



SafeAccess

SAFE SCHOOLS TRANSPORTATION STUDY

South Lake High School Groveland, FL



March 2013



South Lake High School Snapshot



May 9, 2012

Grades: 9th – 12th

Total Students: 1,740

- Provided Bus Transportation : 1,011
- Not Provided Bus Transportation: 729
- Buses Assigned to School (29 reg, 5 ESE) 34

Students Living within the "Walk Zone": 142

- Provided Bus Transportation: 31
- Not Provided Bus Transportation: 111

Observation Day (Sunny AM, Light Rain PM)

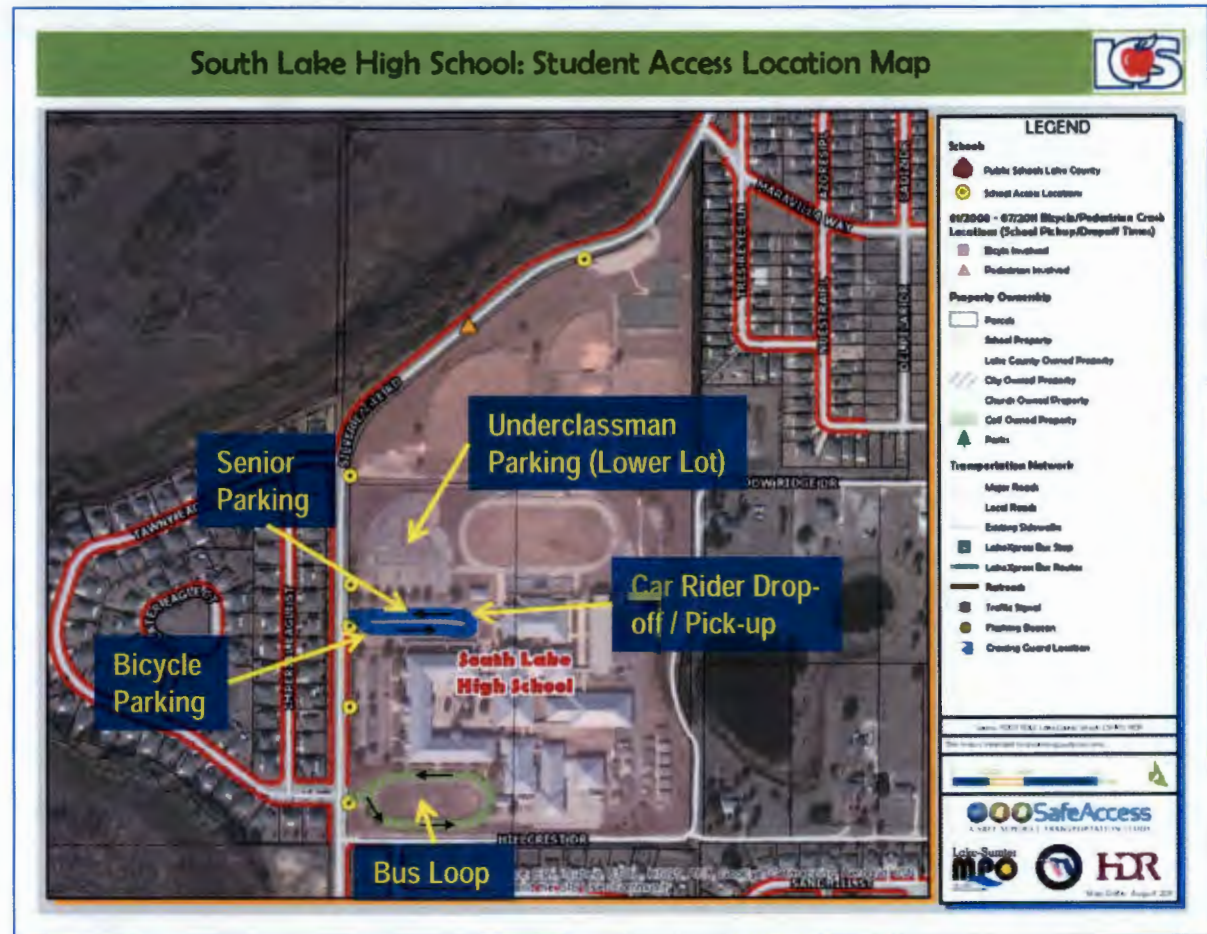
- Walkers: 30 (est.)
- Bike Riders: 0



- ✓ South Lake High School website – Click [here](#)
- ✓ City of Groveland website – Click [here](#)
- ✓ Lake County Schools website – Click [here](#)

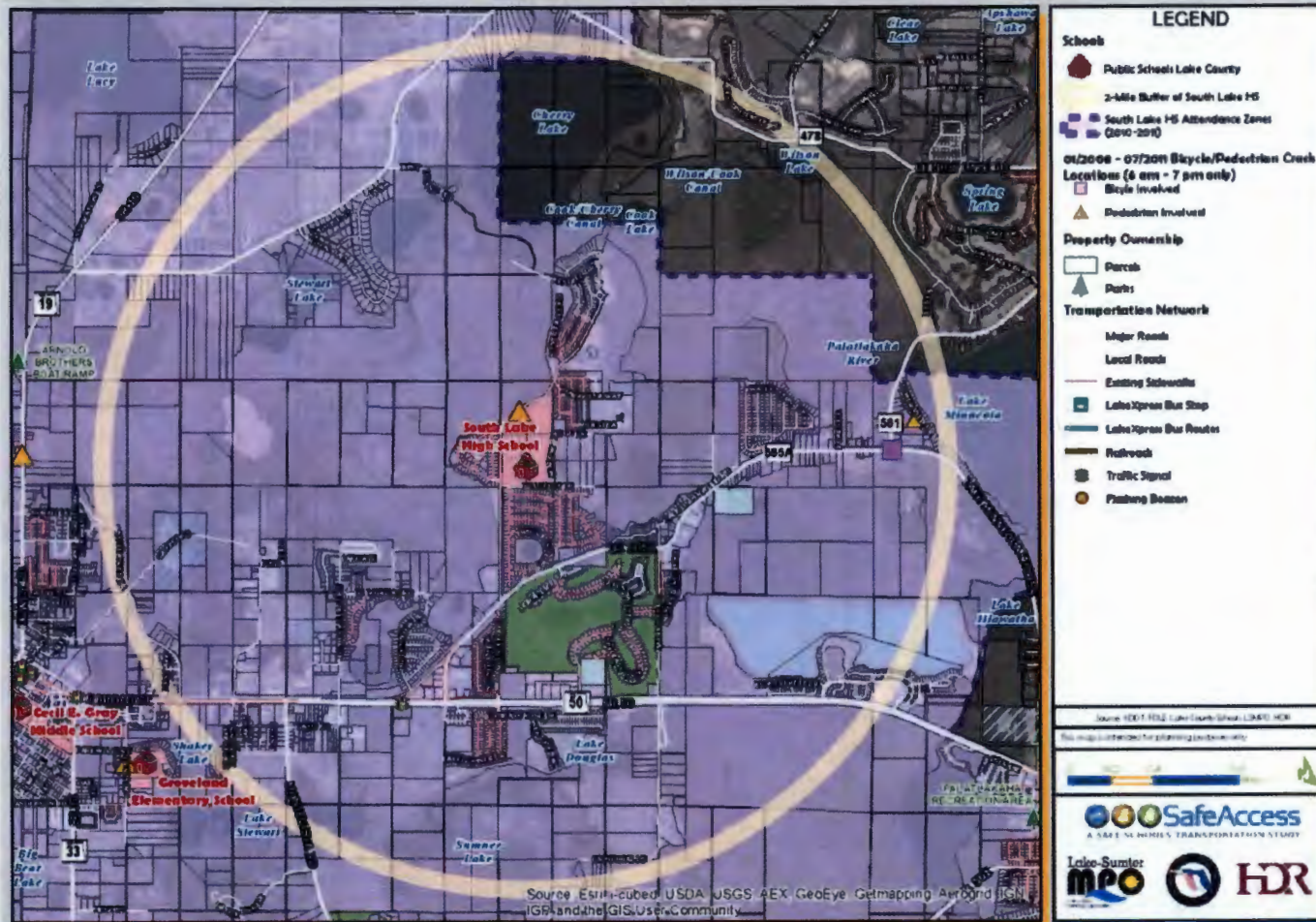
Findings:

- ✓ AM and PM backup occurs from underclassman parking
- ✓ Senior parking and car loop share a driveway
- ✓ Driveways for car loop/senior parking and the underclassman lot are closely spaced
- ✓ No designated walker / bicycle entrance
- ✓ Speeding observed on Silver Eagle Rd
- ✓ Most walkers are from neighborhood south of the school



Attendance and 2-Mile "Walk" Zone Map

South Lake High School: Attendance and 2-Mile "Walk" Zone Map



Arrival and Dismissal Schedule

- 7:32 am:** First bell / school start time
- 2:00 pm:** ESE bus riders dismissed
- 2:10 pm:** Gates are opened
- 2:15 pm:** Seniors released
- 2:20 pm:** School release time
(staggered dismissal)
- 2:26 pm:** Bus riders released
- 2:35 pm:** Majority of students have
left campus

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





Findings:

- ✓ Buses line up in a single queue in a specific order; loading occurs simultaneously
- ✓ Adequate storage is provided on-site for all 34 buses (29 regular, 5 ESE)
- ✓ ESE buses are loaded at 2:00 PM and leave at 2:05 PM; all regular bus riders are released at 2:20 PM; regular buses leave at 2:26 PM
- ✓ School staff help buses exit in PM by stopping traffic on Silver Eagle Rd (which also allows pedestrians to cross Silver Eagle Rd to Tawny Eagle Dr)



Recommendations:

- ✓ Install a sidewalk around the bus loop to provide a paved connection for students to access queued buses in PM
 - ✓ Sidewalk gap south of the bus loop entrance / exit will be addressed by the Silver Eagle Rd sidewalk project; bus loop sidewalk project should connect with the Silver Eagle Rd sidewalk project
- ✓ Install a stop sign at the bus loop exit

Findings:

- ✓ Car loop is co-located with the senior parking lot
- ✓ Parents observed to start dropping off at 6:50 AM; backup starts to occur about 10 minutes before the first bell
- ✓ Students crossings of the drive aisles in the senior parking are focused at particular locations, which results in congestion and safety concerns
- ✓ All PM pickups were completed within 15 minutes (by 2:35 PM)

Recommendations:

- ✓ Install a railing along the sidewalk on the parking lot side of the car loop drop-off / pick-up area to channelize walkers at existing marked crosswalks
 - ✓ Would reduce vehicle – pedestrian conflict points
- ✓ Install marked crosswalk connecting east end of sidewalk separating parking from car loop to handicap ramp near gym





Findings:

- ✓ Two parking lots are available for students – senior lot and underclassman (lower) lot
- ✓ Vehicle queue back-up onto Silver Eagle Rd occurs at underclassman lot
- ✓ Students walking through senior lot cause vehicles in car queue to stop during AM drop-off; students cross between parked cars during PM pick-up
- ✓ Students must pay parking permit fee to park in student lots; about 100 spaces are available in senior lot; more than 200 spaces are available in underclassman lot
- ✓ Students parking in underclassman lot cannot currently get into campus without walking on grass or through senior lot – existing sidewalk connection ends at senior lot and does not extend around perimeter of lot

Recommendations:



- ✓ Install a railing along the sidewalk on the parking lot side of the car loop drop-off / pick-up area to channelize walkers at existing marked crosswalks
- ✓ Raise existing crosswalks (speed tables)
- ✓ Reconfigure parking lot with designated pedestrian walkway connecting marked crosswalk at car line and sidewalk to lower lot, or construct sidewalk along perimeter of upper lot connecting lower lot sidewalk connector toward gym
- ✓ Consider connecting upper & lower student parking lots with new driveway





Remote Student Pick-up on Hillcrest Dr



Remote Student Pick-up on Silver Eagle Dr

Findings:

- ✓ Parents were observed to drop off and pick up students on Hillcrest Dr and Silver Eagle Dr
- ✓ Vehicles can cut through the neighborhood south of the school from CR 561

Recommendations:

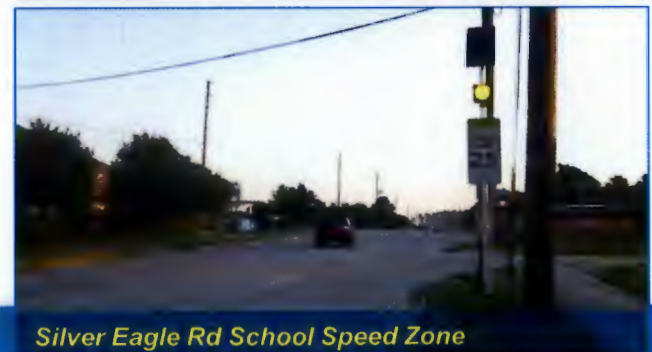
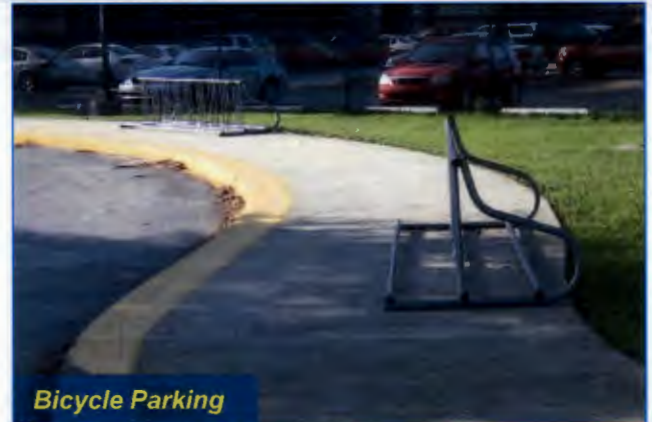
- ✓ Additional enforcement might be necessary if this becomes an issue (complaints raised, traffic operations disruptions, safety concerns), particularly on Silver Eagle Dr



Remote Student Drop-off on Silver Eagle Dr

Findings:

- ✓ No students were observed to ride their bike to school
- ✓ Bike racks are older “wheel bender” style that do not properly support bicycles at two points above the wheel hubs
- ✓ Bike racks are not secured to ground, and existing placement is poor – bicycles on the racks would potentially block the sidewalk
- ✓ Although the school is within a 25 MPH school zone, speeding was observed to be an issue on Silver Eagle Rd
- ✓ No pedestrian safety program is offered by the school
- ✓ More walkers were observed in the PM
- ✓ Most walked to/from the neighborhood south of the school and cut through the bus loop; an alternative route (if connected) would be along the north side of Hillcrest Dr to the east end of the bus loop
- ✓ The baseball field and tennis courts are locked; walkers cannot cut through these areas to/from the north



Findings:

- ✓ Existing curb ramp on west side of Silver Eagle Rd at senior parking lot does not line up with marked crosswalk due to location of stormwater inlet; crossing point is not ideal – street is wider at that point and there are conflicts with traffic turning into/out of the underclassman parking lot
- ✓ Planned CR 565A / Silver Eagle Rd intersection project includes sidewalk improvements along Silver Eagle Rd and CR 565A; Sidewalk improvements are not planned to connect to Greenley Ave cul-de-sac
- ✓ A midblock crosswalk is marked across Silver Eagle Dr at Maravilla Way but does not have pedestrian warning signs
- ✓ Cross streets along Silver Eagle Drive, such as Tawny Eagle Cir and Hillcrest Dr do not have marked crosswalks
- ✓ Early morning arrival period is dark and insufficient lighting is provided along Silver Eagle Dr, particularly at student crossing points



Existing Silver Eagle Rd Crosswalk at Senior Lot



Greenley Ave cul-de-sac does not have a sidewalk connection to CR 565A



Maravilla Way crosswalk missing pedestrian signs



Recommendations:

- ✓ Construct sidewalk along north side of Hillcrest St to provide connection around east end of bus loop for walkers
- ✓ Relocate existing Silver Eagle Rd crosswalk at senior lot approximately 200 feet north to north of lower lot driveway
- ✓ Install crosswalks on cross streets along Silver Eagle Rd
- ✓ Replace existing bike rack and place on concrete pad closer to school
- ✓ Install pedestrian crossing signage at Silver Eagle Rd/Maravilla Way
- ✓ Install lighting along Silver Eagle Rd and at crossing points
- ✓ Build a sidewalk connection from Greenley Ave cul-de-sac to CR 565A sidewalk project

South Lake High School: Existing Conditions Map



- Schools**
- Public Schools Lake County
 - Crossing Guard Locations
 - Libraries
 - 2-Mile Buffer of South Lake HS
 - South Lake HS Attendance Zones (2010-2016)
- 01/2008 - 07/2011 Bicycle/Pedestrian Crash Locations (School Pickup/Dropoff Times)**
- Bicycle Involved
 - Pedestrian Involved
- Property Ownership**
- Parcel
 - School Property
 - Lake County Owned Property
 - City Owned Property
 - Church Owned Property
 - Golf Owned Property
 - Parks
- Transportation Network**
- Major Roads
 - Local Roads
 - Existing Sidewalks
 - Existing Trails
 - LakeXpress Bus Routes & Stops
 - Railroads
 - Traffic Signal
 - Flashing Beacon

Source: Esri, Intel, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGA, and the GIS User Community

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This map is intended for planning purposes only.

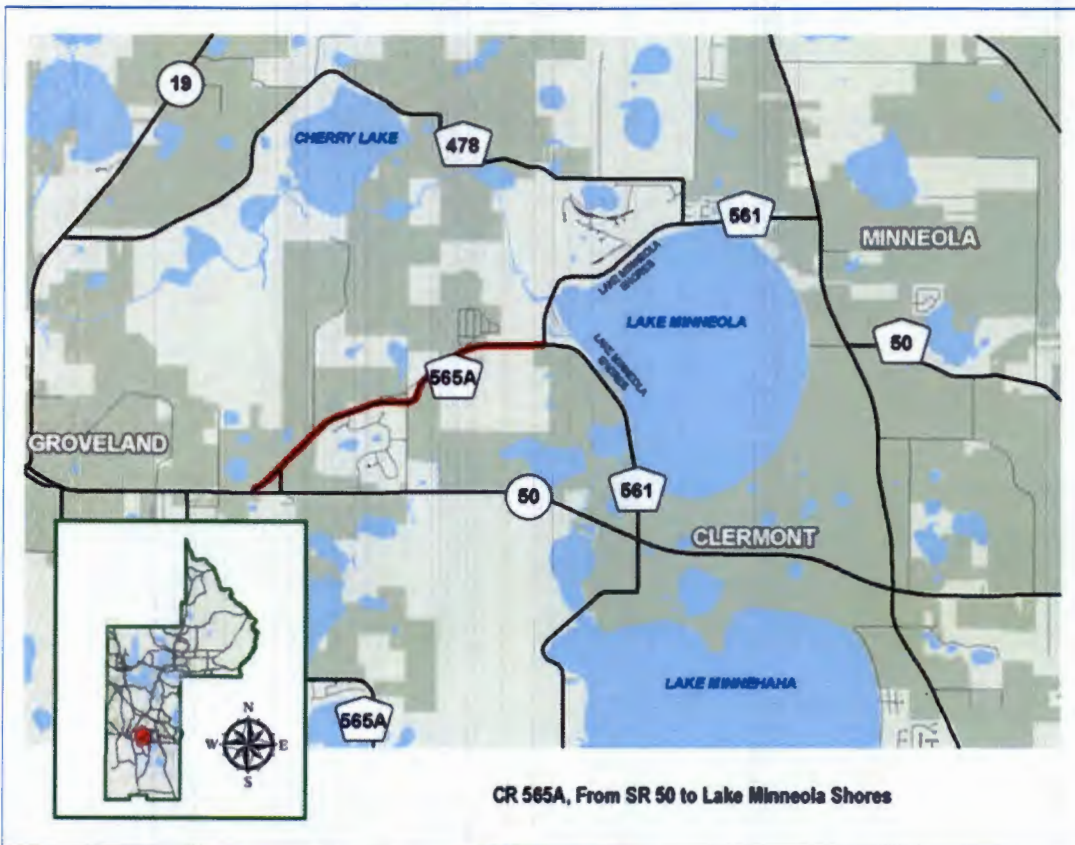
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Lake-Sumner
mco **HDR**

Findings:

- ✓ Intersection is programmed to be signalized with new sidewalks constructed on CR 565A (south side) and Silver Eagle Rd (west side)
- ✓ Project is planned for FY 2012
- ✓ Project cost is \$405,000 (Design / Construction)
- ✓ South Lake Trail to be constructed on the north side of the road and will be cul-de-saced just west of Silver Eagle Rd
- ✓ Sidewalk project will close existing sidewalk gap in front of school between Hillcrest St and the bus loop



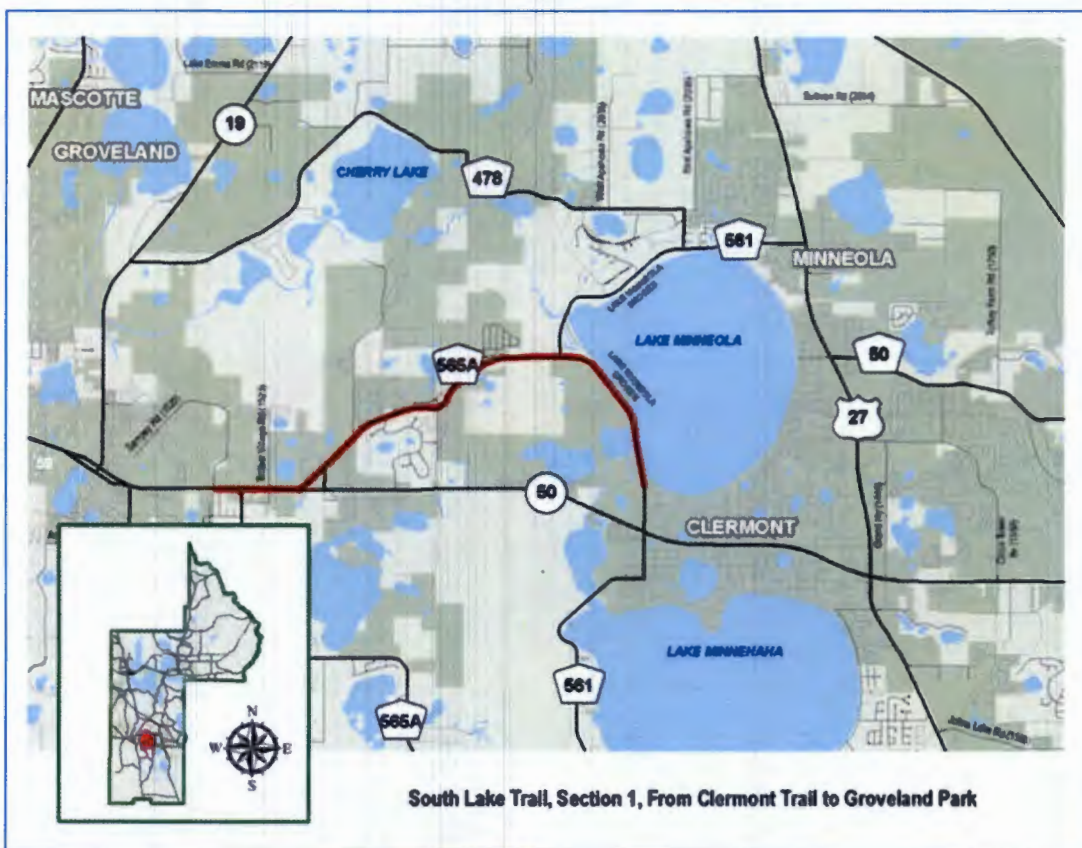


Findings:

- ✓ CR 565A will be widened to 30 ft. and resurfaced
 - ✓ Paved shoulders will be added between Publix shopping center near SR 50 and CR 561
- ✓ Project cost is \$1,473,000 (Design / ROW / Construction) FY 2012
- ✓ New signal to be installed at Silver Eagle Rd and CR 565A

Planned Project

South Lake Trail (Section 1)



Findings:

- ✓ Section 1 will be constructed from the existing Clermont Tr terminus to Groveland Park
- ✓ Trail will be constructed as a 15 ft. multi-use trail
- ✓ Project cost is \$2,000,000 for construction (FY 2012)
- ✓ Phase 3A is the next section to be constructed and is scheduled to go to bid in 2013



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South Lake High School

Transportation Access Master Plan

South Lake High School: Transportation Access Master Plan

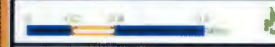


LEGEND

- Schools**
 - Public Schools Lake County
 - Crossing Guard Locations
 - Libraries
 - 2-Mile Buffer of South Lake HS
 - Parent Responsibility Zone
 - Special Exception Areas
 - South Lake HS Attendance Zones (0100-204)
- 01/2008 - 07/2011 Bicycle/Pedestrian Crash Locations (School Pickup/Dropoff Times)**
 - Bicycle Involved
 - Pedestrian Involved
- 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
 - Existing Trails
- Identified Improvement Projects**
 - Priority Projects (by Project ID)
 - Recommended Projects

Source: TDD, FOLS, Lake County Street, LRS, 00 - 00

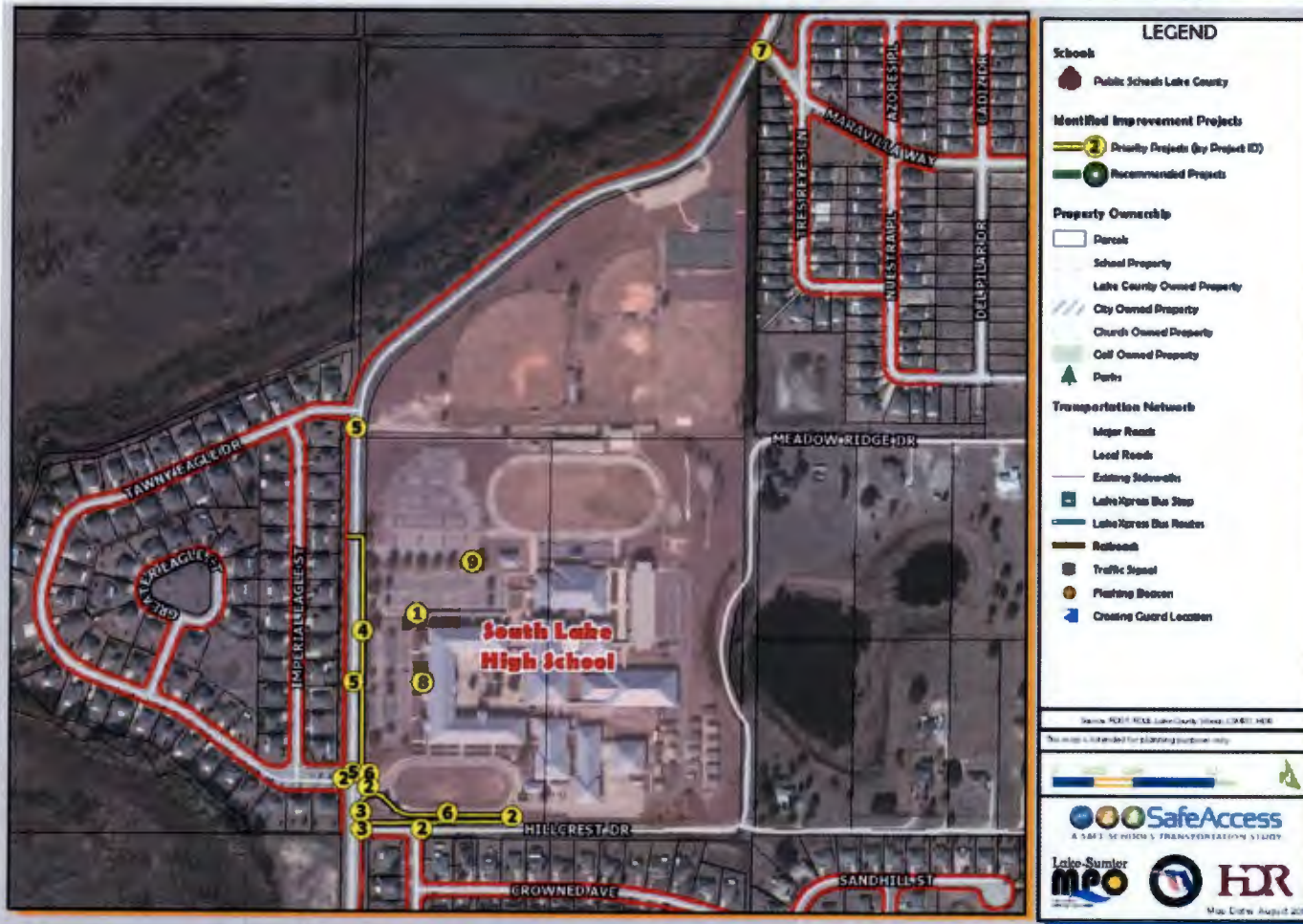
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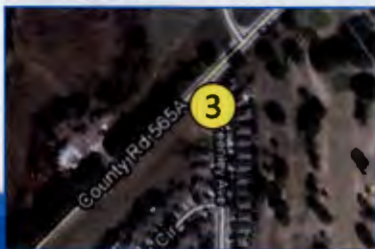


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South Lake High School: Priority Projects





Priority Projects:

1. Improve pedestrian connections through senior lot including addition of railing and raised speed tables at marked crosswalks
2. Sidewalk along Hillcrest Dr to east of bus loop
3. Close sidewalk gap in front of school on Silver Eagle Rd; construct sidewalk connection at Greenley Ave (see smaller map below, located south of main map)
4. Relocate / improve northern school crosswalk
5. Install crosswalks along Silver Eagle Rd at driveways and cross streets
6. Install sidewalk on south side of bus loop
7. Install pedestrian crossing signage at Silver Eagle Rd and Maravilla Way
8. Move existing bicycle parking closer to school; place bicycle rack on a concrete pad
9. Student lot driveway connection

Recommended Priority Projects

Project Number	Roadway	Location	Project
1	Car Loop / Sr Parking Lot		Install Pedestrian Railing and Mark New Crosswalk towards Gym
	Car Loop / Sr Parking Lot		Raise Existing Crosswalks at Car Loop Line and Install Detectable Warning Mats
	Sr Parking Lot		Pedestrian Connection From Lower Lot To Campus
2	Hillcrest Dr	Silver Eagle Rd to East End Of Bus Loop	Construct New Sidewalk into School
3	Silver Eagle Rd	Bus Loop Driveway to Existing Sidewalk	Close Sidewalk Gap; Install High Visibility Ladder Style Crosswalks
	Greenley Ave	At CR 565A	Build A Sidewalk Connection To CR 565A As Part Of The CR 565A And Silver Eagle Rd Sidewalk Project
4	Silver Eagle Rd	Existing Crosswalk Between Student Lots	Move Existing Crosswalk further North; Install Lighting; Implement Standard Midblock Crosswalk Treatment
5	Silver Eagle Rd	Cross Streets Adjacent To School	Install High Visibility Ladder Style Crosswalks on Cross Streets
6	Bus Loop		Install a Sidewalk Around South Side of Bus Loop
	Bus Loop Exit	At Silver Eagle Dr	Install Stop Sign



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South Lake High School

Recommended Priority Projects

Project Number	Roadway	Location	Project
7	Silver Eagle Dr	At Maravilla Way	Install Pedestrian Crossing Signs
8	At School	At Bicycle Rack	Replace Existing Bicycle Racks and Place on a Concrete Pad Closer to the School Building
9	Student Parking Lots		Construct a Driveway Connecting the Two Lots (Stop Control at Both Ends of New Driveway)





A SAFE SCHOOLS TRANSPORTATION STUDY

South Lake High School

Priority Project #1A

Channelize & Improve Senior Lot Crosswalks

Findings:

- ✓ Car loop is located in senior parking lot
- ✓ Students will cross car loop at most convenient location; cause disruption to traffic flow in AM
- ✓ School would like to channelize student crossing to existing marked crosswalks

Recommendations:

- ✓ Install railing along parking lot side of car loop lane to channelize student crossings at the two existing marked crosswalks
- ✓ Construct raised pedestrian crossings at two existing marked crosswalks and provide detectable warning mats
- ✓ Extend existing sidewalk along parking lot side of car loop lane towards gym and provide new marked crosswalk connecting to existing handicap buffer area



Findings:

- ✓ Pedestrian connection between lots is incomplete
 - ✓ Students have to either walk through the senior lot or on grass to get to the campus

Recommendation Options:

- A.** Connect existing sidewalk from lower lot to existing sidewalk near gym
- B.** Mark a pedestrian pathway from the lower lot sidewalk to the school through the senior parking lot
 - ✓ Includes minor widening of existing sidewalk from lower lot
 - ✓ Would result in loss of 4 parking spaces



Priority Project #2

Hillcrest Drive Sidewalk Connection



Findings:

- ✓ Most walkers were observed to originate from the neighborhood south of the school
 - ✓ Students would walk through grass at the sidewalk south of the bus loop entrance / exit and then proceed to the campus through the bus loop

Recommendations:

- ✓ Construct a sidewalk connection along the north side of Hillcrest Dr the length of the bus loop
- ✓ Provide a pedestrian access in the fence on the east side of the bus loop
 - ✓ Will keep students out of the bus loop lanes
- ✓ Close the sidewalk gap on Manchurian St
- ✓ Install high visibility ladder crosswalks on Silver Eagle Rd cross streets & bus driveway, across Hillcrest St, and across edge of bus loop
- ✓ Provide gate in school fence at new pedestrian access point



Findings:

- ✓ Several students were observed to walk on grass at Silver Eagle Rd sidewalk gap between neighborhood south of school and bus loop
 - ✓ Crosswalks on either side of sidewalk gap were missing / faded
 - ✓ Path is visible in grass from frequent use as walkway
 - ✓ This sidewalk gap will be addressed with the planned CR 565A sidewalk improvements
- ✓ Sidewalk at Greenley Ave cul-de-sac does not connect to CR 565A sidewalk project

Recommendations:

- ✓ Construct a sidewalk to close the existing gaps on Silver Eagle Rd and Greenley Ave
- ✓ (Re)paint the crosswalks on both roadway / driveway crossings adjacent to the sidewalk gap on Silver Eagle Rd

Priority Project #4

Improve Existing Northern School Crosswalk



Findings:

- ✓ Existing crosswalk is located between the student lots
- ✓ Observations were made of vehicles not yielding to pedestrians in the crosswalk
- ✓ Majority of traffic is coming from and going to the south (CR 565A)

Recommendations:

- ✓ Relocate the existing crosswalk between the student lots to north of the underclassman parking lot and connect to existing sidewalk on east side of roadway
- ✓ Install lighting and update markings
- ✓ Install the standard treatment for a midblock crosswalk



Findings:

- ✓ Crosswalks were either missing or faded at cross streets and school driveways along Silver Eagle Rd

Recommendations:

- ✓ Mark crosswalks on Silver Eagle Rd cross streets as high visibility ladder style crosswalks



Findings:

- ✓ At dismissal, buses are stationed in a single file queue in a specific order
- ✓ School dismissal is at 2:20 PM and buses depart the school at 2:26 PM
- ✓ Buses are loaded simultaneously in the PM; some students must walk through grass to board bus

Recommendations:

- ✓ Install a 8 foot sidewalk around the south side of the bus loop to provide a paved connection to all bus loading areas; connect new sidewalk to CR 565A sidewalk project
- ✓ Install a stop sign at the bus loop exit



Priority Project #7

Install Pedestrian Signage At Maravilla Way



Findings:

- ✓ Pedestrian crossing signage is missing at the Maravilla Way / Silver Eagle Rd intersection

Recommendations:

- ✓ Install pedestrian crossing signage along Silver Eagle Rd
- ✓ Install advance yield line pavement markings



Existing Bicycle Racks



Sample of Permanent Bicycle Racks on Concrete Pad

Findings:

- ✓ Bicycle racks were located on the sidewalk of the senior parking lot
 - ✓ If used, bicycles would cause further blockage of the sidewalk causing students to either walk on the pavement or through the grass
- ✓ Bicycle racks are older “wheel bender” design and do not adequately support bicycles at two points above the wheel hubs
- ✓ With new sidewalk connection to CR 565A and extension of South Lake Trail anticipated, bicycle usage at school likely to increase

Recommendations:

- ✓ Replace racks - Inverted “U” design preferred
- ✓ Move bicycle racks closer to school by the covered walkway on the car loop and provide on a concrete pad so racks are permanently fixed in place

Priority Project #9

Driveway Connection Between Student Parking Lots



Findings:

- ✓ There is presently no vehicle connection between the student lots
- ✓ Back-up onto Silver Eagle Rd was observed at both lots

Recommendations:

- ✓ Consider constructing a driveway connection between the student lots
 - ✓ Would allow an alternative entrance / exit
 - ✓ Could reduce vehicle-pedestrian conflict points if a pedestrian connection is installed through the senior lot
 - ✓ Requires the removal of 7 parking spaces between the 2 lots (4 - senior; 3 - lower)
 - ✓ Connection would have to negotiate elevation change down to lower lot and should incorporate sidewalk recommended as part of project 1B

Priority #	Item	Quantity	Units	Total
1B	Sidewalk	124	ft.	\$31,700.00
1B	Crosswalk	128	ft.	\$286.00
1B	Detectable Pad	2	Pads	\$700.00
2	Sidewalk	607	ft.	\$70,200.00
2	Fence Gate	1	Gate	\$600.00
2	Crosswalks (2)	68	ft.	\$152.00
3	Sidewalk	57	ft.	\$25,300.00
3	Crosswalks (2)	153	ft.	\$342.00
3	Sidewalk	64	ft.	\$26,900.00

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 design costs, CEI costs, or 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).
- Regular excavation & embankment to 1 ft. depth is assumed
- No R/W costs included
- No specialized landscaping (beyond sodding) is included.
- Sidewalk is assumed to be 5 feet wide, unit given is in linear feet.

Priority #	Item	Quantity	Units	Total
4	Crosswalk	23	ft.	\$51.00
4	Detectable Pad	2	Pads	\$700.00
4	Lighting	1	Light	\$10,000.00
4	Pedestrian Signs	4	Signs	\$1,200.00
5	Crosswalks (6)	234	ft.	\$522.00
6	Sidewalk (8 feet wide)	535	ft.	\$89,900.00
6	Fence Gate	1	Gate	\$600.00
6	Stop Sign	1	Sign	\$300.00
7	Pedestrian Signs	4	Signs	\$1,200.00

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- Sidewalk is assumed to be 5 feet wide, unit given is in linear feet.



South Lake High 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.

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Transportation Partnerships*