



SafeAccess

A SAFE SCHOOLS TRANSPORTATION STUDY

ROUND
ELEMENTARY



LAKE
SCHOOL

GALAXY

DAKTRONICS

Florida's Harriett
Tubman Essay Contest
Winner: Connor Tierce!

Round Lake Elementary School

Mount Dora, FL

August 2013





A SAFE SCHOOLS TRANSPORTATION STUDY

Round Lake Elementary School

Round Lake Elementary School Snapshot

May 2, 2013

Grades: Pre-K – 5th

Total Students:	895
▪ Provided Bus Transportation:	403
▪ Not Provided Bus Transportation:	492
▪ Buses Assigned to School (8 reg, 2 ESE)	10

Students Living within 2 Mile “Walk Zone”:	151
▪ Provided Bus Transportation:	64
▪ Not Provided Bus Transportation:	87

Students Living within LCS PRZ*:	4
▪ Provided Bus Transportation:	0
▪ Not Provided Bus Transportation:	4

Observation Day (Rainy)	
▪ Walkers:	0
▪ Bike Riders:	0

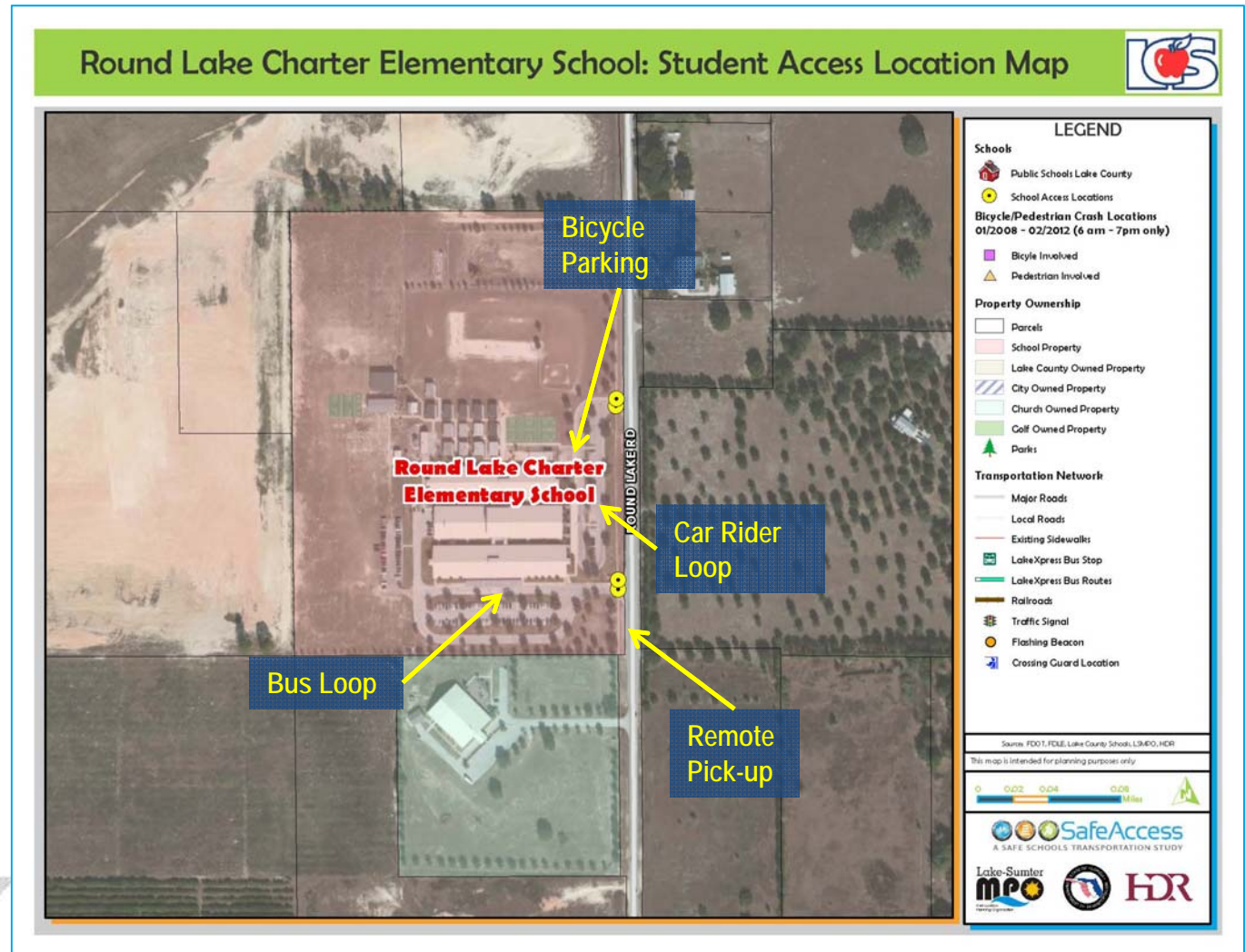


- ✓ Round Lake Elementary School website – Click [here](#)
- ✓ City of Mt. Dora website – Click [here](#)
- ✓ Lake County Schools website – Click [here](#)

* LCS PRZ is the Lake County Schools designated Parent Responsibility Zone

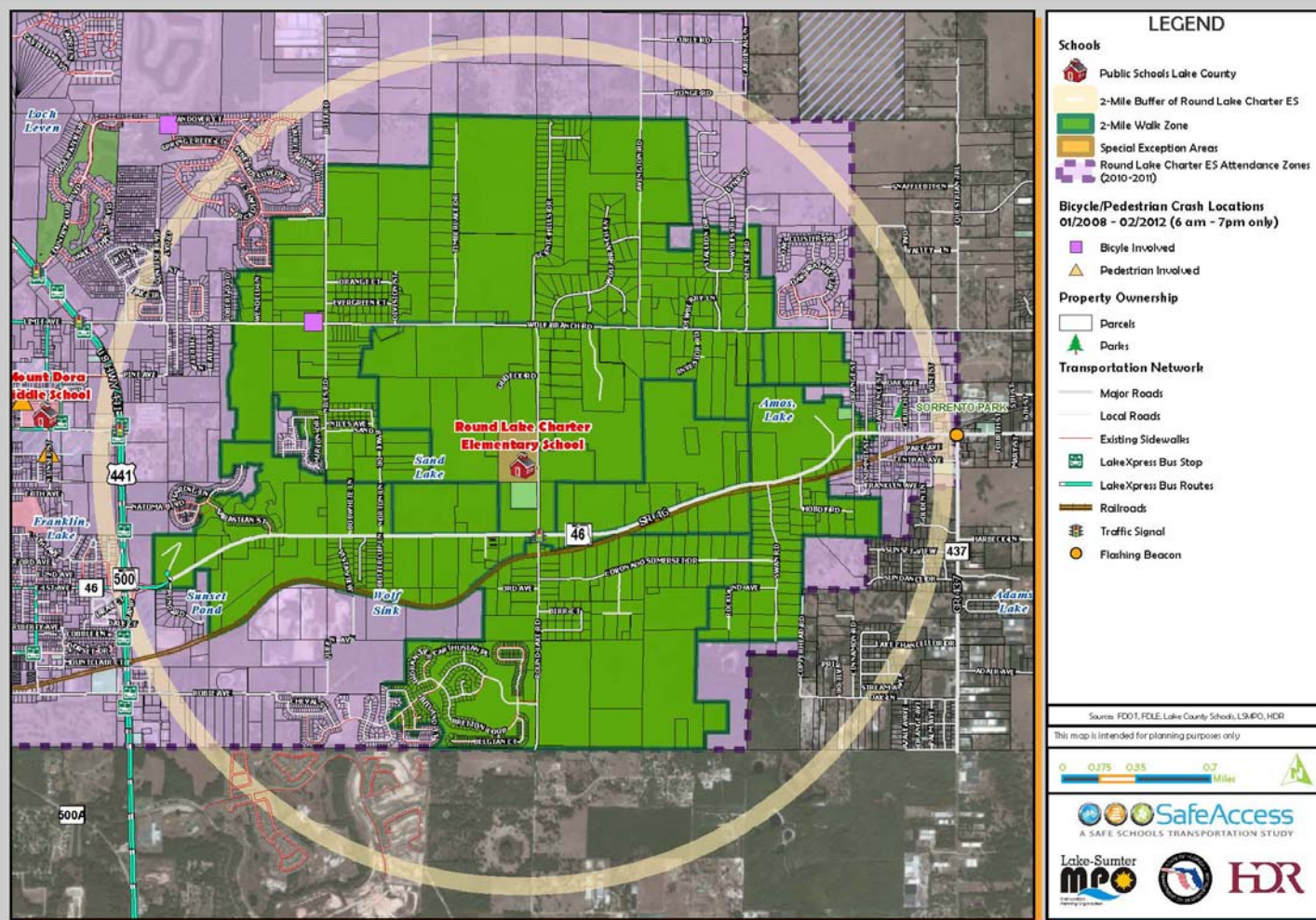
Findings:

- ✓ Bus loop separated from drop-off / pick-up
- ✓ Remote drop-off / pick-up allowed between bus loop and church
- ✓ 4 daycare buses / vans use car loop; 2 use bus loop
- ✓ Campus gates open at 8:00 AM
- ✓ 10-12 staff members monitor arrival / dismissal



Attendance and 2-Mile "Walk" Zone Map

Round Lake Charter Elementary School: Attendance and 2-Mile "Walk" Zone Map



Arrival and Dismissal Schedule

- 7:00 am: ELC starts
- 7:15 am: Music program starts
- 8:00 am: Gates are opened;
Supervision for student arrival starts
- 8:35 am: School start time
- 11:00 am: Morning pre-K pick-up
- 11:45 am: Afternoon pre-K drop-off
- 2:55 pm: School end time; Bus riders released as buses arrive



Note: Students are released one hour early on Wednesdays



A SAFE SCHOOLS TRANSPORTATION STUDY

Round Lake Elementary School

Bus Access



Afternoon Bus Staging

Findings:

- ✓ 8 regular service buses and 1 ESE buses (9 total)
- ✓ Bus riders are released as buses arrive; Maximum of 3 buses loading at any time (observed and confirmed by staff)
- ✓ Issue with parents using bus loop for student pick-up
- ✓ Bus operations were observed to be well-run and efficient



A SAFE SCHOOLS TRANSPORTATION STUDY

Round Lake Elementary School

Student Drop-off & Pick-up

Findings:

- ✓ Significant queuing observed and reported for both directions on Round Lake Rd; School reported back up has reached Wolf Branch Rd
 - ✓ School staff noted 46 rear-end collisions associated with queuing issue
 - ✓ School no longer marks students tardy as long as there are still cars in the queue
 - ✓ Queue extends beyond turn lane to north, existing hill may create sight distance problems
- ✓ Police officer directs car loop exit / entrance for both drop-off and pick-up
- ✓ 7-8 staff members assist with car loop operations
- ✓ Student names are displayed in car windows to assist with dismissal car loading efficiency
- ✓ No car loops gates
- ✓ No sidewalk provided for visitor parking



Afternoon Pick-up



Queuing on Shoulder



Police Directing Car Loop Exit

Recommendations:

- ✓ Investigate switching bus loop and car loop to extend car queuing area, or add additional driveway loop
- ✓ Install gates to assist with loading / unloading
- ✓ Install new visitor parking sidewalk





A SAFE SCHOOLS TRANSPORTATION STUDY

Round Lake Elementary School

Remote Drop-off & Pick-up

Findings:

- ✓ School allows remote drop-off / pick-up between bus loop and church on shoulder; Sidewalk provided on school property
 - ✓ 23 vehicles observed at peak; Vehicles were starting to use church driveway
- ✓ Issue with parents using bus loop for pick-up; Parents will park and walk to front

Recommendations:

- ✓ Install sidewalk along west side of Round Lake Rd from Wolf Branch Rd to County Line; Portion in front of school and remote pick-up area should be constructed with 8-ft width



Permitted Remote Pick-up near Bus Exit



Remote Pick-up Observed in Bus Loop



Remote Pick-up Sidewalk



Bike Rack

Findings:

- ✓ Currently no students walk or ride a bike to the school
 - School does have designated bicycle parking on-site
 - Most of the area around school lacks sidewalks or any form of pedestrian or bicycle facility
- ✓ Sidewalk extends length of school property
- ✓ Proposed alignment for Round Lake Rd Trail on Round Lake Rd and Lake-Wekiva Trail (Ph1) south of school along SR 46



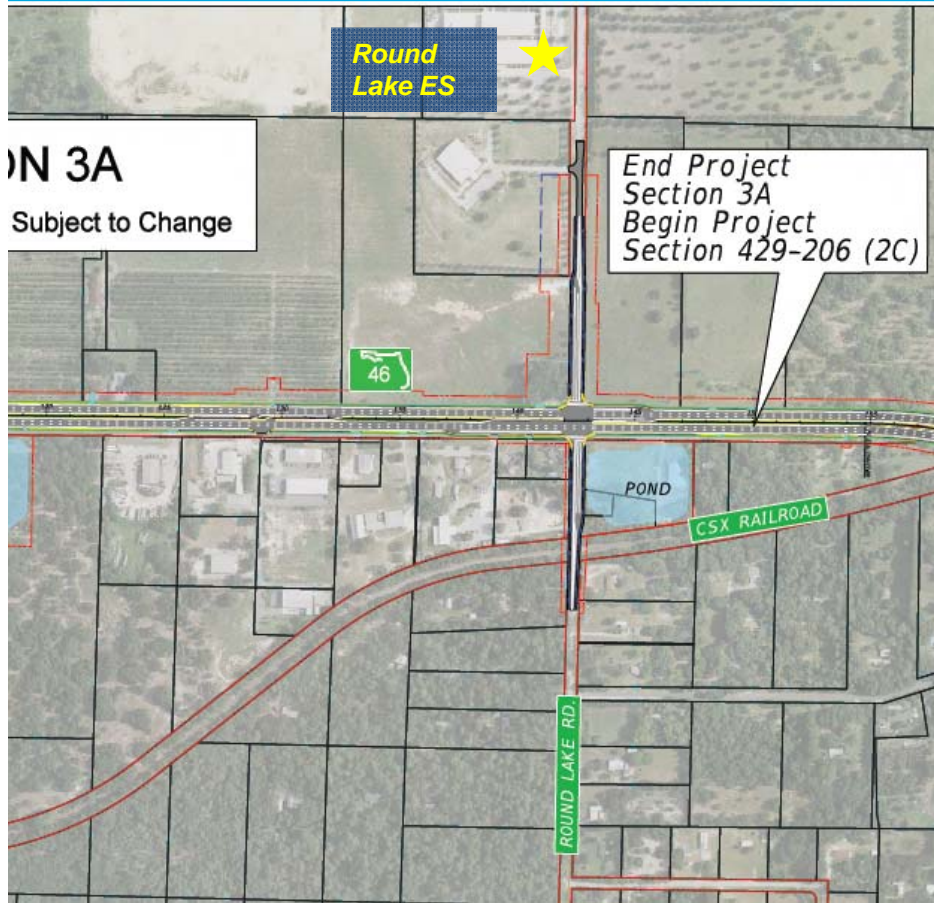
School Sidewalk n/o Car Loop

Recommendations:

- ✓ Provide area sidewalk connections with pedestrian connections to planned trail
 - SR 46 from US 441 to Orange St
 - Orange St from SR 46 to Wolf Branch Rd
 - Round Lake Rd from County Line to Wolf Branch Rd; Crossing guard placement at Round Lake Rd and SR 46
 - Wolf Branch Rd from Orange St to Washington Blvd
- ✓ Round Lake Rd portion of trail project should be placed on school side
- ✓ Place new crossing guard at Round Lake Rd / SR 46 intersection

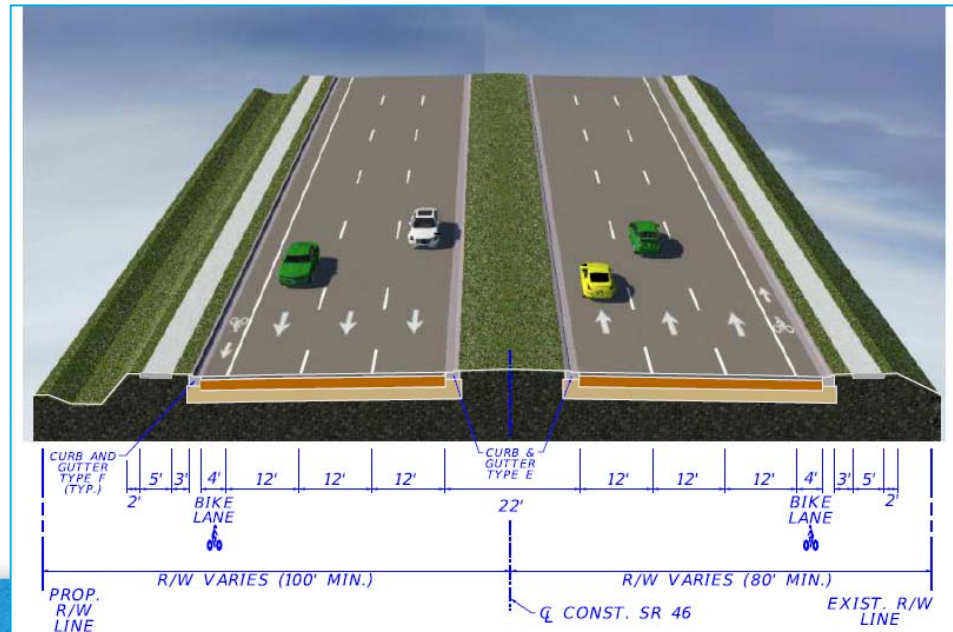
Round Lake Elementary School

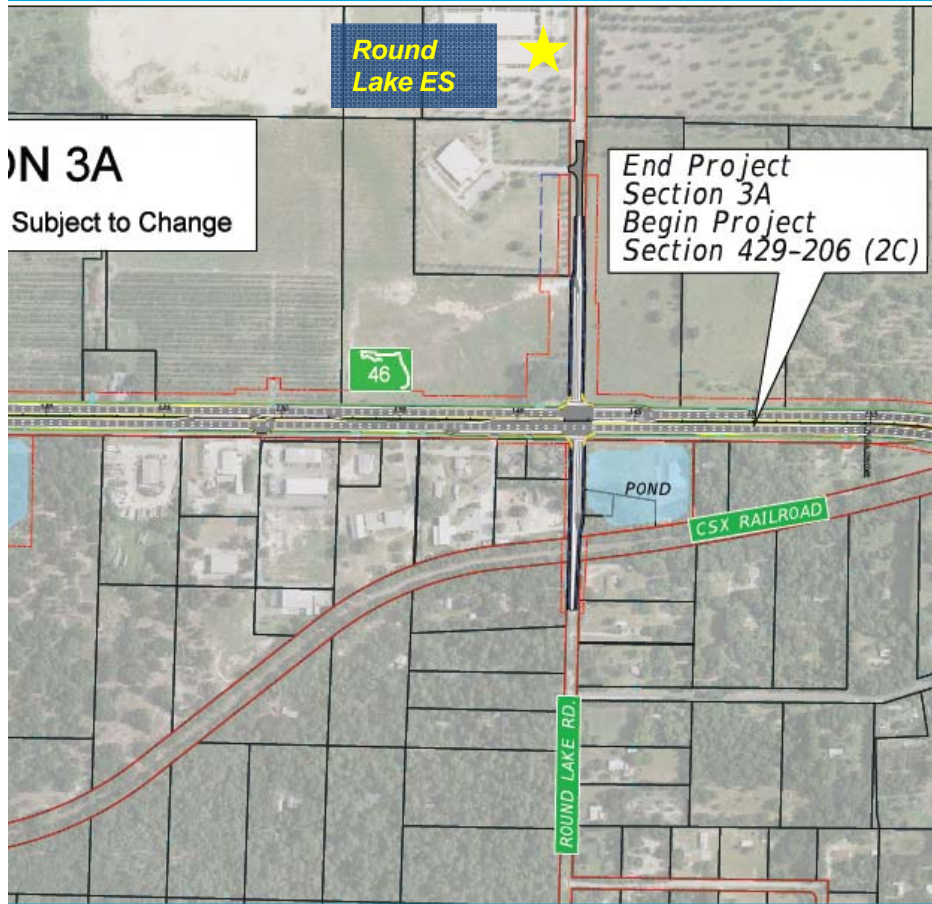
Other Projects



Findings:

- ✓ SR 46 will be widened to 6 lanes as part of the Wekiva Parkway project
- ✓ The intersection of SR 46 and Round Lake Rd is in Section 3A which began design in late spring 2013
- ✓ The extent of the improvements at this intersection extend almost to the school property
- ✓ The concept includes bicycle lanes and 5-ft sidewalk



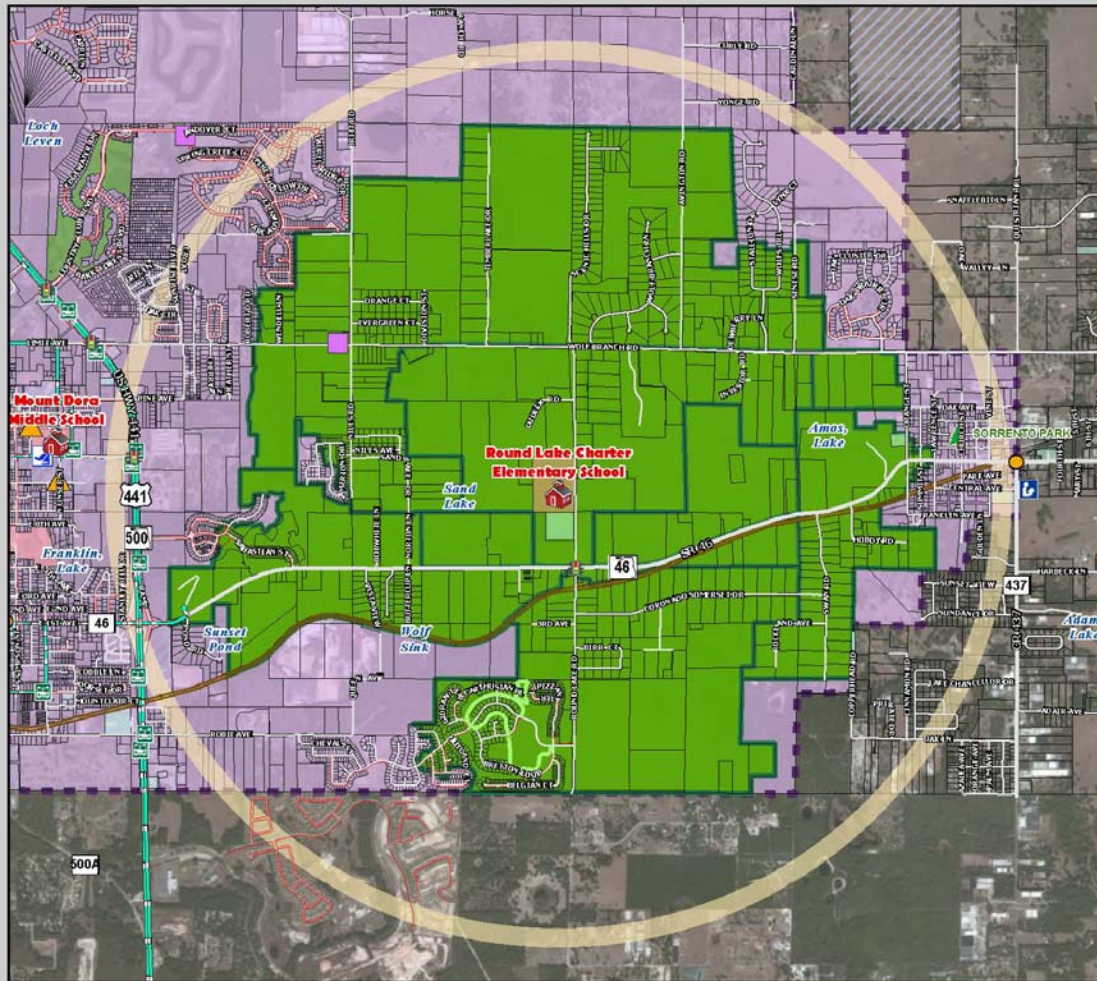


Recommendations:

- ✓ Request that FDOT extend the limits of the project on Round Lake Rd to include a sidewalk on the west side to connect to the existing sidewalk and widen the sidewalk on the north side of SR 46 to 10 feet.
- ✓ Continued coordination with the Lake~Sumter MPO, FDOT, LCS and Lake County to include pedestrian signal heads / amenities at the intersection
- ✓ Once sidewalks are complete along Round Lake Rd to the south, a crossing guard would likely be needed at this location.



Round Lake Charter Elementary School: Existing Conditions Map



- Schools**
- Public Schools Lake County
 - Crossing Guard Locations
 - Libraries
 - 2-Mile Buffer of Round Lake Charter ES
 - 2-Mile Walk Zone
 - Special Exception Areas
 - Round Lake Charter ES Attendance Zones (2010-2011)
- Bicycle/Pedestrian Crash Locations 01/2008 - 02/2012 (6 am - 7pm only)**
- 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
 - LakeXpress Bus Routes & Stops
 - Railroads
 - Traffic Signal
 - Flashing Beacon

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

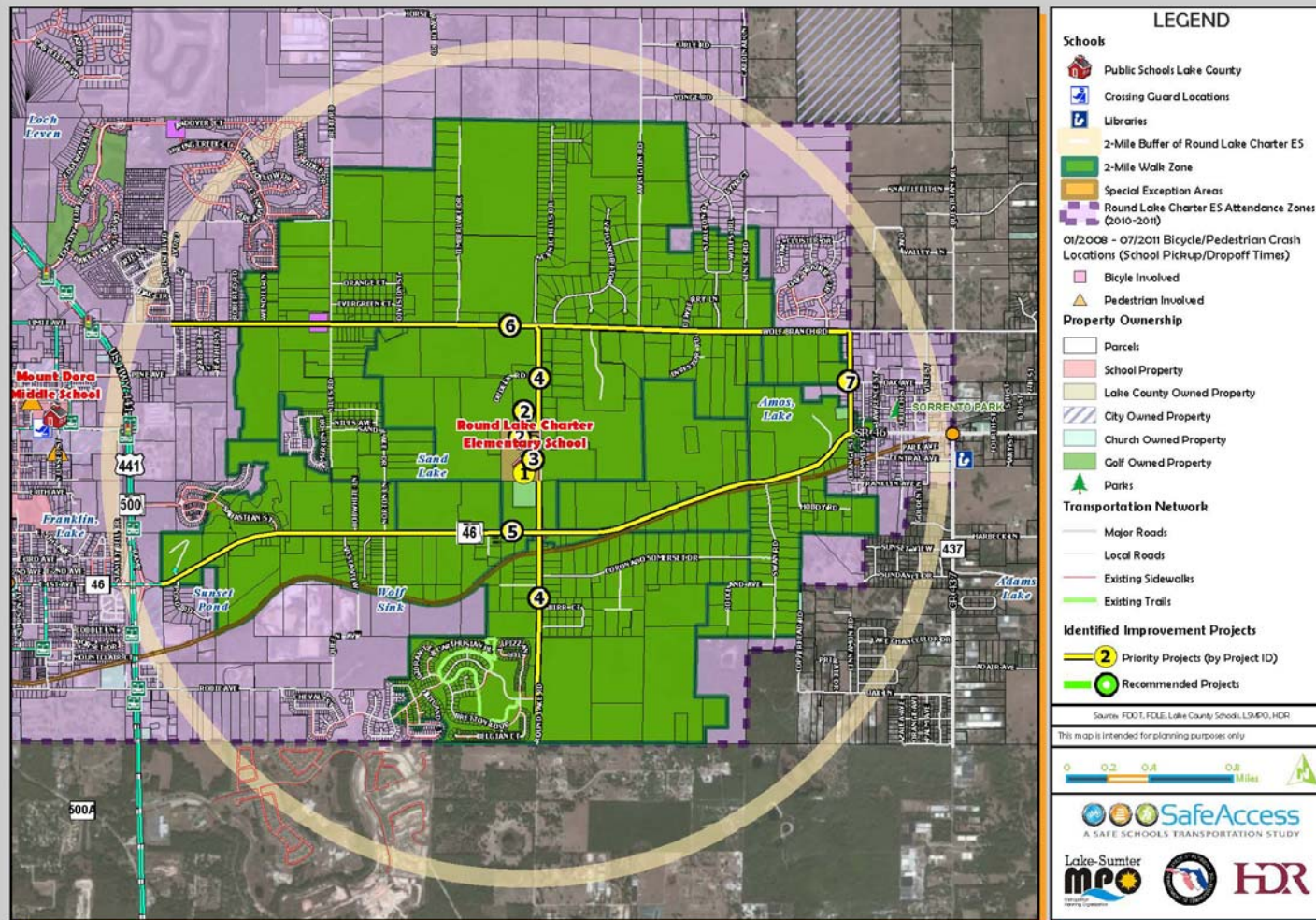


Findings:

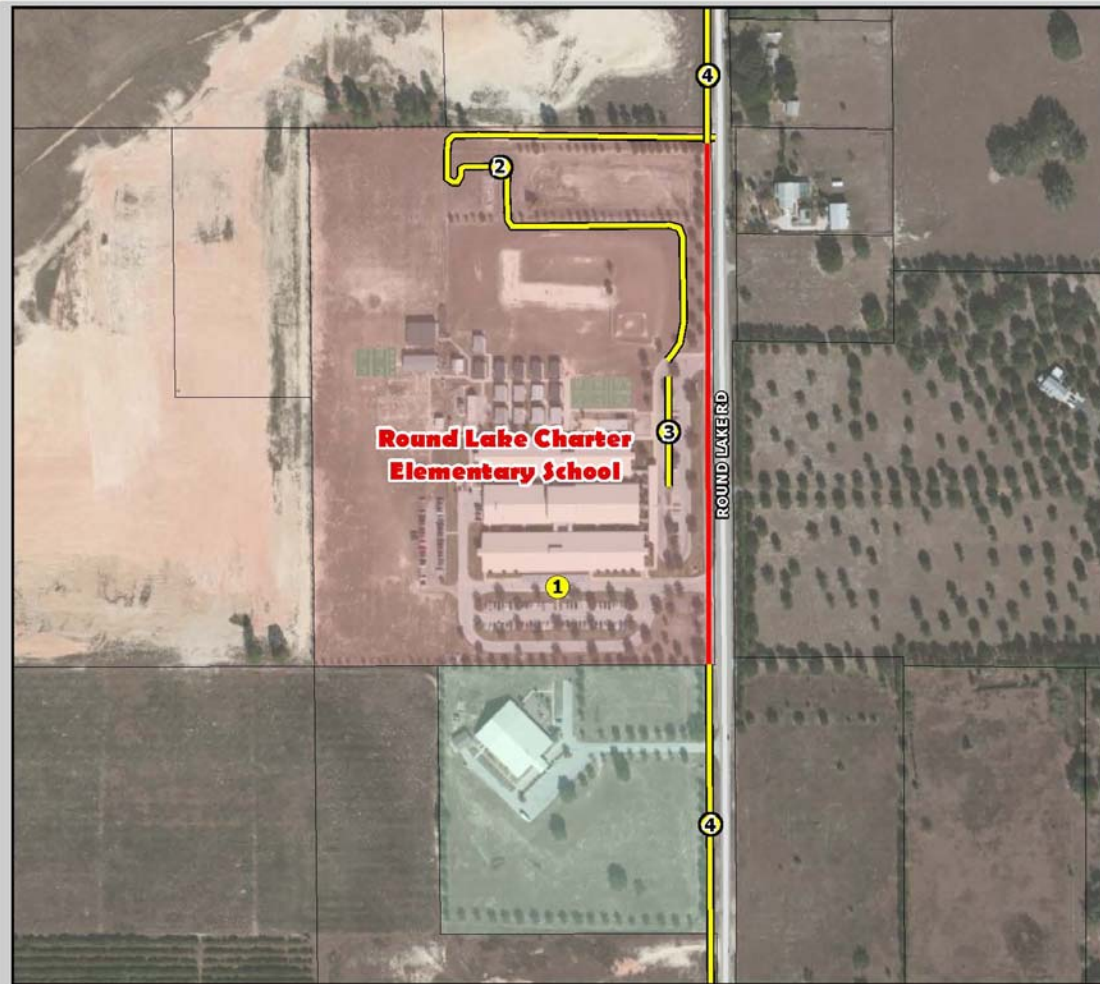
- ✓ On June 24, 2013 the Lake County School Board voted to formally discontinue all courtesy busing for elementary and middle school students who live within 2-mile walk zone of the school
 - This essentially makes the new parent responsibility zone equal to the 2-mile walk zone, except for schools with identified Hazardous Walking Areas
- ✓ 64 Students were courtesy bused last year within the 2-mile walk zone for Round Lake Charter Elementary School
- ✓ Given the lack of sidewalk facilities in the area, and the rural character of walk zone, it is likely most of these children will be brought to school by car, and additional car queue issues and wait times should be anticipated which will exacerbate the current queuing issues on Round Lake Rd
- ✓ The addition of onsite queuing space should be a priority to avoid safety issues associated with cars queuing on Round Lake Rd past the existing turn lane
- ✓ The Board is also considering combining middle and high school students on the same bus for the 2014-2015 school year.
 - This would involve moving middle school start times earlier from their existing 9:05 to 9:15 time frame to the proposed 7:35
 - This would also cause the elementary schools to be moved back almost 25 minutes to start around 8:55 in the morning

Transportation Access Master Plan

Round Lake Charter Elementary School: Existing Conditions Map



Round Lake Charter Elementary School: Student Access Location Map



LEGEND

- 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
 - LakeXpress Bus Stop
 - LakeXpress Bus Routes
 - Railroads
 - Traffic Signal
 - Flashing Beacon
 - Crossing Guard Location

This map is intended for planning purposes only.

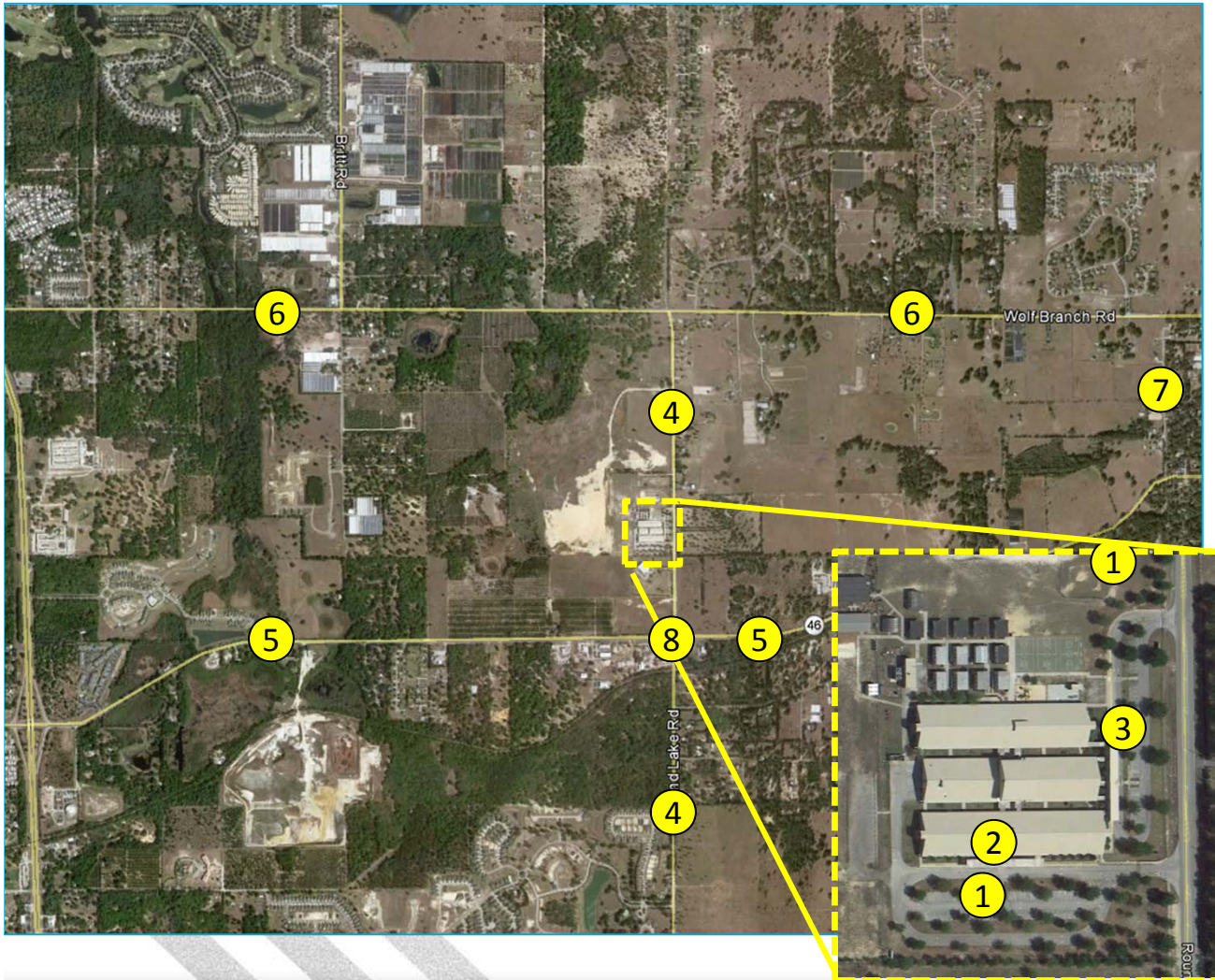


SafeAccess

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Round Lake Elementary School

Recommended Priority Projects



Recommendations:

1. Add car queue space
2. Install car loop gates
3. Install visitor parking sidewalk
4. Install sidewalk on Round Lake Rd from Wolf Branch Rd to County Line
5. Install sidewalk on SR 46 from US 441 to Orange St
6. Install sidewalk on Wolf Branch Rd from Orange St to Washington Blvd
7. Install sidewalk on Orange St from SR 46 to Wolf Branch Rd
8. New crossing guard at Round Lake Rd / SR 46 intersection

Recommended Project List

Project Number	Roadway	Location	Project
1	At School		Add additional vehicle queue space by a) switching bus loop and car loop, or b) adding a loop driveway on the northwest part of the school property
2	At School	Car Loop	Install gates
3	At School	Visitor Parking	Install new sidewalk
4	Round Lake Rd	Wolf Branch Rd to County Line	Install new sidewalk on west side
5	SR 46	US 441 to Orange St	Install new sidewalk on both sides of road
6	Wolf Branch Rd	Orange St to Washington Blvd	Install new sidewalk on both or north side of road
7	Orange St	SR 46 to Wolf Branch Rd	Install new sidewalk on west side of road

Recommendations:

- ✓ Investigate switching bus loop and car loop
 - Used Microstation Autoturn 8.0 to analyze bus ability to make necessary turns at existing car loop; Used turning radius of a 2011 AASHTO S-Bus-36
 - Buses can only make turn if stacked in single queue; Also required to depart in order
- ✓ Have a bus driver test difficulty of turn over summer, indicate turn must be made from far right lane



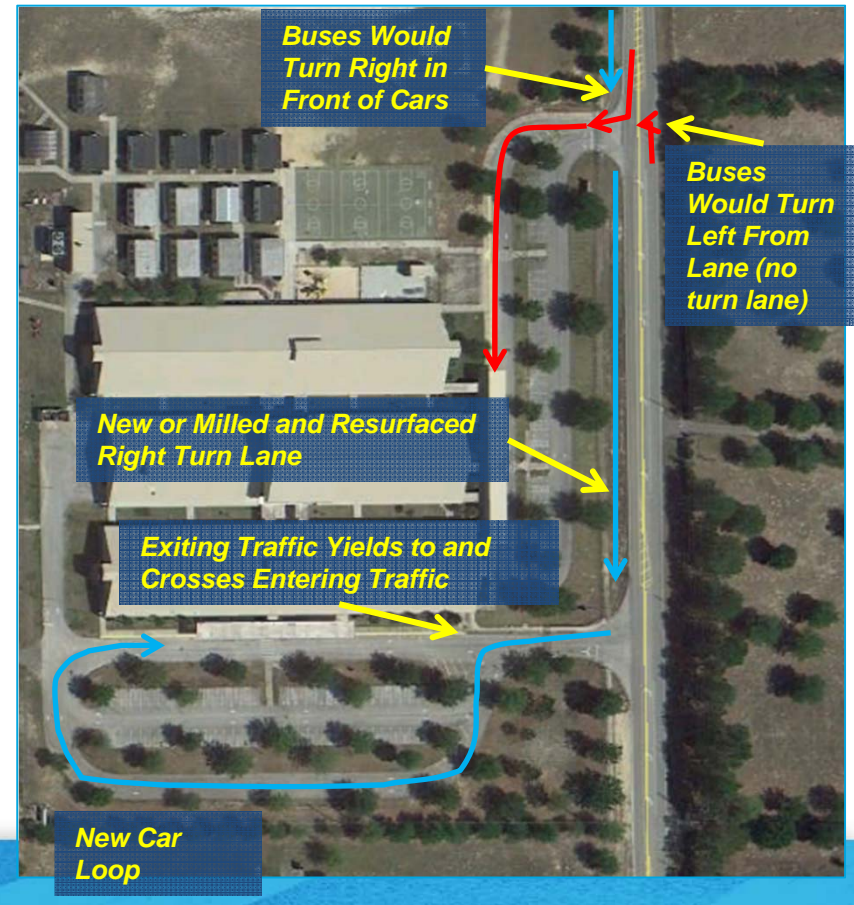
Recommended Project #1

a) Swap Bus Loop and Car Loop

Cont - Car Loop:

- ✓ Length of existing car loop is 350 feet on campus, right turn lane storage is 460 feet, and left turn lane storage is 350 feet for a total of 1,160 feet of storage, new loop would be about 1,900 feet, with all the turn lanes reconstructed
- ✓ If swapped, a right turn lane would have to be added along the school's frontage with potential drainage improvements, or the roadway would have to be milled and resurfaced to shift the lanes and use the space from the existing left turn lane in front to the school as the right turn lane, the area of the left turn into the current bus lane would need to be redesigned to allow for the appropriate space to shift the lanes and would likely require a corner clip at the new car loop entrance
- ✓ The new loop would require driver side loading and unloading and would require a stop / yield condition to oncoming traffic at the queue entrance / exit

- ✓ Cars in the right turn lane north of the school may block the bus entrance
- ✓ Officer assistance would still likely be necessary



Recommended Project #1

b) Add additional driveway

Recommendation

- ✓ Add an additional 16-ft wide one way car loop (conceptual illustration to right)
- ✓ Length of existing car loop is 1,160 feet with turn lanes, additional loop is approximately 2,500 feet
- ✓ There are no turn lanes at this entrance, shifting the pavement markings for the existing right turn may allow for the continuation of the existing left turn but additional space may be needed at new driveway
- ✓ Additional right of way to the north may be needed for a small right turn lane
- ✓ Current entrance would need to be coned or have a gate during arrival and dismissal
- ✓ New fencing would be needed along loop and a gate might be needed at the new driveway and connection to existing loop



Recommended Project #2

Install Car Loop Gates

Recommendations:

- ✓ Install car loop gates once car loop location has been determined



Recommended Project #3

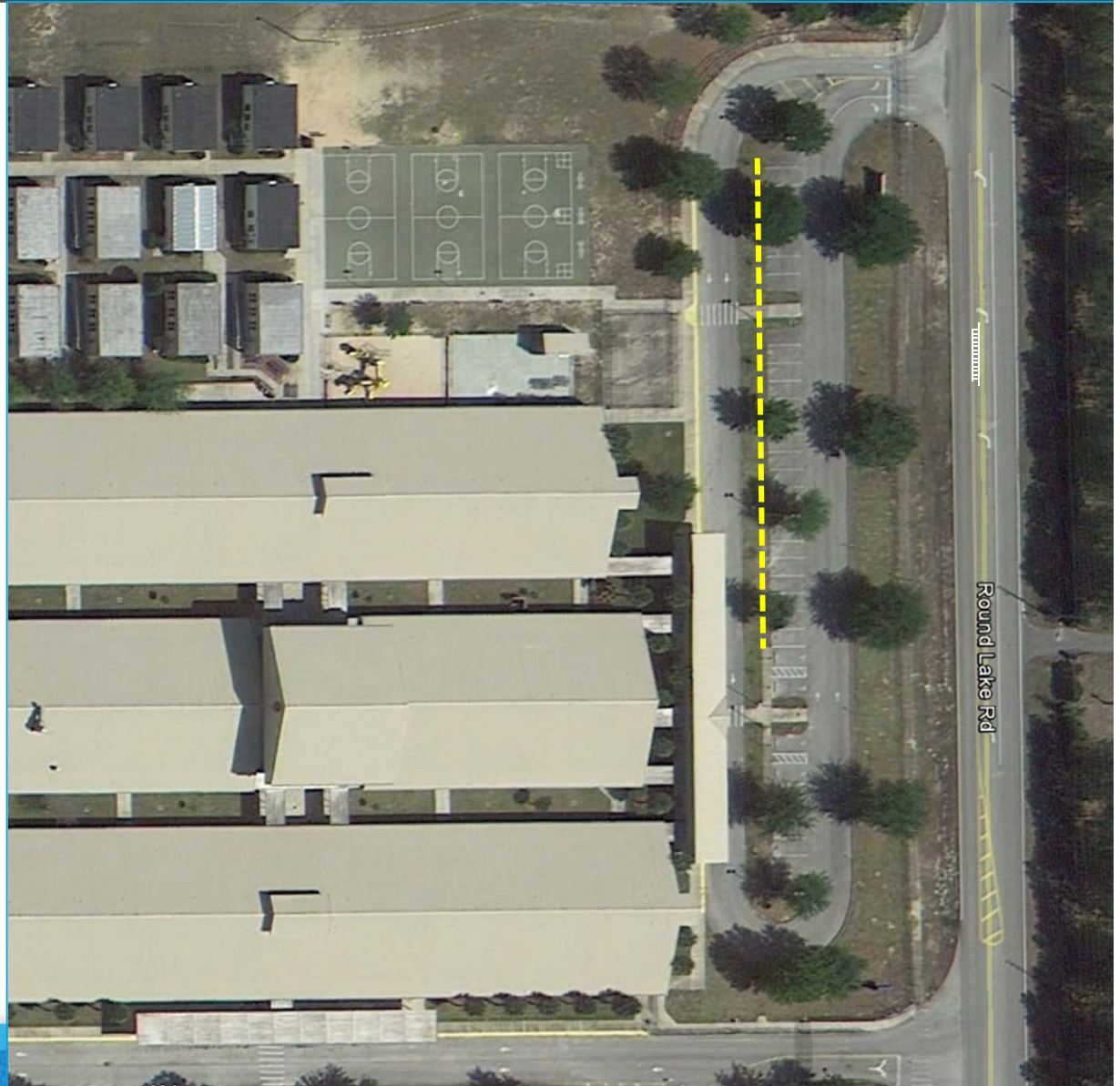
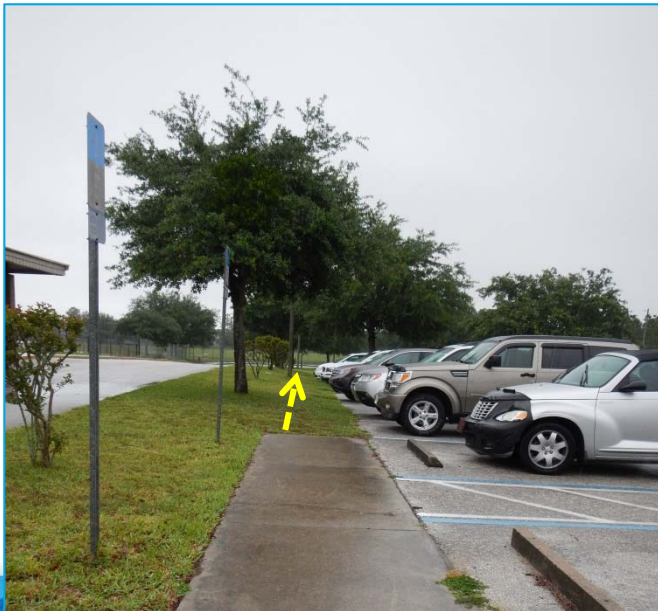
Install Visitor Parking Sidewalk

Findings:

- ✓ Sidewalk is missing for most of the visitor parking forcing visitors and / or staff to walk in the driving lanes

Recommendations:

- ✓ Install / extend visitor parking sidewalk along entire length of grassy area





A SAFE SCHOOLS TRANSPORTATION STUDY

Round Lake Elementary School

Recommended Project #4

Construct Sidewalk on Round Lake Road

Findings:

- ✓ There is no sidewalk in the vicinity of the school except at the school
- ✓ The nearest concentration of students is in the Sullivan Ranch Development, south of the school on Round Lake Rd
- ✓ The Wekiva Project 3A will include widening SR 46 to six (6) lanes and includes intersection improvements at Round Lake Rd

Recommendations:

- ✓ Coordinate with FDOT and the Lake~Sumter MPO to have sidewalk on the west side of Round Lake Rd from SR 46 to the school included with the Wekiva Project
- ✓ Install new sidewalk on the west side of Round Lake Rd from Wolf Branch Rd to County line
 - It is recommended the sidewalk be 8-ft wide (preferred if space allows) or 6-ft to allow bi-directional pedestrian traffic in front of school; Existing sidewalk should be reconstructed to match new width and both sidewalks should be constructed 6" thick to avoid damage in the event a vehicle drive onto / over sidewalk
- ✓ A crossing guard will be needed to safely cross students at SR 46 once it is 6 lanes, and there is a sidewalk connection

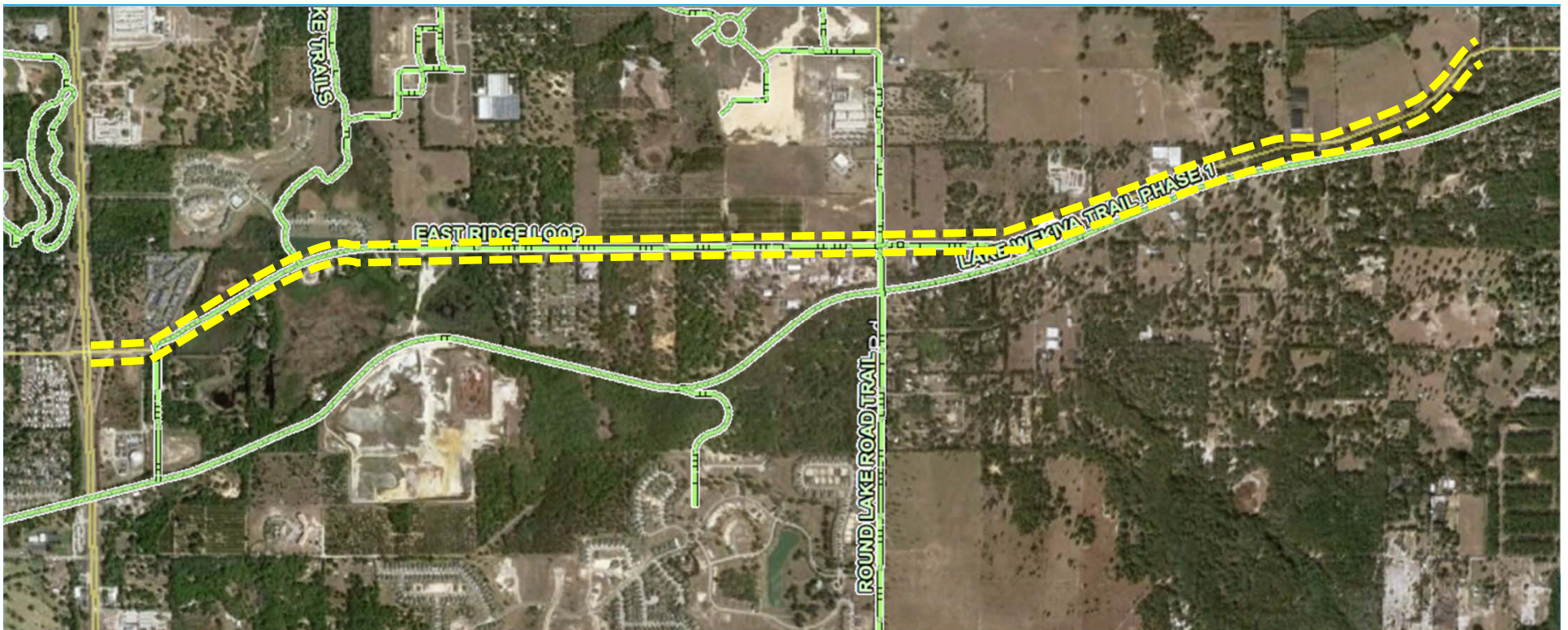


Findings:

- ✓ SR 46 is planned for 6-lane widening as part of Wekiva Parkway project
- ✓ Lake-Wekiva Trail Phase 1 and East Ridge Loop Trail alignments have been identified along SR 46

Recommendations:

- ✓ Install new sidewalk on both sides of SR 46 from US 441 to Orange St (part of Wekiva Project 3A)

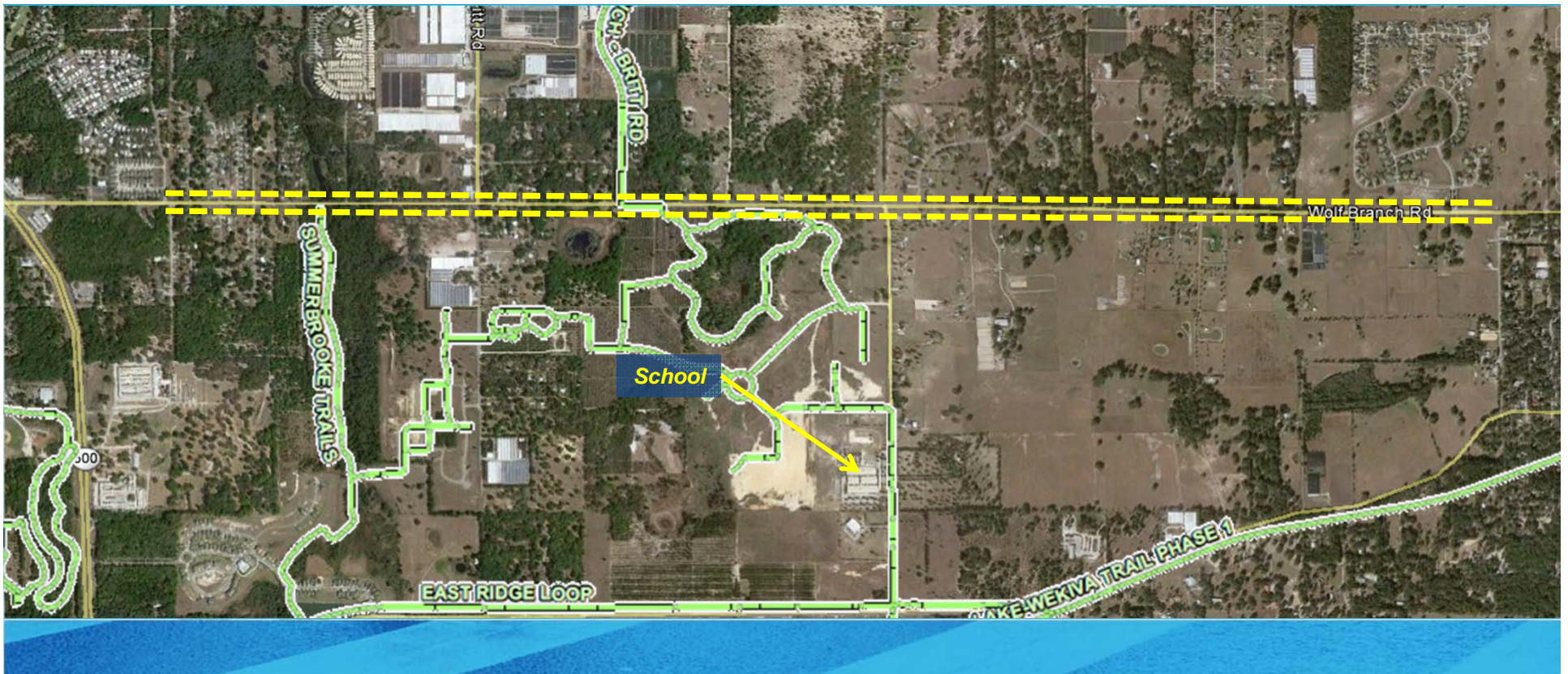


Recommended Project #6

Install New Sidewalk on Wolf Branch Road

Recommendations:

- ✓ Install new sidewalk on north or both sides of Wolf Branch Rd from Orange St to Washington Blvd





A SAFE SCHOOLS TRANSPORTATION STUDY

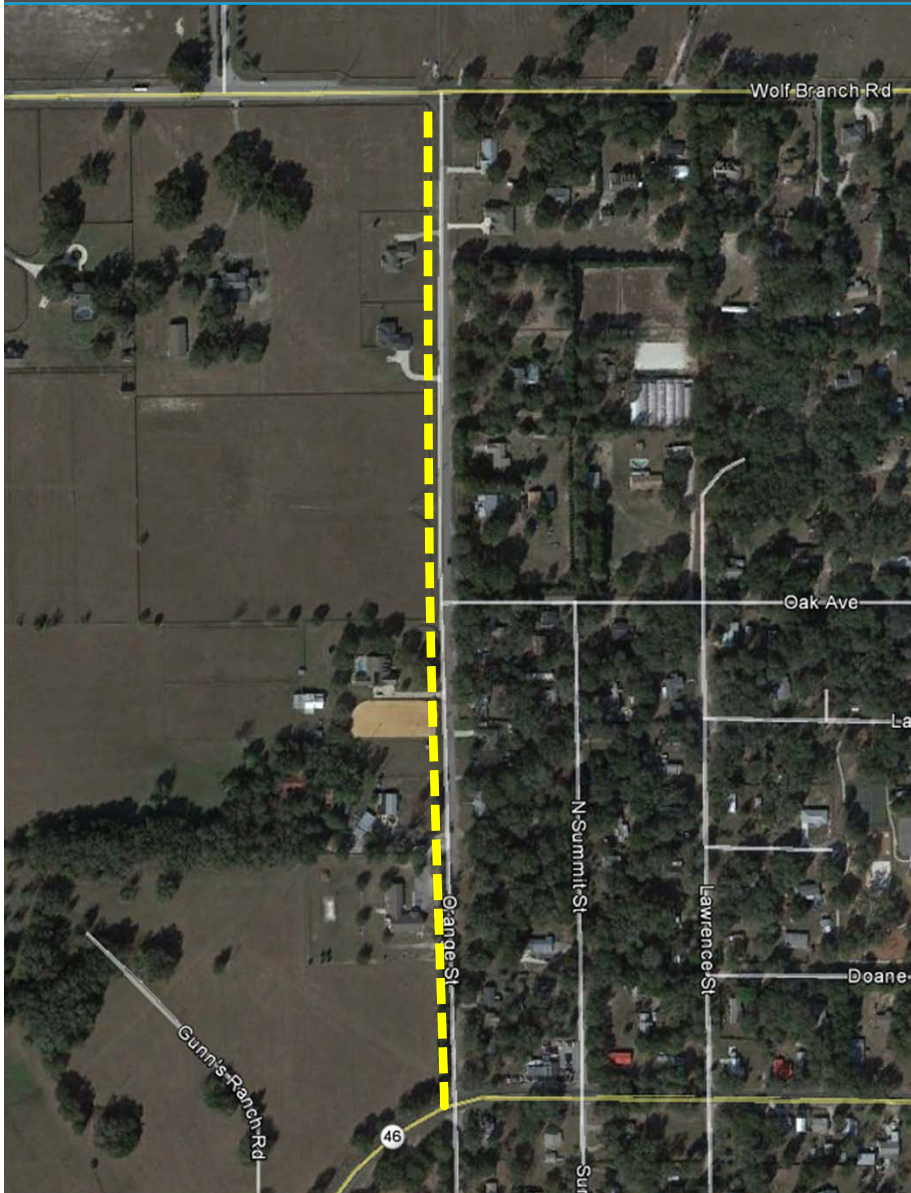
Round Lake Elementary School

Recommended Project #7

Install New Sidewalk on Orange Street

Recommendations:

- ✓ Install new sidewalk on west side of Orange St from SR 46 to Wolf Branch Rd



Priority #	Item	Quantity	Units	Total
1	New Driveway	2,500	ft	\$222,700.00
3	Sidewalk	270	ft	\$42,800.00
4	Sidewalk	10,500	ft	\$863,900.00
4	Crosswalk	185	ft	\$413.00
4	Crosswalk Signage	4	ft	\$1,200.00
5	Sidewalk	37,500	ft	\$3,031,800.00
5	Crosswalk	900	ft	\$2,009.00
6	Sidewalk	33,000	ft	\$2,670,100.00
6	Crosswalk	940	ft	\$2,099.00
7	Sidewalk	2,300	ft	\$230,300.00

ESTIMATE BASIS AND ASSUMPTIONS:

- Costs are in 2012 dollars
- 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.



Round 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.

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*Promoting Regional
Transportation Partnerships*