

The Green Mountain Scenic Byway

C O R R I D O R M A S T E R P L A N

Prepared by:

 **GLATTIG JACKSON KERCHER ANGLIN**

Prepared for:

The East Central Florida Regional Planning Council · and · The Florida Department of Transportation

January 2008

Acknowledgements

The Green Mountain Scenic Byway is nestled in the highest hills of the Lake Wales Ridge. Traveling through the historic towns and hamlets, the Scenic Byway benefits from the stewardship of a dedicated group of engaged citizens and public officials. These people have dedicated years of their lives to the designation and preservation of the Green Mountain Scenic Byway.

Corridor Management Committee

CMC Members	Represents
Kathleen Patterson	Montverde
Greg Gensheimer	Montverde
Ramona Phipps	Town of Oakland
Fred Cranmer	Friends of Ferndale
Frank Merritt	Town of Oakland

Participants/ Meeting Attendees	Represents
Glenn Burns	Montverde
Grant Wenrick	Lake County
Garry Balogh	FDOT
Anita Snapp	Friends of Ferndale
Beryl Snapp	Friends of Ferndale
Charlie Lalone	Friends of Ferndale
Sherry Batts	Friends of Ferndale
Jacqueline Lee	Friends of Ferndale
Michael Kelley	
Vaughn Roberts	Clermont



CMC Meeting, July 2007

Table of Contents

- Figures iv
- Tables..... v
- Introduction..... 1
 - Purpose..... 1
 - Principles..... 1
 - Community Engagement 3
 - Corridor Management Committee Monthly Meetings..... 3
 - Stakeholder Interviews..... 3
 - Design Workshop..... 3
 - Public Meeting 3
- Background Analysis 5
 - Existing Conditions..... 5
 - Land Use 5
 - Natural, Historic, Cultural and Recreational Features 8
 - Roadway Analysis 11
 - Traffic 11
 - Safety 14
- Master Plan 15
 - Master Plan Elements 15
 - Principles..... 15
- Recreation and Open Space Plan 16
 - The Importance of a Recreation and Open Space Plan..... 16
 - The Development of the Recreation and Open Space Plan 16
 - Elements of the Recreation and Open Space Plan 16
 - Parks..... 22
- Rural Space Preservation 25
 - Landscape Buffers along Major Roadways 25
 - Tree Preservation 25
 - Large-Lot Zoning..... 25
 - Cluster Development 26
- Places 28
 - Oakland..... 28
 - Town of Montverde 28
 - Ferndale Community 28

Transportation	30
Speed Limits	30
Cross-Sections.....	30
Intersections	30
Guidelines for Future Roadway Modifications.....	30
Landscaping	32
Plant Material.....	32
Resources	33
Transit-Stops	33
Wayfinding	34
What is Wayfinding?	34
Logo	34
The Wayfinding Master Plan	34
Implementation	39
Short Term	39
Mid Term	40
Long Term	41

Figures

Figure 1: Green Mountain Scenic Byway Study Area.....	2
Figure 2: CMC Input.....	4
Figure 3: Existing Land Use	5
Figure 4: Future Land Use	5
Figure 5: Approved Developments	6
Figure 6: Ferndale Area	7
Figure 7: Recreation Resources	9
Figure 8: Historic Resources.....	10
Figure 9: Posted Speed.....	12
Figure 10: Proposed Roadway Network	13
Figure 11: Existing Preservation and Proposed Acquisitions	17
Figure 12: Trails.....	18
Figure 13: Cultural Points of Interest.....	19
Figure 14: Scenic Points of Interest	20
Figure 15: Recreation and Open Space Plan.....	21
Figure 16: Draft Conceptual Plan for the Town of Montverde.....	29
Figure 17: Proposed Transportation Enhancements	31
Figure 18: Signage Plan	38

Tables

Table 1: Programmed Development5

Table 2: Historic Traffic Count..... 11

Table 3: Projected Traffic Volume 11

Table 4: Crash Rates Per Year 14

Table 5: Crash Type..... 14

Table 6: Crashes by Intersection..... 14

Table 7: Crash Types at CR 561 14

Table 8: Proximity to Intersection at CR 561 14

Table 9: Community Issues or Qualities Identified by Design Workshop Attendees 15

Table 10: Trees and Palms32

Table 11: Grasses.....32

Table 12: Shrubs and Groundcover33

Table 13: Vines and Wildflowers33

Table 14: Aquatics33

Table 15: Short Term39

Table 16: Mid Term40

Table 17: Long Term41



I N T R O D U C T I O N

Introduction

Beginning at the Howey Crossroads (the intersection of Lake County Roads 455 and 561), the Green Mountain Scenic Byway winds southeast along 15.7 miles of CR 455, CR Old Highway 50, CR 438, and Oakland Avenue, terminating at Avalon Road. The road travels through some of the highest hills of the Lake Wales Ridge, generally following the western and southern shores of Lake Apopka.

The Scenic Byway is home to historic towns and hamlets. The Byway travels through the rural community of Ferndale, the historic center of the Town of Montverde, the Mediterranean Revival buildings of the Montverde Academy, the Town of Oakland with its restored town center, and the historic oak canopies on the western edge of Winter Garden.

The Scenic Byway draws visitors from across Florida and beyond to explore its vast recreational and natural resources. The rolling hills and winding roadway draws cyclists, motorcyclists, antique car clubs, and Sunday drivers. The Byway is one of the most popular cycling routes in Florida, and is the site of several internationally recognized triathlons each year. The Clay Island/North Shore Restoration Area, the Ferndale Preserve, and the Oakland Nature Preserve offer varied and unique opportunities to experience the natural environment through hiking, biking, bird watching and horseback riding.

Unique combinations of natural resources are found along the Green Mountain Scenic Byway. The Byway contains rare remnants of Lake Wales Ridge Scrub, 14 miles of Lake Apopka shoreline, as well as Sugarloaf Mountain, the highest point in peninsular Florida at 312 feet. Twenty-three species of plants and animals classified as Endangered, Threatened, or Species of Special Concern have been found within the corridor.

The Green Mountain Scenic Byway is a representation of a Central Florida that is itself becoming rare and endangered – rolling hills, stately and historic buildings, and unspoiled sweeping vistas.

Purpose

Through the Florida Scenic Highway designation process, the Corridor Management Committee (CMC) developed a Corridor Management Plan (CMP) which identified projects and programs that will help preserve, protect, enhance, and maintain the resources located along the Green Mountain Scenic Byway. The Master Plan is the first step in implementing many of the projects identified in the Corridor Management Plan. The Green Mountain Scenic Byway Corridor Master Plan plays a role in preserving the historic character of the area by informing the traveler of the resources found along the corridor and by visually connecting the resources along the corridor. The Master Plan also addresses transportation analysis and design, multi-use trail design, signage and wayfinding, and land development.

The following Master Plan elements were identified through the Corridor Management Plan as well as the community engagement efforts completed as part of this study:

- Recreation and Open Space Plan
- Rural Spaces Preservation
- Places
 - Oakland
 - Montverde
 - Ferndale
- Transportation
- Corridor Enhancements
- Landscape Standards
- Wayfinding



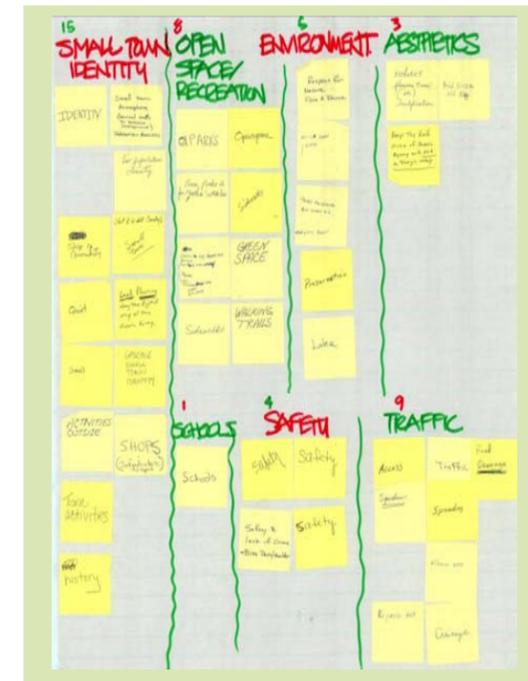
CR 455. Photograph provided by Greg Gensheimer

Principles

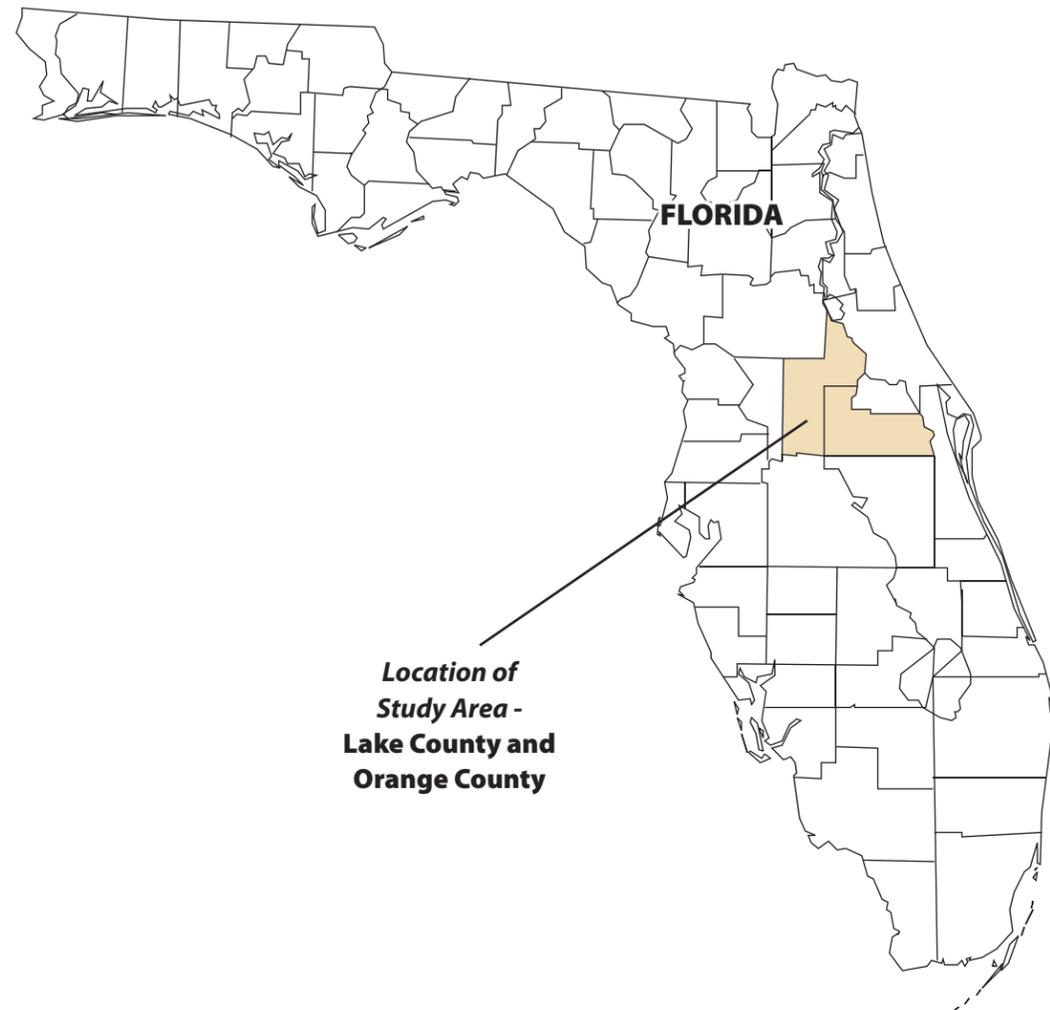
During the Design Workshop, residents were asked to write down three words that summarized the most important issues or qualities of their communities. Based on this feedback, as well as conversations with the Corridor Management Committee (CMC), the design team developed Design Principles that informed the design process and were used as a measure of effectiveness for the proposed investments and designs.

Design Principles

- **Preserve small town identity**
- **Provide opportunities to learn about and experience natural resources**
- **Design architecture, signage and other enhancements authentic to the Green Mountain Scenic Byway area**
- **Facilitate appropriate local businesses**
- **Create safe facilities for all users**



Values identified in Opening Presentation of the Design Workshop



Community Engagement

The Corridor Master Plan design process relied on leadership and direction from the Corridor Management Committee (CMC), residents, and local stakeholders.

Corridor Management Committee Monthly Meetings

Representatives from Glatting Jackson met with the CMC at the regularly scheduled CMC meetings.

Date	Corridor Master Plan Discussion Topic
May 10, 2007	Introduced design team, proposed project schedule, and proposed public involvement plan.
June 14, 2007	CMC summarized issues and opportunities on base map.
July 12, 2007	CMC continued to summarize issues and opportunities on base map.
August 9, 2007	Presented preliminary design concepts and recommendations developed at the Design Workshop for CMC comment/feedback.
September 13, 2007	Continued to present preliminary design concepts and recommendations developed at the Design Workshop for CMC comment/feedback.
October 11, 2007	No new Master Plan information discussed
November 8, 2007	Presented Draft Master Plan. Discuss Programming.
December 13, 2007	Obtained comments on Draft Master Plan.

Stakeholder Interviews

Glatting Jackson conducted one-on-one meetings, to obtain ideas and concerns, with individuals and groups identified by the CMC to be invested in the project.

Stakeholder	Date
Rural Community of Ferndale	July 12, 2007
Montverde Academy	July 12, 2007 and September 13, 2007
Team Olympus (Ken Taylor)	July 12, 2007
Montverde Visioning Committee	July 12, 2007
Sugarloaf Mountain	September 6, 2007
Oakland Park	September 18, 2007
Plaza Collina	August 30, 2007
Friends of Lake Apopka	September 13, 2007
Lake County Trails Master Plan Team	August 24, 2007
Lake-Sumter Metropolitan Planning Organization	August 1, 2007
Tom Daugherty	July 30, 2007
St. Johns River Water Management District	October 17, 2007
Ginn Group	December 12, 2007

Minutes for these meetings are included in the Appendix.

Design Workshop

Glatting Jackson conducted a multi-day design workshop and public meeting. The workshop involved a multidisciplinary team of land-use planners, transportation planners, landscape architects, wayfinding experts, ecologists and engineers who worked together with the public to develop draft concepts that addressed issues and opportunities identified by the public.

Opening Presentation

On July 30th, 2007, residents were invited to inform the design team of the issues they would like addressed during the design workshop.

Walking Audits

Two walking audits were held during the Design Workshop. Walking audits are one of the most powerful tools for people to discuss common issues of interest or concern for the design or operation of streets, parks, open space, trails and other features of their neighborhood. Billy Hattaway and Patty Hurd, from Glatting Jackson, accompanied attendants on a walk through downtown Montverde to learn about residents' concerns at specific sites. Residents focused on pedestrian circulation in the commercial area, parking and redevelopment in the commercial area, drainage issues along CR 455,

vehicular circulation at the intersection of CR 455 and Lakeside Drive, extension of the existing bicycle trail, signage and visual clutter.

Biking Audit

Members of the Glatting Jackson team biked the entire length of the Green Mountain Scenic Byway to gain a better understanding of the corridor. Issues and opportunities identified include:

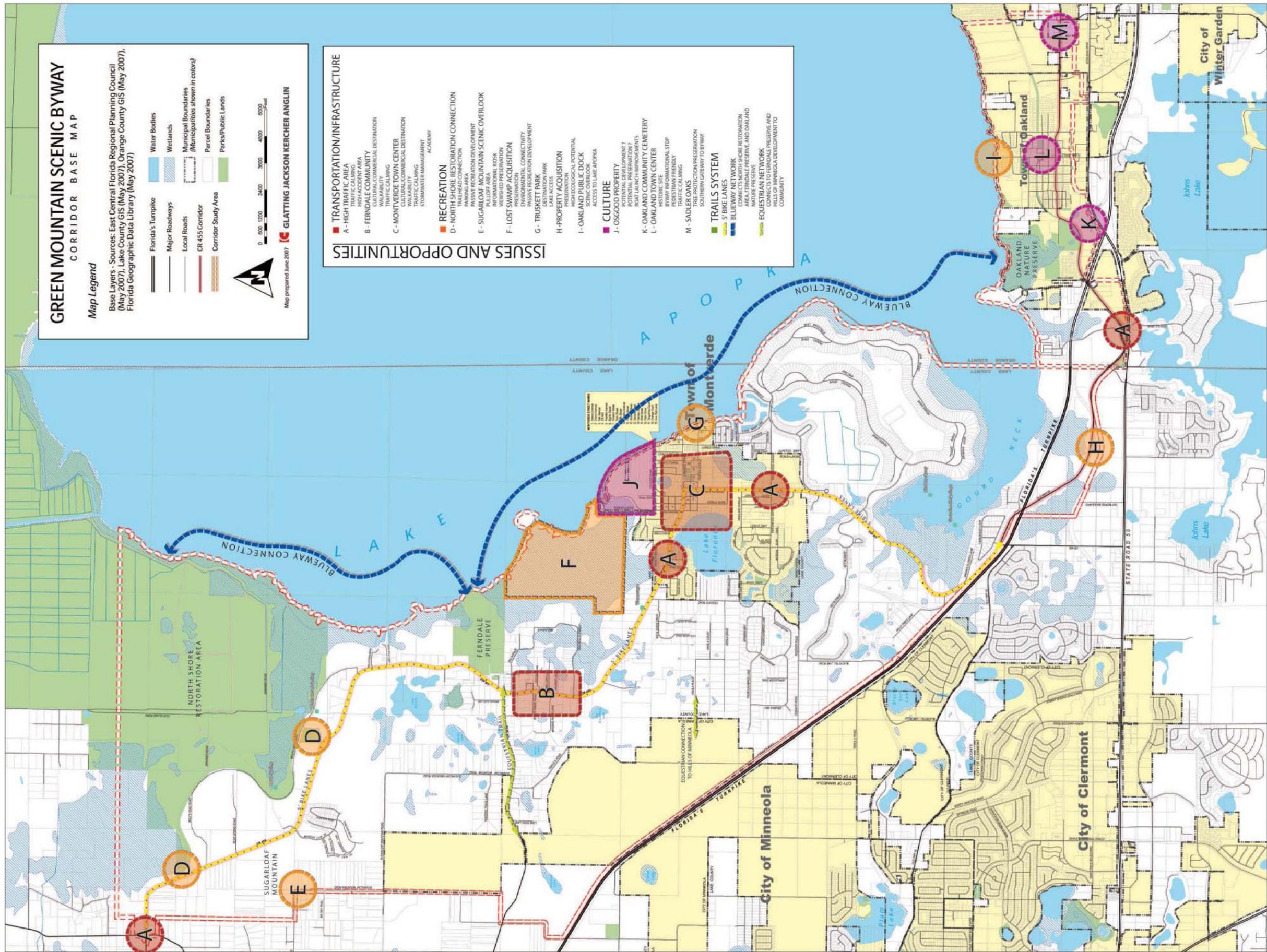
- Limited paved shoulders; striping for outside lane has either worn or eroded away along with the asphalt.
- Tree canopy coverage north of the Turnpike overpass near the Woodlands reduces the ambient temperature and is picturesque.
- Local residents embrace cyclists by leaving produce and drinks for sale using the honor system.
- There are views of Lake Apopka that are available to a cyclist that would otherwise be missed from a car due to travel speeds.
- Terrain is challenging for all cyclists, which is the main attractant.
- The road itself is a bit treacherous given the vehicular speeds, diversity of vehicular traffic such as large trucks and trailers, upkeep, and minimal to no existing paved shoulder.
- Opportunities exist for a local bike shop/repair and/or vendors along the corridor.

Closing Presentation

On August 2, 2007, the design team presented their preliminary concepts based on information received during the Design Workshop, detailed background analysis, and observations made in the field. The PowerPoint presentation is presented in the Appendix.

Public Meeting

A public meeting was held on October 18, 2007 to review the draft concept plans as presented on the final day of the Design Workshop, comments obtained from the public and through stakeholder interviews on the draft concepts, and proposed revisions based on the comments received.



Overall Corridor/Policy

- 5 Lanes
- Scenic Byway Zoning Overlay District
 - Unifying architectural elements
 - Grading ordinance
 - Landscape buffering on hillsides
 - Outdoor lighting controls
 - Cell tower controls
 - Bike/ped network that compliments byway
- Redevelop Montverde Town Center



B A C K G R O U N D A N A L Y S I S

Background Analysis

Existing Conditions

In the Corridor Management Plan, the CMC documented in detail the many intrinsic resources found within the Green Mountain Scenic Byway corridor. Much of this information has been mapped to assist in the preparation of the Corridor Master Plan. For detailed information on each of these resources, please see the Corridor Management Plan.

Land Use

The area along and around the Green Mountain Scenic Byway is experiencing significant development pressures. The new residential communities of Bella Collina, Colina Bay, Sugarloaf Mountain Development, and Oakland Park are currently under construction. Planned developments include Montverde Estates, Plaza Collina, Black East and the Hills of Minneola.

At this time, Lake County is revising its future land use plan. The plan will include a Special Area Plan for the Ferndale Community (see Figure 6), which will protect the rural hamlet through Comprehensive Plan policies and Land Development Regulations. Elements of this plan include:

- A Ferndale Center District providing for commercial, office and civic uses to serve the needs of the Ferndale Community.
- An integrated street, bicycle trail, and pedestrian paths system.
- Rural Low Density Future Land Use category of one dwelling unit per five net buildable acres.
- Architectural and landscape standards.
- Gateway features.
- Land development regulations that limit topographic cuts.
- The development of lighting standards.

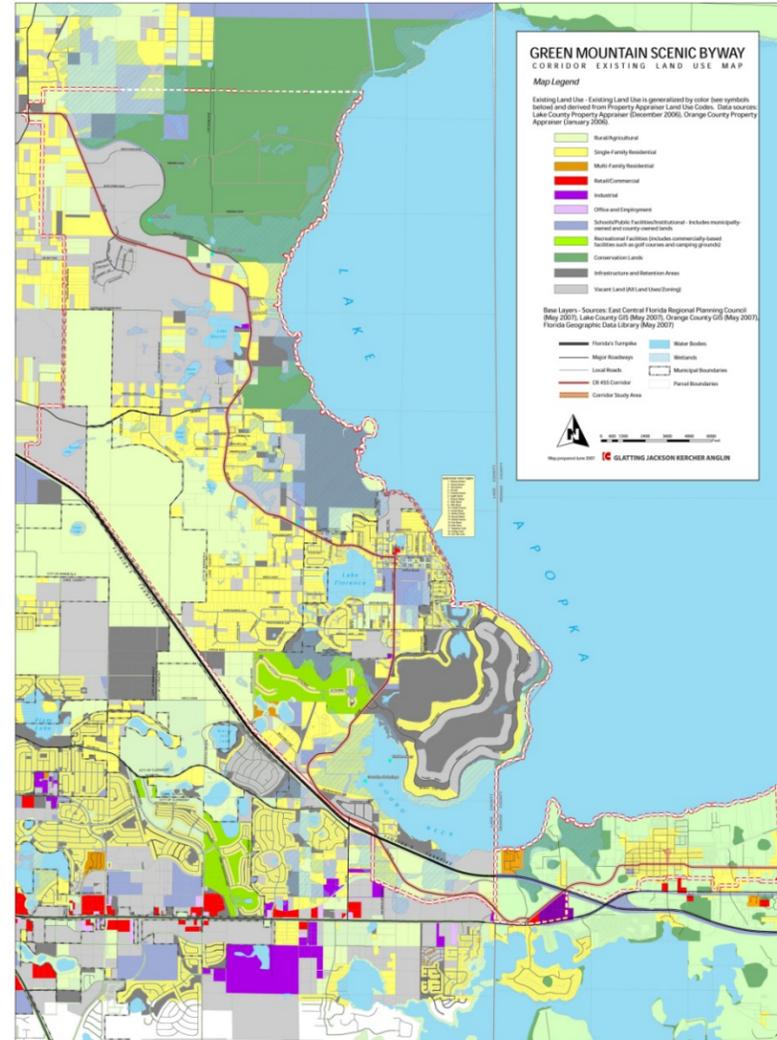


Figure 3: Existing Land Use

Source: Lake County

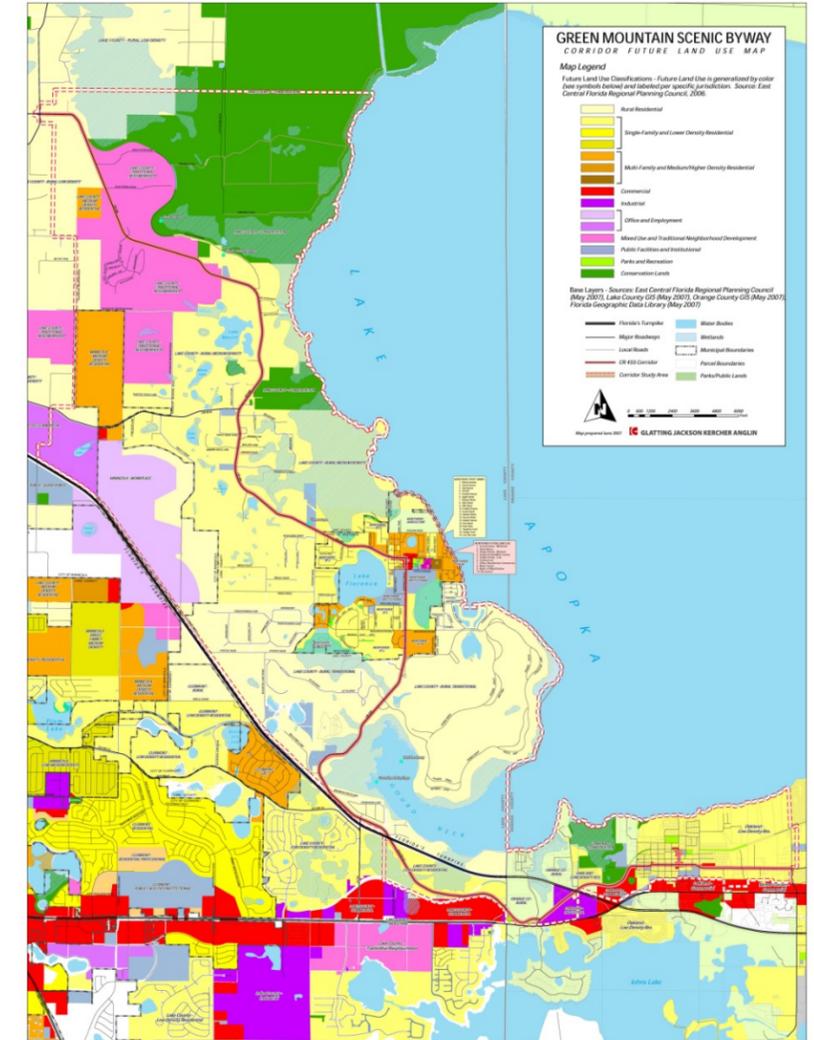


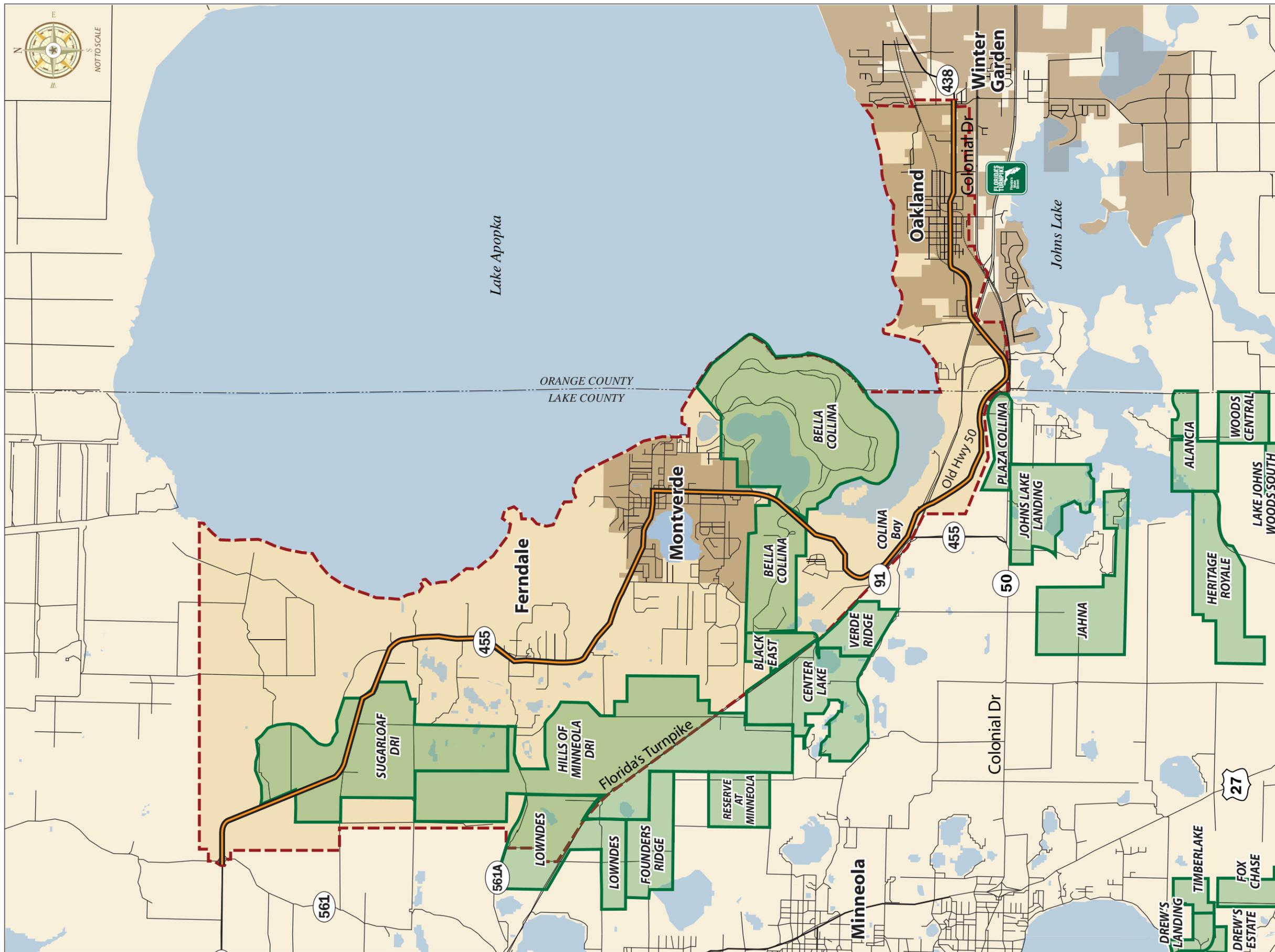
Figure 4: Future Land Use

Source: East Central Florida Regional Planning Council

Table 1: Programmed Development

Development	Single-Family Dwelling Units	Multi-Family Dwelling Units	Hotel (rooms)	Industrial	Retail	Office	Other
				Square Feet			
Bella Collina	698	200	0	32,870	48,800	156,000	
Sugarloaf	2295	175	0	0	120,000		
Colina Bay	73						
Black East	215						
Oakland Park	675	75	7		25,000		
Plaza Collina		200	0	0	1,200,000	0	
Hills of Minneola	2,656	1,056	300	1,400,000	610,000	850,000	golf

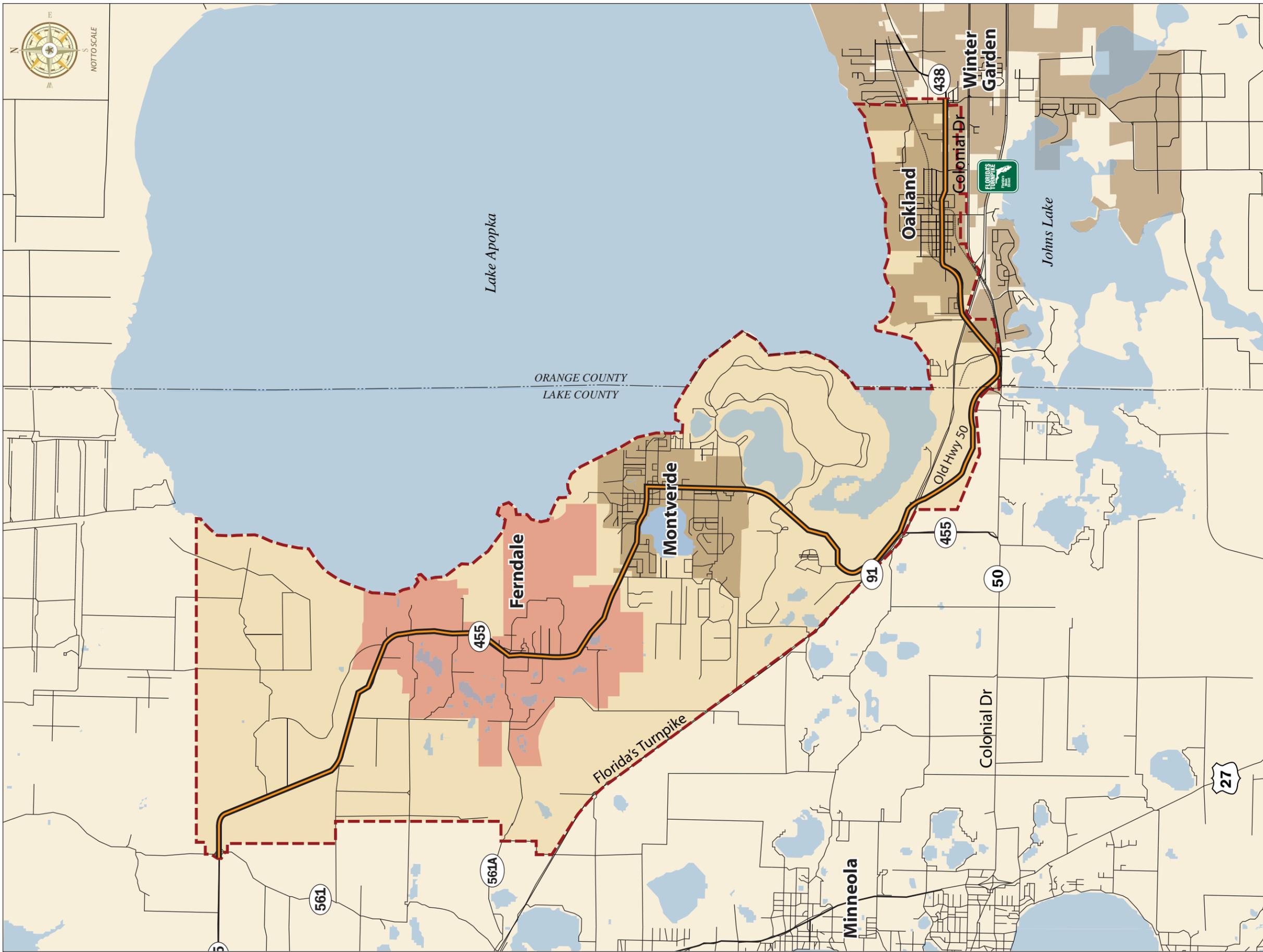
Source: Glatting Jackson and Lake County, May 2007



Source: Lake County, October 2007

Legend

- Study Area
- Scenic Corridor
- Town Limits
- Approved Developments



Natural, Historic, Cultural and Recreational Features

The vast natural, historic, cultural, and recreation resources found along the Green Mountain Scenic Byway are described in detail in the Corridor Management Plan. They include conservation lands, parks and recreational lands, multi-use trails, Lake Apopka, and the Lake Wales Ridge. The Ridge and Lake Apopka provide a unique natural environment which is home to endangered plants and animals, including the Scrub Pigeonwing which is solely endemic to two counties in Florida. The Town of Oakland, Town of Montverde, and the Ferndale Community enjoy a long and rich history that is preserved in historic structures and rich community traditions.

These resources attract bicyclists and scenic travelers. It is the role of the Corridor Master Plan to add value to these resources by:

- Identifying additional conservation lands;
- Promoting recreational activities supporting ecotourism;
- Visually linking resources; and
- Providing safe access to resources by multiple modes.

The design team mapped and conducted field surveys of many of these resources as part of the development of the Recreation and Open Space Element of the Master Plan.



Town of Oakland Town Hall. Photograph provided by Greg Gensheimer



Post Office in Ferndale. Photograph provided by Greg Gensheimer



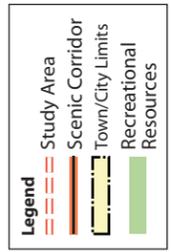
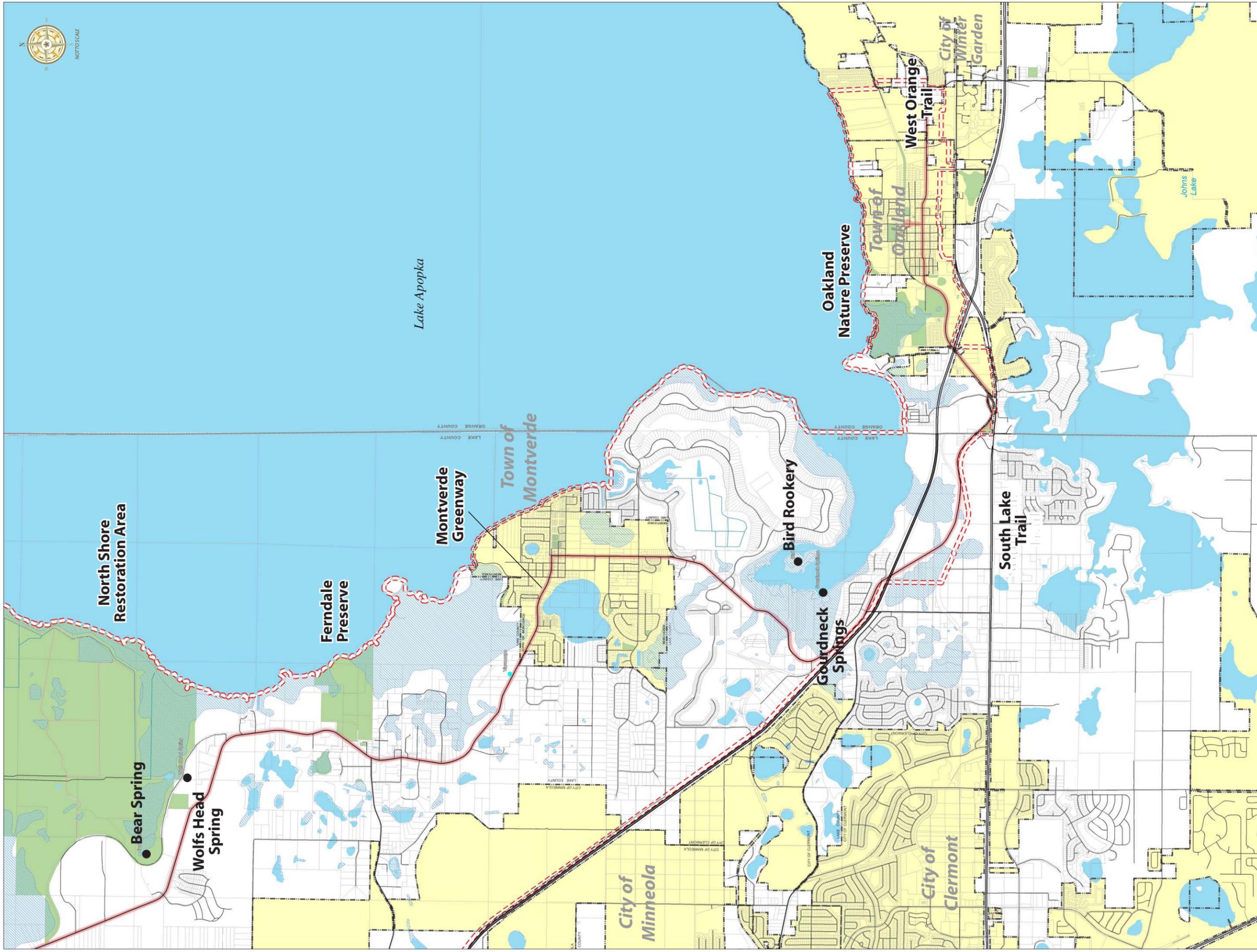
View of Lake Apopka. Photograph provided by Greg Gensheimer

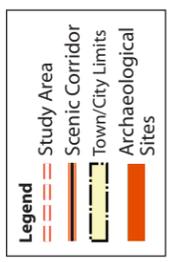
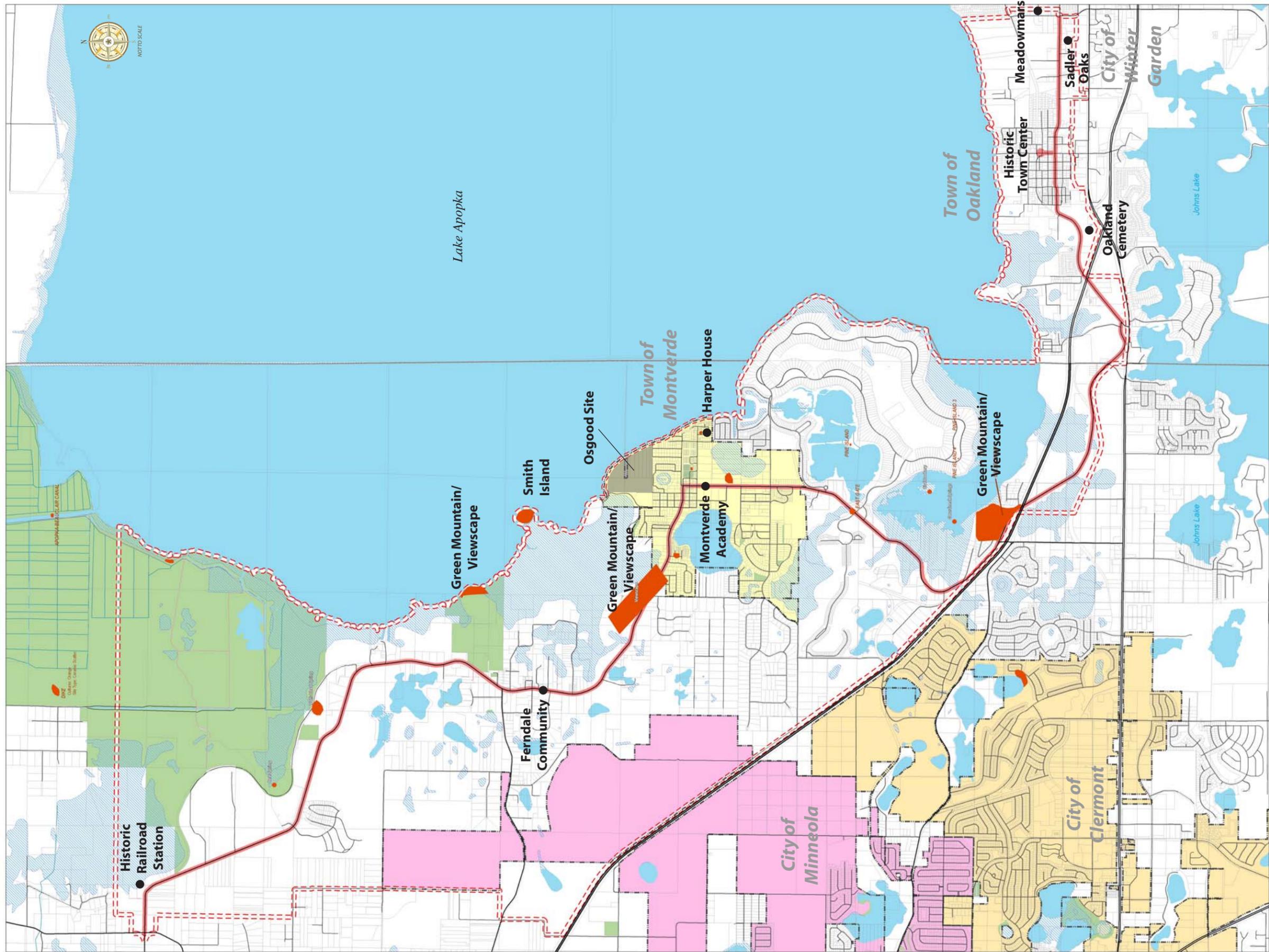


Salder Oaks. Photograph provided by Greg Gensheimer



Montverde Academy. Photograph provided by Greg Gensheimer





Roadway Analysis

Traffic

Traffic has grown steadily along the Scenic Byway in the past ten years (see Table 2). Figure 9 presents Annual Adjusted Daily Traffic along CR 455 for 2007.

Due to the development patterns documented in the previous sections, the Green Mountain Scenic Highway can expect to experience a substantial growth in traffic volumes. Lake County, the Lake-Sumter MPO, and the development community is studying additional roadway networks in this area to serve future development and reduce pressure on existing roadways. Figure 10 shows one possible future roadway configuration currently under consideration by Lake-Sumter MPO.

Table 3 shows a range of future roadway projections for CR 455. Due to variations in assumed roadway network and projection tools, these projections are highly variable. It is clear, due to the programmed growth, that traffic volumes will grow much faster in the next ten years than they have in the previous five years.

In Lake County, CR 455 is policy constrained to 2 lanes. The roadway will not be widened regardless of future traffic volumes. Intersection modifications may be required to reduce delays. The CMC opposes signalized intersections along the Scenic Byway.

Table 2: Historic Traffic Count

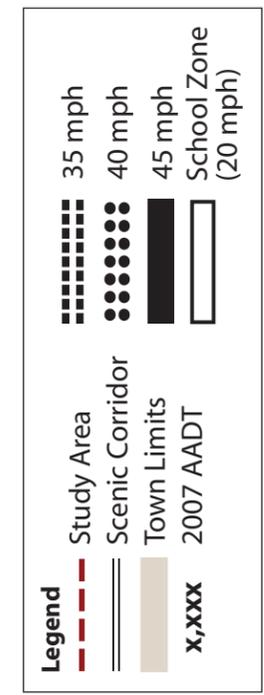
Station Number	Location	Annual Adjusted Daily Traffic										5-Year Annual Growth from 2003-2007	E+C # of Lanes	LOS Standard	PM Peak Hour Total 2007	LOS 2006
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007					
191	0.14 miles east of CR 561							1,564	1,685	1,659	1,680	2.43%	2U	C	171	B
65	CR 455 .05 miles west of Fosgate Road	1,727	2,008	2,218	2,305	2,447	2,566	2,675	2,899	2,944	3,002	4.00%	2U	C	303	B
67	CR 455 .10 miles north of Magnolia Creek Lane	4,156	4,703	4,749	5,365	5,241	5,188	5,425	6,203	6,873	5,549	1.70%	2U	C	495	C
69	CR 50 .06 miles west of Orange County Line	2,699	3,146	3,435	4,243	4,575	5,045	4,897	5,435	5,089	5,056	0.05%	2U	C	721	D
119	Oakland Avenue									4,142			2U	C		C
118	Oakland Avenue									6,250			2U	C		D

Source: Orange County and Lake County, September 2007

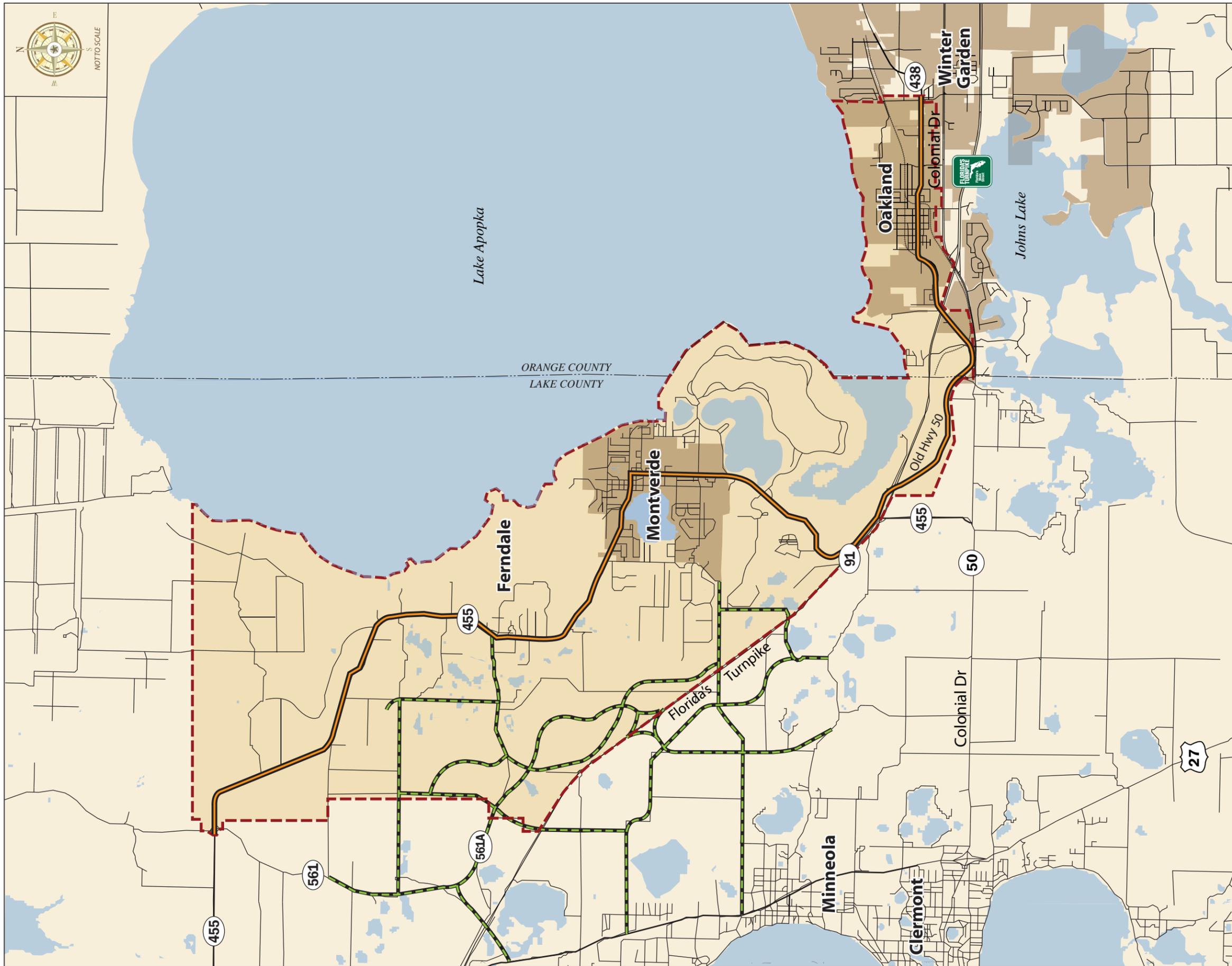
Table 3: Projected Traffic Volume

Source	2015 ADT			
	Old Highway 50 to Ridgewood Avenue	Ridgewood Avenue to Fosgate Road	Fosgate Road to CR 561A	CR 561A to CR 561
Straight line projects assuming 5-year annual growth rate from 2003-2007	5,200	-	3,400	1,800
Sugarloaf Mountain DRI				13,600 to 11,400
The Hills of Minneola DRI	8,600	8,100	7,600	5,600
Town of Montverde PD&E Draft Traffic Technical Report		9,500		

Source: Glatting Jackson Kercher Anglin, Inc., September 2007
Data rounded



Source: Lake County and Glatting Jackson



Source: Glatting Jackson
Date: July 2007

Safety

Crash data for 2002 to 2006 was provided by Lake County. The crash data documents 33 crashes along CR 455 or near an intersection with CR 455.

Table 4: Crash Rates Per Year

Year	Number
2002	7
2003	6
2004	2
2005	9
2006	9
Total	33

Table 5: Crash Type

Crash Type	Number
Angle	6
Hit fence	1
Overtaken	3
Hit tree/shrubbery	0
Utility/light pole	2
Left-turn	3
Hit other fixed object	3
Coll. w/ bicycle	0
Head-on	0
Rear-end	2
Backed into	2
Hit guardrail	1
Sideswipe	0
Hit sign/sign post	0
Ran in ditch/culvert	1
Coll. w/ parked car	1
Coll. w/fixed object above road	0
Ran off road into water	1
All other (explain)	2
No type given	5
Total	33

Most of the crashes occurred near an intersection.

Table 6: Crashes by Intersection

Intersection	From 2002-2006
CR 561	12
CR 561A	3
Trousdale Street	2
Ridgewood Avenue	2
Morningside Ave	2
Willow Pines Lane	3
Total	24

CR 561 Intersection

The area at and around this intersection account for 12 of the 33 crashes identified as having occurred along or near CR 455.

Table 7: Crash Types at CR 561

Crash Type	Number
Angle	1
Hit fence	0
Overtaken	2
Hit tree/shrubbery	0
Utility/light pole	0
Left-turn	1
Hit other fixed object	2
Coll. w/ bicycle	0
Head-on	0
Rear-end	0
Backed into	0
Hit guardrail	0
Sideswipe	0
Hit sign/sign post	0
Ran in ditch/culvert	0
Coll. w/ parked car	1
Coll. w/fixed object above road	0
Ran off rd into water	1
All other (explain)	1
No type given	3
Total	12

While the data lists 12 crashes at this intersection, 6 of the 12 occurred away from the actual intersection.

Table 8: Proximity to Intersection at CR 561

Location	
At Intersection	3
Not at Intersection/Railroad Crossing/Bridge	5
Driveway Access	1
Total	9

A study is currently underway for CR 561. The crash data suggests that safety modifications may be needed at this intersection. It is

recommended that a roundabout be evaluated at this location. A roundabout may serve to reduce crashes, reduce speeds entering the Scenic Byway and serve as a gateway feature for the corridor.