot sidewalk is present on the east side of S.R. 19 from C.R. 450 (Bulldog Lane) to East Collins Street. At East Collins Street, the sidewalk crosses S.R. 19 at a signalized intersection and becomes a four-foot concrete sidewalk. This four-foot sidewalk follows S.R. 19 north to Mary Street / Owens Street. There are no dedicated bicycle lanes within this area.

4.3. POSTED SPEED

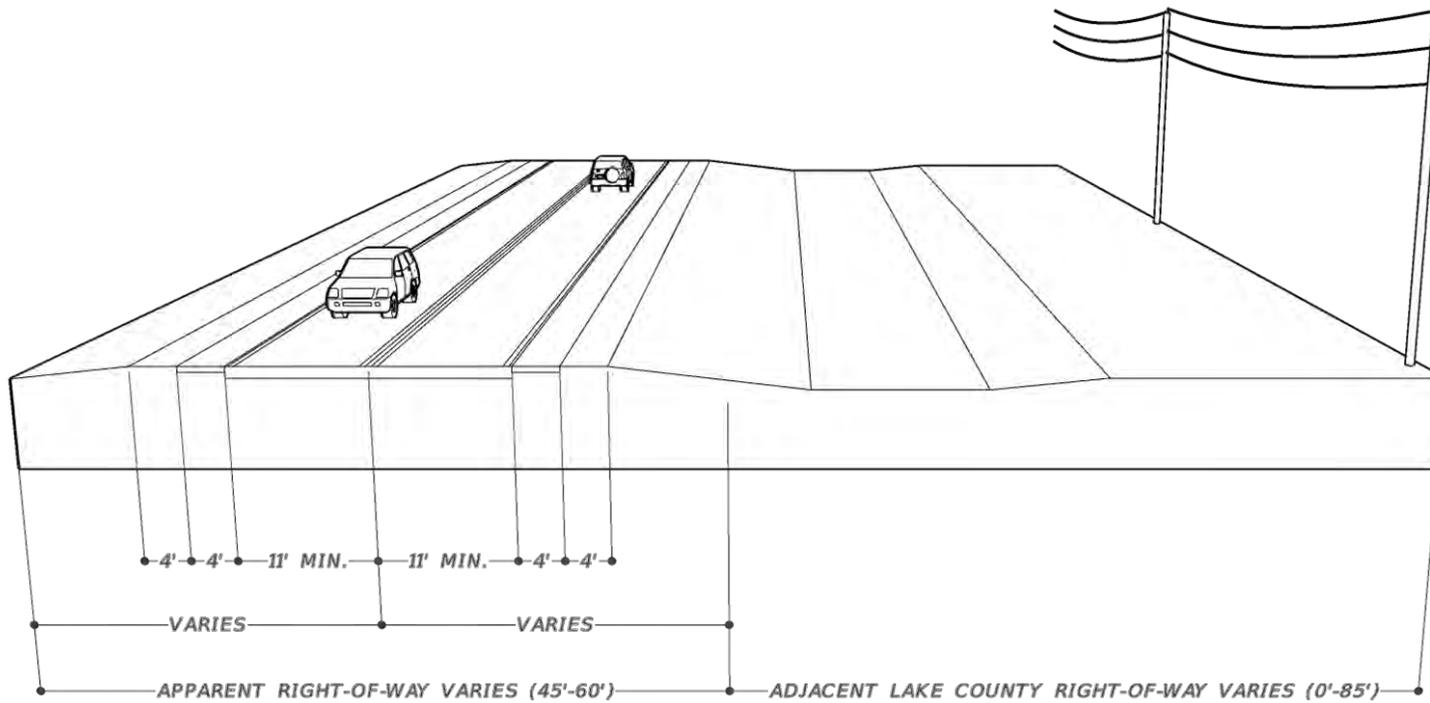
The posted speed limit varies depending on the segment of the roadway, as shown in Figure 12. The following list denotes the posted speed by roadway segment and the direction of the speed:

- S.R. 19
 - 35 MPH: C.R. 450 to Umatilla Boulevard
 - 35 MPH: Southbound Bulldog Way to Umatilla Boulevard
 - 45 MPH: Northbound Umatilla Boulevard to Bulldog Way
 - 55 MPH: Bulldog Way to Keene Road / Clark Road
 - 40 MPH: Keene Road / Clark Road to Demko Road
 - 55 MPH: Demko Road to S.R. 40
- C.R. 445
 - 55 MPH: S.R. 19 to C.R. 445A
- C.R. 445A
 - 35 MPH from S.R. 19 to S.R. 40

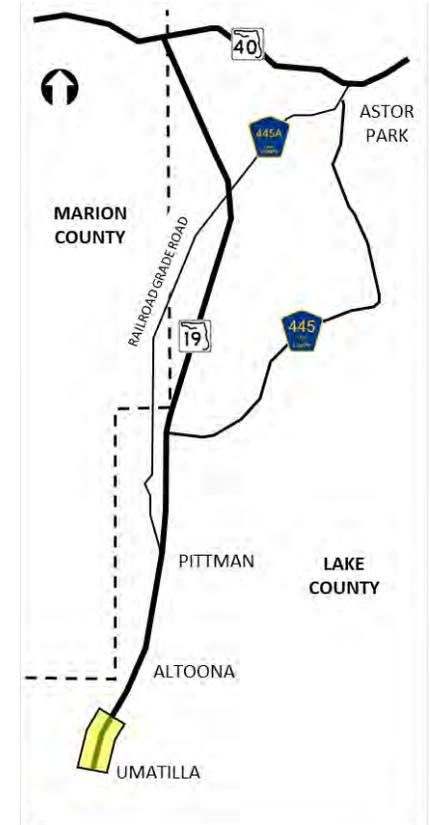
NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 4 | Existing Typical Section – S.R. 19 from C.R. 450 to Beach Street



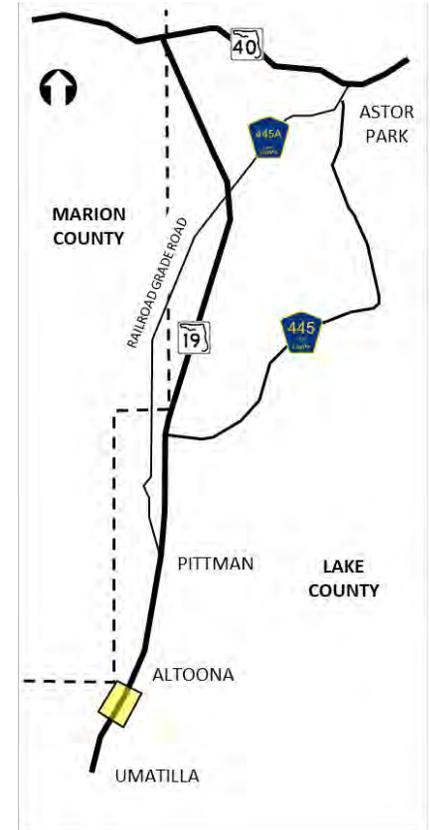
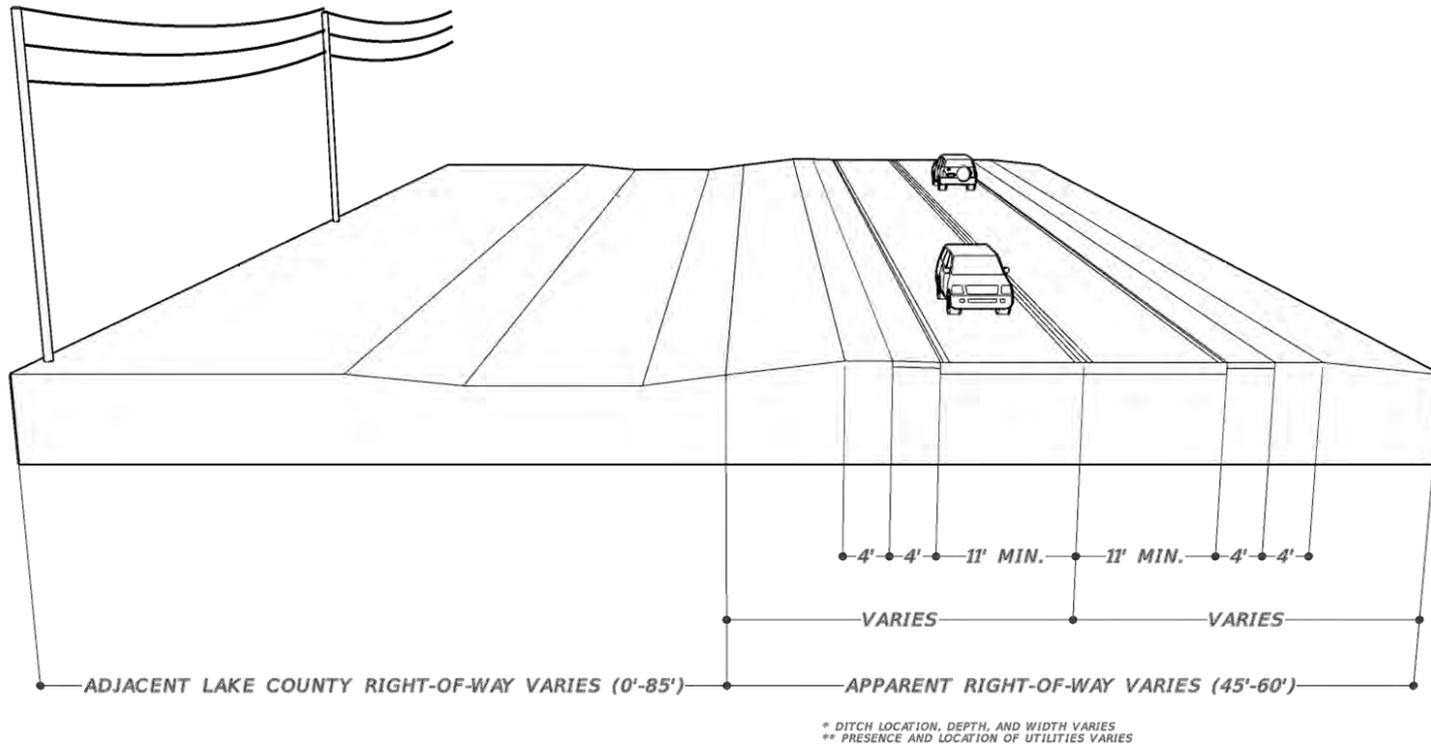
* DITCH LOCATION, DEPTH, AND WIDTH VARIES
 ** PRESENCE AND LOCATION OF UTILITIES VARIES



NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

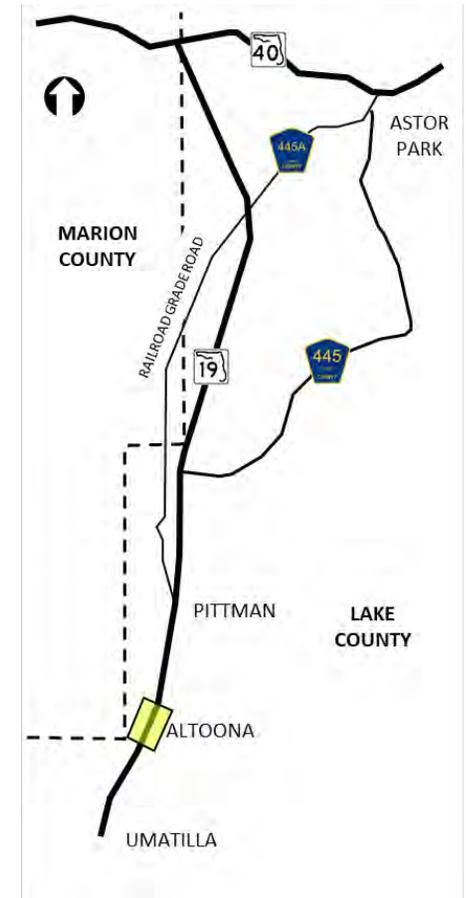
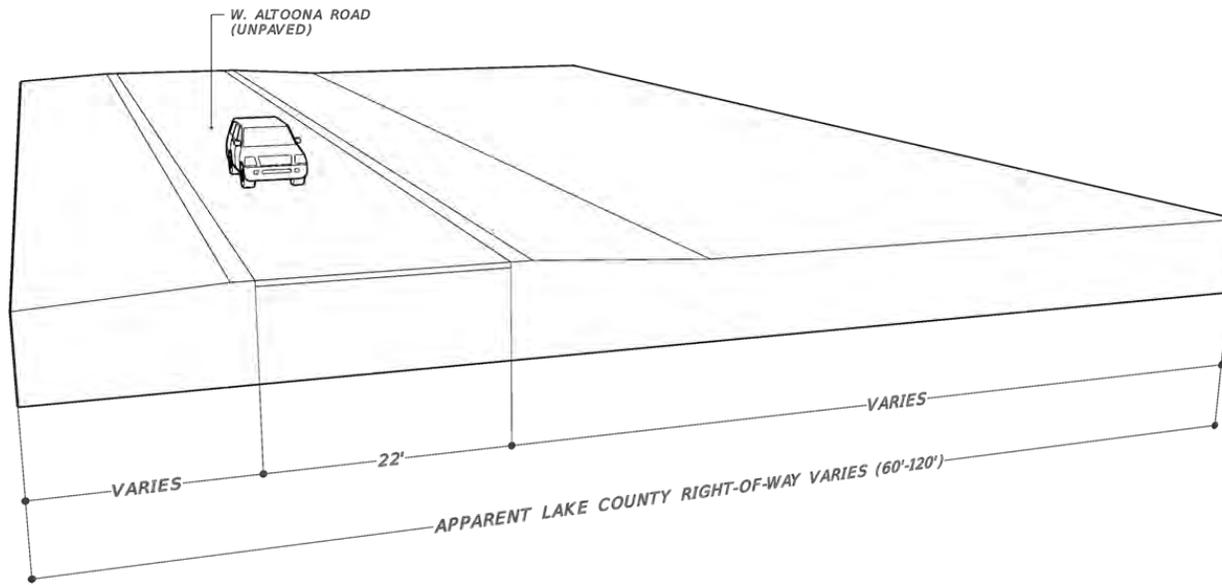
Figure 5 | Existing Typical Section – S.R. 19 from Beach Street to Lakeview Terrace Drive



NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

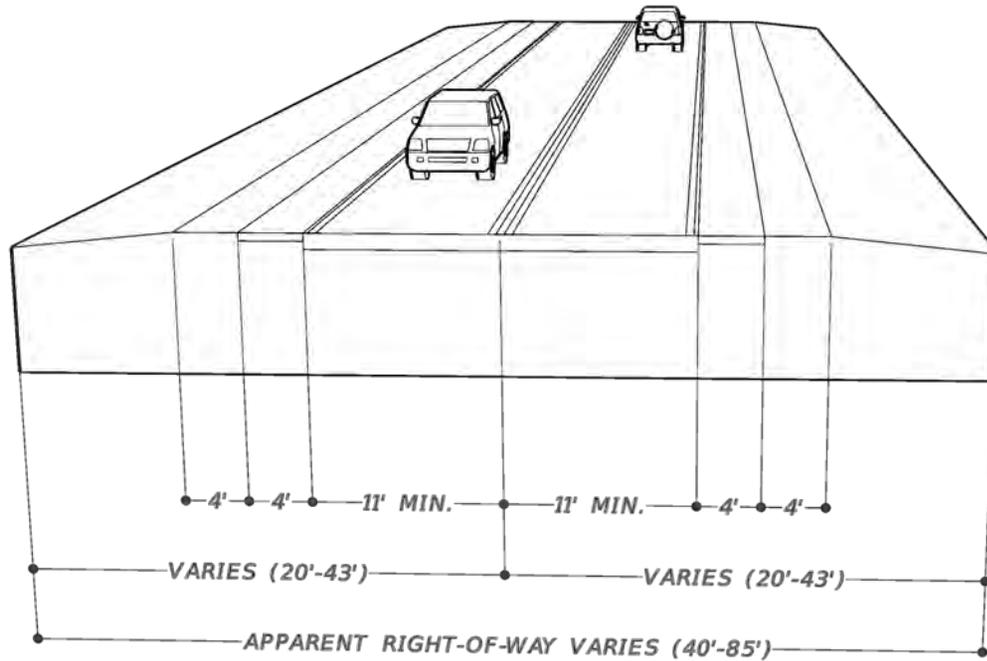
Figure 6 | Existing Typical Section – W. Altoona Road from Lakeview Terrace Drive to Lake Daisy Drive



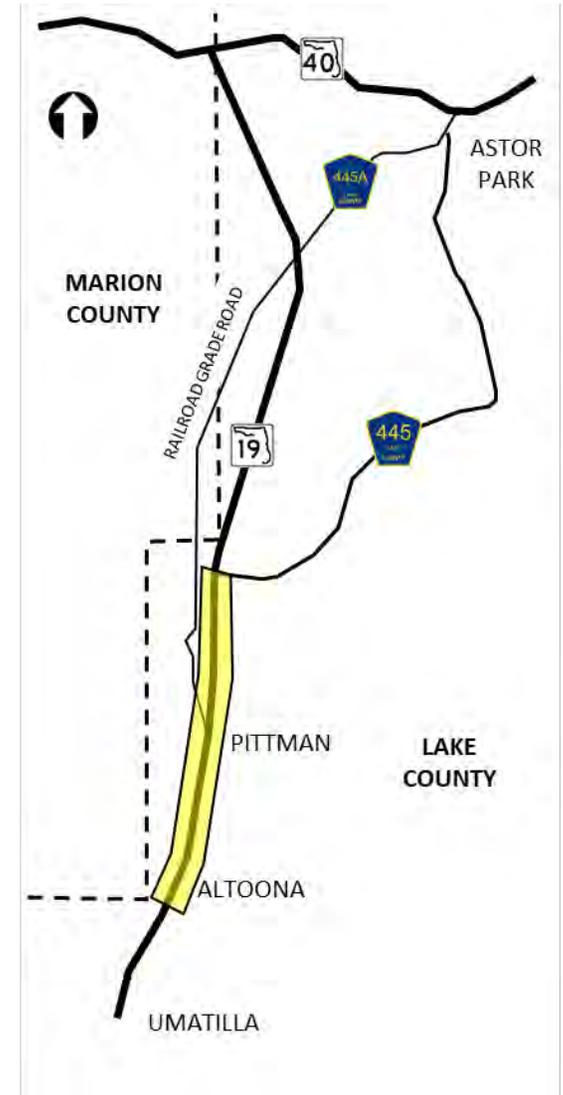
NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 7 | Existing Typical Section – S.R. 19 from Lakeview Terrace Drive to C.R. 445



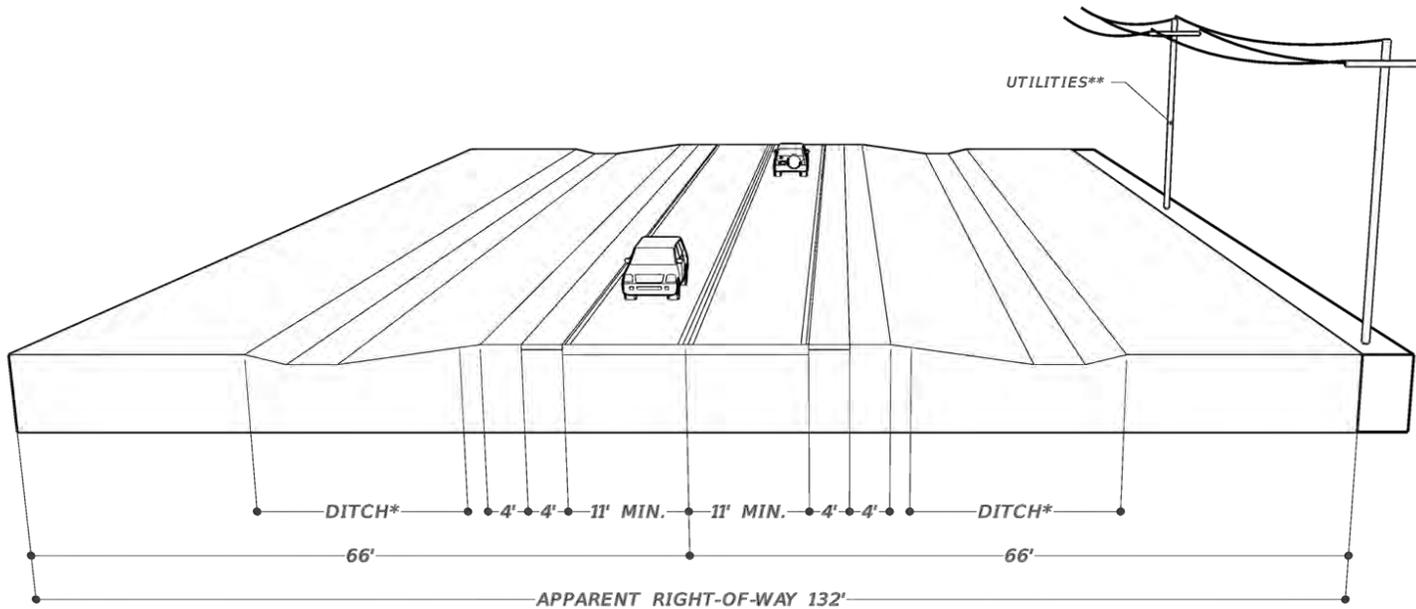
* DITCH LOCATION, DEPTH, AND WIDTH VARIES
** PRESENCE AND LOCATION OF UTILITIES VARIES



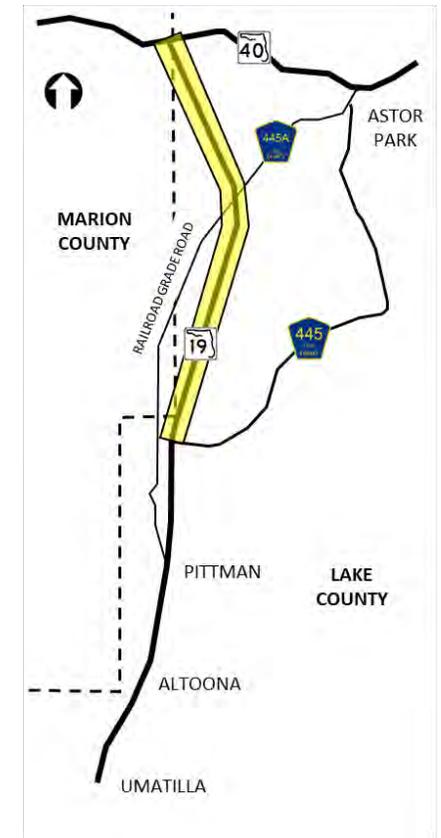
NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 8 | Existing Typical Section – S.R. 19 from C.R. 445 to S.R. 40



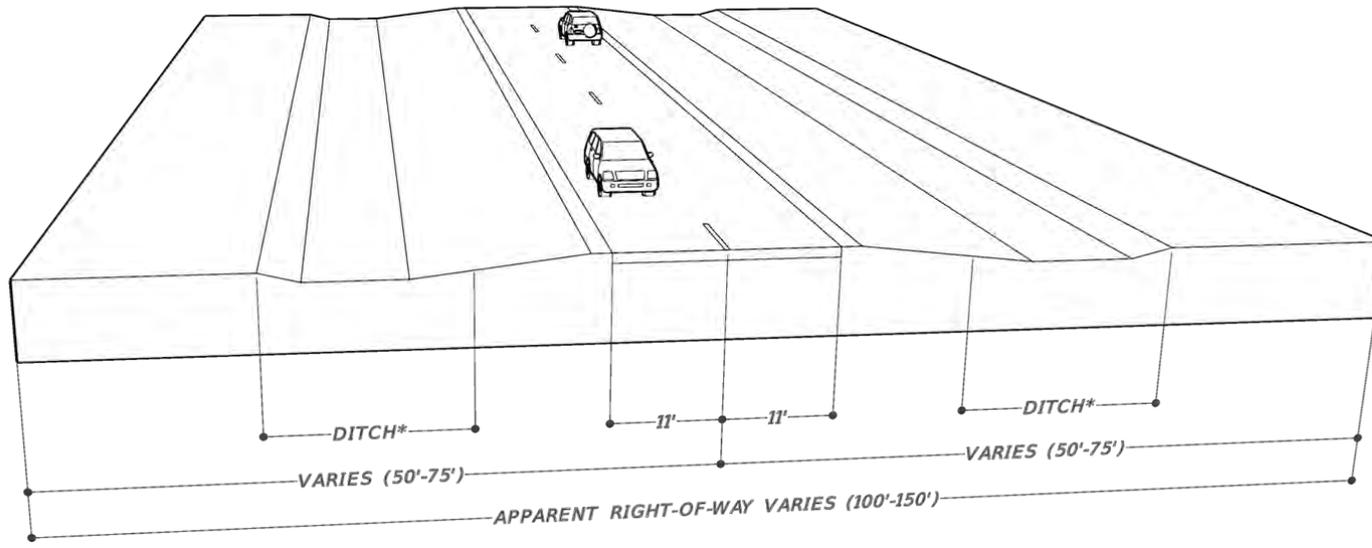
* DITCH LOCATION, DEPTH, AND WIDTH VARIES
** PRESENCE AND LOCATION OF UTILITIES VARIES



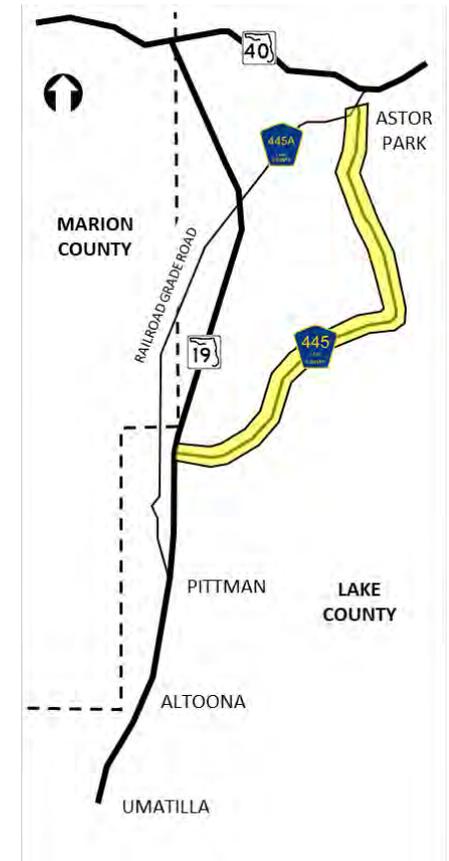
NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 9 | Existing Typical Section – C.R. 445 from S.R. 19 to C.R. 445A



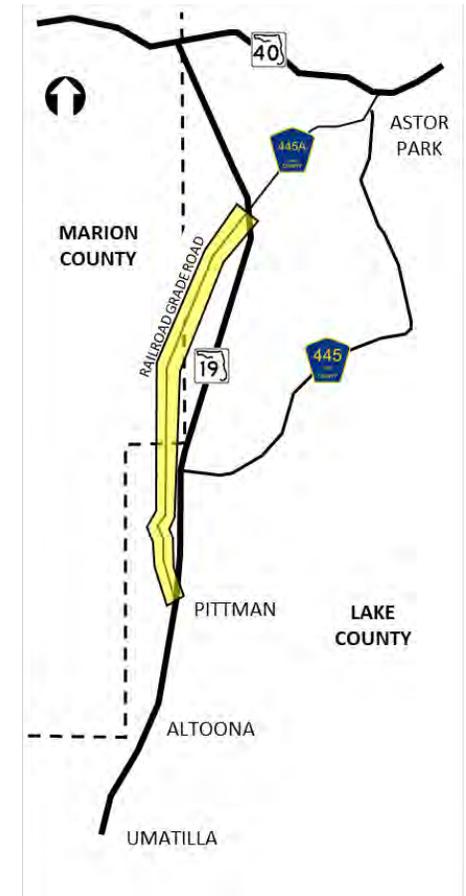
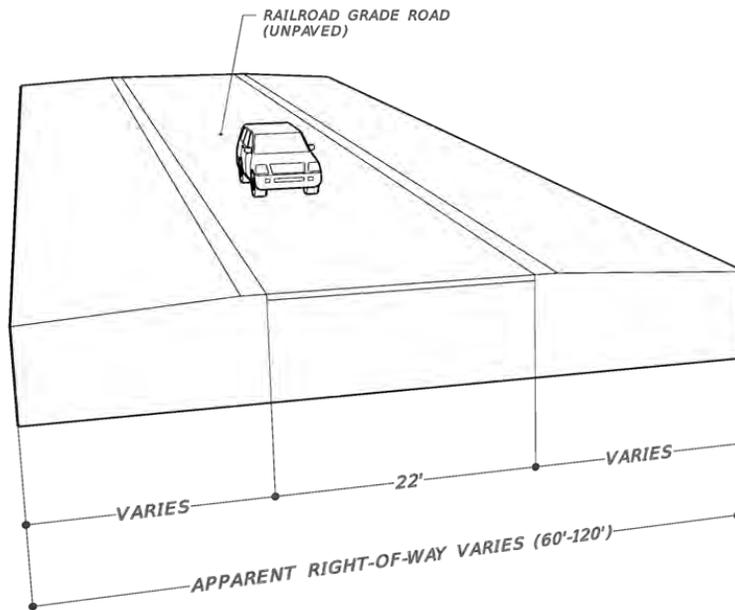
* DITCH LOCATION, DEPTH, AND WIDTH VARIES



NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

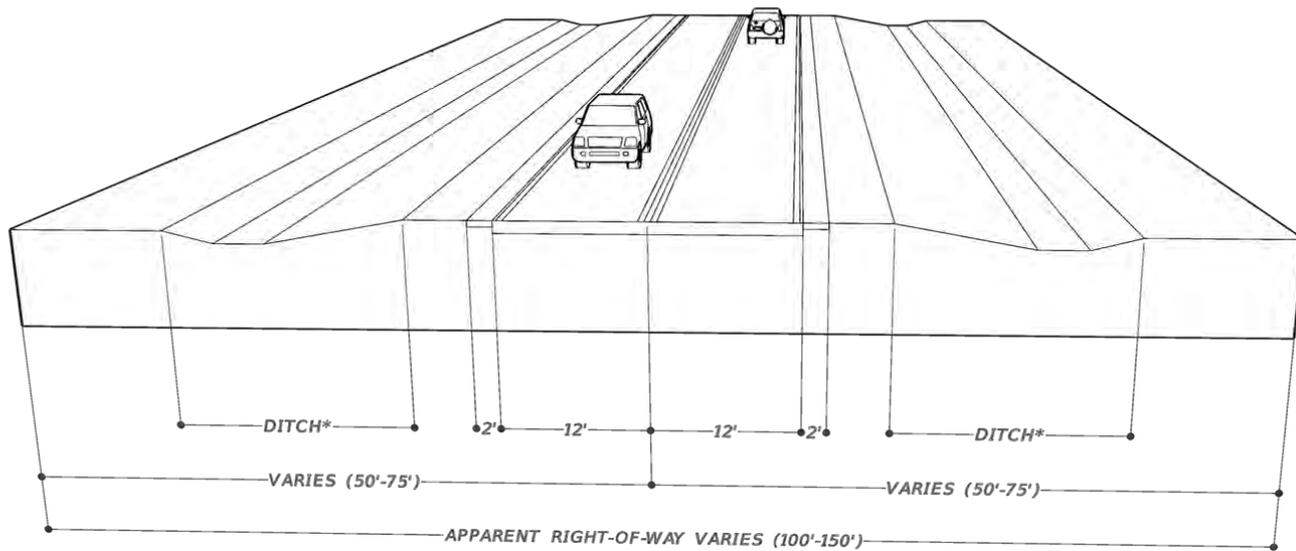
Figure 10 | Existing Typical Section – Railroad Grade Road from Dorr Road to S.R. 19



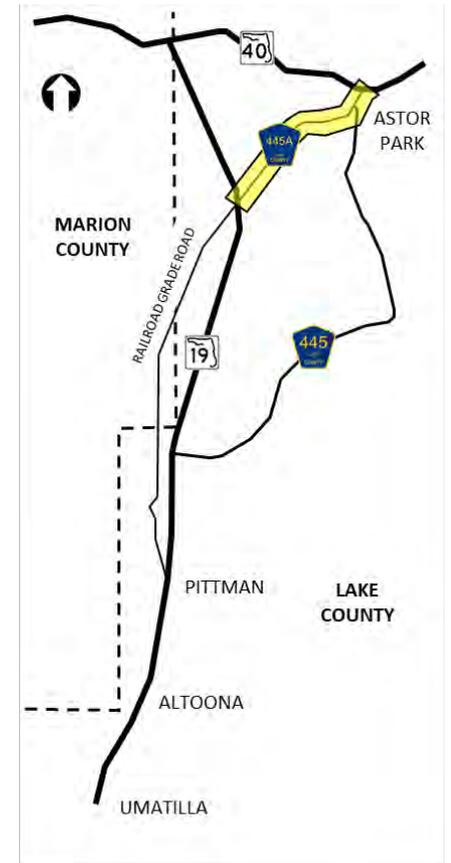
NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

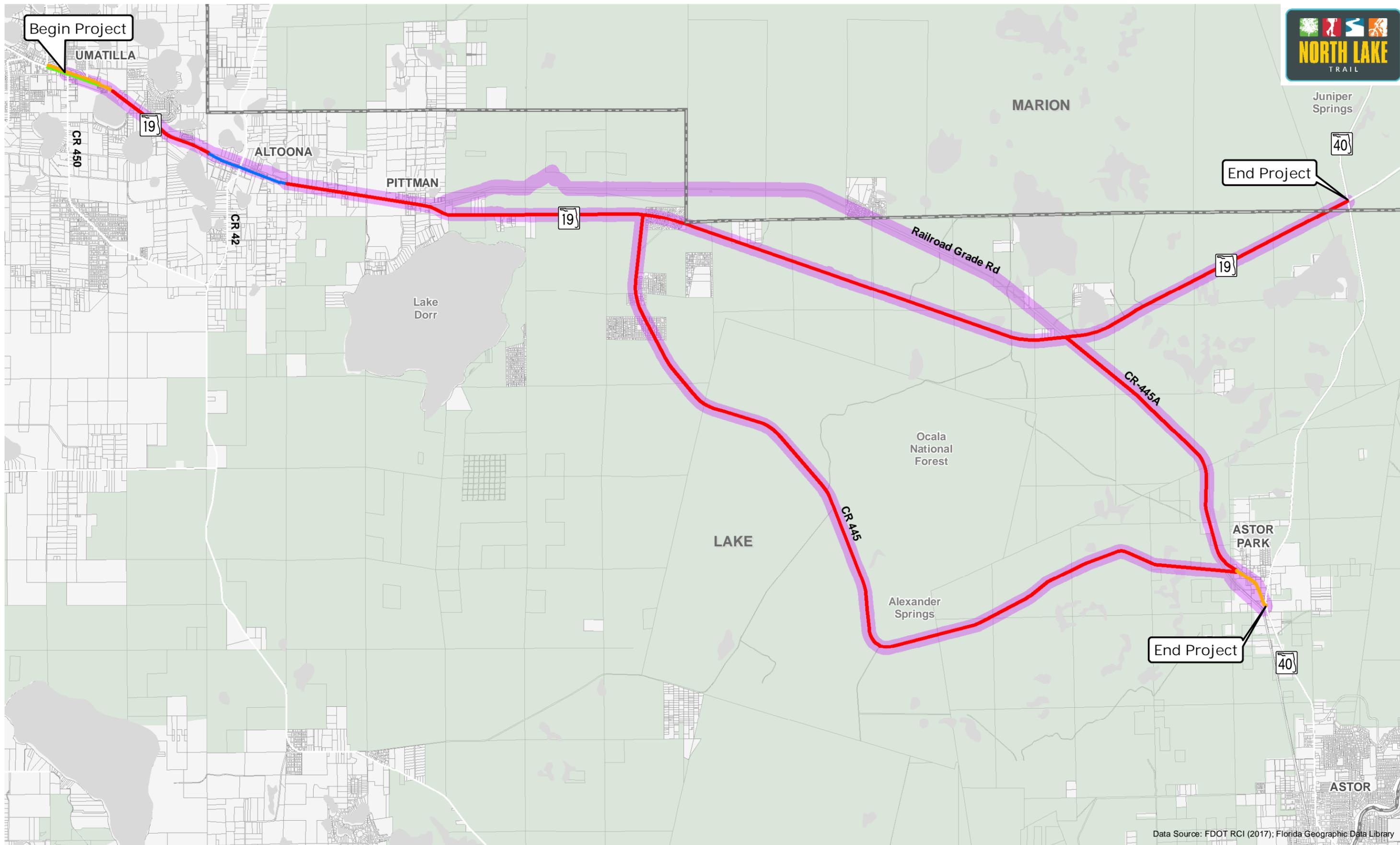
CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 11 | Existing Typical Section – C.R. 445A from S.R. 19 to S.R. 40



* DITCH LOCATION, DEPTH, AND WIDTH VARIES
** PRESENCE AND LOCATION OF UTILITIES VARIES





Data Source: FDOT RCI (2017); Florida Geographic Data Library

Posted Speed Limit
North Lake Trail Corridor Planning Study
Figure 12



- 35
- 45
- Conservation Area
- 40
- 55
- Study Corridor(s)

4.4. CONTEXT CLASSIFICATION

The FDOT context classification system labels roadways based on local roadway transportation characteristics and user experience. Upon evaluation of the study corridor, the context classification determinations identified by FDOT are shown in Table 3. A map of the context classifications is included as Figure 13.

Table 3 | Provisional Context Classification Determination

Mile Post (MP)	Provisional Context Classification Determination
Roadway Section Number: 11100000 (S.R. 19)	
4.919 to 5.567	C4 - Urban
5.567 to 7.443	C2 - Rural
7.443 to 7.755	C2T - Rural Town
7.755 to 11.417	C2 - Rural
11.417 to 12.772	C1 - Natural
Roadway Section Number: 11190000 (S.R. 19)	
0.571 to 2.087	C2 - Rural
2.087 to 5.696	C1 - Natural
5.696 to 6.726	C2 - Rural
6.726 to 9.725	C1 - Natural
Roadway Section Number: 36090000 (S.R. 19)	
0.000 to 0.241	C1 - Natural

Source: Florida Department of Transportation Planning and Environmental Management Office

NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Figure 13 | Context Classification Map

Context Classification Map
 SR 19 - 1110000; 11190000;
 36090000
 Lake & Marion Counties
 Begin Mile Point: 4.919; 0.571; 0.000
 End Mile Point: 12.772; 9.725; 0.241



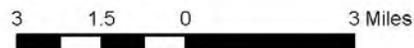
Legend

CSCLASS

- C1
- C2
- C2T
- C4

— FDOT District 5 Roads

Map Created: 7/5/18



4.5. FUNCTIONAL CLASSIFICATION

S.R. 19 from C.R. 450 to S.R. 40 is classified by FDOT as a minor arterial in a rural area. C.R. 445 and C.R. 445A are both classified as major collectors in a rural area.

A large portion of the North Lake Trail corridor is within the Black Bear Scenic Byway, including S.R. 19 from S.R. 40 to Twin Lake Circle (south of Altoona), the entirety of C.R. 445 from S.R. 19 to C.R. 445A, and C.R. 445A from the intersection with C.R. 445 to S.R. 40.

4.6. ACCESS CLASSIFICATION

The access management classification of S.R. 19 from C.R. 450 (Bulldog Lane) to S.R. 40 is Class 4. The access management classifications and standards were obtained from the *FDOT 2014 Median Opening Handbook* and are defined in Table 4.

Table 4 | Arterial Access Management Classifications and Standards

Access Class	Medians	Connection Spacing (ft)		Median Opening Spacing		Spacing Signal (ft)
		> 45 MPH	≤ 45 MPH	Directional	Full	
4	Non-Restrictive*	660	440	-	-	2,640

Source: Straight-Line Diagrams; *Non-Restrictive – Does not physically prevent vehicle crossing

4.7. RIGHT OF WAY

The existing R/W width along S.R. 19 varies between 34 and 150 feet. The R/W width by segment is shown in Table 5. The R/W information was determined based on research of R/W maps and plats. R/W maps could not be located for the portions of S.R. 19 between mile markers 5.450 to 6.176 and 6.810 to 9.981. Continued research will attempt to find the missing segments. See Appendix E for all R/W maps. Straight-Line diagrams were used to assist with the R/W locations and are included within Appendix F for reference.

NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Table 5 | Right of Way (R/W) Width

Mile Post on S.R. 19	R/W Width (ft)	R/W Left from Centerline (ft)	R/W Right from Centerline (ft)
Lake County			
4.919 to 4.958	34	Range from 17 to 30	Range from 17 to 30
4.958 to 5.334	60	30	30
5.334 to 5.450	46	23	23
Lake County			
6.176 to 6.810	120	60	60
Lake County			
9.981 to 10.118	100	50	50
10.118 to 10.206	120	60	60
10.206 to 10.336	110	50	60
10.336 to 10.417	100	50	50
10.417 to 10.525	65	32.5	32.5
10.525 to 10.655	66	33	33
10.655 to 10.873	110	50	60
10.873 to 10.954	100	50	50
10.954 to 11.174	66	33	33
11.174 to 11.304	77	33	44
11.304 to 11.401	98	54	44
11.401 to 11.636	87	54	33
11.636 to 12.574	66	33	33
12.574 to 12.772	132	66	66
0.569 to 9.725	132	66	66
Marion County			
0.000 to 0.241	150	84	66

Source: Florida Department of Transportation Right of Way Maps

4.8. DRAINAGE FEATURES

The proposed trail is located within the Upper St. Johns hydrologic basin as shown in Figure 14. This basin is broken down into several sub-basins, which include (from south to north): Blackwater Creek, Ninemile Creek, Boyd Lake Outlet, Jumping Gully and Morman Branch. Storm runoff from the study area drains to these branches through sheet flow in the existing conditions. The topography of the area is also shown in Figure 15. Existing culverts and cross drains are listed in Table 6.

Table 6 | Existing Culverts and Cross Drains

Mile Post (MP)	Type of Structure	Number of Structures/Barrels	Diameter (in)	Width (ft)	Height (ft)	Length (ft)
5.817	Concrete Pipe	1	24			51
6.404	Concrete Pipe	1	15			85
6.652	Concrete Pipe	1	18			84
6.984	Concrete Pipe	1	24			54
8.877	Concrete Pipe	1	24			37
9.959	Concrete Pipe	1		23	14	78
10.097	Concrete Pipe	1		23	14	84
10.136	Concrete Pipe	1		23	14	78
10.298	Concrete Pipe	1	18			80
11.191	Concrete Pipe	1	24			46
11.826	Concrete Pipe	2	60			59
11.865	Concrete Pipe	1	60			63
11.913	Concrete Pipe	2	36			62
12.32	Concrete Pipe	1	24			46
12.669	Concrete Pipe	1	24			48
1.126	Concrete Pipe	2	36			77
2.911	Concrete Pipe	1	24			65
3.67	Concrete Pipe	1	24			66
4.317	Concrete Pipe	1	36			55
4.656	Concrete Pipe	3	42			88
5.963	Concrete Pipe	1	36			58
6.393	Concrete Pipe	1	24			37
6.755	Concrete Pipe	1	24			38
7.685	Concrete Pipe	1	24			40
7.843	Concrete Pipe	1	24			42
8.425	Concrete Pipe	1	24			52
8.545	Concrete Pipe	1	24			56
8.925	Concrete Pipe	1	24			57

Source: Straight Line Diagrams

In order to accommodate a trail along the roadway alignment, the crossing culverts under the existing road are anticipated to be extended. In locations where culverts cannot be extended, a new culvert will be installed for the trail itself at the existing culvert location. Within the study

NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

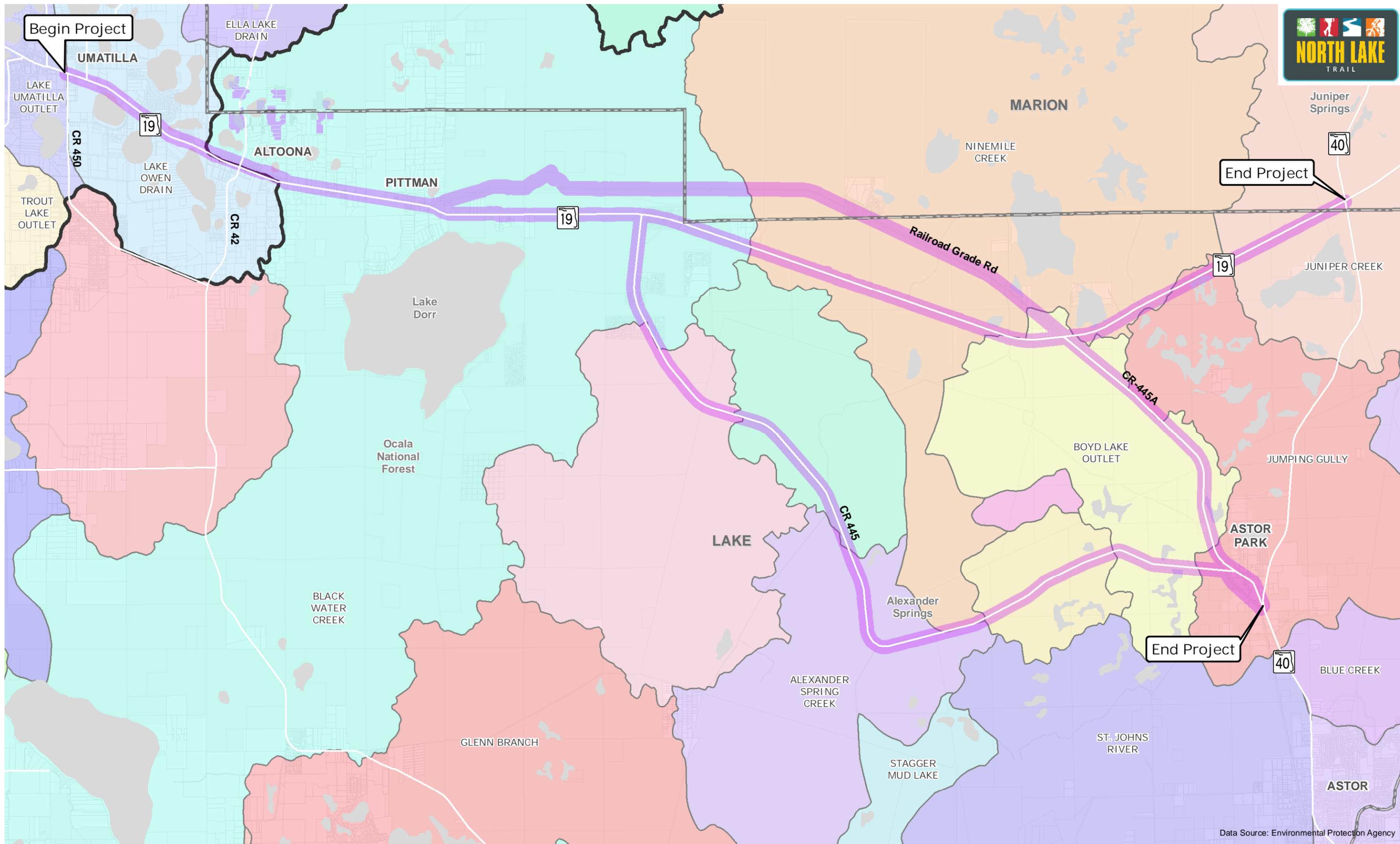
CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

area, major culverts are located at Blackwater Creek and Ninemile Creek. A bridge is also present over Alexander Springs Creek along C.R. 445.

The study area also crosses, or is immediately adjacent to, numerous floodplains according to Federal Emergency Management Agency (FEMA) maps. The floodplains are designated as Zone A, which indicates that 100-year flood elevation is not determined.



Cross Drain on S.R. 40

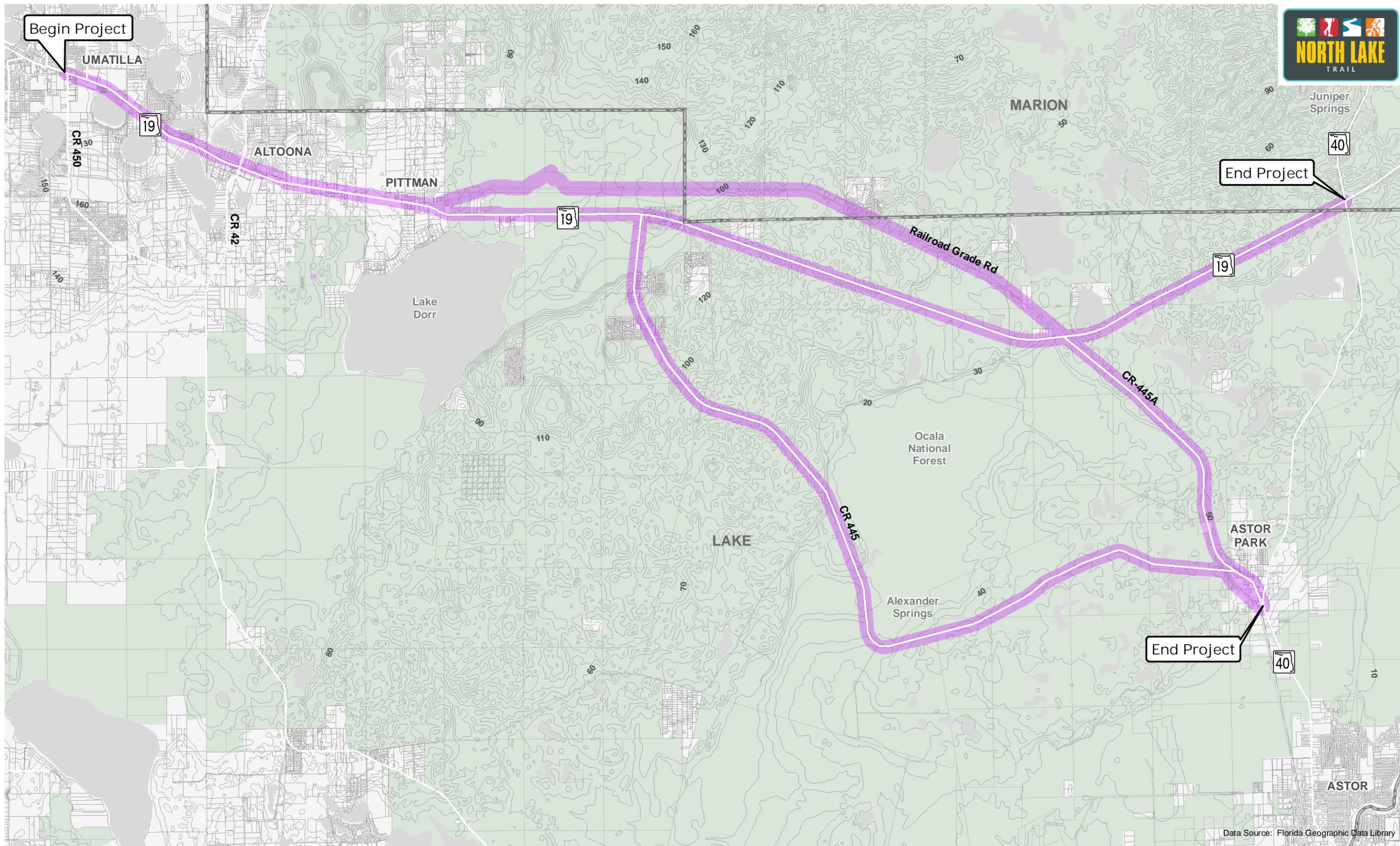


Data Source: Environmental Protection Agency



- Drainage Basin (each basin represented by a different color)
- Watershed
- Study Corridor(s)

Drainage Basins
North Lake Trail Corridor Planning Study
Figure 14



Begin Project

End Project

End Project



- 10 Foot Contour
- Conservation Area
- Study Corridor(s)

Data Source: Florida Geographic Data Library

Topographic Map
North Lake Trail Corridor Planning Study
Figure 15

4.9. STRUCTURES

One existing structure is located within the study area, and is the C.R. 445 Bridge over Alexander Springs Creek (Bridge No. 114047). The C.R. 445 Bridge over Alexander Springs Creek was built in 1959. The bridge is owned by Lake County and is not programmed for rehabilitation (repairs) or replacement.



C.R. 445 Bridge over Alexander Springs Creek

4.9.1. TYPICAL SECTION

The existing bridge typical section consists of two approximately 10.5-foot travel lanes and 1.5-foot outside shoulders with a curb and concrete traffic railing on both sides. The overall bridge width is 30 feet.

4.9.2. HISTORICAL SIGNIFICANCE

A review of the National Register of Historic Places indicated that the bridge is not historic, and is exempt from Section 106 evaluation under the 2012 Program Comment for Common Post-1945 Concrete and Steel Bridges.

4.10. LIGHTING

Lighting is present along S.R. 19 at the intersection of S.R. 19 and S.R. 40 only. The light poles are spaced approximately 114 feet apart for nearly 0.10 miles.



S.R. 19 and S.R. 40 Lighting

4.11. EXISTING TRAFFIC DATA AND CHARACTERISTICS

The S.R. 19 corridor is a two lane minor arterial in a rural area. The S.R. 19 corridor traffic characteristics can be broken into various segments. The first is from C.R. 450 to Bent Tree Road, where Annual Average Daily Traffic (AADT) was approximately 8,850 vehicles, as shown in Figure 16. This means on the average day, the road segment experienced this amount of vehicle traffic in both directions of travel combined. From Bent Tree Road to C.R. 445, this segment of S.R. 19 experienced an AADT of approximately 6,100. Lastly, the segment from C.R. 445 to S.R. 40, experienced an AADT of approximately 3,900. Truck and heavy vehicle traffic ranges from 9.1% to 10.7% of all vehicle traffic within the area.

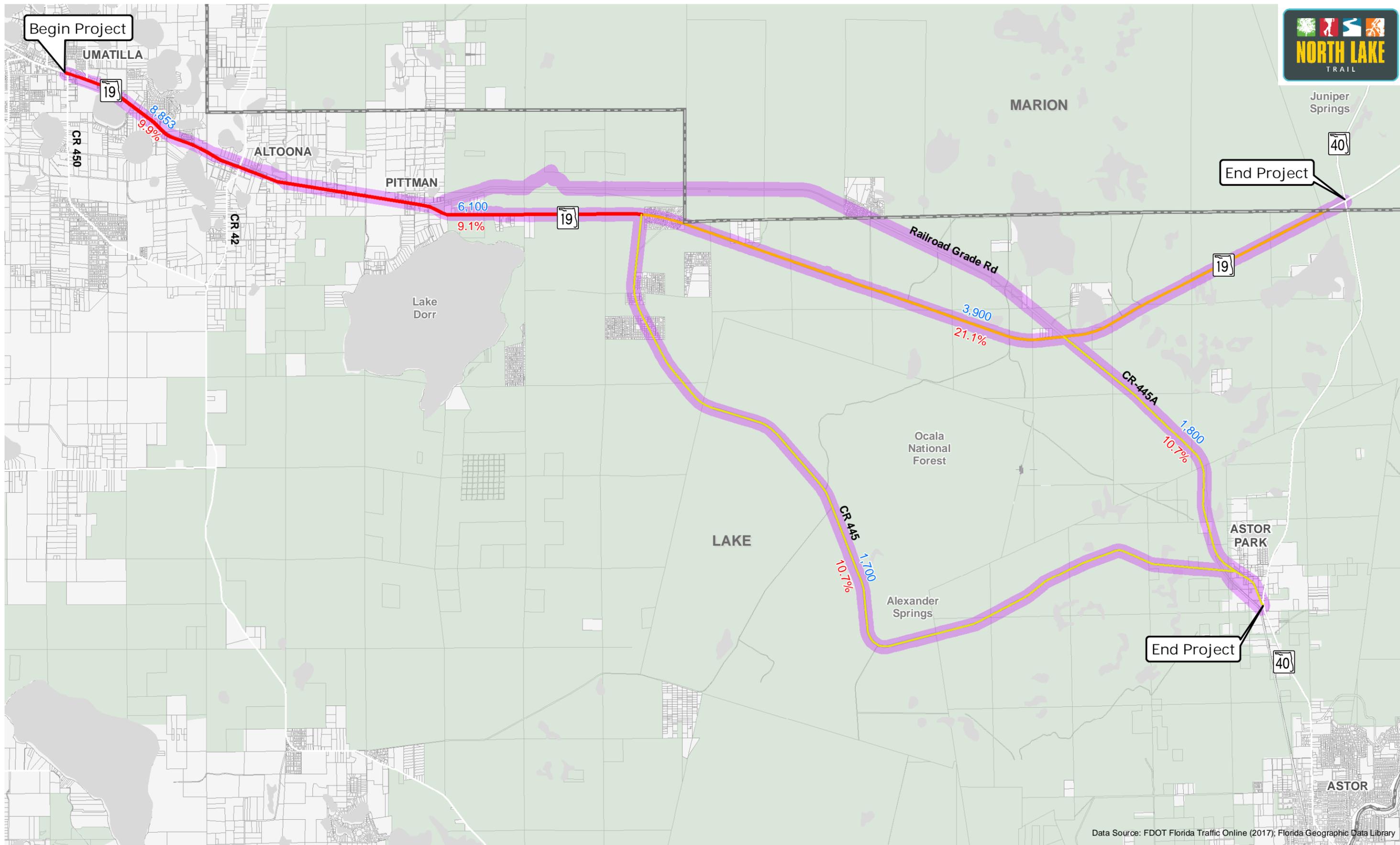
Pedestrian counts on S.R. 19 are available for the intersection of S.R. 19 with C.R. 450. The pedestrian counts at C.R. 450 are for a combined eight hours on a Thursday in September 2014. During this data collection effort, 46 pedestrians crossed east-west along C.R. 450, and 17 pedestrians were observed crossing north-south along S.R. 19. There were 63 total pedestrians observed at S.R. 19 and C.R. 450, and sightings were higher generally in the early afternoon. No bicycle counts have been conducted along the corridor, however cyclists were observed along S.R. 19 during the field reviews.



Pedestrian at intersection of S.R. 19 and Bulldog Lane



Cyclist on S.R. 19 in the City of Umatilla



Data Source: FDOT Florida Traffic Online (2017); Florida Geographic Data Library

Annual Average Daily Traffic (AADT)
North Lake Trail Corridor Planning Study
Figure 16



0 - 1,000
 1,001 - 2,000

2,001 - 5,000
 5,001 - 10,000

850 AADT Count
 9.5% Truck Percentage

Study Corridor(s)
 Conservation Area

4.12. EXISTING OPERATIONAL ANALYSIS

Level of Service (LOS) measures the travel delay of vehicles and provides a “grade” based on the delay. As shown in Figure 17, an “A” grade represents free flowing traffic, while “F” is considered failing and highly congested. The LOS for S.R. 19 were obtained from the FDOT Roadway Characteristics Inventory (RCI). In 2017, the LOS varies between LOS B and LOS C from C.R. 450 to S.R. 40, as illustrated in Figure 18.

Figure 17 | Level of Service Examples



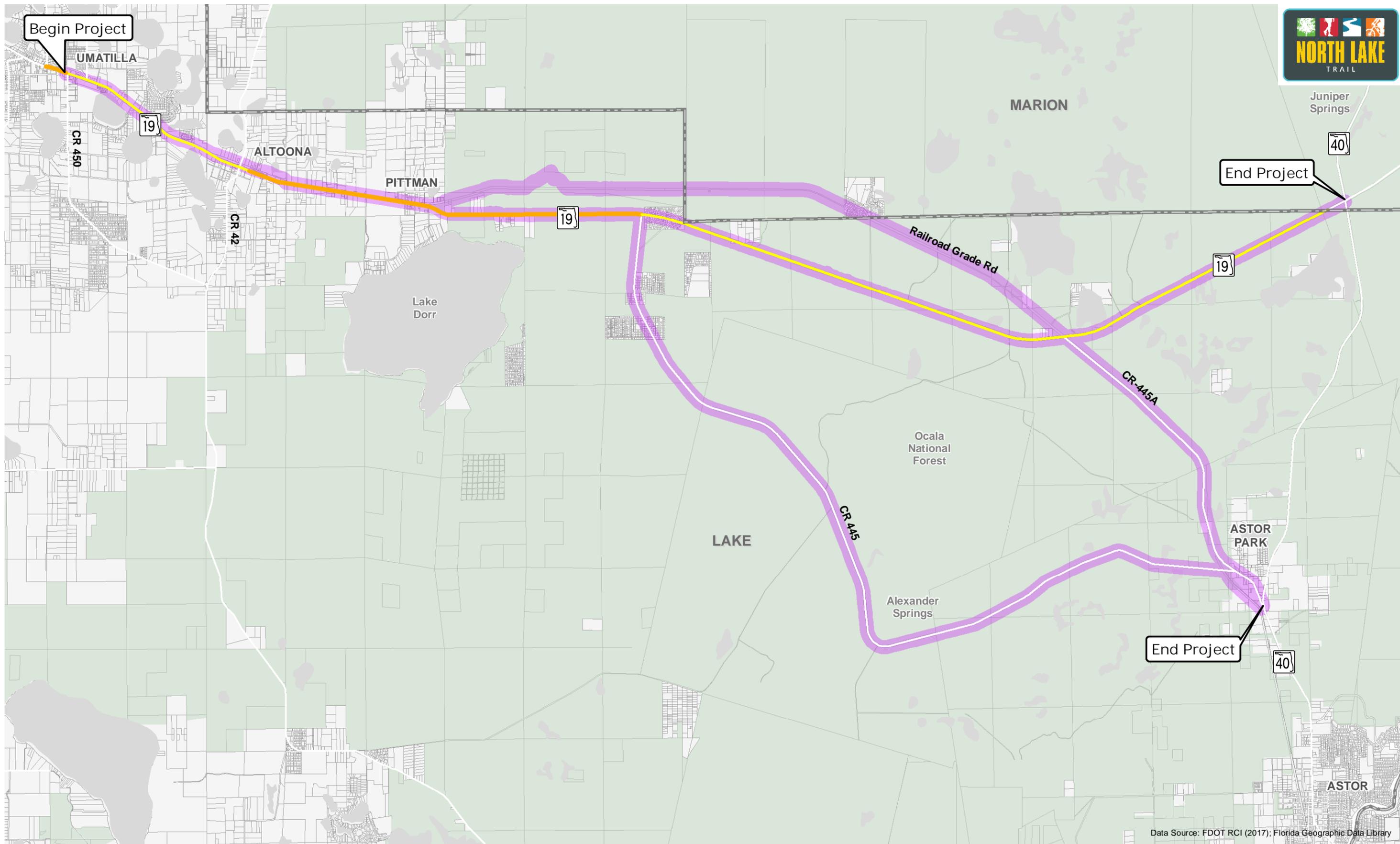
A/B



C/D



E/F



Data Source: FDOT RCI (2017); Florida Geographic Data Library

Corridor Level of Service (LOS)
North Lake Trail Corridor Planning Study
Figure 18



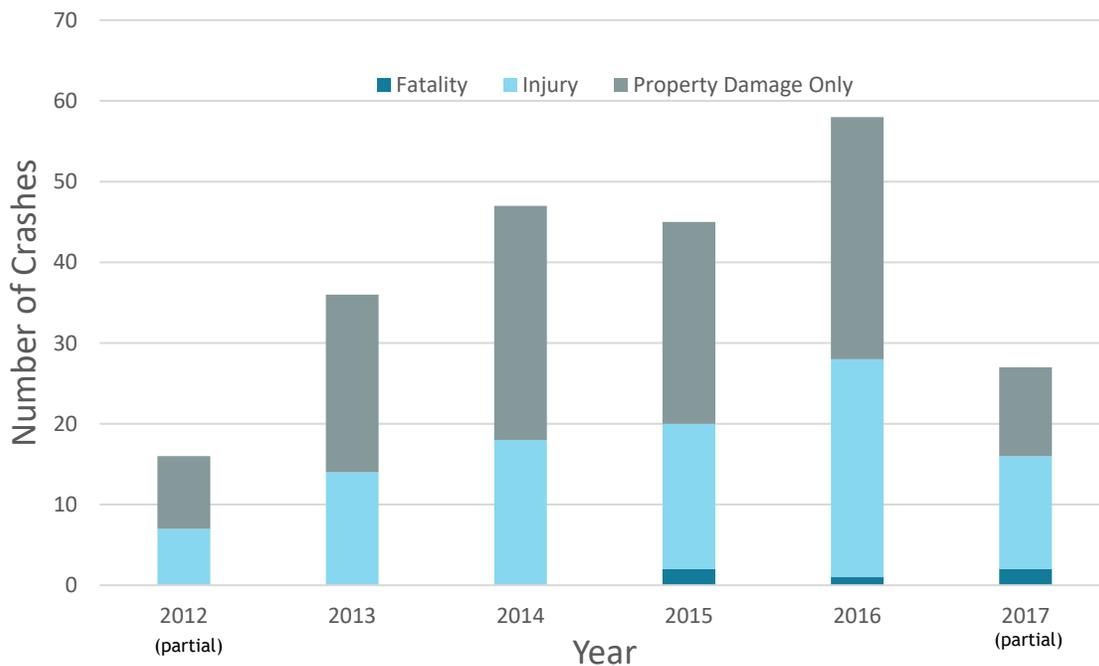
- B
- C
- Conservation Area
- Study Corridor(s)

4.13. CRASH DATA

Crash data was collected for S.R. 19 from C.R. 450 to S.R. 40 for the most recent five years using Signal Four Analytics. This section summarizes crash statistics and analyzes data for high frequency crash locations within the study corridor.

Figure 19 summarizes crash frequency and crash type by year from 2012 to 2017. Both 2012 and 2017 are partial data sets.

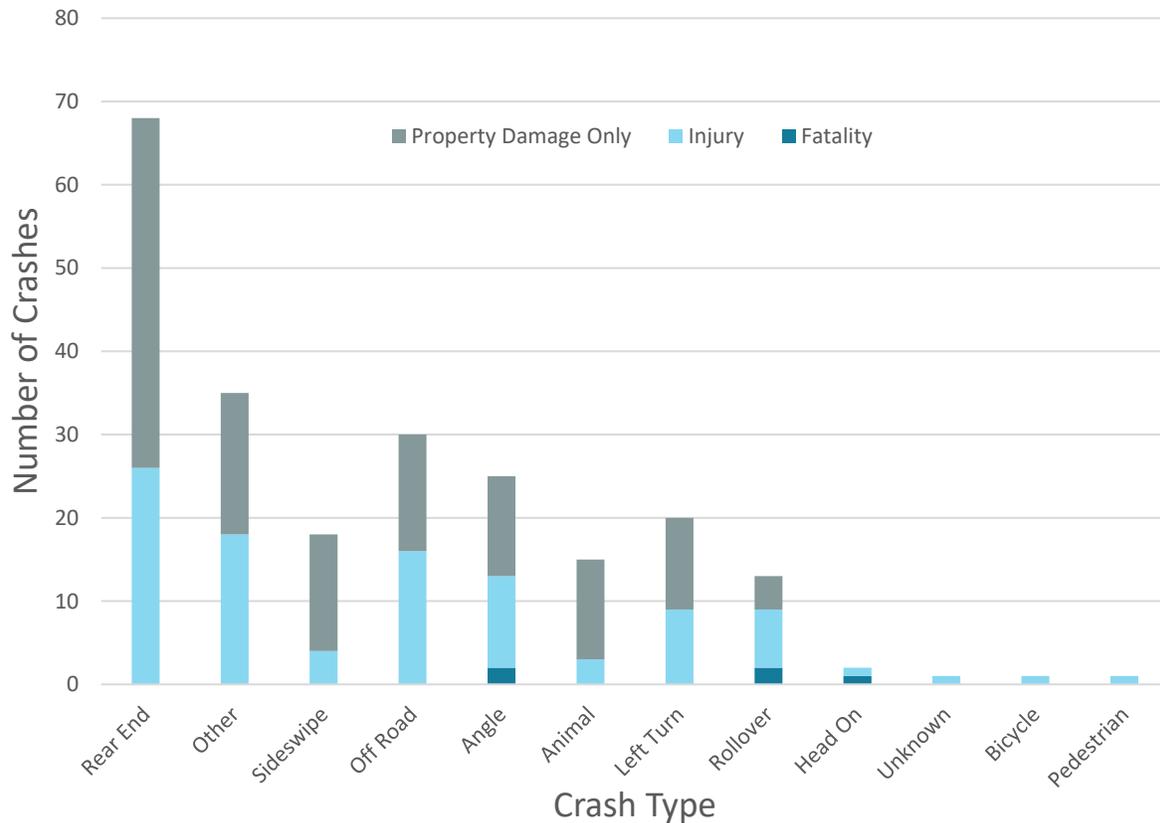
Figure 19 | Crashes by Severity and Year (2012 – 2017)



Source: Signal Four Analytics

The crashes per year trend upward from 2013 to 2016. The corridor wide crashes for the five year study are displayed in Figure 20 broken down by type and severity.

Figure 20 | Crashes by Type and Severity (2012 - 2017)



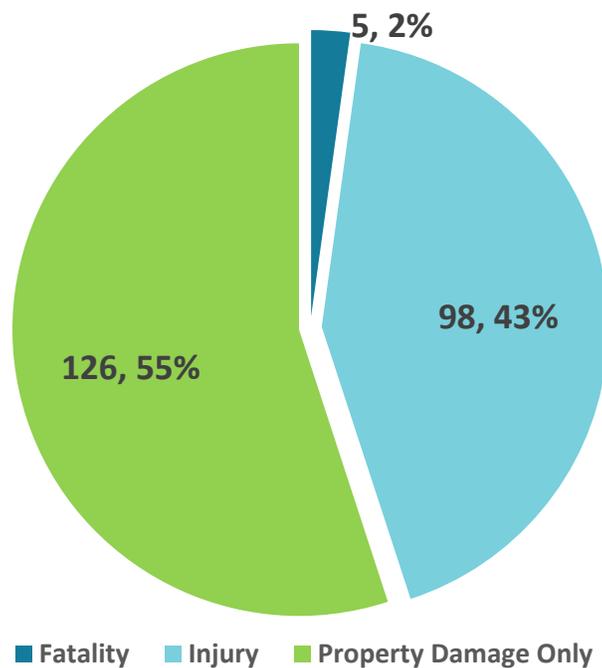
Source: Signal Four Analytics

The most common types of crashes on S.R. 19 are rear-end at 30%, other at 15%, and off road at 13%. Animal involved crashes account for 7% of all accidents. Pedestrian and bicyclist accidents account for less than 1% of all accidents. The locations where pedestrian and bicyclist accidents occurred are the following:

- **Pedestrian:** S.R. 19 and Clayton Trail (500 feet offset south at 6:30 a.m.)
- **Bicyclist:** S.R. 19 and West Ocala Street (at intersection at 12:10 p.m.)

The pedestrian accident occurred in a low crash, rural area and the bicyclist crash occurred in a high crash rate area at a large intersection within the City of Umatilla. The corridor crash severity is broken down in Figure 21 by total accidents and percentage.

Figure 21 | Number of Percentage of Crashes Classified by Severity (2012 – 2017)

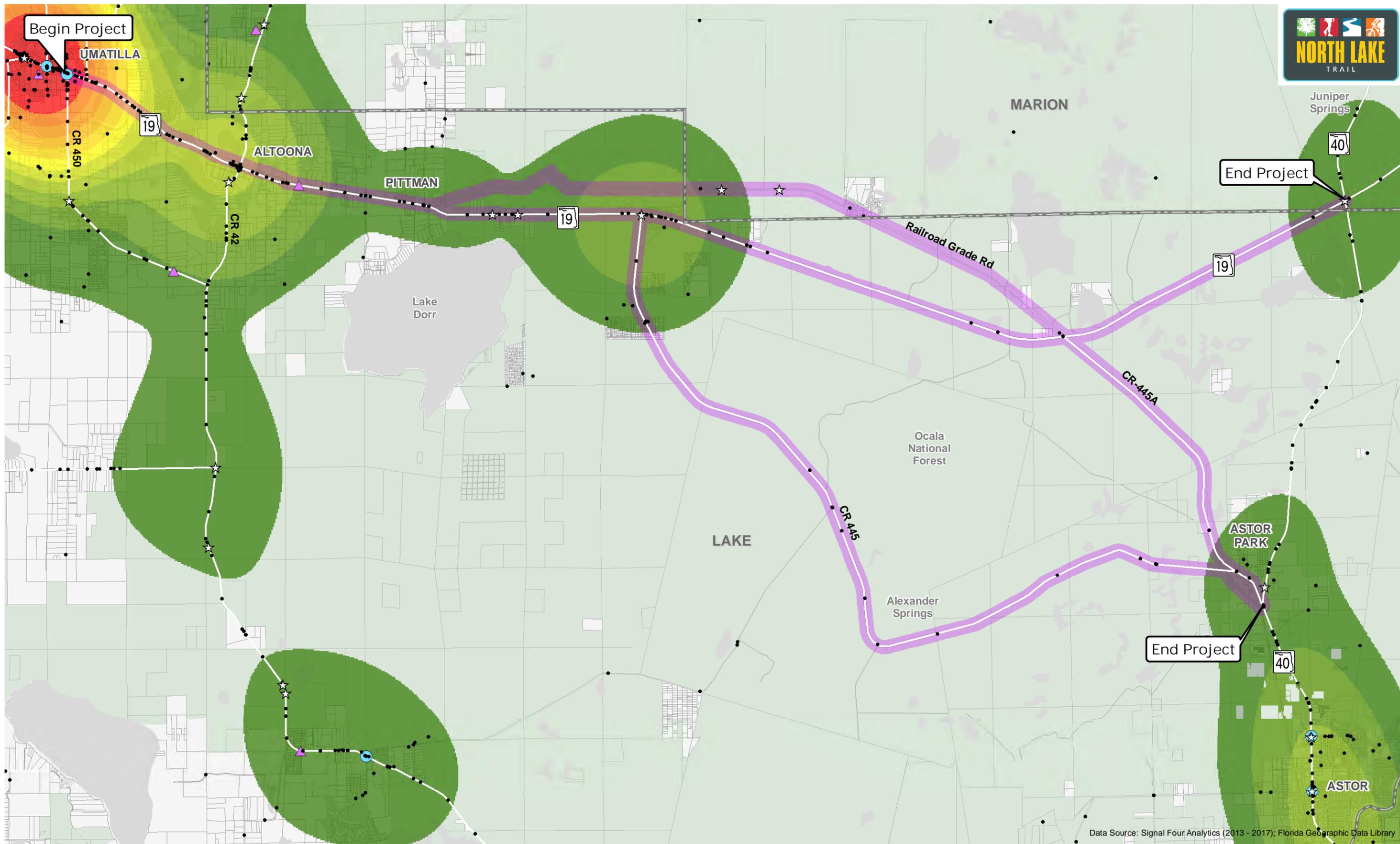


Source: Signal Four Analytics

Additional significant findings include the following:

- 63% of crashes occur during daylight hours
- Night crashes, without lighting, account for 20%
- Wet surface conditions accounted for 11% of all crashes
- 89% of crashes occurred in dry surface conditions

A heat map of the S.R. 19 segment is shown in Figure 22. There are three segments on S.R. 19 within the study area where crashes are most common. Beginning from the south, these are West Ocala Street to Bulldog Way in Umatilla, Lakeview Terrace Drive to East Altoona Road in Altoona, and S.R. 19 north and south of C.R. 445.



Data Source: Signal Four Analytics (2013 - 2017); Florida Geographic Data Library

Crash Density Heat Map: 2013-2017
North Lake Trail Corridor Planning Study
Figure 22



- Vehicle Crash
- ☆ Fatality Crash

- Bicycle Crash
- ▲ Pedestrian Crash

- Conservation Area
- Study Corridor(s)

4.14. UTILITIES / RAILROADS

The St. Johns and Lake Eustis railway corridor was previously abandoned and portions within S.R. 19 deeded over to the City of Umatilla. That corridor makes up the median within the City and originates on the east side of S.R. 19. The corridor follows S.R. 19 north to Demko Road, crossing to the west side of S.R. 19 near Baker Road. At Ravenswood Road, the corridor shifts further west into the Ocala National Forest, and eventually merges with Railroad Grade Road. From there, the rail corridor crosses S.R. 19 again, and merges with C.R. 445A until just south of S.R. 40. The rail corridor then travels eastward south of S.R. 40 until it reaches the St. Johns River in Astor.

The railroad corridor was originally 120 feet in width, and since the abandonment much of the corridor has either been sold to private owners, absorbed into the Ocala National Forest, or incorporated into Lake County R/W.

Several utilities are also located within the study area, as summarized in Table 7.

Table 7 | Study Area Utilities

Service Area Name	Utility Type
City Of Leesburg - Fiber	Fiber
Clay Electric Salt Springs District	Electric
City Of Eustis Water Dept.	Water and Sewer
City Of Umatilla	Water and Sewer
Opticaltel	CATV
Florida Gas Transmission - Orlando	Gas Pipeline
Florida's Natural Growers	Industrial Waste
Duke Energy	Electric And Fiber
Comcast Communications/Prev Lk Cnty Inc	Fiber and Telephone
Teco Peoples Gas	Gas Pipeline
Sumter Electric Cooperative Inc	Electric
Centurylink-Ocala	Phone and Fiber Optic

Source: Sunshine OneCall (Sunshine 811)

4.15. TRANSIT DATA / ROUTES

LakeXpress routes operate on weekdays between the hours of 6:00 a.m. and 7:45 p.m. on 60 minute headways (except Route 4 which operates every 120 minutes). Currently, LakeXpress Route 4 runs from Zellwood (Orange County) to the Altoona Post Office (Lake County), and serves the southern end of the project area from Umatilla to Altoona. The majority of the route travels on state and United States (U.S.) highways, including S.R. 19.

4.16. EXISTING / PLANNED TRAILS

Figure 23 illustrates the existing trails and trailheads within the study area, while the following sections describe several of the most well-known trails. Detailed trail maps for most of the existing trails are located in Appendix G.

4.16.1. FLORIDA NATIONAL SCENIC TRAIL

The Florida National Scenic Trail is a congressionally designated National Scenic Trail spanning 1,300 miles across the State of Florida. Part of the trail runs through the Ocala National Forest. The Cross Seminole Trail is a paved multi-use trail that makes up a portion of the scenic trail in Seminole County.



Florida National Scenic Trail

4.16.2. TIMUCUAN TRAIL

The Timucuan Trail is a short recreation trail, less than one mile, around the Alexander Springs Recreation Area.

4.16.3. OCALA ADVENTURE TRAIL

The Ocala Adventure Trail, also known as the Centennial Trail, is a 45 mile loop surrounding the Pinecastle Naval Range to the west of S.R. 19 and allows the use of off highway vehicles (OHV).

4.16.4. WANDERING WIREGRASS TRAIL

The Wandering Wiregrass Trail is a 14 mile loop to the east of C.R. 445 and is designated primarily for slow moving all-terrain vehicles (ATVs) and motorcycles.

4.16.5. BAPTIST LOOP HORSE RIDING TRAIL

The Baptist Loop Equestrian Trail is a 19 mile loop to the west of S.R. 19 and north of S.R. 42.

4.16.6. PAISLEY WOODS BICYCLE TRAIL

The Paisley Woods Bicycle Trail is a combination of the Alexander Springs Loop and the Clearwater Lake Loop with over 20 miles of bicyclist trail. The trail is located to the southeast of C.R. 445 and to the east of S.R. 19 and Lake Dorr.

4.16.7. HEART OF FLORIDA LOOP

The Heart of Florida Loop is a series of interconnected mixed-use trails that create a loop through eight counties in Central Florida, as identified by FDEP OGT. The North Lake Trail Phase 3 would connect to the Black Bear Trail along S.R. 40, which is a significant component of the Heart of Florida Loop.

4.16.8. ALEXANDER SPRINGS RUN

The Alexander Springs Run is a five-mile paddling trail to the southeast of C.R. 445.

4.16.9. LAKE WEKIVA TRAIL

The Lake Wekiva Trail is a 2.6-mile long trail that begins at C.R. 435 and ends at S.R. 46. This project includes a 14-foot paved multi-use trail and an eight-foot equestrian trail. The project is south of the North Lake Trail Phase 3 Corridor Planning study.

4.16.10. SOUTH LAKE TRAIL PHASE IIIB

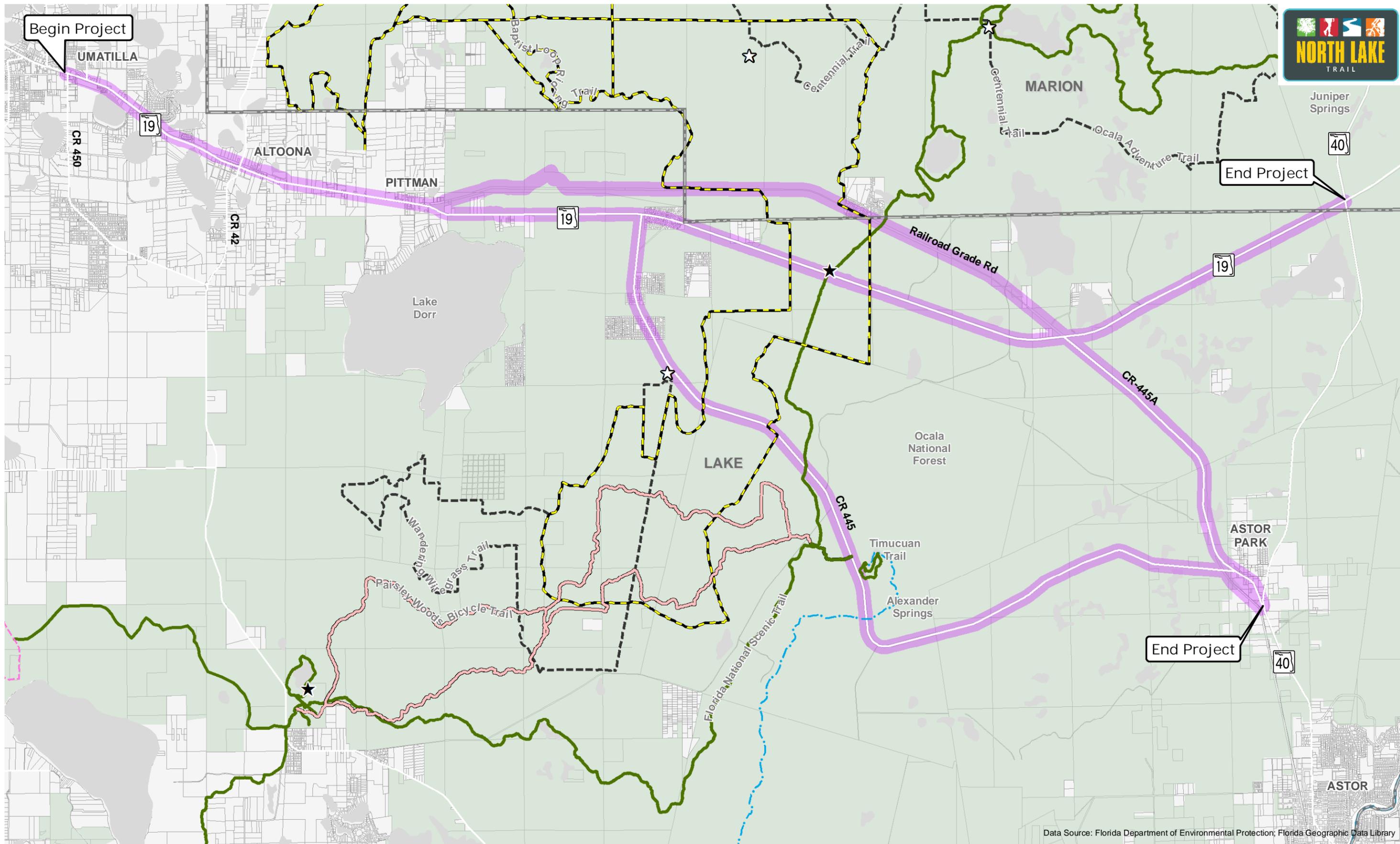
The South Lake Trail Phase IIIB is a 1.9-mile addition to the existing South Lake Trail from 2nd Street to Silver Eagle Road in Groveland, FL. The current trail end is at Silver Eagle Road. The project is south of the North Lake Trail Phase 3 Corridor Planning Study.

4.16.11. SOUTH LAKE TRAIL PHASE IV

The South Lake Trail Phase IV is an eight mile addition to the existing South Lake Trail and the proposed South Lake Trail Phase IIIB from the existing Van Fleet Trail to Villa City Road in Groveland, FL. The current trail end is at Silver Eagle Road. The project is south of the North Lake Trail Phase 3 Corridor Planning Study.

4.17. FIELD REVIEW

Field reviews were performed on February 12, 2018 and March 19, 2018. Data collected during the field reviews, including photos of key features, are included in Appendix H.



Data Source: Florida Department of Environmental Protection; Florida Geographic Data Library



- Unpaved Biking
- Multi-Use
- Equestrian
- ★ Non-Motorized Trail Head
- Conservation Area
- Hiking
- Paddling
- Motorized
- ☆ Motorized Trail Head
- Study Corridor(s)

Existing Trails
North Lake Trail Corridor Planning Study
Figure 23

5. ENVIRONMENTAL SETTING

The existing environmental setting is comprised of natural, cultural, social, and physical resources. The features identified within each of these four categories are described in the following sections.

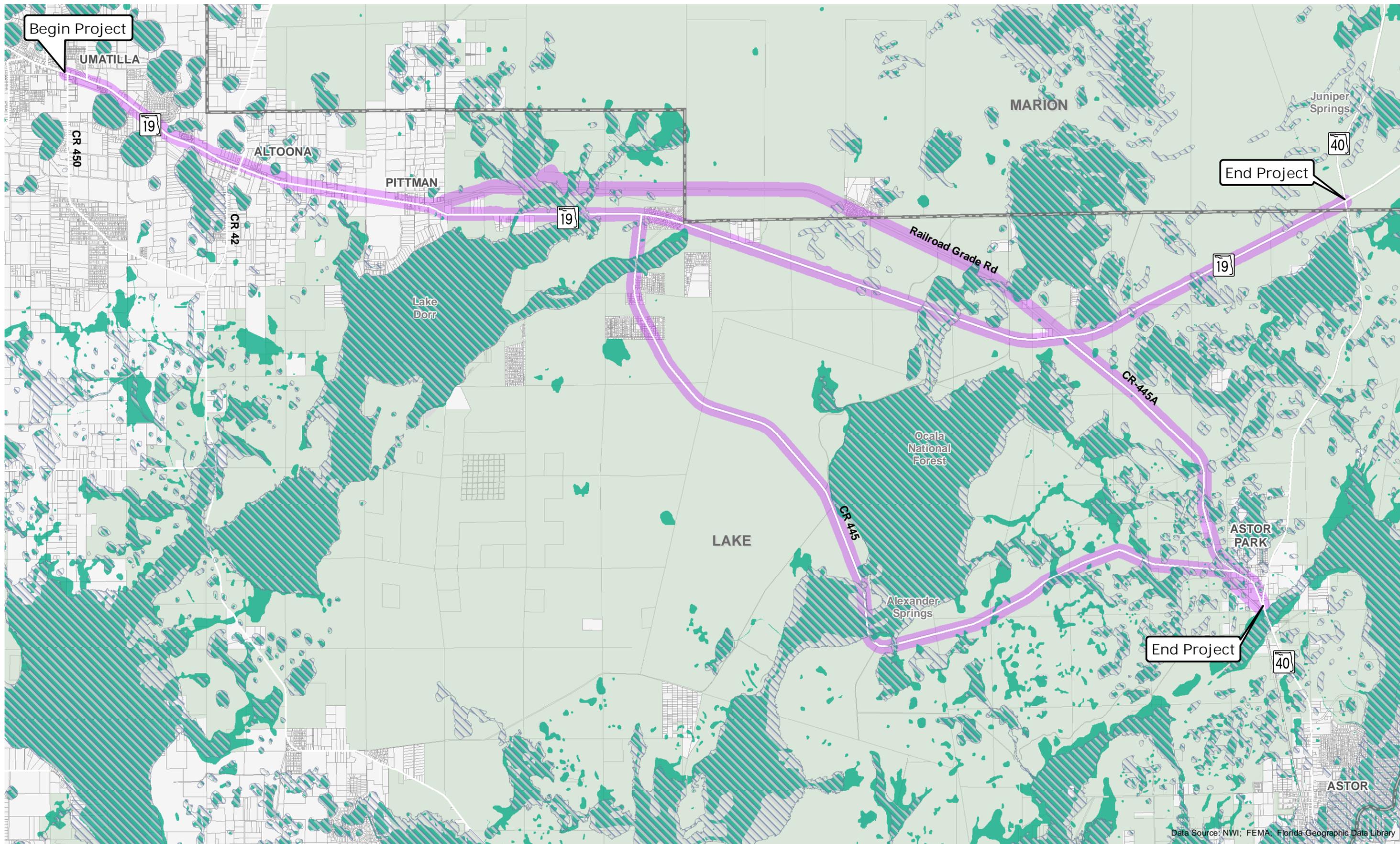
5.1. NATURAL RESOURCES

5.1.1. WETLANDS AND FLOODPLAINS

Several rivers, creeks, lakes, and natural springs are located within the study area, which increases the occurrence of wetlands and floodplains. The wetlands and floodplains analyses were performed in geographic information systems (GIS) using Federal Emergency Management Agency (FEMA) and National Wetlands Inventory (NWI) data, and the resulting map is shown in Figure 24.



Surface Water & Wetland Area near S.R. 19



Data Source: NWI; FEMA; Florida Geographic Data Library



- Floodplain
- Conservation Area
- Wetland
- Study Corridor(s)

Wetlands & Floodplains
 North Lake Trail Corridor Planning Study
 Figure 24

5.1.2. HABITAT

The study area predominantly consists of conservation lands within the Ocala National Forest, which creates a higher potential for occurrence of wildlife and plant species. The aquatic area of Lake Dexter is classified as a critical habitat for the West Indian Manatee, as shown in Figure 25. Consultation areas for the following wildlife and plant species are located throughout the study area:

- Lake Wales Ridge Plants (entire study area)
- Red cockaded woodpecker (entire study area)
- Sand skink (entire study area, excluding alternatives east of Forest Road 71)
- Florida scrub-jay (entire study area)
- Snail kite (entire study area)

Information regarding the primary species with a potential for occurrence are included in the following series of tables, determined through a preliminary environmental screening utilizing FDOT's Environmental Screening Tool (EST). Though it should be noted that these items should not be considered comprehensive. The protection status for each of the animal and plant species were obtained from the Florida Fish & Wildlife Conservation Commission (FWC) and the U.S. Environmental Protection Agency (EPA). There are no occurrences of essential fish habitats within the study area.



*Florida scrub-jay
Observed During Field Review*

NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Table 8 | Wildlife Species with a Potential for Occurrence

Wildlife Species Common Name	Scientific Name	Federal or State Listing	Protection Status
Bald eagle	<i>Haliaeetus leucocephalus</i>	Federal	Managed
Berner's microcaddisfly	<i>Hydroptila beneri</i>	-	-
Blue purse-web spider	<i>Sphodros abboti</i>	-	-
Dense hydrobe snail	<i>Aphaostracon pycnum</i>	-	-
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>	-	-
Eastern indigo snake	<i>Drymarchon couperi</i>	Both	Threatened
Everglade snail kite	<i>Rostrhamus sociabilis</i>	Both	Endangered
Florida black bear	<i>Ursus americanus floridanus</i>	-	-
Florida pine snake	<i>Pituophis melanoleucus</i>	State	Threatened
Florida scrub lizard	<i>Sceloporus woodi</i>	-	-
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	Both	Threatened
Floridian finger-net caddisfly	<i>Chimarra florida</i>	-	-
Gopher tortoise	<i>Gopherus polyphemus</i>	State	Threatened
Little-entrance oxyethiran microcaddisfly	<i>Oxyethira janella</i>	-	-
Long-tailed weasel	<i>Mustela frenata</i>	-	-
Pescador's bottle-cased caddisfly	<i>Oxyethira pescadori</i>	-	-
Rasmussen's neotrichia caddisfly	<i>Neotrichia rasmusseni</i>	-	-
Red-cockade Woodpecker	<i>Picoides borealis</i>	Both	Endangered
Rosemary grasshopper	<i>Schistocerca ceratiola</i>	-	-
Sand skink	<i>Neoseps reynoldsi</i>	Federal	Threatened
Short-tailed snake	<i>Lampropeltis extenuata</i>	-	-
Striped newt	<i>Notophthalmus perstriatus</i>	Federal	Managed
Tavares white miller caddisfly	<i>Nectopsyche tavana</i>	-	-
Wakulla springs vari-colored microcaddisfly	<i>Hydroptila wakulla</i>	-	-
West Indian manatee	<i>Trichechus manatus</i>	Federal	Threatened
Wood stork	<i>Mycteria americana</i>	Both	Threatened

Source: Florida Department of Transportation Environmental Screening Tool

NORTH LAKE TRAIL PHASE 3 - FPID # 441626-1

CORRIDOR PLANNING STUDY - EXISTING CONDITIONS REPORT

Table 9 | Plant Species with a Potential for Occurrence

Plant Species	Scientific Name	Federal or State Listing	Protection Status
Britton's beargrass	<i>Nolina brittoniana</i>	Federal	Endangered
Florida bonamia	<i>Bonamia grandiflora</i>	Federal	Threatened
Giant orchid	<i>Grammatophyllum speciosum</i>	State	Threatened
Hartwrightia	<i>Hartwrightia</i>	State	Threatened
Lewton's polygala	<i>Polygala lewtonii</i>	Federal	Endangered
Longspurred mint	<i>Dicerandra cornutissima</i>	Federal	Endangered
Papery whitlow-wort	<i>Paronychia chartacea</i>	Federal	Threatened
Pigeon wings	<i>Clitoria ternatea</i>	Federal	Threatened
Pygmy fringe-tree	<i>Chionanthus pygmaeus</i>	Federal	Endangered
Scrub plum	<i>Prunus geniculata</i>	Federal	Endangered
Scrub wild buckwheat	<i>Eriogonum longifolium</i>	Federal	Threatened
Wide-leaf warea	<i>Warea amplexifolia</i>	Federal	Endangered

Source: Florida Department of Transportation Environmental Screening Tool

Bald eagles have the potential to occur within the study area, and are listed as a federally managed species by the Bald and Golden Eagle Protection Act. Several bald eagle nests are located within the Ocala National Forest and surrounding areas, as illustrated in Figure 25, however the majority are located at least a half-mile away from the study corridors. One nesting location near Alexander Springs is located approximately 0.15 miles north of C.R. 445. No direct impacts to the nesting sites are anticipated due to the proposed corridor.

5.1.3. AQUATIC PRESERVES / OUTSTANDING FLORIDA WATERS

The study has no involvement with Florida's aquatic preserves. The following water bodies, also depicted in Figure 26 are designated by EPA as Outstanding Florida Waters:

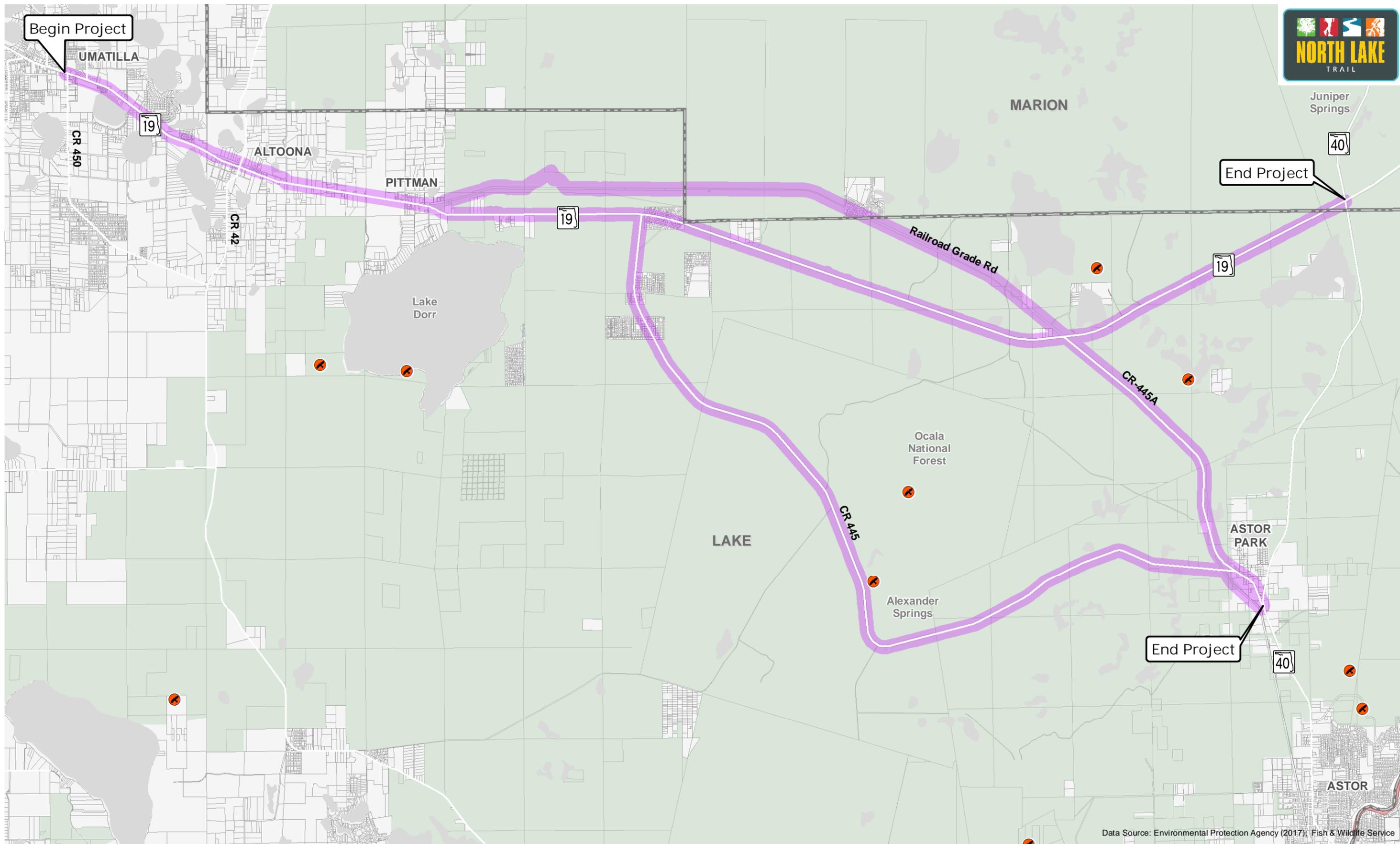
- Juniper Creek
- Alexander Springs Creek
- Lake Dexter
- Lake Dorr
- Lake Norris



Alexander Springs Creek

5.1.4. WILD AND SCENIC RIVERS

Alexander Springs Creek is classified as a Wild and Scenic River by the U.S. Department of Agriculture Forestry Service. The creek is located on the north and south side of C.R. 445 within Lake County.

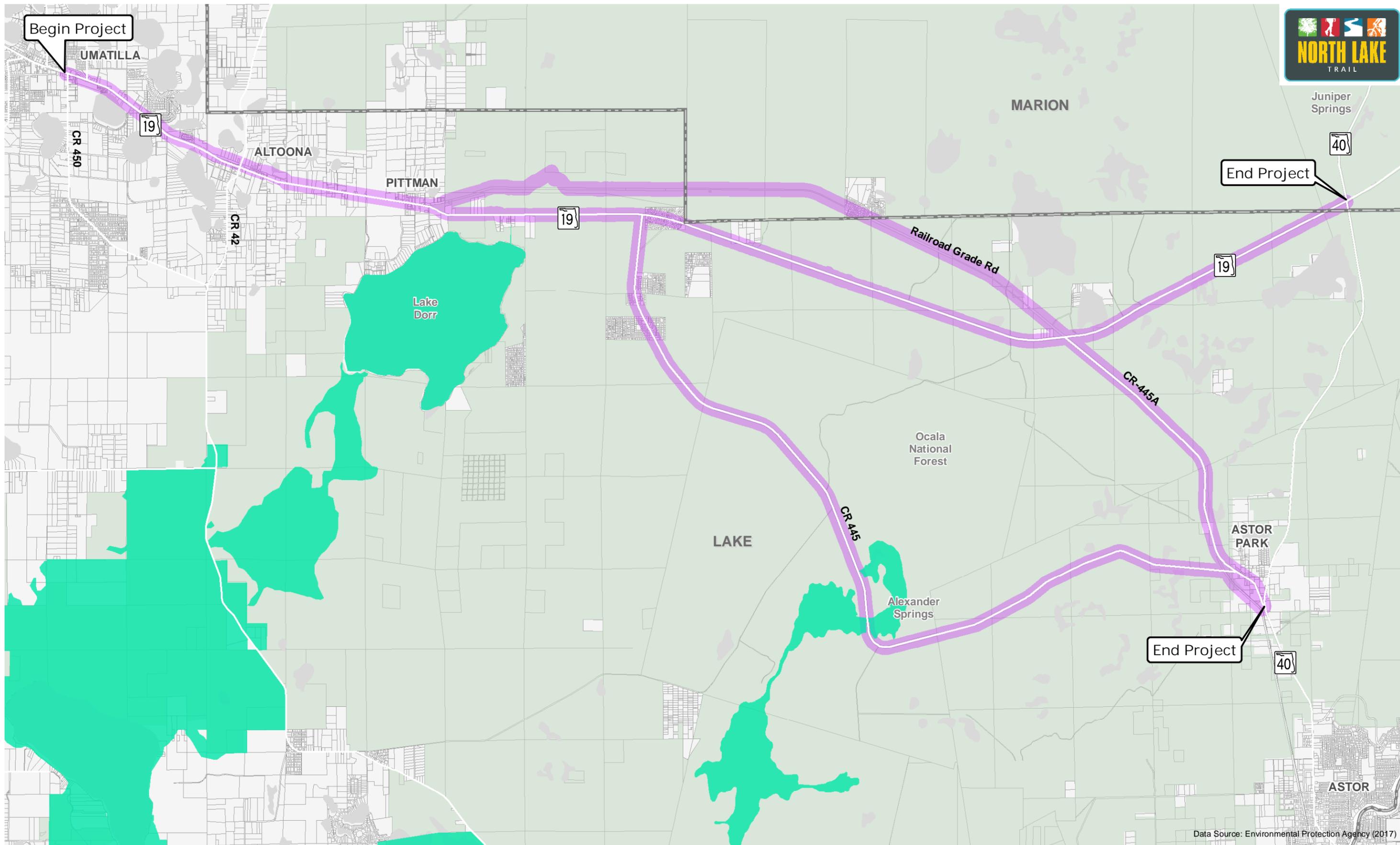


Data Source: Environmental Protection Agency (2017); Fish & Wildlife Service

Critical Habitats and Bald Eagle Nests
 North Lake Trail Corridor Planning Study
 Figure 25



- Critical Habitat
- Conservation Area
- Study Corridor(s)
- ✎ Bald Eagles Nest



Data Source: Environmental Protection Agency (2017)

Outstanding Florida Waters
North Lake Trail Corridor Planning Study
Figure 26



- Outstanding Florida Water Body
- Conservation Area
- Study Corridor(s)

5.1.5. WILD COASTAL ZONE CONSISTENCY / COASTAL BARRIER RESOURCES

Neither Lake nor Marion County are subject to the National Coastal Zone Management Program. Adminstrated by the National Oceanic and Atmospheric Administration (NOAA), this program is a voluntary partnership between the federal government and coastal states and territories that works to address some of today’s more pressing coastal issues.

5.2. CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA) requires that historic and archaeological resources be considered in project planning for federally funded or permitted projects. Cultural resources or historic properties include any, “prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP).”

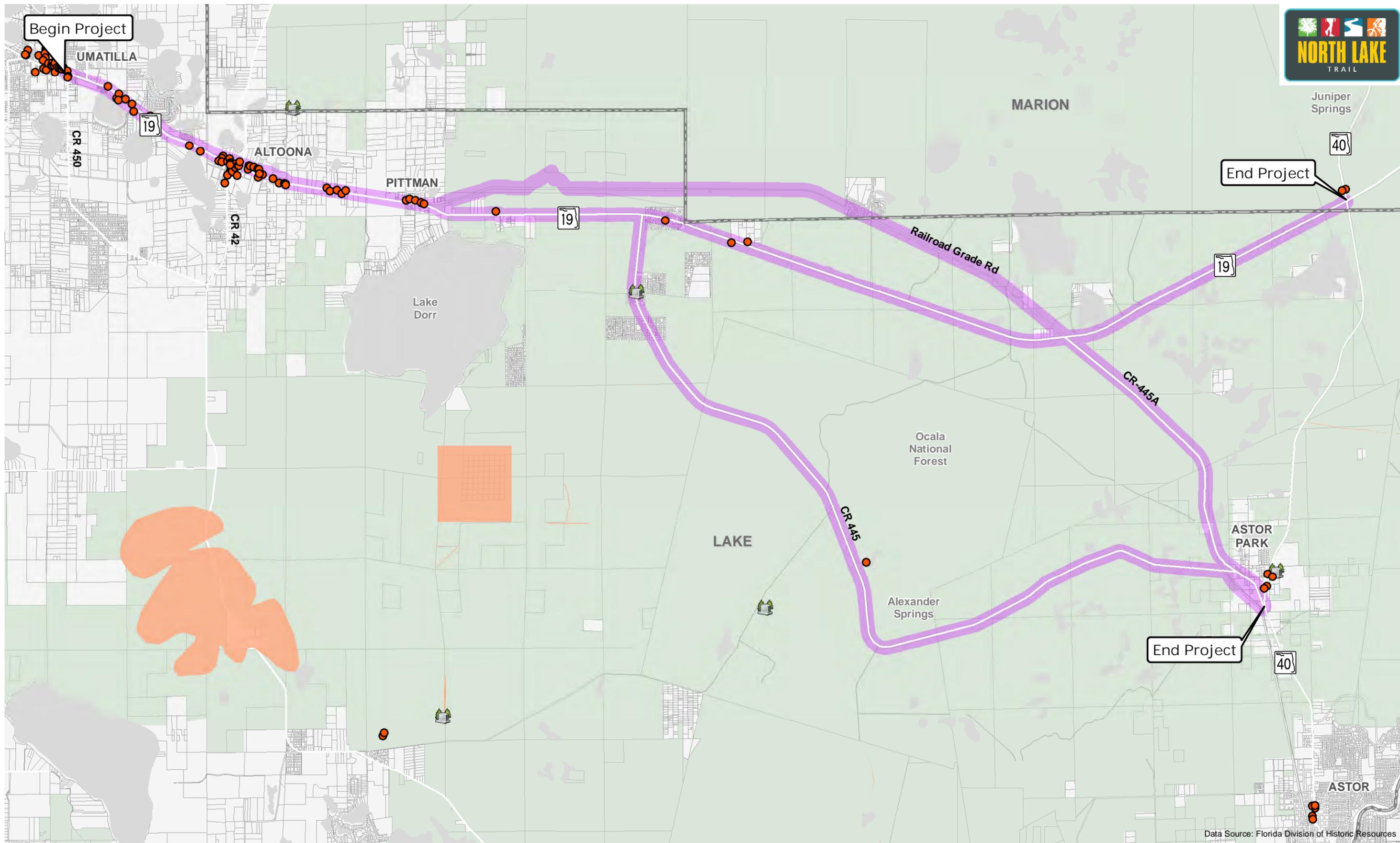
Any historic resources or archaeological sites that have been identified within the study area by the Florida Division of Historic Resources, obtained through the use of FDOT’s EST, are shown in Figure 27 and summarized in Table 10.

The highest concentrations of historic structures are seen in Umatilla, Altoona, Pittman, and Astor Park. Of the 115 historic structures shown in Figure 27, nine are considered eligible or potentially eligible for listing in the NRHP. Historic sites include historic districts and historic landscapes, four of which have been classified as eligible for listing in the NRHP as identified by the Florida Division of Historic Resources.

Table 10 | Summary of Study Area Cultural Resources

Cultural Resources	Within Study Area	Eligible or Potentially Eligible for Listing in the NRHP
State Historic Preservation Office Structures	115	9
State Historic Preservation Office Bridges	0	0
State Historic Preservation Office Cemeteries	6	0
State Historic Preservation Office Sites	10	4

Source: Florida Division of Historical Resources



Data Source: Florida Division of Historic Resources

Historic & Archaeological Sites
 North Lake Trail Corridor Planning Study
 Figure 27



Historic Cemetery
 Historic or Archaeological Resource Site



Historic Structures
 Conservation Area



Study Corridor(s)

5.3. SOCIAL RESOURCES

Figure 28 depicts the locations of the community services and social resources within the study area, as described throughout the remainder of this section. Figure 29 identifies areas of public and privately owned lands.

5.3.1. PARKS AND RECREATIONAL FACILITIES

Parks and recreational facilities in the study area consist of:

- Umatilla Veterans Park; 40924 State Road 19, Umatilla, FL 32784
- McTureous Memorial Park; 42106 State Road 19, Altoona, FL 32702
- Lake Beakman Boat Ramp; State Road 19, Altoona, FL 32702
- Alexander Springs Creek; County Road 445, Bridge Canoe Launch
- Ocala National Forest
- Lake George State Forest

The Ocala National Forest comprises a large majority of the study area and is described in more detail in the following sub-section.

5.3.1.1. OCALA NATIONAL FOREST

The Ocala National Forest is home to more than 600 lakes, rivers, and springs across 387,000 acres of conservation land. Activities in the forest include recreational, scenic, and historic areas. Recreational activities include canoeing, swimming, camping, horseback riding, hiking, bicycling, four-wheeling, and hunting. Trails for many of these activities were previously described in the Section Existing / Planned Trails. An active naval bombing range is located within the forest, several miles west of S.R. 19.

Licensed hunting within the Ocala National Forest is permitted throughout the property *except* within Wildlife Management Areas. Lands surrounding Alexander Springs, Alexander Springs Creek, and Juniper Springs are closed to hunting.

5.3.2. SCHOOLS

One school is located within the study area: Altoona School; 42630 State Road 19 Altoona, FL 32702.



Altoona School

5.3.3. CHURCHES AND RELIGIOUS INSTITUTIONS

Churches and religious institutions within the study area include:

- Umatilla Seventh Day Adventist; 1400 North Central Avenue, Umatilla, FL 32784
- Voice of Calvary Ministries; 43830 State Road 19, Altoona, FL 32702
- Umatilla Church of God; 463 Umatilla Boulevard, Umatilla, FL 32784
- First Baptist Church Altoona; 42226 State Road 19, Altoona, FL 32702
- Vineyard Outreach Center; 925 North Central Avenue, Umatilla, FL 32784
- Anointed House of Prayer; 2 East Collins Street, Umatilla, FL 32784
- Altoona United Methodist Church; 42631 State Road 19, Altoona, FL 32702

5.3.4. FIRE AND POLICE

The following fire station and law enforcement facilities are located within the study area:

- Lake County Fire Department Station 11; 47544 State Road 19, Altoona, FL 32702
- Lake County Rescue Station 12; 18405 Keene Road, Altoona, FL 32702
- Lake County Fire Department Station 14; 42700 State Road 19, Altoona, FL 32702

5.3.5. MEDICAL AND EMERGENCY OPERATION FACILITIES

No medical or emergency operation facilities are present within the study area.

5.3.6. OTHER PUBLIC BUILDINGS AND FACILITIES

One U.S. Post Office location is within the study area:

- U.S. Post Office; 42038 State Road 19, Altoona, FL 32702

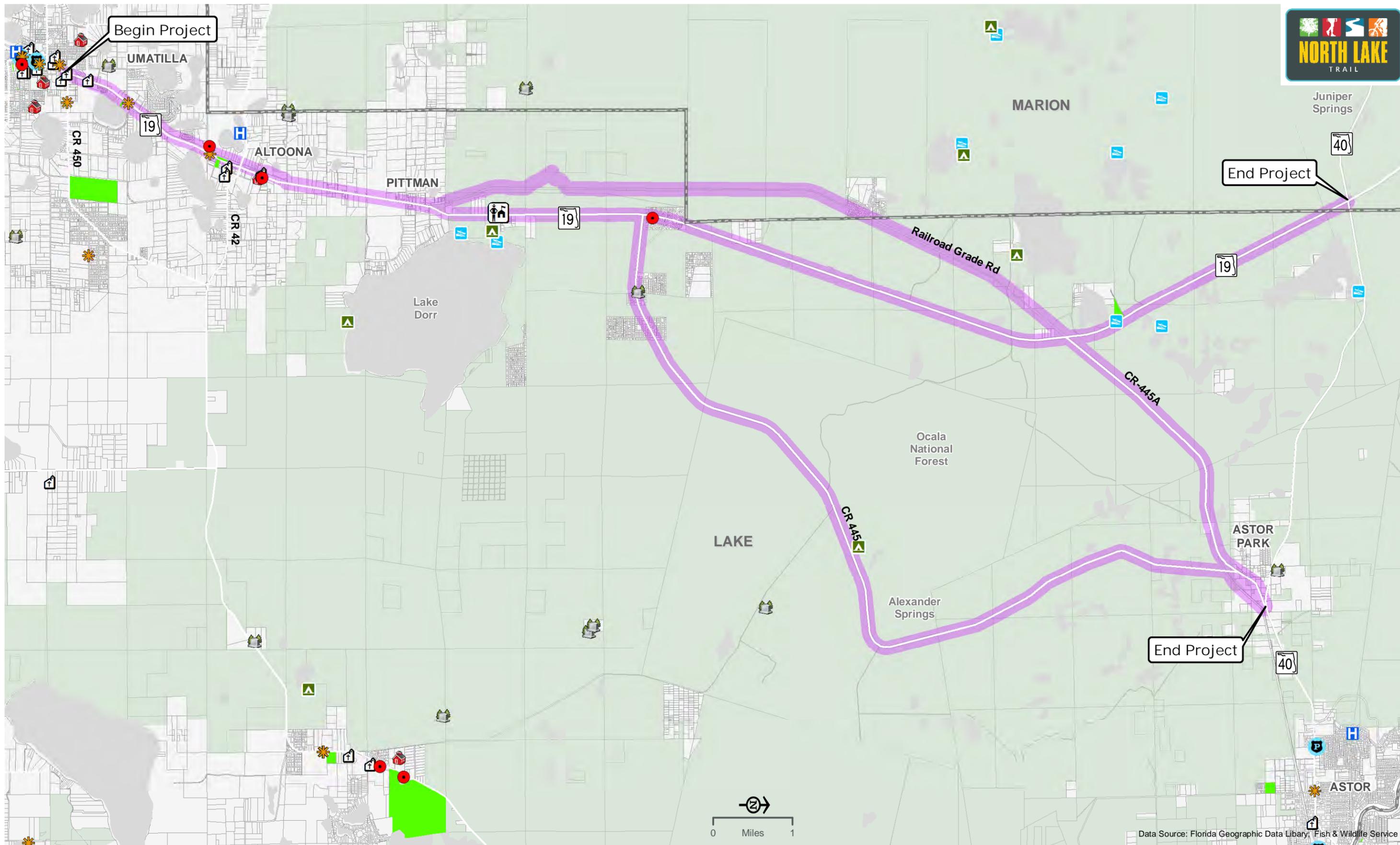
5.3.7. OTHER SIGNIFICANT LOCATIONS

Additional noteworthy social resources within the study area include:

- Pearl Lane Apartments; 725 N. Umatilla Boulevard, Umatilla, FL 32784
- American Legion Post 21; 40924 State Road 19, Umatilla, FL 32784
- Umatilla Public Library; 412 Hatfield Drive, Umatilla, FL 32784
- Chisholm Trail Campground; 45626 State Road 19, Altoona, FL 32702
- Ocala National Forest Seminole Ranger District Office; 40929 State Road 19, Umatilla, FL 32784

5.3.8. EVACUATION ROUTES AND EMERGENCY SERVICES FACILITIES

S.R. 19 is classified as a primary evacuation route in Lake County, according to the Florida Division of Emergency Management. An excerpt of the local evacuation route map is provided in Appendix I.



Begin Project

End Project

End Project

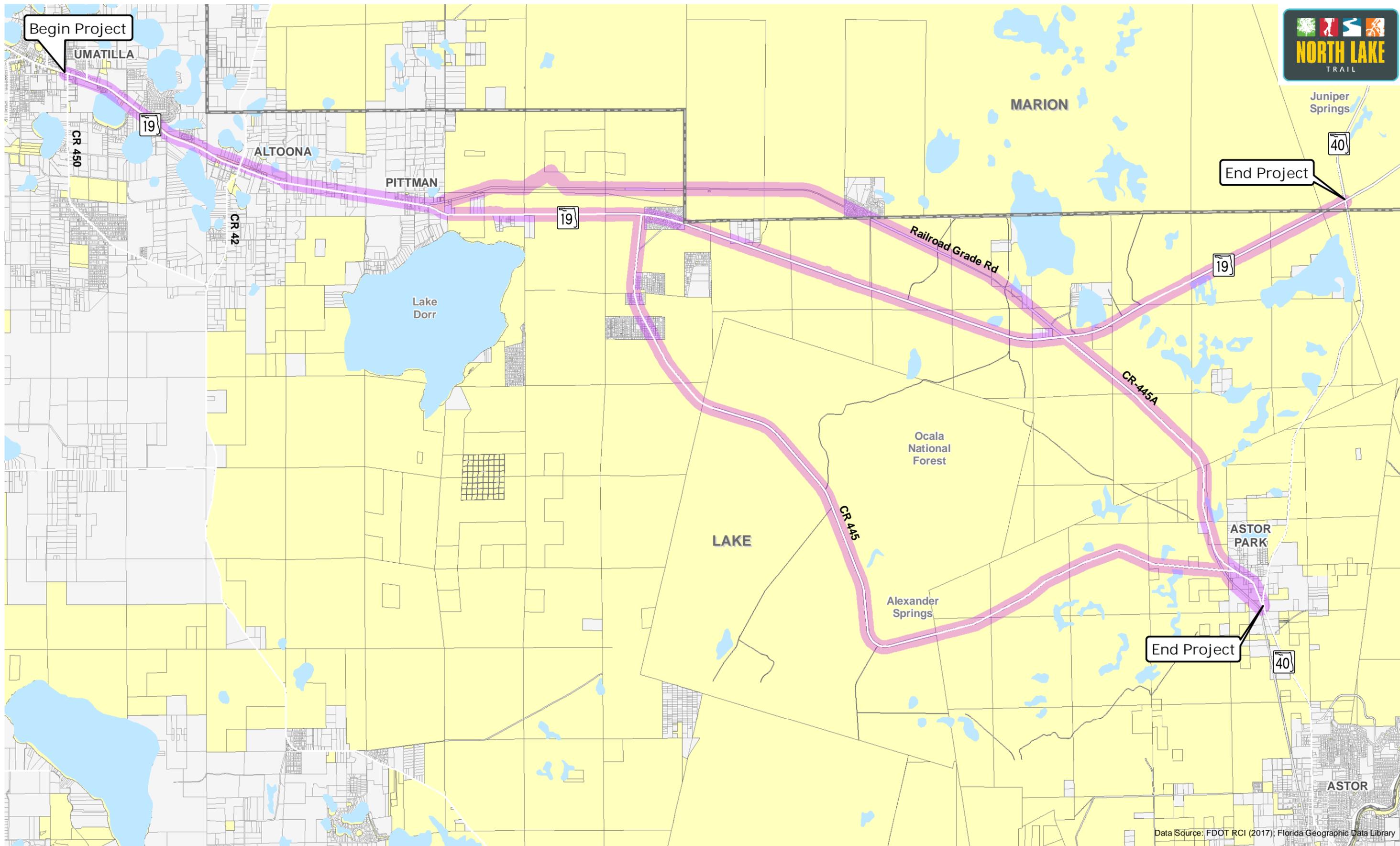


Data Source: Florida Geographic Data Library, Fish & Wildlife Service



- Visitor Center
- Cemetery
- Health Facility
- Law Enforcement Facility
- Government Building
- Shooting Range
- Conservation Area
- Campground
- Fire Station
- School
- Religious Facility
- Boat Ramp/Launch
- Park/Recreation Area
- Study Corridor(s)

Social Resources
 North Lake Trail Corridor Planning Study
 Figure 28



Data Source: FDOT RCI (2017); Florida Geographic Data Library

Publicly Owned Land
North Lake Trail Corridor Planning Study
Figure 29



Publicly Owned Parcel
Privately Owned Parcel

Study Corridor(s)

5.4. PHYSICAL RESOURCES

5.4.1. AIR QUALITY

Lake and Marion Counties are currently designated as being in attainment for the following Clear Air Act National Ambient Air Quality Standards (NAAQS): ozone, nitrogen oxide, particulate matter (2.5 microns in size and ten microns in size), sulfur dioxide, carbon monoxide, and lead.

5.4.2. CONTAMINATION

Known contaminated locations within the study area were identified using EPA data. Table 11 summarizes the types of contamination sites, while Figure 30 identifies the known contaminated site locations.

Table 11 | Study Area Known Contamination Sites

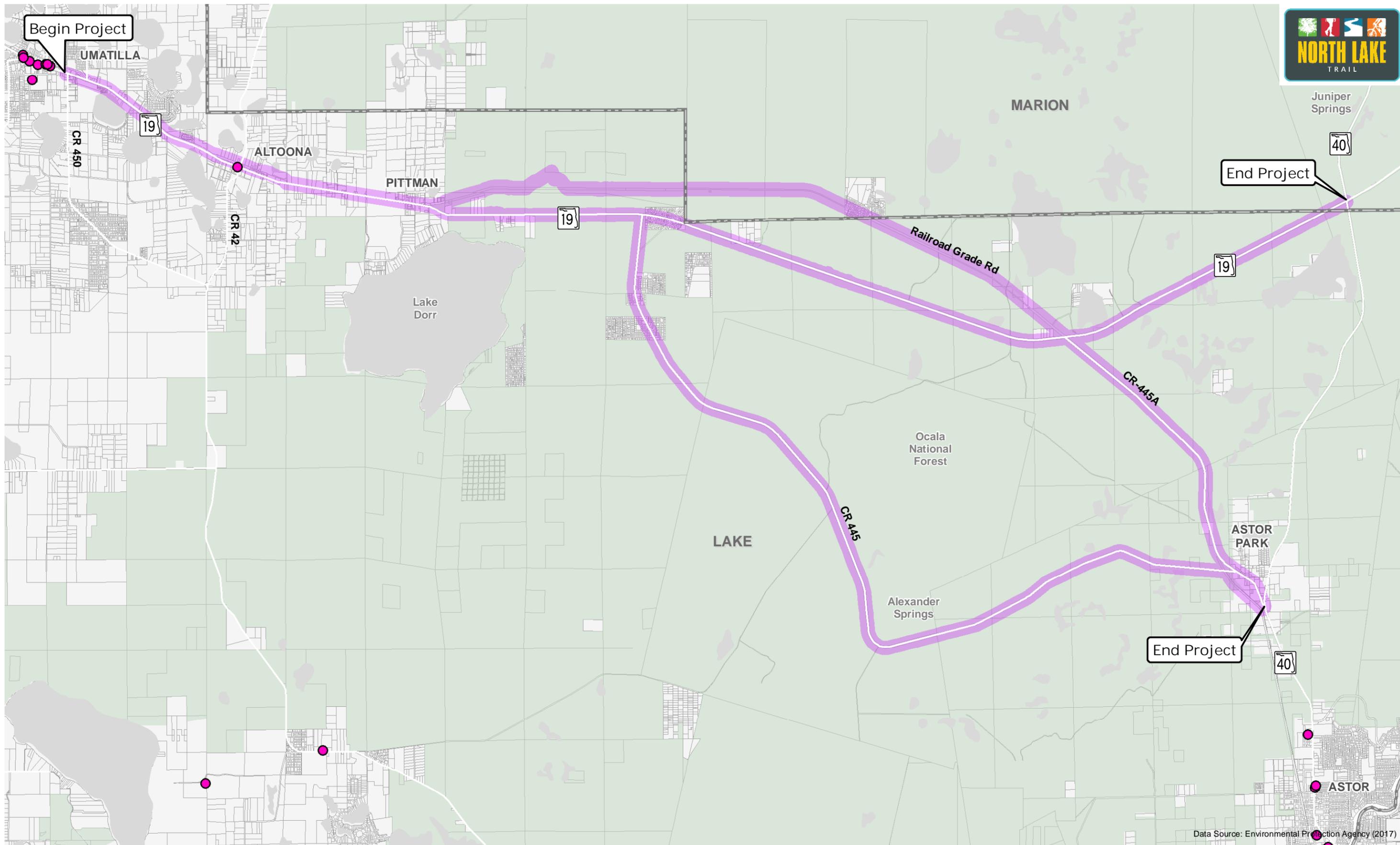
Facility Type	Known Sites within Study Area
County Government	1
Retail Station	8
Fuel User (Non-Retail)	3
Contamination Site	1
Total	13

Source: Environmental Protection Agency and Florida Department of Environmental Protection

Ten of these locations are pending or active petroleum cleanup locations through FDEP. There are no brownfield, superfund, or other waste cleanups either active or in progress.

5.4.3. SOIL TYPES

The S.R. 19 corridor consists of the soil types shown in Figure 31. These are predominantly sandy soils with high permeability, though locations with muck soils are present west of Altoona, at the intersection with C.R. 445, a few locations north of Alexander Springs along C.R. 445A and C.R. 445, and along S.R. 40 east of S.R. 19.

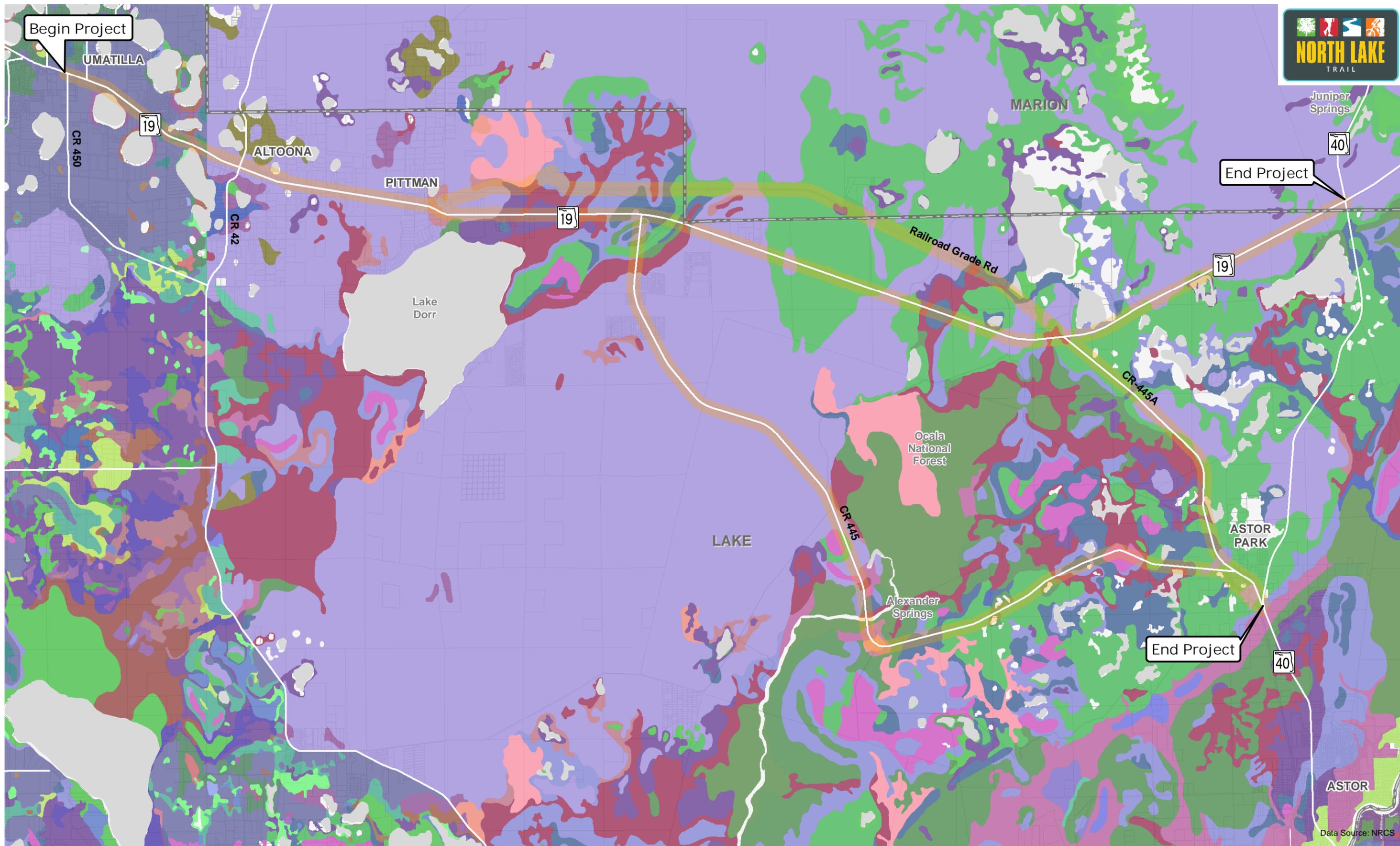


Data Source: Environmental Protection Agency (2017)

Contamination Sites
 North Lake Trail Corridor Planning Study
 Figure 30



- Contaminated Site
- Study Corridor(s)
- Conservation Area



	Astatula		Hontoon		Myakka		Pineda		Quartzipsamments		Smyrna		Water		Study Corridor(s)
	Astor		Immokalee		Orsino		Pomello		Samsula		St. Johns		Wauchula		
	Deland		Made Land		Paola		Pomona		Sellers		Tavares				

Natural Resource Conservation Service (NRCS) Soils
 North Lake Trail Corridor Planning Study
 Figure 31

