

**Volusia County
MPO**

November 2008



Spirit Elementary School

Bicycle and Pedestrian School Safety Review Study Phase 3B



School Summary

Spirit Elementary School is located in a densely populated area in the City of Deltona, and is centrally located within the designated walk zone.

Of the 890 students attending this school, 503 live within the walk zone area. During the 2007/2008 school year approximately 117 of these students walked or rode bicycles to school.

Recent residential construction adjacent to the school has negatively impacted the safety and convenience for students bicycling or walking to and from school. To address safety concerns, a second crossing guard was added to the Baton Drive and Meadowlark Drive crossing location. There are three additional crossing guard locations supporting students attending Spirit Elementary School.

No reported bicycle or pedestrian crashes during estimated school travel times and involving elementary school age children have been reported within the walk zone during the last three years.

This Study recommends the construction of sidewalks along the south side of Tivoli Drive and the east side of Urbana Avenue.



Figure 3.8.1

Spirit Elementary School – Summary Sheet

School Address: 1500 Meadowlark Drive
Deltona, FL 32725

School Principal: Dr. Don Travis
Phone: 386-575-4080
Email: dtravis@volusia.k.12.fl.us

Volusia County School District Representative: Saralee Morrissey, AICP
Phone: 386-947-8786, ext. 50772
Email: smorriss@volusia.k12.fl.us

Volusia County Public Works Traffic Engineering: Jon Cheney, P.E., Director
Phone: 386-736-5968 ext. 2709
Email: jcheney@co.volusia.fl.us

Crossing Guard Supervisor: Nancy Strickland
Phone: 386-860-7030
Email: nstrickland@vcso.us

City Representative: Tom Burbank, Acting Planning and Development Services Director
(Previous representative, Becky Mendez, is no longer with the City)
Phone: 386-878-8608
Email: tburbank@deltonafl.gov

Scott McGrath, Principal Planner
Phone: 386-878-8624
Email: smcgrath@deltonafl.gov

Volusia County MPO: Stephan Harris, Bicycle and Pedestrian Coordinator
Phone: 386-226-0422 ext. 34
Email: scharris@co.volusia.fl.us

Site Visit Observation Date: March 20, 2008 (weather: raining at arrival time)

Meeting Attendees:

- Don Travis, School Principal
- David McCarty, Facilities Manager for Spirit and Discovery
- Nancy Strickland, Crossing Guard Supervisor
- Stephan Harris, MPO, Bicycle and Pedestrian Coordinator
- Scott McGrath, Principal Planner
- Becky Mendez, Former Planning Manager, City of Deltona
- Ginger Hoke, Hoke Design, Inc.

Number of Enrolled Students (2008 data): 890

Estimated Number of Students Living in Walk Zone: 503

Number of School Buses: 8 full

Number of Aftercare Buses/Vans: 4 or 5

Estimated Number of Walkers/Bicycle Riders: 117

- 47 walkers and 14 bicyclists at arrival
- 100 walkers and 17 bicyclists at dismissal

Number of Bicycles on Site: 18

Number of Bicycle Helmets (stored with bicycle): 5

Staggered Student Dismissal: Yes, buses leave ahead of students and car riders

Estimated Number of Students Attending Breakfast: 200 (starts prior to 7:30 am)

Number of Students for School Site Aftercare: 130

Teachers Assisting in Arrival and Dismissal Safety:

Arrival: 6 **Dismissal:** 8

Title One School: (2007/2008): Yes, 53%

Backpack Policy: none

Summary of Principal Comments:

- Parents parking in wrong place
- Tried letting bus and pedestrians out before the car riders
- Concerned with adjacent housing development, especially for the planned summer school session

Crossing Guard Locations:

- Baton Drive and Meadowlark Drive
- Baton Drive and Fernandina Drive
- Baton Drive and Tivoli Drive

Summary of Crossing Guard Supervisor Comments:

- Concerned with road alignment planned by new development

Number of Bicycle/Pedestrian Crash Events within the Existing Walk Zone (elementary age, during estimated school travel times, 2005-2007): 0

Planned Road, Sidewalk, or other Improvements: City has an ongoing sidewalk construction plan and budget

Planned Development in Walk Zone: Ongoing Lake Baton Estates residential development on the east side of Meadowlark Drive

Number of Students Transported (Designated as Hazardous): 0

Number of Students Transported (Designated as Courtesy): 3

- Multi-lane highway creates an area of transported students north of Saxon Boulevard and west of Normandy Boulevard

Votran Route in Walk Zone: Yes, along Saxon Boulevard and Normandy Boulevard

Findings and Recommendations

Finding: School staff displays signage requesting motorists not to use or block the designated parking area for persons with disabilities. The signage is not successful and motorists continue parking in this area.

Recommendation: Consider increased educational efforts in newsletters and notices to delivery drivers. Contact the sheriff's office to issue tickets if the problem continues.



A truck blocks access to accessible parking spaces

Finding: Not all pedestrian routes are fully accessible.

Recommendation: When schools are designed or parking areas are substantially renovated, all primary pedestrian routes should be designed to provide barrier-free access.



A crosswalk connects a curb ramp to a sidewalk without a curb ramp

Description of existing conditions at Baton Drive and Meadowlark Drive: The new development under construction across from Spirit Elementary School has interrupted the crossing patterns at Meadowlark Drive and Baton Drive. Over 100 students cross at this intersection and safe pedestrian facilities and crossings are critical.

Prior to the end of the 2007/2008 school year, the crosswalk terminated into the new turn lane onto Meadowlark Drive. All students heading east on Baton Drive crossed Baton Drive twice to avoid the turn lane and narrow sidewalk constructed by the developer.



The construction of Lake Baton Estates has impacted the crossing areas near the school

Findings: Due to the construction of the right turn lane into Meadowlark Drive from Baton Drive, the sidewalk and crosswalk are no longer aligned across Meadowlark Drive.

Since the observation date of this school, crosswalks were painted to connect sidewalks (see last photo this page). The crosswalk across Meadowlark Drive is angled in the middle and separated from the stop bar. A second crossing guard was added for the 2008/2009 school year to address the added complexity of this intersection.

Recommendations: City staff may wish to evaluate the possibility of re-aligning the crosswalk to create a straight crosswalk providing the shortest route possible for students crossing Meadowlark Drive. The stop bar may also need to be relocated.



The previous crosswalk provided a direct connection across Meadowlark Drive



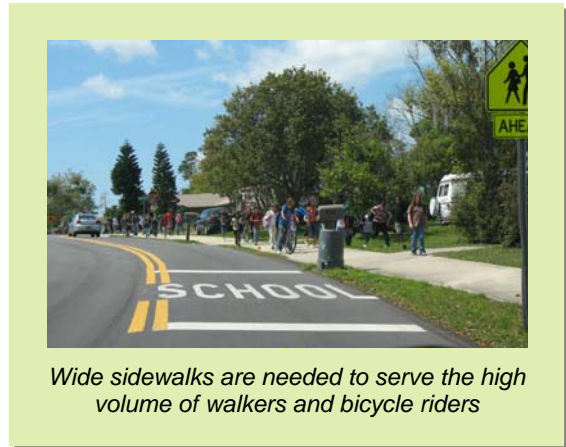
The crosswalk at Meadowlark Drive terminated into the new turn lane before school closed



A crosswalk with an angle was painted after school was out for the summer

Findings: The existing wide sidewalk along the north side of Baton Drive near the school has been reduced to a five foot wide sidewalk to accommodate the construction of a right turn lane. The new narrow sidewalk will not adequately serve the large groups of students walking or riding their bicycles to and from school.

Recommendation: Reconstruct the sidewalk to provide a continuous wide sidewalk along the north side of Baton Drive. This may require a retaining wall at the retention pond to provide sufficient room for the sidewalk.



Future developments requiring turn lanes should be required to provide sufficient right of way for a sidewalk separated from the roadway along the entire length of the turn lane. The sidewalk width should match or exceed the adjacent sidewalk width.



Finding: The Lake Baton Estates development is a gated community. Students may wish to use the sidewalks within the subdivision as a shortcut to and from school.

Recommendation: Require the developer to leave the pedestrian gates open during school arrival and dismissal travel times to allow students to use the sidewalk system within the subdivision. The intersection of Meadowlark Drive with the development access road may need to be evaluated for a crossing guard in the future. Crossing the majority of students at this intersection may allow for the elimination of one guard at the intersection of Baton Drive and Meadowlark Drive.



Findings: Students encroach onto private property while they wait to be crossed at Meadowlark Drive and Baton Drive. School staff is working with the crossing guards to stagger the time of release.

Breakfast is served prior to 7:30 am and some students may cross roadways before the crossing guards are on duty.

Recommendations: Consider releasing walkers and bicyclists prior to the buses. Students who walk or ride their bikes should be given higher preference and crossed more frequently.

Additionally, the crossing guard schedule should be coordinated with school staff to ensure students have sufficient time to cross with the guards and arrive at the start of breakfast.



Students wait to cross with the guard at Meadowlark Drive and Baton Drive

Finding: There are no sidewalks on the south side of Tivoli Drive from Saxon Boulevard to Providence Boulevard. The lack of this sidewalk may increase the possibility of students crossing Tivoli Drive at undesignated locations.

Recommendation: Examine the feasibility of constructing a sidewalk along the south side of Tivoli Drive from Providence Boulevard to Baton Drive, especially if the existing crossing guard locations close. This sidewalk is recommended as a Priority Project and is further described at the end of this chapter.



Students walk southward along the east side of Tivoli Drive after crossing Tivoli Drive with the guard at Baton Drive

Finding: Urbana Avenue only has a sidewalk along the west side of the road within the Spirit Elementary walk zone. Students living east of Urbana Avenue may cross that street at various locations to reach the sidewalk. The lack of sidewalk on the east side of Urbana Avenue may also result in fewer students walking or riding bicycles to school.

Recommendation: Review the feasibility of providing a sidewalk along the east side of Urbana Avenue to serve students living east of the roadway. The segment between Greenview Drive and Stratton Street is likely to serve the



Urbana Avenue looking north

greatest number of users. This sidewalk is recommended as a Priority Project for this school and is further described at the end of this chapter.

Finding: There is no sidewalk along the east side of April Avenue from Fort Smith Boulevard to Tivoli Drive. Students living east of April Avenue may cross that street at random locations to reach the sidewalk on the west side of the road.

Recommendation: The City may wish to consider the construction of a sidewalk along the east side of April Avenue from Fort Smith Boulevard to Tivoli Drive.



April Avenue looking north

Master Plan

The following Bicycle and Pedestrian Master Plan specifies a network of sidewalks and trails that, if implemented, will greatly increase the convenience and safety of travel for pedestrians and bicyclists. A 24"x36" fold-out map is included as a deliverable with this Study.

The Bicycle and Pedestrian Master Plan includes the following information:

Existing Conditions:

- Existing Walk Zone area from School District GIS (shaded tan)
- Courtesy Transportation Zone from School District, if applicable (shaded blue)
- Hazardous Transportation Zone from School District, if applicable (shaded yellow)
- Student Home Locations from School District (dark blue dot)
- Existing Trails from County GIS and field review (solid green line)
- Existing Wide Sidewalk 6-8' from field review (solid blue line)
- Existing Sidewalks 3-5' from field review (solid red line)
- Existing Crossing Guard Locations from County GIS and field observations (green cross for existing to remain and yellow cross for existing to be closed)
- Bicycle or Pedestrian Crash Event Locations from 2005-2007 from County GIS data, during estimated school travel times and involving an elementary age bicyclist or pedestrian (pink star).
- Existing Votran Routes and stops from Volusia County MPO (yellow lines along roadway centerline with yellow squares at bus stops).

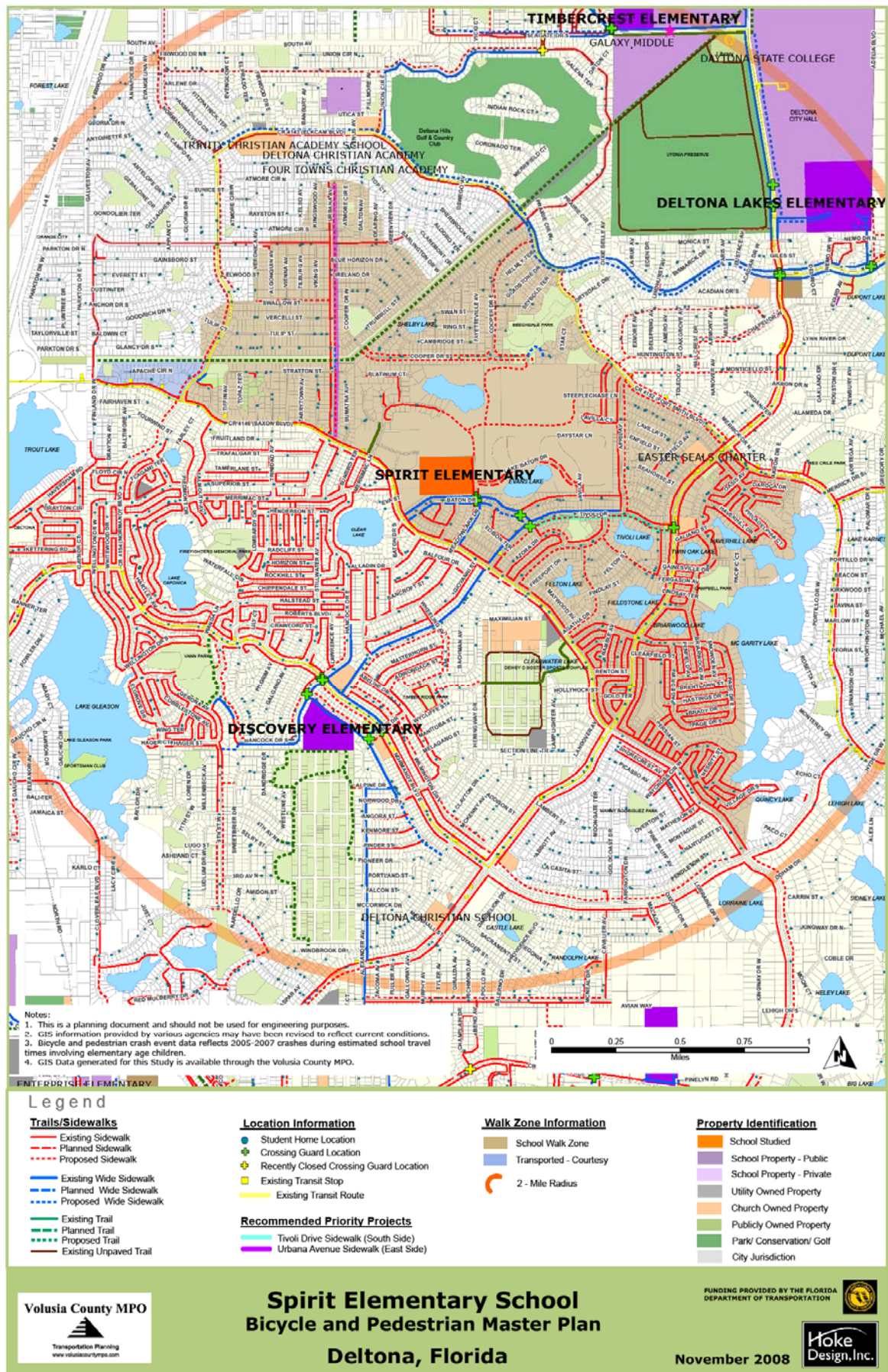
Planned Conditions:

- Planned trail (long dashed dark green line)
- Planned wide sidewalk (long dashed blue line)
- Planned sidewalk (long dashed red line)

Recommendations of this Study:

- Proposed Trails (dashed dark green line)
- Proposed Sidewalks 6-8' wide (dashed blue line)
- Proposed Sidewalks 5' (dashed red line)

This Master Plan and supplemental information supplied within the Implementation Report are meant as a guideline for sidewalk and trail planning. The Master Plan is not an engineering document.



Recommended Priority Projects

Tivoli Drive Sidewalk (south side)

Project Location: South side of Tivoli Drive from Providence Boulevard to Saxon Boulevard.

Project Description: A minimum 5 foot wide sidewalk separated from the road.

Finding: There is no sidewalk on the south side of Tivoli Drive from Saxon Boulevard to Providence Boulevard. The lack of this sidewalk may increase the possibility of students crossing Tivoli Drive at undesignated locations.

Recommendation: Construct a sidewalk along the south side of Tivoli Drive from Providence Boulevard to Saxon Boulevard. If possible, widen the sidewalk at the crossing guard location at Baton Drive to provide a waiting area for students.

Maintaining Agency: City of Deltona

Potential Constraints: Right of way appears to be available. The placement of the sidewalk should avoid any existing trees to the extent possible.

Potential Opportunities: Increased safety for all walkers and bicyclists.

Estimated Project Cost (not including right of way costs, if applicable):
\$370,000



Tivoli Drive looking south from the intersection with Baton Drive



Tivoli Drive looking east

Note: This project is highlighted blue on the corresponding Bicycle and Pedestrian Master Plan.

Urbana Avenue Sidewalk (east side)

Project Location:
East side of Urbana
Avenue from Atmore
Circle to Saxon

Boulevard.

Project Description: A one mile long, minimum 5 foot wide sidewalk located away from the roadway.

Findings: Students living east of Urbana Avenue may cross that street at various locations to reach the sidewalk along the west side of the road. The lack of sidewalk on the east side of Urbana Avenue may also result in fewer students walking or riding bicycles to school.

Recommendation: Review the feasibility of providing a sidewalk along the east side of Urbana Avenue to serve students living to the east of that street. The segment between Greenview Drive and Stratton Street is likely to serve the greatest number of users.

Maintaining Agency: City of Deltona

Potential Constraints: None apparent

Potential Opportunities: Will serve all other pedestrians and bicyclists living in this area.



A short section of sidewalk was constructed along one lot on the east side of Urbana Avenue



Urbana Avenue looking south

Estimated Project Cost (not including right of way costs, if applicable): \$500,000

Note: This project is highlighted purple on the corresponding Bicycle and Pedestrian Master Plan.