



# Golf Cart Operational Study



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## Executive Summary

The development pattern as an auto-centric, “bedroom community” is at the heart of Wellington’s lifestyle. The 1960’s design requires the use of motorized vehicles for daily activities. Local travel has expanded into the use of golf carts. Equestrians have been utilizing golf carts as a mode of transportation within the Equestrian Preserve Area (EPA) for decades. Today’s golf carts are customizable and can be equipped with sound systems, multiple seats, larger tires, and the ability to exceed the traditional golf cart traveling speed. Therefore, addressing the use of golf carts and the interactions with pedestrians and bicyclists on our pathways is a step towards addressing public safety within our community.

Golf carts are recognized by the State of Florida as a type of motorized vehicle allowed to operate under certain conditions. Golf carts and low speed vehicles have been identified by the State of Florida through Title XXIII (Motor Vehicles) Chapter 316, Section 212 – Operation of Golf Carts on Certain Roadways and Section 2122 – Operation of a low-speed vehicle or mini truck on certain roadways. Under Section 316.212 “*a golf cart may be operated only upon a county road that has been designated by a county, a municipal street that has been designated by a municipality, or a two-lane county road located within the jurisdiction of a municipality designated by that municipality, for use by golf carts. Prior to making such a designation, the responsible local governmental entity must first determine that golf carts may safely travel on or cross the public road or street, considering factors including the speed, volume, and character of motor vehicle traffic using the road or street. Upon a determination that golf carts may be safely operated on a designated road or street, the responsible governmental entity shall post appropriate signs to indicate that such operation is allowed*”.

The use of golf carts within Wellington requires an ordinance that defines the locations of use, and should clarify required golf cart safety features, and operational expectations. This study provides support for an ordinance with an overview of the methodology and analysis related to golf cart use and safety recommendations. The study reviews the jurisdictional issues related with ownership and operational activities of the Village’s streets/roads, along with the functional classification to aid in understanding the street’s design, posted speed limits, and the volume of traffic. Existing golf cart ordinances and suitability studies from other Florida municipalities were also reviewed to determine current best practices. These include Miami Springs, Winter Garden, Winter Haven, Tallahassee, Vero Beach, Clewiston, Port St. Lucie, and Stuart.

This study is split into two parts. Part I – Residential Neighborhoods, and Part II – Village Pathways Adjacent to Major Roadways. The two parts correspond to Wellington’s preemptions on imposing more restrictions on golf cart use on public streets versus the ability to impose more restrictions for use on public pathways. This distinction provides an opportunity for Village leaders to consider additional safety and operational standards for the pathways within the ordinance.

The conclusion of the study is the recommendation that public neighborhood streets with a posted speed limit of 25 MPH or less could accommodate golf carts with the minimum safety features installed on the golf cart. In addition, the Village’s paved (asphalt or concrete) pathways that are a minimum of 8 feet in width and are adjacent to the Village’s major and minor collector roadways could also accommodate golf carts with specified conditions. An ordinance based upon the recommendations of this study has been drafted.

## Introduction

This Golf Cart Operational Study details and analyzes the factors impacting the ability for golf carts to travel safely on or cross Wellington's public roads, streets, and pathways. Several Florida municipalities have already joined a national trend of allowing the operation of golf carts on municipal streets to lessen the communities' environmental impacts and to provide alternate modes of travel for their residents. The Village of Wellington is considering a similar option.

This study considers factors such as posted speed limits, traffic volumes, and character of motor vehicle traffic using these roads and streets to determine the suitability of allowing golf carts to operate in Wellington.

## Methodology

The study evaluates the shared use of vehicles, pedestrians, bicyclists, and golf carts on Wellington's roads, streets, and pathways, to determine the suitability of golf cart operations. The study is presented in two parts; Part I – Residential Neighborhoods, Part II – Village Pathways - Adjacent to Major Roadways and begins with the following information:

- Florida Statutes regarding operation of golf carts on streets
- Roadway Jurisdiction
- Roadway Functional Classification
- Land Use
- Palm Beach County Sheriff's Office (PBSO)
- Motor Vehicle Traffic Data
- Roadway Speed Limits
- Accident Statistics from 2016 - 2019

## Florida Statutes

The following summarizes the Florida Statutes municipal regulation of golf cart operation on public streets and pathways. Full text of the referenced statutes are provided in Appendix A.

1. Title XXIII (Motor Vehicles), Chapter 316 (State Uniform Traffic Control), Section 03 (Definitions)
2. Chapter 316, Section 212 (Operation of Golf Carts on Certain Roadways)
3. Title XXIII (Motor Vehicles), Chapter 320 (Motor Vehicle Licenses) Section 01 (Definitions)

The Florida Statutes defines a golf cart as "a motor vehicle that is designed and manufactured for operation on a golf course for sporting or recreational purposes and that is not capable of exceeding speeds of 20 miles per hour." The Statutes require municipalities to explicitly permit the use of golf carts through an ordinance. Additionally, cities may only grant this permission on streets or roads under the municipality's jurisdiction. Operating golf carts on or crossing roads, under the jurisdiction of Palm Beach County or the State of Florida, requires their approval.

## Roadway Jurisdiction

The suitability for golf cart operation must account for which roads are owned/maintained by Wellington, Palm Beach County, the State of Florida, or private (sometimes gated) communities. Figure 1 highlights the communities that are gated or private, and those that have public roads that are maintained by the Village.

The Florida Department of Transportation (FDOT) has shared jurisdiction with Palm Beach County on Forest Hill Blvd. between State Road 7/441 and the west side of the Florida Turnpike. FDOT also has jurisdiction on State Road 7/441, which passes through Wellington. The state and county-maintained roads in Wellington are listed in Table 1.

**Table 1. State and County Roads in Wellington**

State Roads	From	To
SR-7/441	Just north of White Horse Drive	Just south of Old Hammock Way
Forest Hill Blvd *(shares w/ PBC)	Turnpike west side	SR-7 /441
County Roads	From	To
Forest Hill Blvd *(shares w/ FDOT)	Turnpike west side	SR-7 /441
Lyons Road	Forest Hill Blvd	North Wellington Boundary

The state and county-maintained roads within the Village require their approval of golf cart usage on or across these roads. Figure 2 depicts the jurisdiction roadway segment of each agency.

## Roadway Functional Classification

Roadway functional classification is a descriptor of the size and nature of a road. Principal arterials, such as Southern Blvd/SR 80 and SR7/441, are generally multi-lane, higher volume, higher speed roadways connecting the region. Collectors, such as Forest Hill Blvd. are generally multi-lane, higher volume, and higher speed roadways connecting neighborhoods and commercial areas. Minor streets are generally neighborhood streets with two-lanes, low speeds, and low volumes. Most streets in Wellington are minor streets that connect to major and collectors which connect to the principal arterials. Table 2 indicates the functional classification of all streets in Wellington and Figure 3 shows the relationship and the interconnection that is Wellington's roadway system.

Table 2. Principal Arterials, Minor Arterials, and Major Collectors in Wellington

Principal Arterials	Minor Arterials	Major and Minor Collectors
SR -7 /441	Forest Hill Blvd	Flying Cow Ranch Road
Southern Blvd (*outside Wellington's Borders)		Binks Forest Drive
		Bent Creek Road
		Aero Club Drive
		Paddock Drive
		Greenview Shores Blvd
		Greenbriar Blvd
		Big Blue Trace
		Wellington Trace
		South Shore Blvd
		Birkdale Drive
		Stribling Way

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Principal Arterials	Minor Arterials	Major and Minor Collectors
		Lyons Road
		Pierson Road
		120 <sup>th</sup> Ave South
		Lake Worth Road
		50 <sup>th</sup> Street

## Land Use

Wellington's land use is dominated by its 20,419 residences. In fact, residential uses make up 60% of Wellington's total land area. The other land uses and significant areas include:

- The Equestrian Preserve Area comprises 1,443 residences of this total and is 34% of the Village's land area.
- Commercial uses, i.e. retail, restaurants and personal services, make up 1.7%.
- Office uses total 0.16%.
- Industrial (flex zoning) uses equal 0.32%.
- Civic uses, i.e. schools, churches, synagogues, and fire departments, equal 15%
- Utility uses equal 0.17%
- Community parks and public open spaces total 0.80%.
- Government uses including roads, canals, and government services buildings make up 6.9%.
- There are seven privately-owned golf courses totaling 858 acres or 3.1% of the land use. Only three are functioning courses.
- South Florida Water Management District operates a 10-square mile storm water retention area which represents 24% of land area.

The uses are separated in a pattern that conforms to the planning principles of the late 60's and early 70's when automotive travel shaped the suburbs. Today, communities like Wellington want to lessen their environmental impacts and utilize other modes of travel such as golf carts to move around in the community.

## Palm Beach Sheriff's Office (PBSO)

As the county's law enforcement agency, PBSO also serves 13 municipalities within the county. Wellington is the first municipality to work with PBSO regarding golf cart use. At this time, PBSO does not have a formal policy regarding golf carts use. After review of this study, PBSO offers the following.

First, should the Village approve a golf cart use ordinance specific, PBSO recommends a zero tolerance policy for enforcing the safety requirements, speed limits, and approved locations for golf cart use. Second, if an operational certification is a requirement as part of an adopted ordinance, PBSO does not have an officer that has been certified to review golf cart operational equipment and safety features. The operational certification is best done through a third-party and provided by the golf cart owner along with an affidavit affirming the information. Third, targeted public relations and communication will be needed to implement a golf cart ordinance and effectively relay the requirements to the public and minimize any confusion. In addition, PBSO acknowledges the safety equipment recommendations and the operational permit conditions presented.

## Part I – Residential Neighborhoods

### Golf Cart Speed vs. Speed Limit

**Florida Statutes only allow low-speed vehicles on streets with a speed limit of 35 mph or less. The Statutes do not, however, set a speed standard for golf carts.** With respect to permitting golf cart use, the Florida Statutes states “the speed, volume, and character of motor vehicular traffic using the road is considered in making such a determination”.

The majority of minor streets in Wellington have a posted speed limit of 25 miles per hour (MPH). The Florida Statutes defines a golf cart as not being “capable of exceeding speeds of 20 miles per hour”. The differential of +/-5 MPH between the posted speed limit and the capable speed of a golf cart would allow a golf cart to generally keep pace with the traffic flow and not create a safety issue based upon the speed difference of motor vehicles. Therefore, the Village’s minor streets are a suitable for allowing golf cart use. Figure 5 shows the speed limits for all Wellington streets and roadways. Figure 6 displays the minor streets with a posted speed limit of 25MPH.

### Traffic Volumes

Utilizing peak hour volumes is a recognized method for analyzing traffic volumes. Peak hour volumes is an indicator of how many vehicles use the road at its busiest times in the AM and PM hours. Due to the limited number of actual traffic counts within the neighborhoods, the peak hour data is determined by using the number and types of residential units within a neighborhood multiplied by the Institute of Transportation Engineers (ITE) trip generation rates. The trip generation rate for single family (SF) residential units is 0.99 per unit and multi-family (MF) residential units is 0.56 per unit. Multiplying the trip generation rate by the number of units (SF or MF) yields the peak hour volume for each neighborhood. Dividing the peak hour volume by the number of ingress/egress points within each neighborhood and assuming an equal distribution between all access points provides the peak hour volume at each neighborhood entrance.

As a guideline, a maximum of 180 peak hour trips at each entrance was determined to be an acceptable volume for golf cart use. This maximum equates to one vehicle every 20 seconds (three per minute) during peak hour times. The residential communities whose peak hour trips are generally below the maximum of 180 trips and are within Wellington’s jurisdiction are suitable to allow the shared use of golf carts on minor streets/roadways.

Table 3 in Appendix B identifies the peak hour volumes by neighborhood. Table 3 also identifies the neighborhoods where the Village has jurisdiction over the roadways. Those communities, whose access is onto a roadway under the jurisdiction of FDOT or Palm Beach County will require the agency’s approval before golf carts can cross or traverse these roadways.

### Neighborhood Street Design

Many of Wellington’s neighborhoods are designed around cul-de-sacs or single points of ingress/egress. This limits neighborhood traffic to the residents, local deliveries, and service vehicles. In addition, sidewalks in some communities are typically 4-5 feet in width, which is not suitable for shared golf cart use. Some neighborhoods streets do not have sidewalks. Generally, this means pedestrians and bicyclists often utilize these neighborhood streets/roadways along with the motor vehicles. As previously stated, adding golf carts to the traffic mix within these neighborhood streets is suitable due to the lower speeds and volumes. Due to the typical design of neighborhood streets, the following is recommended as part of any ordinance permitting golf cart use:

- Prohibit golf cart use on sidewalks less than 8 feet wide.

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- Require proper safety equipment on each golf cart.
- Require each owner/operator acknowledge the Village's operational requirements.
- Require each owner/operator to obtain an operational permit.

### **Equestrian Community**

Our equestrian community utilizes golf carts as a mode of transportation within the Equestrian Preserve Area (EPA). Golf carts are a key component to the equestrian lifestyle; transporting people, equipment, and goods between stables, show facilities, and events. Golf carts have been in use in the EPA for decades. Currently, section 62-20 of the Village Code of Ordinances states "all unregistered off-road, all-terrain vehicles and motorcycles equipped with dirt tires and loud mufflers (generically known as "dirt bikes" or "all-terrain vehicles") shall be prohibited from operation in the village". The basic golf carts do not typically come equipped with dirt tires or loud mufflers suggesting that a standard golf cart is not included in this definition. Generally, the use of golf carts has safely occurred in the EPA supporting the position that a Wellington ordinance to permit golf cart use in other areas of the Village with similar roadway characteristics would be appropriate.

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## Part II – Village Pathways Adjacent to Major Roadways

### Introduction

Wellington's principal arterials and collector roads were designed as 2-, 4-, and 6-lane sections, some with medians. The roadway design accommodates higher traffic volumes and higher speeds (35-45 MPH), with a paved pathway/sidewalk adjacent to the roadway. This section focuses on the pathways and sidewalks to evaluate the shared uses of pedestrian, bicycle, and golf carts on the paved pathways adjacent to the major arterials and collector roadways. Chapter 316, FS, has specific language related to pathways and the enactment of an ordinance. Specifically, section 316.212(8), provides that:

*"A local governmental entity may enact an ordinance relating to:*

- (a) Golf cart operation and equipment which is more restrictive than those enumerated in this section. Upon enactment of such ordinance, the local governmental entity shall post appropriate signs or otherwise inform the residents that such an ordinance exists and that it will be enforced within the local government's jurisdictional territory. An ordinance referred to in this section must apply only to an unlicensed driver.*
- (b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:*
  - 1. The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk;*
  - 2. The local governmental entity consults with the Department of Transportation before adopting the ordinance;*
  - 3. The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide;*
  - 4. The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by s. 316.271; and*
  - 5. The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalks.*

### Pedestrian, Bicycle, and Golf Cart Use on Pathways

There is very little data relative to golf cart use on pathways. Therefore, the focus is on the locations where golf carts would intersect with vehicles. For golf carts to share use of pathways, the Statutes limit golf cart use to pathways that are at least 8 feet wide and restricts the maximum speed to 15 MPH. The Statutes also require signs to be posted noting golf cart use permitted and the speed limit. Figure 7 shows those pathways which have a width of 8 feet or more.

### Level of Service

Level of Service (LOS) indicates the volume of traffic on a street relative to its maximum design capacity. The pathways often intersect access points to residential neighborhoods from major collectors. The traffic volumes and LOS on the major collectors is important in assessing golf cart use standards and any additional measures that may be needed to increase safety at these access points. Examining the peak hour volumes on the collectors, along with the LOS, aids in determining the need for signage or other safety measures. Table 4 summarizes the daily AM and PM peak hour trips on the Village's major collectors (Wellington Traffic Counts and Analysis, 2018). All of the referenced major collectors are operating at a LOS of C which suggests additional

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signage and golf cart use controls will be needed at the points each of the pathways intersects with the access points of any residential neighborhood.

**Table 4. Major Collectors Level of Service (LOS) with AM and PM Peak Hour Counts**

Daily Peak Hour Trips					
Major Collectors	Link Locations	Level of Service	# of Lanes	AM Peak Hour	PM Peak Hour
<b>Flying Cow Ranch Road</b>	Southern southward	C	2L	120	202
<b>Binks Forest Drive</b>	Southern to Aero Club	C	4LD	1,544	442
<b>Aero Club Drive</b>	Binks to Greenbriar	C	2L	500	559
<b>Paddock Drive</b>	Greenview Shores to Big Blue	C	2L	184	203
<b>Greenview Shores Blvd</b>	Greenbriar to South Shore	C	4LD	1,563	1,545
<b>Greenbriar Blvd</b>	Wellington Trace to Greenview	C-#1	2L	425	613
<b>Big Blue Trace</b>	Wellington Trace to South Shore	C	2L	991	1,079
<b>Wellington Trace</b>	Forest Hill to Birkdale	C	2L	1,011	932
<b>Forest Hill Blvd</b>	Stribling to SR 7	C	6LD	2,534	3,488
<b>South Shore Blvd</b>	Big Blue to Forest Hill	C-#2	4LD	1,490	1,728
<b>Birkdale Drive</b>	Forest Hill to Wellington Trace	C	2L	469	442
<b>Stribling Way</b>	SR 7 to Lyons Rd	C-#3	2L	1,185	977
<b>Pierson Road</b>	120th to Fairlane Farms Rd.	C-#4	2L	511	690
<b>120th Ave South</b>	Lake Worth Rd to 50th St	C	2L	99	253
<b>Lake Worth Road</b>	Isles Blvd to East Border	C	4LD	1,554	1,659
<b>50th Street</b>	120th to East Border	C-#5	2L	362	396

1. Aero Club Dr. to Wellington Trace link is LOS D in the E. bound lane during the PM.
2. Lake Worth/Pierson link during the AM is LOS D in the No. bound lane and LOS F in the So. bound lane and during the PM it is the reverse F/D. In addition, 50<sup>th</sup> St to LWR is a LOS D in the PM, in the No. bound lane.
3. FHB/ Fairlane Farms Rd link AM is LOS E on the So. bound lane.
4. Ousley Farms Rd/South Shore Blvd. link in the AM is a LOS D in the E. bound lane and LOS F in the E. bound lane during the PM.
5. 120<sup>th</sup> to Wellington's boundary (N/S FL&L transmission lines) E. bound lane LOS D in both the AM and PM.

### Intersection Evaluation

Weekday and weekend intersection peak hour volumes were summarized, including the number of pedestrians and bicyclists (Wellington Traffic Counts and Analysis 2018). The inclusion of the pedestrian and bicycle counts in Table 5 provides a point of reference to the volume of these types of users. Table 5 also indicates the traffic control provided at each intersection. This information confirms the recommendation for additional signage and golf cart use controls at the points each of the pathways intersects with the access points of any residential neighborhood.

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**Table 5. Peak Hour Intersection Evaluation**

Intersection Evaluation Weekday				AM - 7:00 - 9:00 AM			PM - 4:00 - 6:00			PM
				Vehicle	Bike	Ped	Vehicle	Bike	Ped	
Forest Hill Blvd	&	Wellington Trace (N)	Signalized	4,196	10	10	4,478	9	7	
Forest Hill Blvd	&	Wellington Trace (S)	Signalized	2,452	7	6	3,002	10	17	
Forest Hill Blvd	&	South Shore Blvd	Signalized	2,979	11	11	3,702	8	8	
Forest Hill Blvd	&	Royal Fern Dr.	Signalized	4,576	7	5	4,703	15	3	
Forest Hill Blvd	&	Stribling Way	Signalized	4,476	17	6	5,093	14	3	
Big Blue Trace	&	Paddock Dr	Signalized	1,823	5	179	1,420	6	3	
Big Blue Trace	&	Wellington Trace	Signalized	2,740	n/a	n/a	3,001	n/a	n/a	
Wellington Trace	&	Greenview Shores	Signalized	2,643	21	38	2,803	12	34	
South Shore Blvd	&	Greenview Shores	Signalized	2,690	n/a	n/a	2,951	3	2	
South Shore Blvd	&	Pierson Road	Signalized	2,042	6	4	2,068	1	2	
Fairlane Farms Rd	&	Stribling Way	Roundabout	1,528	1	2	2,024	7	1	
Lake Worth Rd.	&	South Shore Blvd	Signalized	1,476	2	0	1,708	3	0	
Lake Worth Rd.	&	120 th Ave So.	2-way stop	1,289	3	2	1,610	4	22	
Intersection Evaluation Weekend (Saturday)				AM - 10:00 - 12: AM			PM - 4:30 - 6:30			PM
				Vehicle	Bike	Ped	Vehicle	Bike	Ped	
Greenbriar Blvd	&	Ousley Farms Rd.	1-way stop	560	20	8	713	7	4	
South Shore Blvd	&	Pierson Road	Signalized	1,729	12	8	2,214	8	10	
Fairlane Farms Rd	&	Stribling Way	Roundabout	1,193	6	3	n/a	n/a	n/a	
Lake Worth Rd.	&	South Shore Blvd	Signalized	1,155	8	0	1,339	5	0	
Lake Worth Rd.	&	120 th Ave So.	2-way stop	1,049	37	2	n/a	10	8	
Overlap review of Weekday and Weekend										
Highest peak hour volume										

### Crash Data

Palm Beach County Sheriff's Office (PBSO) provided the accident data for 2015 through 2019, summarized by year and by type of accident (Table 6). The table also indicates whether the crashes occurred during the daytime or nighttime. While specific data involving golf carts was not available, golf cart accidents have occurred, and a few have been serious. The data suggests that less than 3% of the accidents in Wellington involve pedestrians or bicyclists. Should golf carts be approved for use in Wellington, it will be important to track specific incidences involving golf carts.

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**Table 6. Crash Data – 2015-2019**

2015						
Vehicles	367					
	Bicycles	5	Day time	3	Nighttime	2
	Pedestrians	5	Day time	3	Nighttime	2
		377	Total Accidents			
2016						
Vehicles	521					
	Bicycles	4	Day time	4	Nighttime	0
	Pedestrians	2	Day time	2	Nighttime	0
		527	Total Accidents			
2017						
Vehicles	487					
	Bicycles	7	Day time	5	Nighttime	2
	Pedestrians	6	Day time	6	Nighttime	0
		500	Total Accidents			
2018						
Vehicles	558					
	Bicycles	1	Day time	1	Nighttime	0
	Pedestrians	4	Day time	1	Nighttime	3
		563	Total Accidents			
2019						
Vehicles	593					
	Bicycles	3	Day time	2	Dusk	1
	Pedestrians	6	Day time	5	Dawn	1
		602	Total Accidents			

### Future Improvements

Village Council has provided direction to improve pathway and connectivity to schools, parks, and places of interest, where possible. This directive has yielded a pathway improvement program that could be developed in phases. The pathways that could be widened or constructed over the next 5 to 8 years are provided in Figure 7. These potential projects will expand the areas where golf cart use would be permitted.

## Report Summary Findings

The following is a summary of the findings in this report. These also include recommendations that should be incorporated into an ordinance to permit golf cart use on pathways in Wellington.

1. Forest Hill Blvd. between SR-7/441 and the west side of the Turnpike and SR-7/441 which passes through Wellington north to south are the responsibility of Palm Beach County and the State of Florida/(FDOT). Allowing golf carts on these roadways and/or pathways will require the County and/or State approval.
2. The minor roads (residential neighborhoods) have posted speed limits of 25 MPH.
3. Major Collectors, except for Pierson Road, 50th Street, and sections of Forest Hill Boulevard and Lake Worth Road, have an 8-foot wide pathway adjacent to the roadway. These pathways support shared golf cart use with required signage.
4. The 5 MPH speed differential between the 25 MPH posted speed limited and the 20 MPH golf cart speed is an acceptable speed differential for shared road and pathway uses by golf carts.
5. The peak hour volumes indicated that the traffic volumes for the vast majority of Wellington's residential communities is below 180 peak hour trips providing for the possibility of shared use of the streets/roadway with pedestrians, bicyclists, vehicles and golf carts.
6. The neighborhood street designs can support a shared use golf carts.
7. Proper safety equipment should be required to safely operate a golf cart on the neighborhood roadways and public pathways.
8. Require each owner/operator to formally acknowledge the proper operational requirements and obtain a golf cart operational permit.
9. Forest Hill Blvd from SR -80 to SR 7/441 has 5-foot-wide sidewalks prohibiting golf cart use.
10. Pierson Road and 50<sup>th</sup> Street both have two travel lanes with zero width shoulder, no adjacent pathways, and portions of curb and gutter. Road swales exist in sections, along with guardrails and canals. These conditions, coupled with the heavy truck and trailer usage, would prohibit golf cart usage.
11. The major intersections within the Village are mostly signalized and include pedestrian crosswalk signals. This is an aid to pedestrian, bicyclist, and golf cart use.
12. The level of service (LOS) on the majority of village roadways is C or better indicating traffic volumes are appropriate for shared golf cart use on pathways.
13. Accident data indicates that pedestrians and bicyclists have relatively safe travel within the Village and adding golf carts to the pathways and minor streets/roadways would not overly burden these systems.

## Recommendations

The shared use of golf carts on minor publicly-owned streets within Wellington's neighborhoods can be supported. Golf carts can be regulated and because of their mass as a vehicle and their ability to travel at a greater speed than a pedestrian, it is recommended that should golf carts be allowed to share the Village pathways with pedestrians and bicyclists the following safety requirements and operational standards be required:

1. The posted speed limit of 15 MPH for golf carts be indicated with signs along the approved pathways.
2. An operational permit be issued by Wellington requiring the following minimum recommended golf cart safety equipment:
  - a) Headlamps
  - b) Turn signal lamps
  - c) Tail/stop lamps
  - d) Rear and side reflectors
  - e) Horn
  - f) Parking brakes
  - g) Rearview mirrors
  - h) Windshield
3. Golf Cart occupancy based on the number of seats.
4. The golf carts only be driven by a licensed driver, age 16 and over.
5. Golf carts only allowed on the pathways from dawn to dusk (daylight hours).
6. Golf carts be required to obey a stop condition at all intersections before proceeding. This would entail the placement of golf cart/motorized vehicle stop signs on all approved pathways that intersect with the major and minor collector roadways which are not signalized. Sign budget to install both stop and speed limit signs throughout the Village is estimated to be between \$25,000.00 and \$30,000.00.
7. Golf carts are only permitted on public pathways a minimum of 8 feet in width.

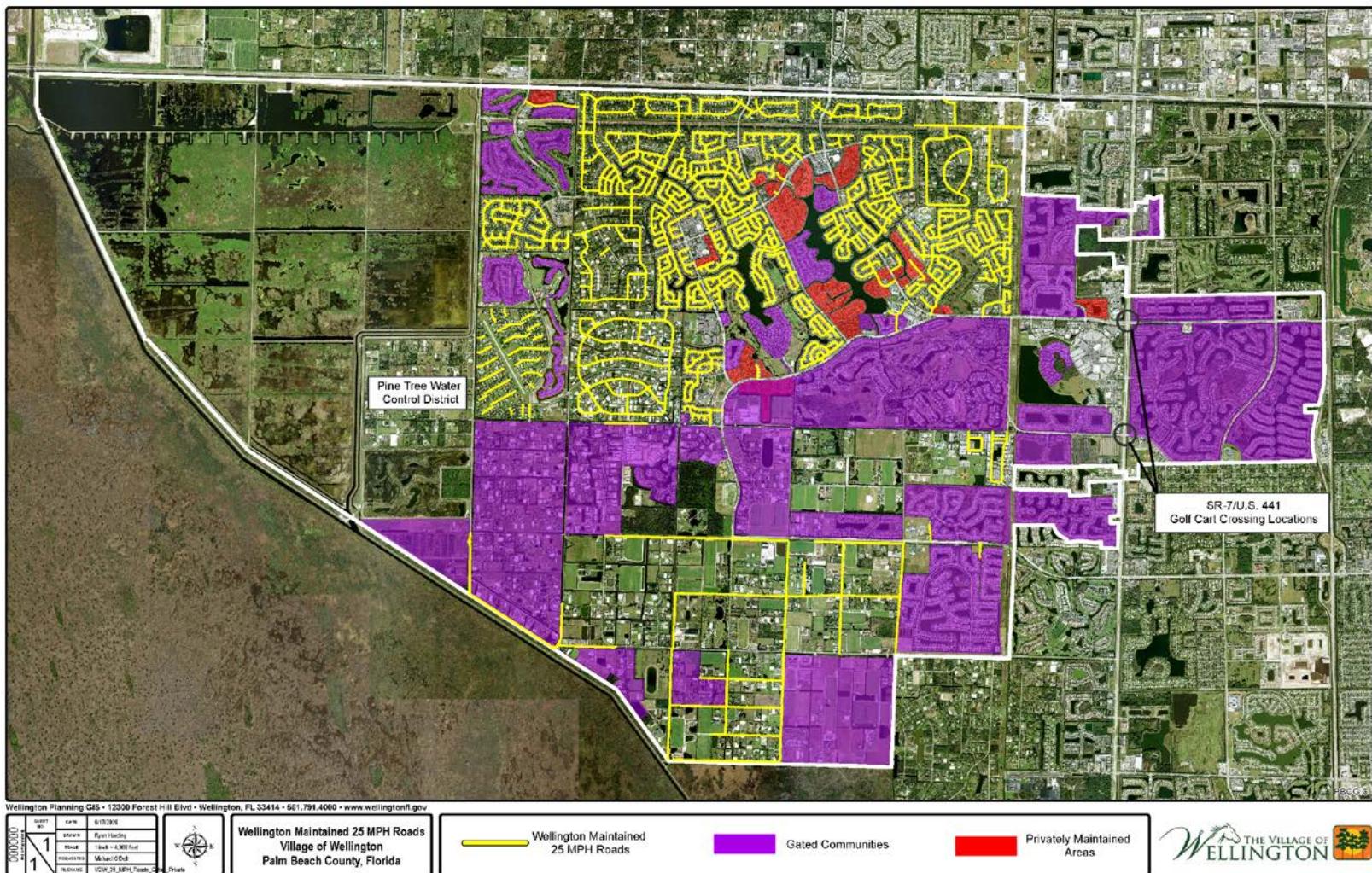
Additional recommendations to support the shared use of golf carts on the Village's pathways include:

1. A portion of the pathways within the school zones should be widened to accommodate golf cart parking. The pathways should be widened to 12 feet or wider, where possible. Each school zone will need to be evaluated to determine the safest and most appropriate locations for widening.
2. Equestrian Preserve – Village Ordinance 2002-18 prohibits the use of motorized vehicles with loud mufflers and dirt tires (motor bikes) on the bridle paths. The installation of bollards on the brown, blue, red, and green trails limits golf carts on these bridle paths. As the bridle path system expands away from the center of the showgrounds, the shared use of these roadways and canal banks as bridle paths with horses and golf carts has been a generally accepted use by the equestrian themselves. The Equestrian Preserve Committee has reviewed the bridle trail system, their operation, and the uses allowed. The committee recommends leaving the system and the operations unchanged in the Equestrian Preserve.

# Village of Wellington

## Golf Cart Operational Study

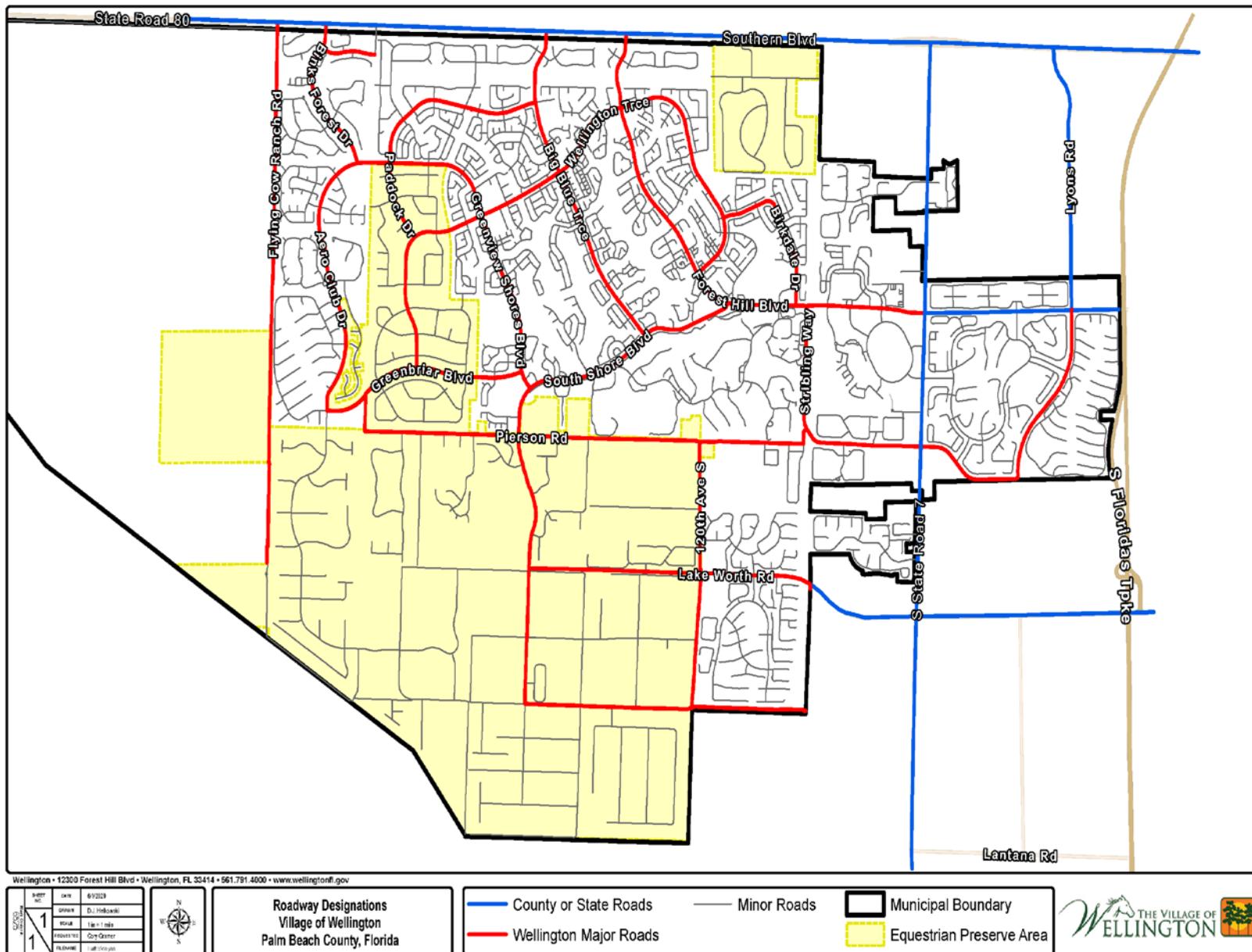
Figure 1. Roadway Jurisdiction



**Figure 2.** Roadway Designations

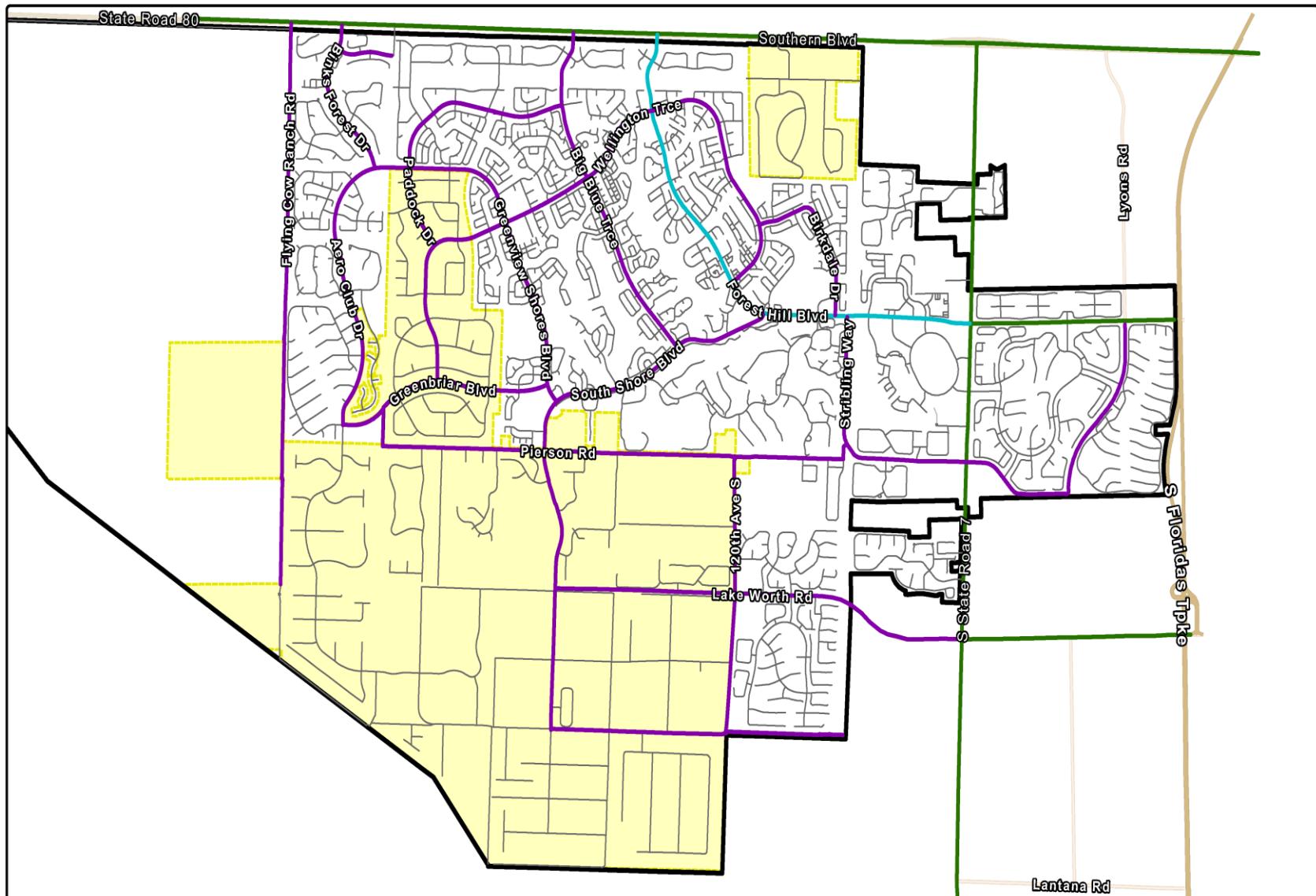
# Village of Wellington

## Golf Cart Operational Study



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Figure 3. Functional Classification



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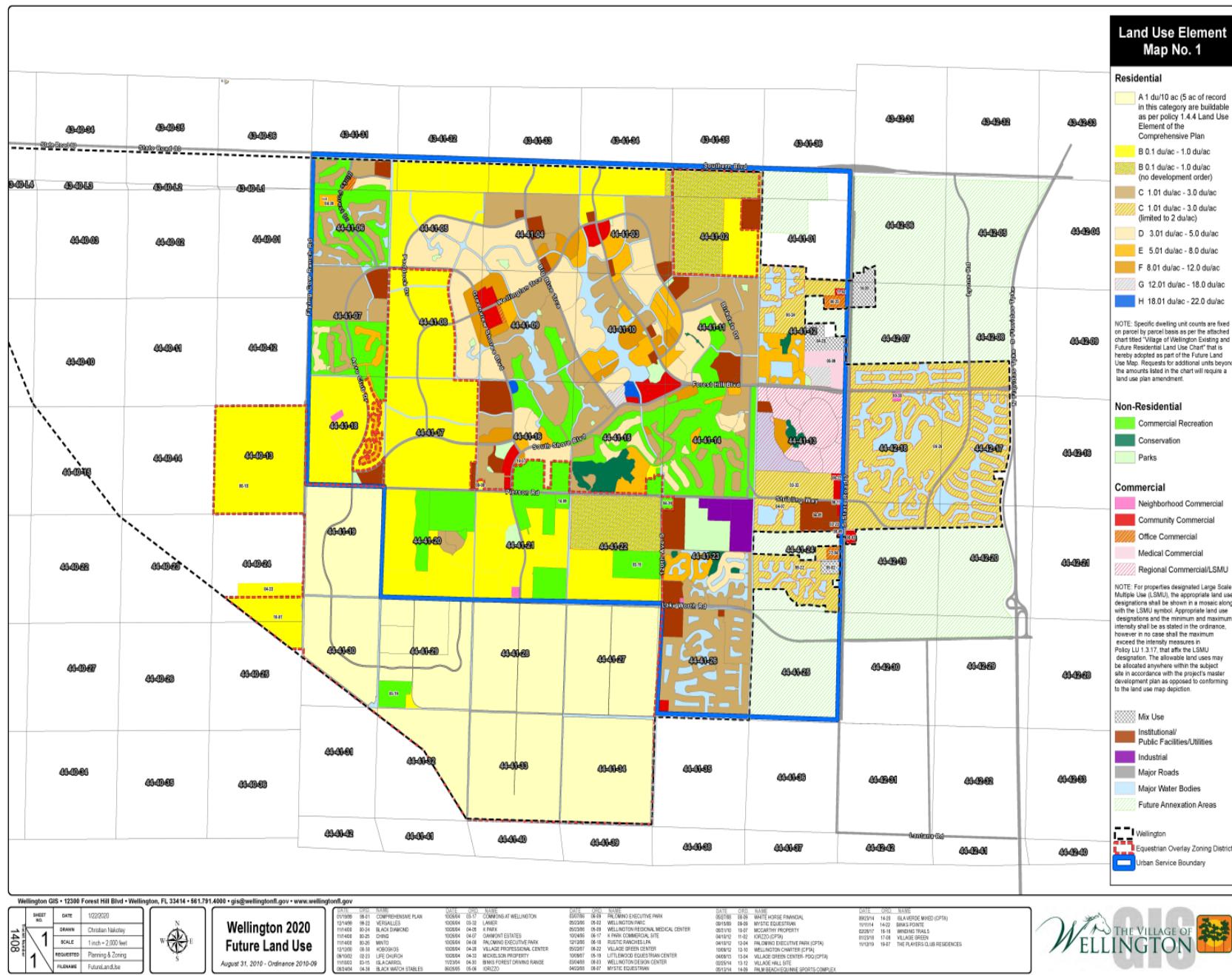
1	1
SHEET NO.	DATE
1	8/2020
DESIGNER	
DJ Hollowell	
SCALE	
1 in = 1 mile	
REQUESTED	
Cory Cramer	
FILENAME	
TrafficAnalysis	



Functional Classifications  
Village of Wellington Palm  
Beach County, Florida

Principal Arterial	Collector	Minor Roads	Municipal Boundary
Minor Arterial			Equestrian Preserve Area



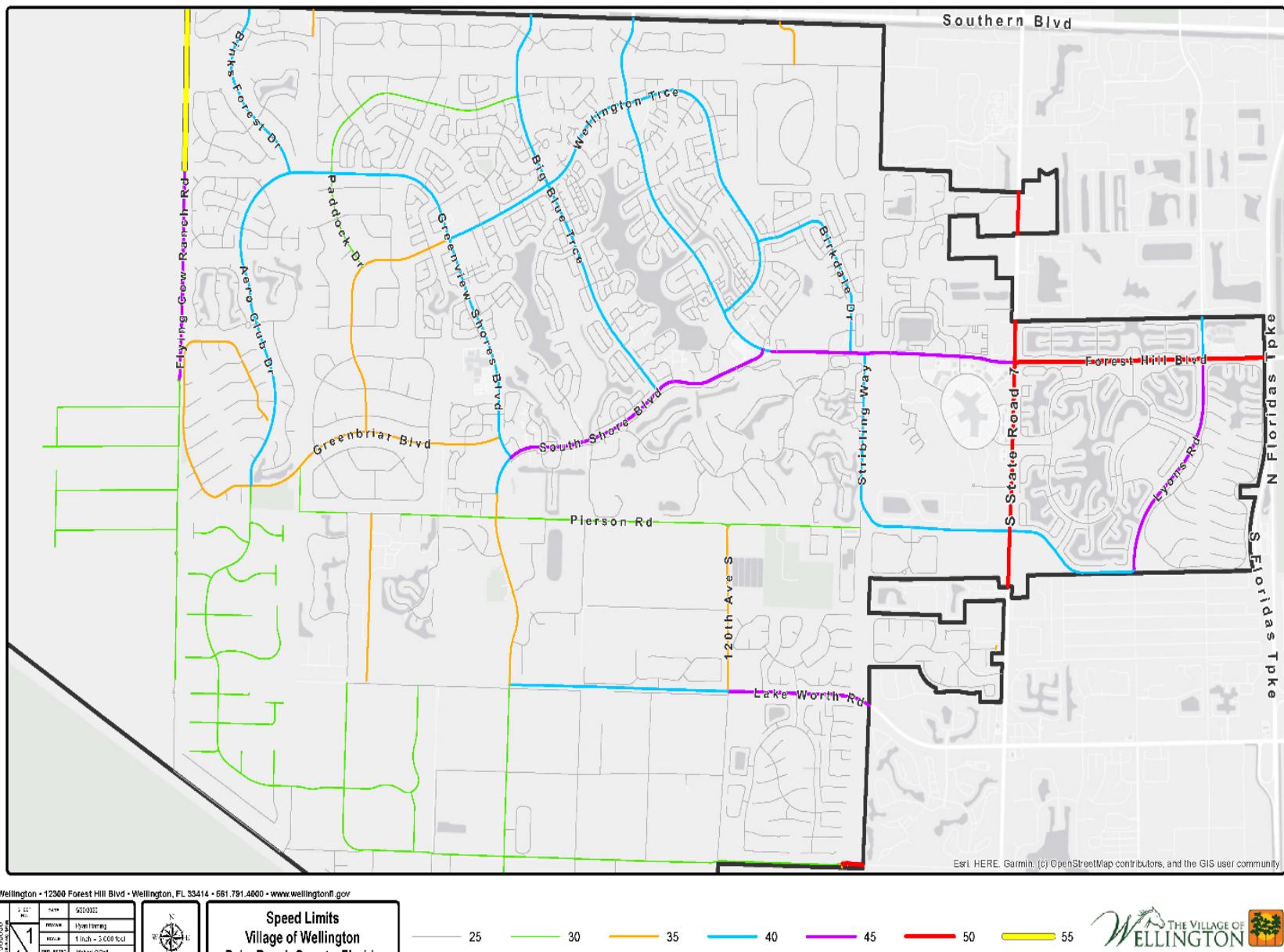


# Village of Wellington Golf Cart Operational Study

Figure 4. Future Land Use Map

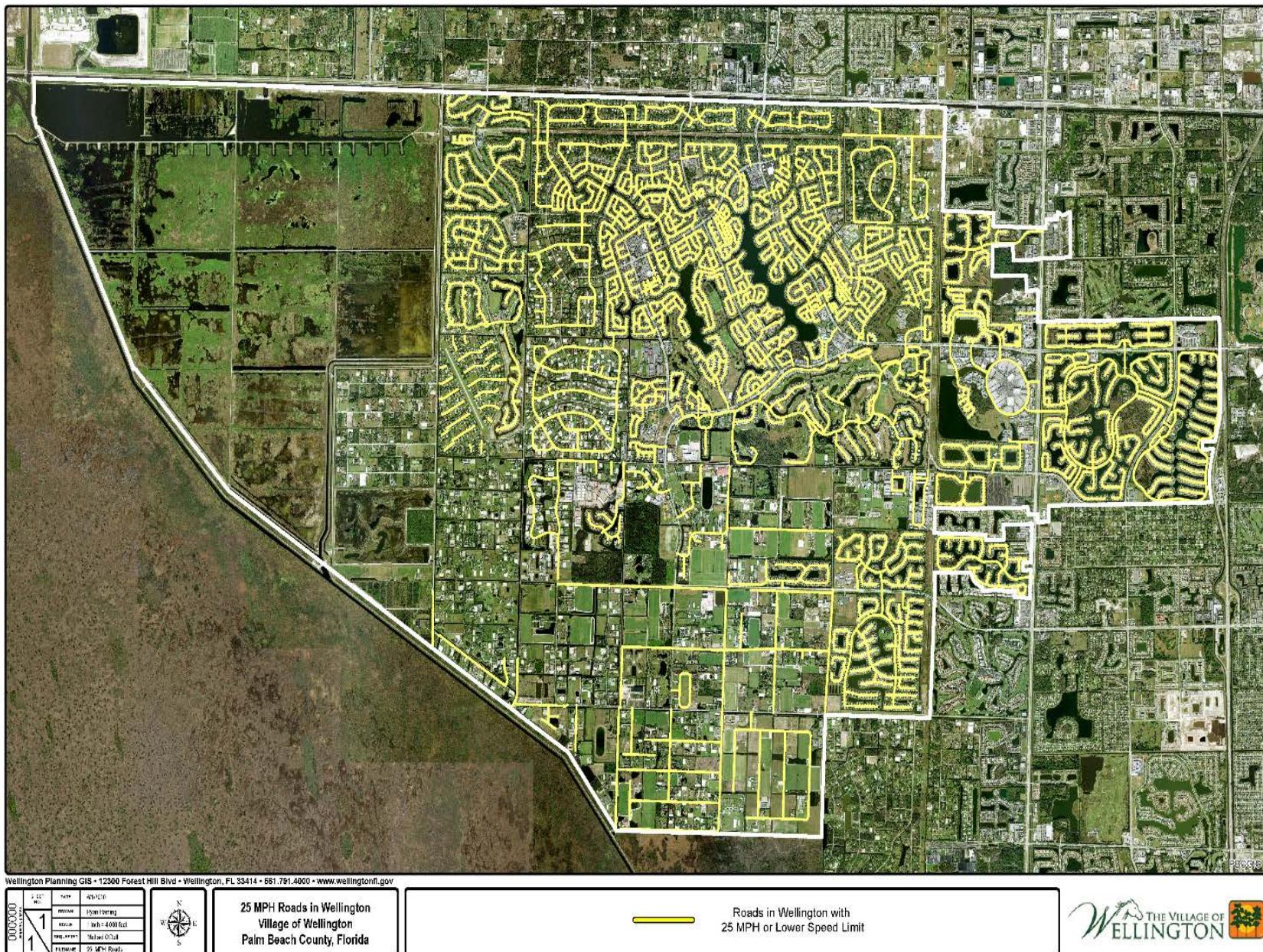
Village of Wellington  
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Figure 5. Speed Limits -Principal Arterials, Minor Arterials, and Major Collectors



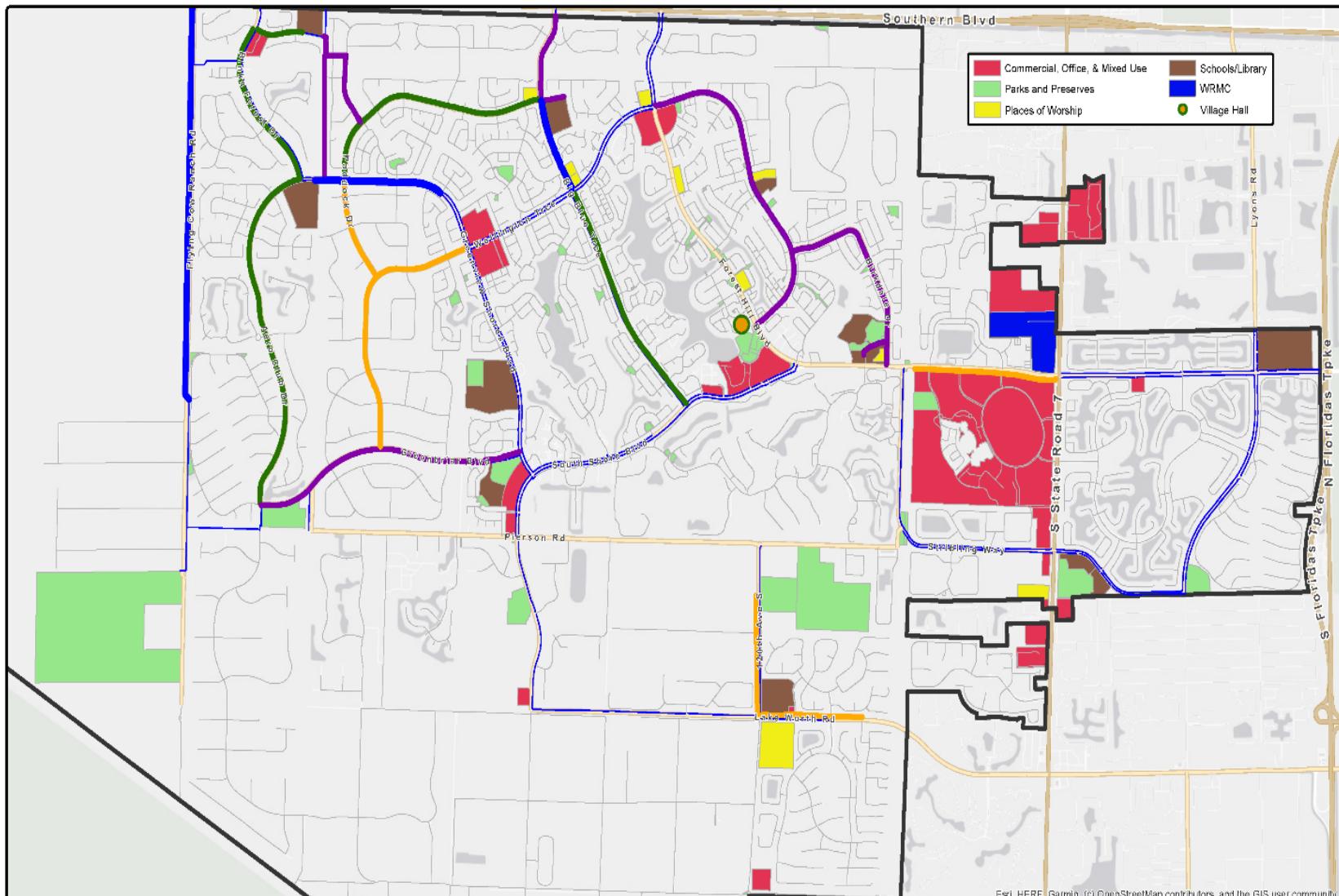
## Village of Wellington

**Figure 6. Posted speed limit of 25MPH (in Yellow)**



Village of Wellington  
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Figure 7. Draft Pathway Widening and Improvements



**Draft Phasing**

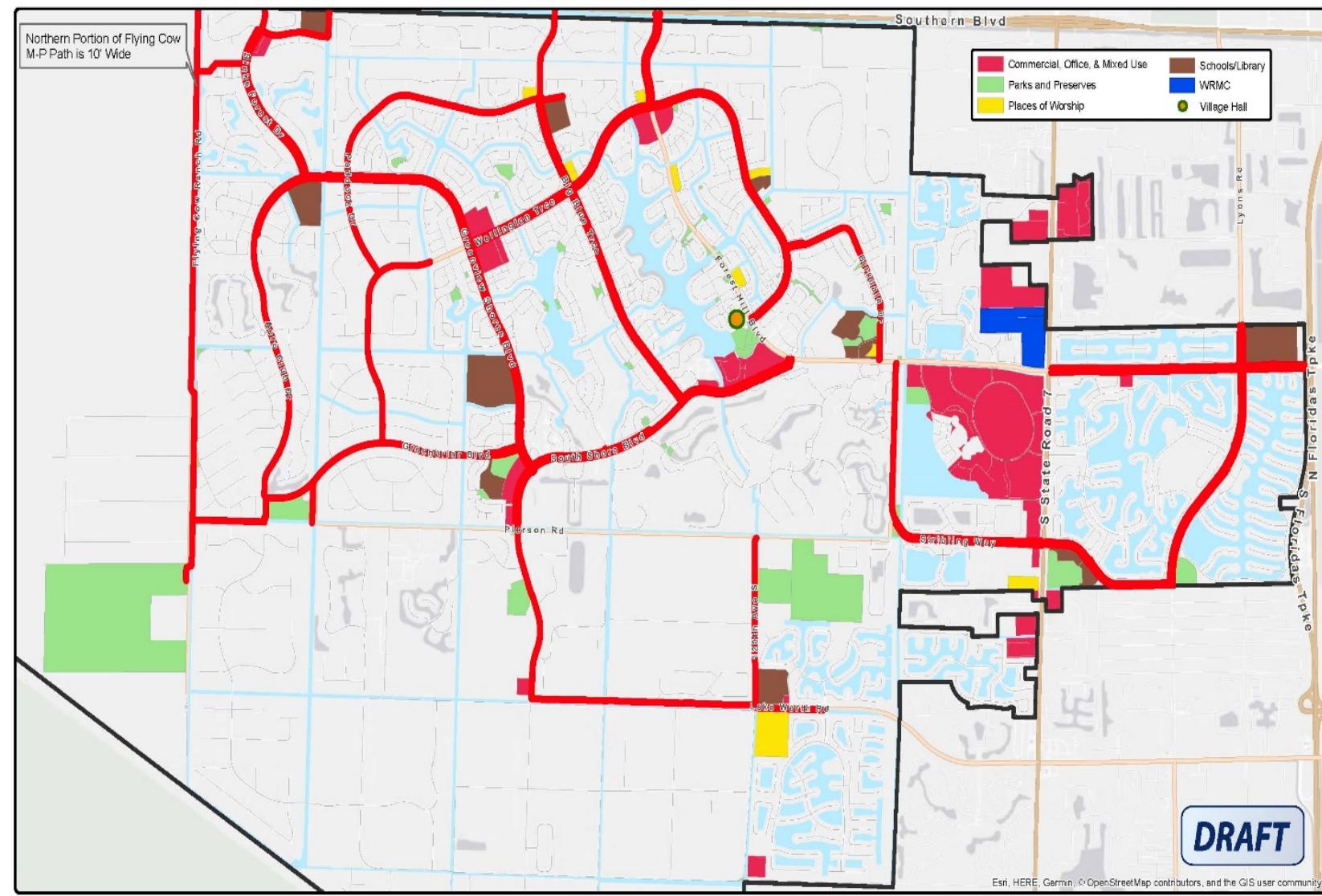
6.41 Miles 1 7.61 Miles 2 4.57 Miles 3

- Existing 8' Pathways (No Expansion Plan)
- Existing 10' Pathways (No Expansion Plan)



# Village of Wellington Golf Cart Operational Study

Figure 8. Existing Pathways



— Existing 8' Pathways



## Appendix A – Florida Statutes (Excerpts)

**316.003 Definitions.** — The following words and phrases, when used in this chapter, shall have the meanings respectively ascribed to them in this section, except where the context otherwise requires:

(27) GOLF CART. —A motor vehicle designed and manufactured for operation on a golf course for sporting or recreational purposes.

---

**316.212 Operation of golf carts on certain roadways.** — The operation of a golf cart upon the public roads or streets of this state is prohibited except as provided herein:

(1) A golf cart may be operated only upon a county road that has been designated by a county, a municipal street that has been designated by a municipality, or a two-lane county road located within the jurisdiction of a municipality designated by that municipality, for use by golf carts. Prior to making such a designation, the responsible local governmental entity must first determine that golf carts may safely travel on or cross the public road or street, considering factors including the speed, volume, and character of motor vehicle traffic using the road or street. Upon a determination that golf carts may be safely operated on a designated road or street, the responsible governmental entity shall post appropriate signs to indicate that such operation is allowed.

(2) A golf cart may be operated on a part of the State Highway System only under the following conditions:

(a) To cross a portion of the State Highway System which intersects a county road or municipal street that has been designated for use by golf carts if the Department of Transportation has reviewed and approved the location and design of the crossing and any traffic control devices needed for safety purposes.

(b) To cross, at midblock, a part of the State Highway System where a golf course is constructed on both sides of the highway if the Department of Transportation has reviewed and approved the location and design of the crossing and any traffic control devices needed for safety purposes.

(c) A golf cart may be operated on a state road that has been designated for transfer to a local government unit pursuant to s. 335.0415 if the Department of Transportation determines that the operation of a golf cart within the right-of-way of the road will not impede the safe and efficient flow of motor vehicular traffic. The department may authorize the operation of golf carts on such a road if:

1. The road is the only available public road along which golf carts may travel or cross or the road provides the safest travel route among alternative routes available; and
2. The speed, volume, and character of motor vehicular traffic using the road is considered in making such a determination.

Upon its determination that golf carts may be operated on a given road, the department shall post appropriate signs on the road to indicate that such operation is allowed.

(3) Notwithstanding any other provision of this section, a golf cart may be operated for the purpose of crossing a street or highway where a single mobile home park is located on both sides of the street or highway and is divided by that street or highway, provided that the governmental entity having original jurisdiction over such street or highway shall review and approve the location of the crossing and require implementation of any traffic controls needed for safety purposes. This subsection shall apply only to residents or guests of the mobile home park. If notice is posted at the entrance and exit of any mobile home park where residents of the park operate

Village of Wellington  
Golf Cart Operational Study

golf carts or electric vehicles within the confines of the park, it is not necessary for the park to have a gate or other device at the entrance and exit in order for such golf carts or electric vehicles to be lawfully operated in the park.

(4) Notwithstanding any other provision of this section, if authorized by the Division of Recreation and Parks of the Department of Environmental Protection, a golf cart may be operated on a road that is part of the State Park Road System if the posted speed limit is 35 miles per hour or less.

(5) A golf cart may be operated only during the hours between sunrise and sunset, unless the responsible governmental entity has determined that a golf cart may be operated during the hours between sunset and sunrise and the golf cart is equipped with headlights, brake lights, turn signals, and a windshield.

(6) A golf cart must be equipped with efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear.

(7) A golf cart may not be operated on public roads or streets by any person under the age of 14.

(8) A local governmental entity may enact an ordinance relating to:

(a) Golf cart operation and equipment which is more restrictive than those enumerated in this section. Upon enactment of such ordinance, the local governmental entity shall post appropriate signs or otherwise inform the residents that such an ordinance exists and that it will be enforced within the local government's jurisdictional territory. An ordinance referred to in this section must apply only to an unlicensed driver.

(b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:

1. The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk;

2. The local governmental entity consults with the Department of Transportation before adopting the ordinance;

3. The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide;

4. The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by s. 316.271; and

5. The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalks.

(9) A violation of this section is a noncriminal traffic infraction, punishable pursuant to chapter 318 as a moving violation for infractions of subsections (1)-(5) or a local ordinance corresponding thereto and enacted pursuant to subsection (8), or punishable pursuant to chapter 318 as a nonmoving violation for infractions of subsection (6), subsection (7), or a local ordinance corresponding thereto and enacted pursuant to subsection (8).

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History.—s. 2, ch. 83-188; s. 1, ch. 84-111; s. 2, ch. 88-253; s. 322, ch. 95-148; s. 4, ch. 96-413; s. 168, ch. 99-248; s. 7, ch. 2000-313; s. 6, ch. 2005-164; s. 3, ch. 2008-98; s. 46, ch. 2010-223; s. 2, ch. 2015-163.

**320.01 Definitions, general.—As used in the Florida Statutes, except as otherwise provided, the term:**

(22) “Golf cart” means a motor vehicle that is designed and manufactured for operation on a golf course for sporting or recreational purposes and that is not capable of exceeding speeds of 20 miles per hour.

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**Appendix B – Table 3 Peak Hour Volumes by Neighborhood**

Neighborhoods	Peak hour SF Trips	Peak hour MF Trips	# of ingress/egress points/ Neighborhood	Max Peak Hour Trips at Points of Ingress/Egress
	0.99	0.56		>180
Palm Beach Little Ranches East	<b>34</b>		<b>1</b>	34
Paddock Park	<b>250</b>		<b>5</b>	50
Paddock Park II	<b>173</b>		<b>6</b>	29
Saddle Trail Park	<b>240</b>		<b>7</b>	34
Geranium – SF – Sugar Pond Manor	<b>111</b>		<b>2</b>	55
Primrose/Hollyhock – SF – Sugar Pond Manor	<b>239</b>		<b>1</b>	<b>239</b>
Primrose/Raintree – SF – Sugar Pond Manor	<b>152</b>		<b>2</b>	76
Aster Cove – SF – Sugar Pond Manor	<b>147</b>		<b>1</b>	147
Horseshoe Trace – A – SF – Sugar Pond Manor	<b>176</b>		<b>2</b>	88
Horseshoe Trace – B – SF – Sugar Pond Manor	<b>128</b>		<b>2</b>	64
Stirrup Lane – SF – Sugar Pond Manor	<b>158</b>		<b>3</b>	53
Pinto Lane – SF – Sugar Pond Manor	<b>74</b>		<b>2</b>	37
Sugar Pond Manor SF – Aster/Silver Bell/ Greenleaf	<b>544</b>		<b>6</b>	91
Mulberry/Staghorn – Sugar Pond Manor		<b>60</b>	<b>2</b>	30
Goldenrod/Hyacinth Pl – Sugar Pond Manor		<b>143</b>	<b>2</b>	72
Periwinkle /Lily Ct – Sugar Pond Manor		<b>83</b>	<b>2</b>	41
Hawthorne – Sugar Pond Manor		<b>97</b>	<b>2</b>	48
South Shore No. 1 MF		<b>77</b>	<b>2</b>	39
Montauk Village		<b>18</b>	<b>1</b>	18
Riverside – South Shore No. 1	<b>36</b>		<b>1</b>	36
Lakeside Shores – Single Family/South Shore No. 1	<b>236</b>		<b>2</b>	118
Lakeside Shores – Single Family/South Shore No. 1	<b>51</b>		<b>2</b>	26
South Shore No. 2	<b>306</b>		<b>4</b>	76
South Shore No. 4	<b>35</b>		<b>6</b>	6
South Shore No. 4 – The 12th Fairway/White Pine		<b>339</b>	<b>3</b>	113
South Shore No. 4 – Guilford Villas		<b>83</b>	<b>1</b>	83
Berkshire – South Shore No. 4	<b>136</b>		<b>7</b>	19
South Shore No. 3 East North Hampton Terr	<b>50</b>		<b>1</b>	50
South Shore No. 3 West West Hampton	<b>133</b>		<b>2</b>	66
Greenview Shores No. 1	<b>231</b>		<b>1</b>	<b>231</b>
Margate Place – GVS No. 2	<b>127</b>		<b>1</b>	127
Amesbury Circle – GVS No. 2	<b>86</b>		<b>1</b>	86
Lynton Circle – GVS No. 2	<b>71</b>		<b>2</b>	36
Farmington – GVS No. 2	<b>87</b>		<b>1</b>	87
Wiltshire Village – GVS No. 2	<b>191</b>		<b>2</b>	96
Chatsworth Village – GVS No. 2	<b>171</b>		<b>1</b>	171

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Neighborhoods	Peak hour SF Trips	Peak hour MF Trips	# of ingress/egress points/ Neighborhood	Max Peak Hour Trips at Points of Ingress/Egress
	0.99	0.56		>180
Folkestone – GVS No. 2	82		1	82
Yarmouth – GVS No. 2	285		2	143
Dovedale Court – GVS No. 2	76		1	76
Greenvue Shores No. 2 (north of Greenbriar MF)		109	1	109
Pinewood/Pinewood East	213		2	106
Pinewood East/Pinewood East No. 2	151		3	50
Avondale Woods – Pinewood East No. 2 (Tract A)	66		1	66
Berkshire – Pinewood East No. 2 (Tract B)	108		1	108
Eastwood			2	0
Eastwood No. 2 – Eastwood	228		2	114
Eastwood No. 3 – Eastwood	295		3	162
The Pines Of Wellington	90		2	45
The Brier Patch		16	1	16
Channing Villas	75		1	75
Park Place		44	1	44
Pinewood Manor	119		1	119
Pinewood Grove	137		1	137
Barrington Woods (Phase 3)	45		1	45
Aero Club	596		4	62
Meadow Wood	945		4	83
Equestrian Preserve Area – Subarea A (Non-PUD)	104		1	104
Equestrian Preserve Area – Subarea C (Not including 59-acre Commercial Rec, Orange Point or Palm Beach Point)	283		13	23

**Appendix C – Wellington Traffic Counts and Analysis April 2018**

For the complete *Wellington Traffic Counts and Analysis April 2018* report, please contact the Wellington Clerk's Office at [publicrecords@wellingtonfl.gov](mailto:publicrecords@wellingtonfl.gov).