



A SAFE SCHOOLS TRANSPORTATION STUDY

# Grassy Lake Elementary School Minneola, FL

GRASSY LAKE ELEMENTARY SCHOOL

August 2012





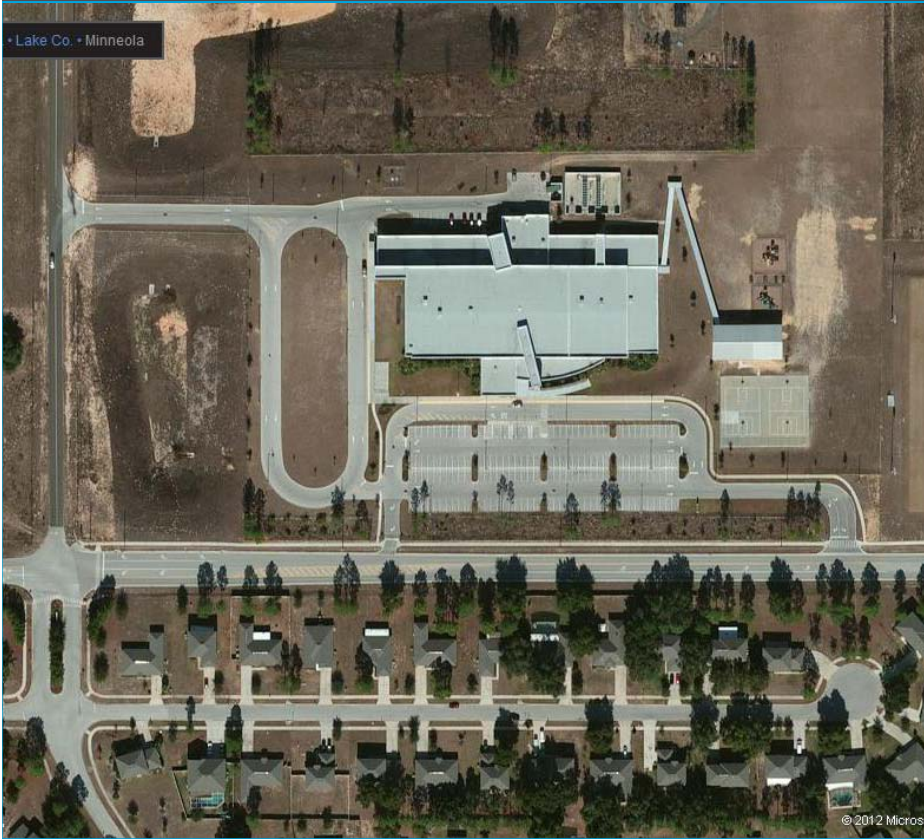


A SAFE SCHOOLS TRANSPORTATION STUDY

## Grassy Lake Elementary School

# Grassy Lake Elementary School Snapshot

• Lake Co. • Minneola



November 30, 2011

Grades: Pre-Kindergarten – 5<sup>th</sup>

Total Students: 1,013

- Provided Bus Transportation : 541
- Not Provided Bus Transportation: 472

Students Living within the “Walk Zone”: 154

- Provided Bus Transportation: 23
- Not Provided Bus Transportation: 131

Observation Day (Partly Cloudy)

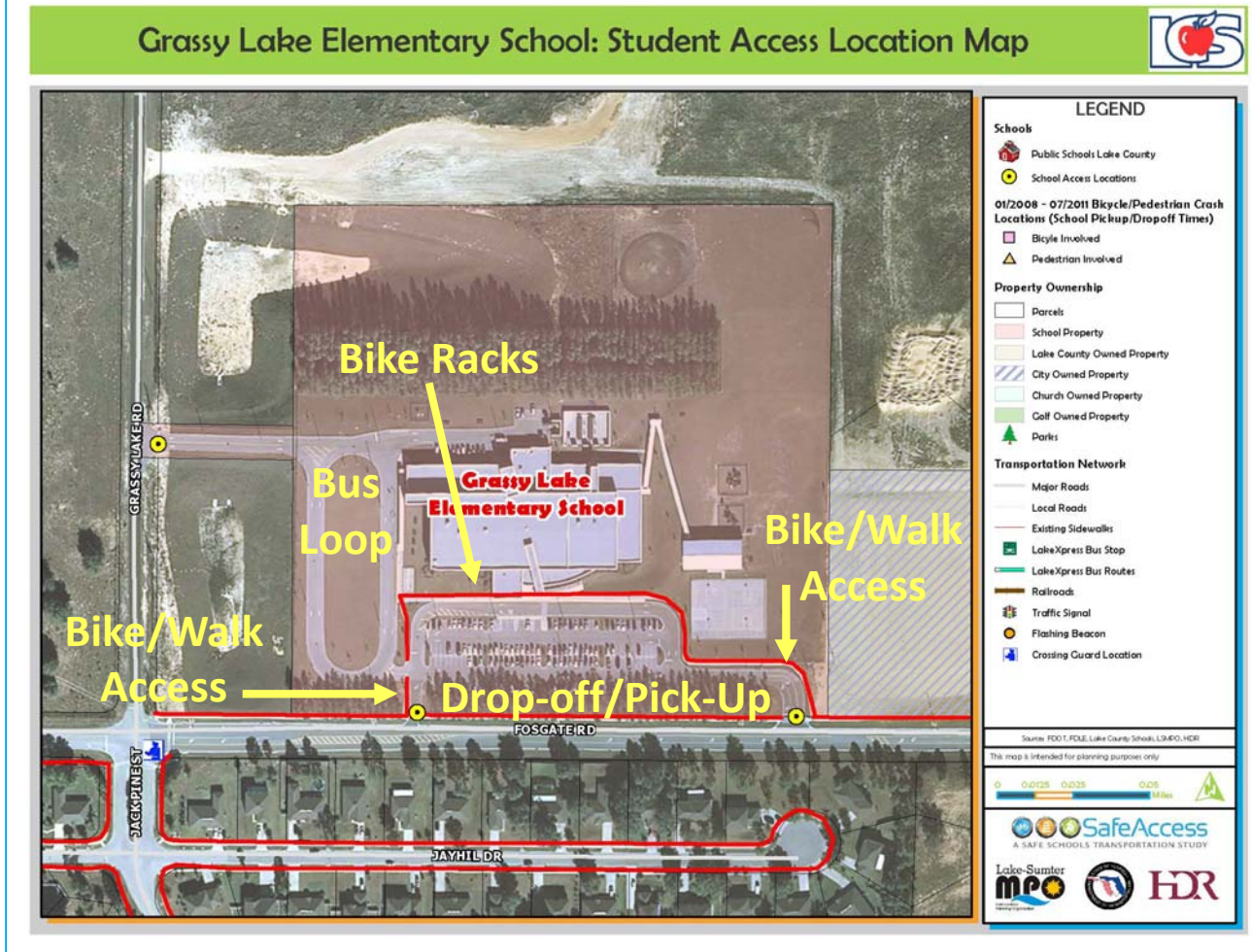
- Walkers: 40 (est.)
- Bike Riders: 2



- ✓ Grassy Lake Elementary School website – Click [here](#)
- ✓ City of Minneola website – Click [here](#)
- ✓ Lake County Schools website – Click [here](#)

## Findings:

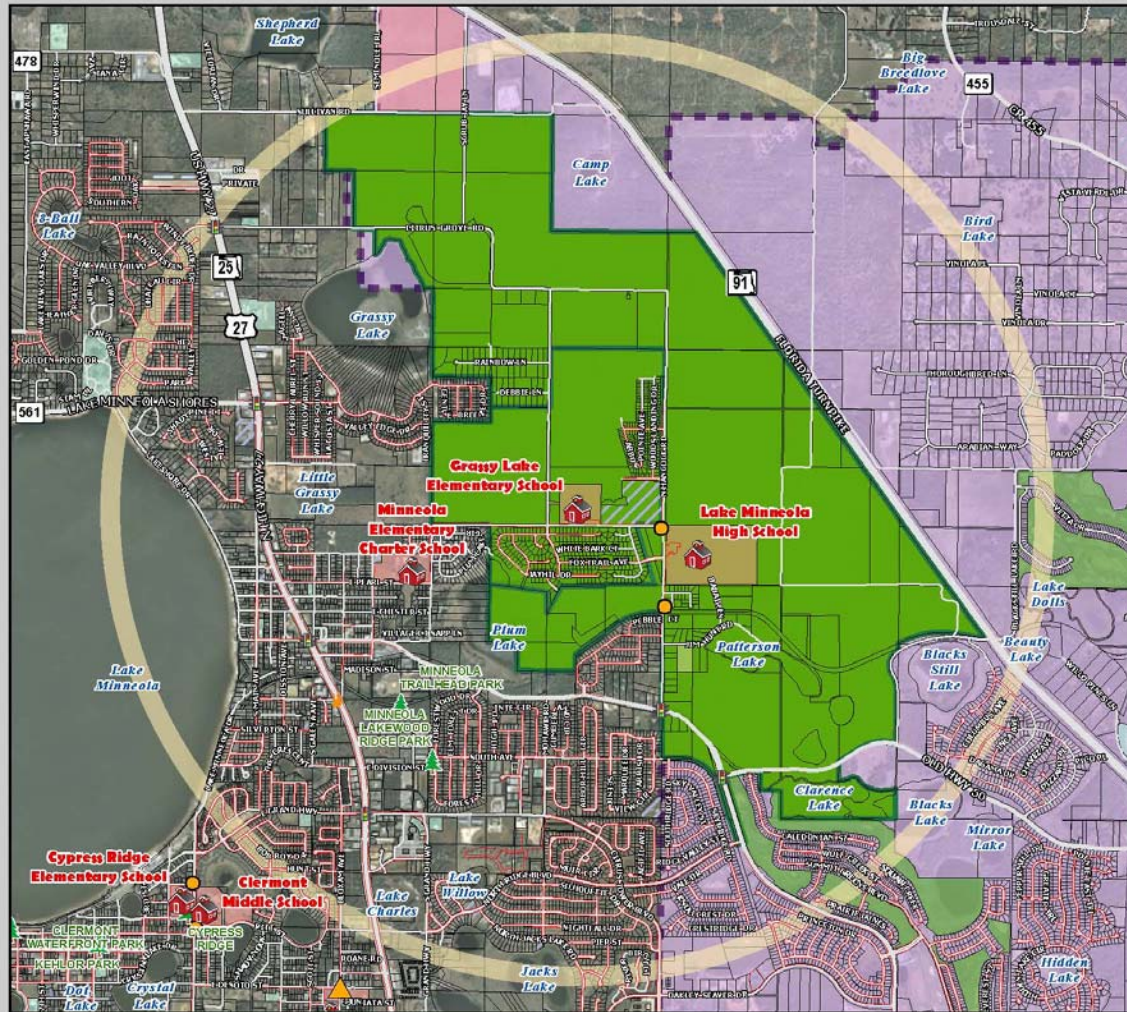
- ✓ More than half of students are bused
- ✓ One-way drop-off/pick-up loop separated from bus loop
- ✓ One bike/walk access on each side of drop-off/pick-up loop
- ✓ Crossing guard located at Fosgate Rd/Grassy Lake Rd/Jack Pine St
- ✓ Vast majority of traffic on Fosgate Rd & Grassy Lake Rd during school arrival/dismissal periods is school-related
- ✓ Some overlap with Lake Minneola HS traffic in PM – dismissal times are only 20 minutes apart





# Attendance and 2-Mile "Walk" Zone Map

## Grassy Lake Elementary School: Attendance and 2-Mile "Walk" Zone Map



**LEGEND**

**Schools**

- Public Schools Lake County
- 2-Mile Buffer of Grassy Lake ES
- Parent Responsibility Zone
- Special Exception Areas
- Grassy Lake ES Attendance Zones (2010-2011)

**01/2008 - 07/2011 Bicycle/Pedestrian Crash Locations (School Pickup/Dropoff Times)**

- Bicycle Involved
- Pedestrian Involved

**Property Ownership**

- Parcels
- Parks

**Transportation Network**

- Major Roads
- Local Roads
- Existing Sidewalks
- LakeXpress Bus Stop
- LakeXpress Bus Routes
- Railroads
- Traffic Signal
- Flashing Beacon

Sources: FDOT, FDE, Lake County Schools, LDMPO, HDR

This map is intended for planning purposes only





- 7:00 am:** Breakfast available; before school program begins
- 8:05 am:** Official start of car drop-off line
- 8:30 am:** School start time
- 2:45 pm:** School release time (first bell)
- 6:00 pm:** After school program ends

*Note: Students are released one hour early on Wednesdays*





A SAFE SCHOOLS TRANSPORTATION STUDY

Grassy Lake Elementary School

# Bus Access



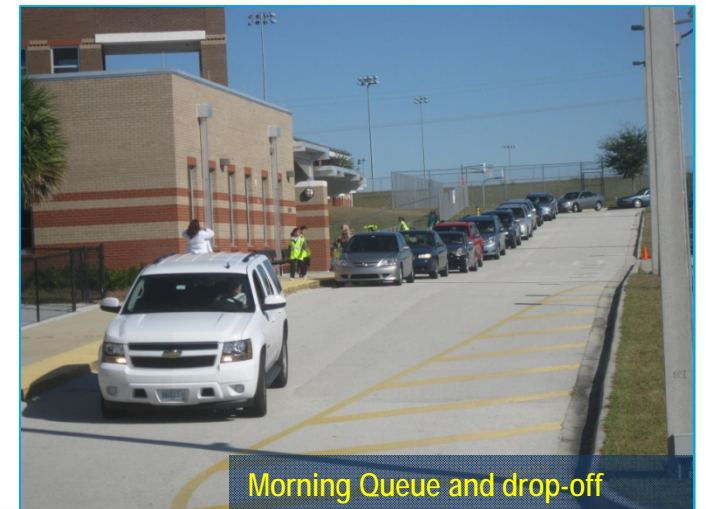
## Findings:

- ✓ The bus loop operations, and loading and unloading work well
- ✓ Adequate storage is provided on-site for all 21 buses (17 regular, 4 ESE)
- ✓ Nine buses jointly serve Grassy Lake ES & Minneola ECS



## Findings:

- ✓ School staff & students provide curbside door-opening valet
- ✓ During dismissals, students are called up to their car
- ✓ The school's more remote location increases the need for car queue storage
- ✓ Drivers at the car line entrance were observed to be courteous, letting other drivers make left turns in and out of the driveway



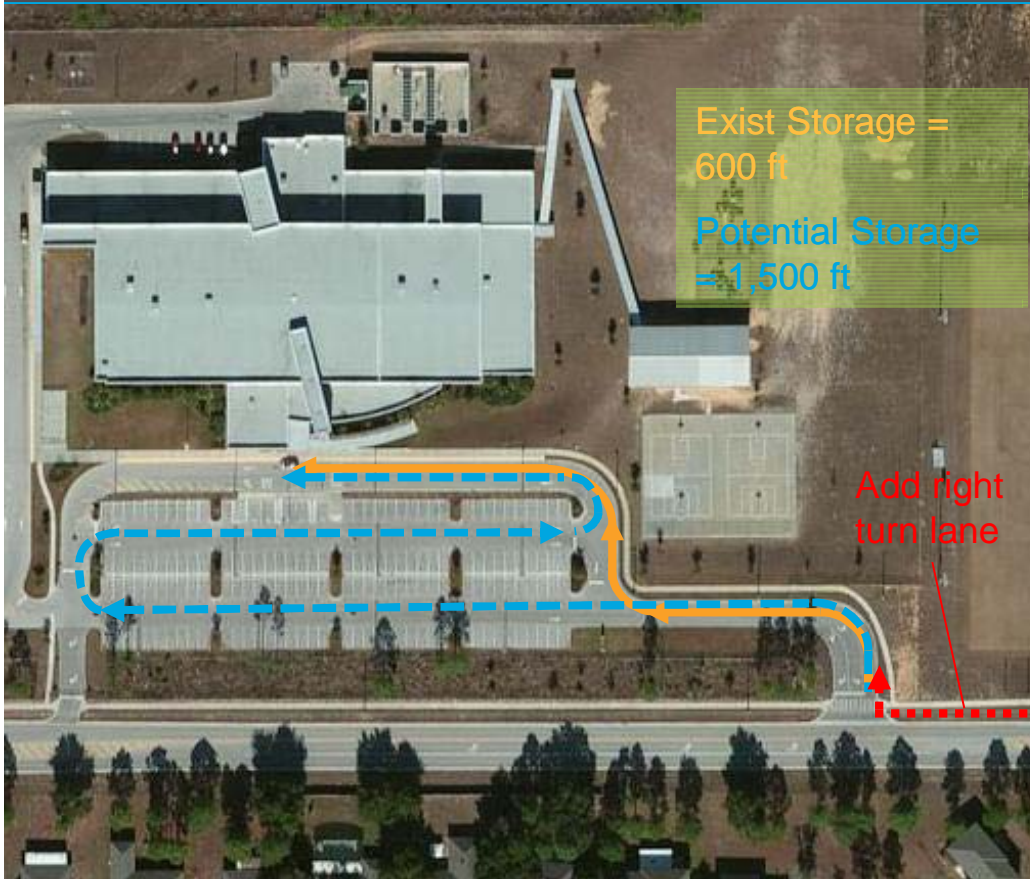
## Findings:

- ✓ The car line queues back onto Fosgate Rd during both arrival and dismissal periods
- ✓ There is a sight distance issue with the hill on Fosgate Rd east of the school
- ✓ Maximum observed queues on Fosgate Rd extended for 450 feet eastbound (in center turn lane) and 900 feet westbound
- ✓ Westbound through vehicles use center turn lane to pass queued vehicles; cross-over point creates conflicts & is a safety hazard





# Student Drop-off & Pick-up



*Drop-off and Pick-up Circulation Concept – Option 1*

## Recommendations:

- ✓ **Option 1:** Modify existing circulation pattern through the parking lot to increase vehicle queuing capacity
  - ✓ Increases on-campus queue storage by 900 feet, from 600 to 1,500 feet
  - ✓ Still does not fully accommodate observed total queue length on Fosgate Rd (1,300 feet)
  - ✓ Add a westbound right turn lane on Fosgate Road to help mitigate the conflict with through vehicles and queued vehicles
    - Sufficient space exists within landscape buffer to add turn lane
    - Some utility poles would need to be relocated
- ✓ Would create conflict with vehicles entering or exiting the parking spaces.



## Recommendations:

- ✓ Option 2: Switch the bus and car loops
  - ✓ Has been considered in the past
  - ✓ Could accommodate total observed queue length on-site, but only with long section of double stacking
  - ✓ Would require northbound right turn & southbound left turn lanes on Grassy Lake Rd to prevent blockage of roadway by queued vehicles if available storage exceeded
  - ✓ Would require modification to curb return at car loop to allow buses to turn left out
  - ✓ More costly improvement than Option 1



*Drop-off and Pick-up  
Circulation Concept –  
Option 2*





## Findings:

- ✓ No remote drop-off/pick-up observed
- ✓ According to school staff, there is some remote drop-off/pick-up at the Fosgate/Grassy Lake/Jack Pine intersection

## Recommendations:

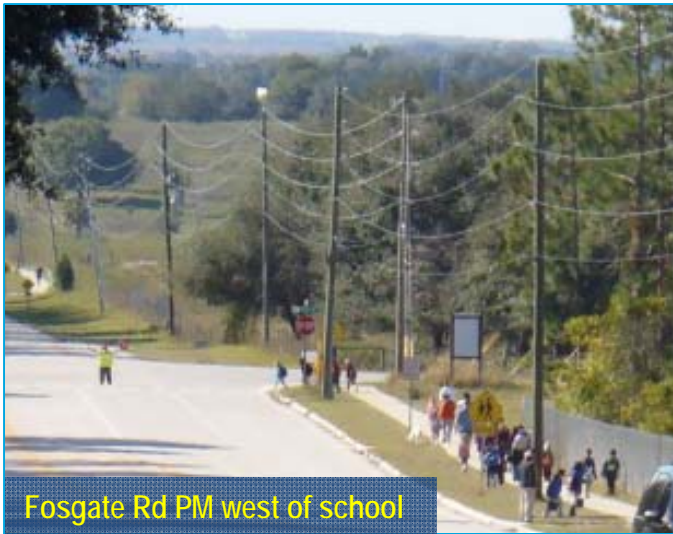
- ✓ No apparent need to address at this time



A SAFE SCHOOLS TRANSPORTATION STUDY

## Grassy Lake Elementary School

# Bike/Walk Access



Fosgate Rd PM west of school

### Findings:

- ✓ Majority of walkers/bicyclists travel to/from the west and cross Fosgate Rd at Jack Pine St with crossing guard
- ✓ Only a handful of students observed traveling to/from the east
- ✓ No elementary school students observed walking/riding to/from further west of Jack Pine St
- ✓ Bicycle racks are well placed in fenced corral at the front of the school and have ample supply



Fosgate Rd at Grassy Lake Rd



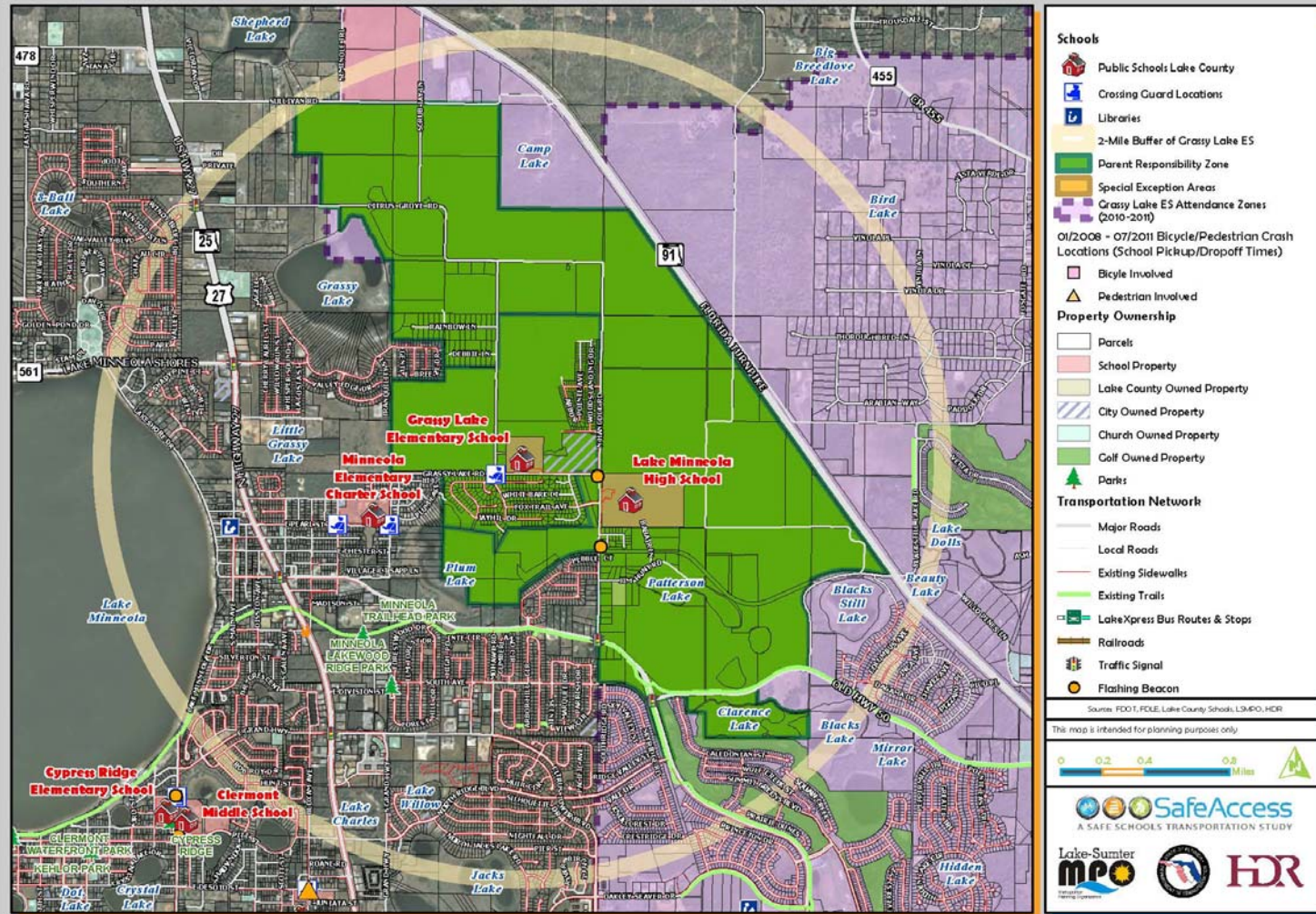
Fosgate Rd east of school



Bike Corral



## Grassy Lake Elementary School: Existing Conditions Map







A SAFE SCHOOLS TRANSPORTATION STUDY

## Grassy Lake Elementary School

# Planned Project

## Hancock Rd North Extension

### Findings:

- ✓ Hancock Rd North Extension, Old Hwy 50 to Fosgate Rd
  - ✓ County project
  - ✓ Extends existing Hancock Rd on east side of powerline easement
  - ✓ Planned for 4 lanes (may be built initially as 2 lanes)
  - ✓ Proposed to have sidewalk (west side) and multi-use trail (east side)
  - ✓ Existing Turkey Farm Rd will end at cul-de-sac
  - ✓ Traffic signal at Old Hwy 50/Turkey Farm to be removed
  - ✓ ROW funding programmed for 2012-2013
  - ✓ No CST funding identified
- ✓ Available ROW on Turkey Farm Rd between Old Hwy 50 and Jim Hunt Rd not sufficient to construct missing sidewalk

### Recommendation:

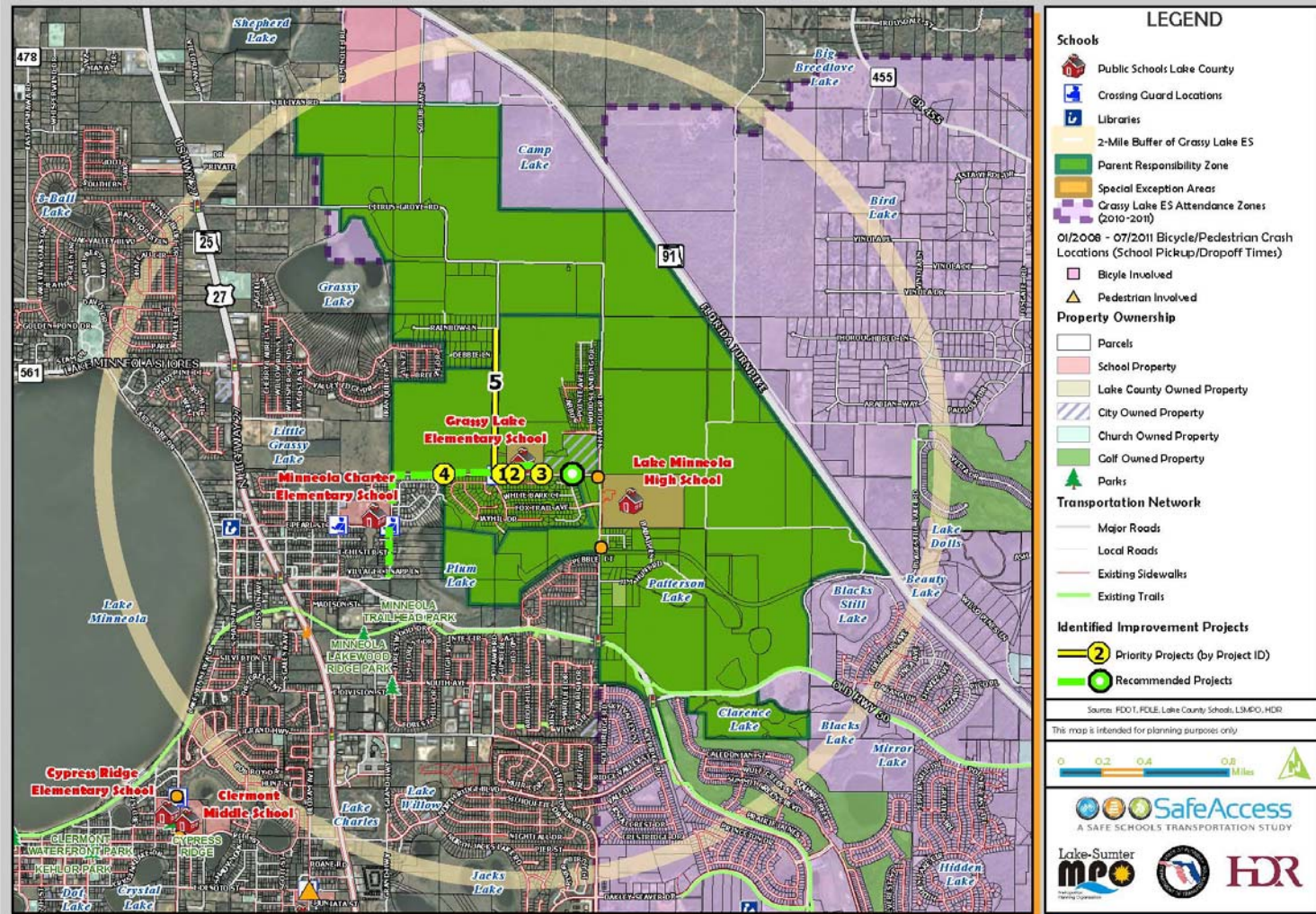
- ✓ Make interim improvements to existing facilities on Turkey Farm Rd/Hancock Rd prior to Hancock Rd Extension





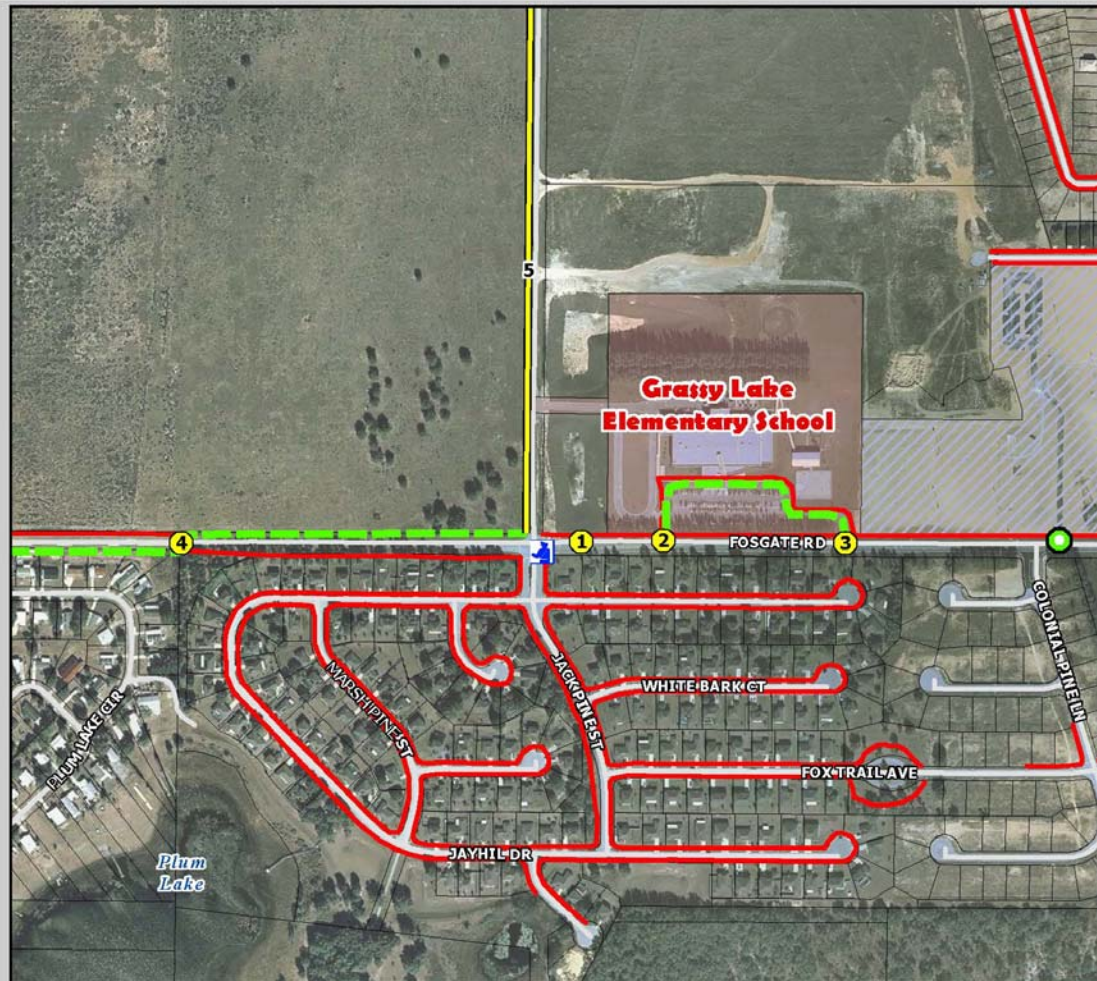
# Transportation Access Master Plan

## Grassy Lake Elementary School: Transportation Access Master Plan





## Grassy Lake Elementary School: Priority Projects



### LEGEND

- Schools**
  - Public Schools Lake County
- Identified Improvement Projects**
  - Priority Projects (by Project ID)
  - Recommended Projects
- Property Ownership**
  - Parcels
  - School Property
  - Lake County Owned Property
  - City Owned Property
  - Church Owned Property
  - Golf Owned Property
  - Parks
- Transportation Network**
  - Major Roads
  - Local Roads
  - Existing Sidewalks
  - Lake Xpress Bus Stop
  - Lake Xpress Bus Routes
  - Railroads
  - Traffic Signal
  - Flashing Beacon
  - Crossing Guard Location

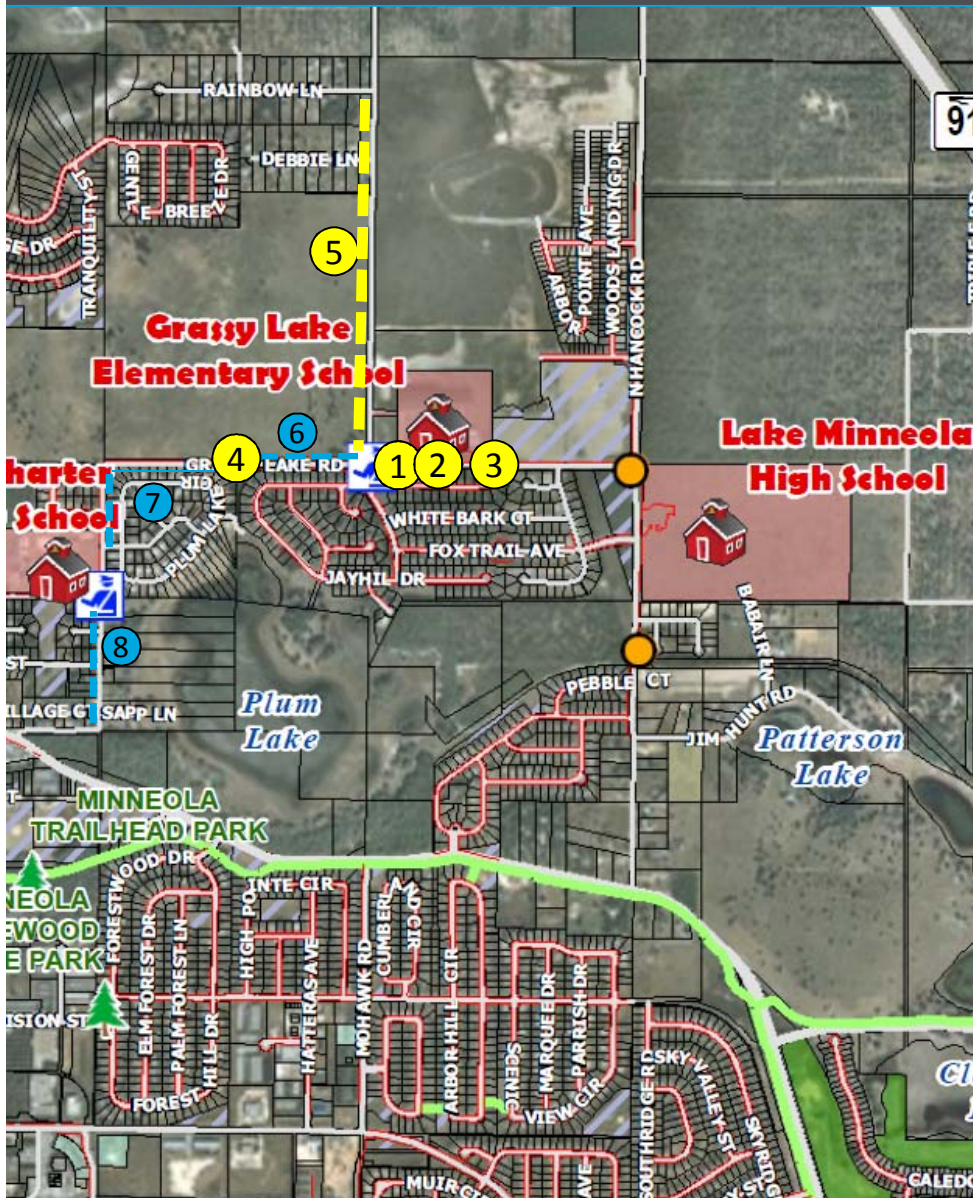
Source: FDOT, FCLE, Lake County Schools, LSMPO, HDR

This map is intended for planning purposes only.





## Grassy Lake Elementary School



### Priority Projects:

1. School speed zone flashing beacons on Fosgate Rd & Grassy Lake Rd
2. Add crosswalk on Fosgate Rd at western school driveway
3. Construct westbound right turn lane on Fosgate Rd at car loop driveway
4. Grassy Lake Rd midblock crosswalk improvements – alignment, lighting, signage/markings
5. Grassy Lake Rd – sidewalk, Fosgate Rd to Rainbow Ln

### Other Sidewalk Connections:

6. Grassy Lake Rd, existing sidewalk (north side) to Fosgate Rd/Jack Pine St
7. Grassy Lake Rd, Plum Lake Dr to existing sidewalk (south side)
8. Grassy Lake Rd, Pearl St to Washington St (west side)

# Priority Project #1

## School Speed Zone Flashing Beacons

### Findings:

- ✓ School speed limit is posted at 15 mph on Fosgate Rd & Grassy Lake Rd adjacent to the school
- ✓ Existing supplemental sign plaques indicate periods in which reduced speed limit applies (7:30 – 9:00 AM & 1:00 – 3:45 PM) have very small print & hard to read by passing motorists

### Recommendations:

- ✓ Replace existing supplemental sign plaques with flashing beacons that are set to be active during the appropriate time periods
- ✓ Beacons can be programmed to be active only during key periods on regular & early release days





# Priority Project #2

## Add Crosswalk on Fosgate Rd at west School Driveway



### Findings:

- ✓ There are no crosswalk markings or detectable warnings at the western school driveway on Fosgate Rd (right turn exit only)

### Recommendations:

- ✓ Mark crosswalk at west school driveway on Fosgate Rd and install missing detectable warnings



# Priority Project #3

## Westbound Right Turn Lane into Car Loop Driveway



Westbound Fosgate Rd queue (PM)



Westbound Fosgate Rd queue (AM)

### Findings:

- ✓ During dismissal, westbound vehicles waiting to enter the car pick-up loop were observed to queue back on Fosgate Rd for 900 feet
- ✓ There is a sight distance issue with the hill on Fosgate Rd east of the school
- ✓ Westbound through vehicles use center turn lane to pass queued vehicles; cross-over point creates conflicts & is a safety hazard
- ✓ Existing landscape strip is about 14 feet wide
- ✓ There are no drainage inlets along the curb in this area
- ✓ Some utility poles would need to be relocated

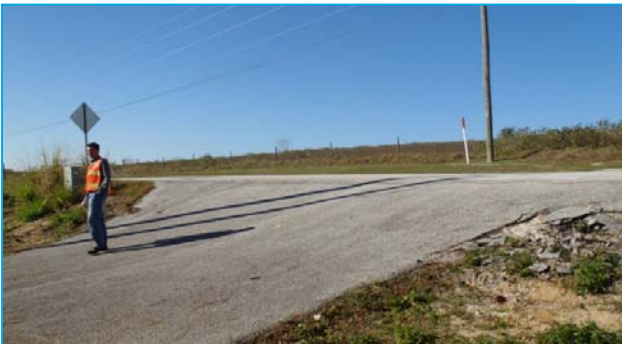
### Recommendations (Option 1):

- ✓ Constructing a westbound right turn lane of 200-400 feet would help mitigate the safety hazard created by westbound through vehicles by moving the cross over point away from the driveway and other conflicting vehicles

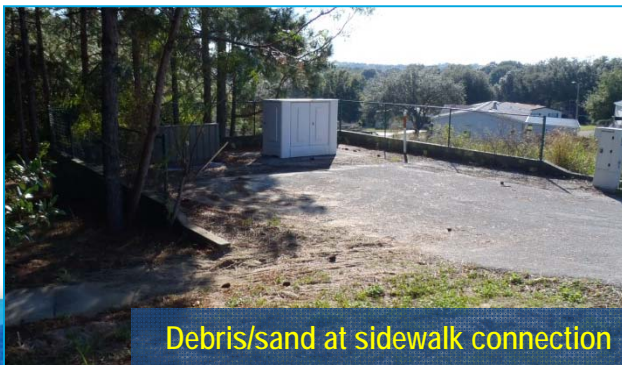




Grassy Lake Rd west of Jack Pine St



ADA Grade Issue at existing crosswalk



Debris/sand at sidewalk connection

### Findings:

- ✓ Crosswalk facilitates shift of sidewalk from north side to south side of roadway
- ✓ Crosswalk connects to existing utilities access driveway with significant grade (does not meet ADA)
- ✓ Sidewalk connecting to driveway is covered with sand/debris
- ✓ Crosswalk does not have any lighting

### Recommendations:

- ✓ Shift midblock crosswalk further east to avoid ADA/grade issue
- ✓ Add lighting so crosswalk is well lit
- ✓ Add advance yield lines (30 ft separation) & yield here to pedestrians signs





Grassy Lake Rd at Debbie Ln



Grassy Lake Rd north of Fosgate Rd

### Findings:

- ✓ Grassy Lake Rd north of Fosgate Rd does not have sidewalks
- ✓ A few H.S. students walk alongside road to/from the north, according to the crossing guard at the Grassy Lake Rd/Fosgate Rd intersection (not observed by study team)
- ✓ New sidewalk would connect to existing residential area at Debbie Ln & Rainbow Ln
- ✓ Reserves at Minneola (Phases 3-4) required to construct Grassy Lake Rd as a standard 2-lane, but not required to construct sidewalk per approved Development Order.

### Recommendations:

- ✓ Construct sidewalk on Grassy Lake Rd from Fosgate Rd to Rainbow Ln; west side preferred (no crossings needed for existing residential)
- ✓ Look for future opportunities to build sidewalk on west side with new development





## Recommendations:

### ✓ Grassy Lake Rd

1. Existing sidewalk (north side) to Fosgate Rd/Jack Pine St
2. Plum Lake Dr to existing sidewalk (south side)
3. Pearl St to Washington St (west side)

✓ All sections above are low priorities due to low number of GLES students living in the vicinity of these potential sidewalk connections (outside the primary school boundary, but includes some students in secondary area who opt not to attend Minneola Elementary Charter School)

Project Priority	Item	Quantity	Units	Total
1	Flashing Ped Signs	2	Signs	\$1,000.00
2	Crosswalk Marking	44	ft	\$100.00
2	Crosswalk Signage	4	Signs	\$1,200.00
3	Right Turn Queue	300	ft	\$40,200.00
4	Crosswalk Yield Bars	20	ft	\$80.00
4	Crosswalk Signage	4	Signs	\$1,200.00
4	Crosswalk Lighting	2	Light	\$20,000.00
5	Sidewalk	3,618	ft	\$311,600.00

### ESTIMATE BASIS AND ASSUMPTIONS:

- Sidewalk estimates based on estimating tool developed for Phase 1, Estimates for all other improvements based on Unit Costs per FDOT Lake County (Area 7) averages (07/2011 - 06/2012).
- Estimate does not include utility relocation costs, utility relocation assumed by others.
- The mobilization costs are based on 15% of the construction cost and estimates include maintenance of traffic costs (15% of construction costs).
- No Regular excavation & embankment to 1 ft depth is assumed
- No R/W Impact
- No specialized landscaping (beyond sodding) is included.
- Sidewalk is assumed to be 5 feet wide, unit given is in linear feet.





A SAFE SCHOOLS TRANSPORTATION STUDY

Grassy Lake Elementary School

## Contact Information

This website represents an ongoing commitment to increase safe access to schools within the Lake~Sumter Metropolitan Planning Organization Planning Area.

Updates to data, and suggestions for programming and project ideas are welcome from all agencies and the general public.

### **Mike Woods**

Project Manager, Transportation Planner

(352) 315-0170

[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)



### **Mindy Heath, AICP**

Consultant Project Manager

(407) 420-4200

[Mindy.heath@hdrinc.com](mailto:Mindy.heath@hdrinc.com)



*Promoting Regional  
Transportation Partnerships*