

**Volusia County
MPO**

November 2008



Edgewater Public Elementary School

Bicycle and Pedestrian School Safety Review Study

Phase 3B



School Summary

Edgewater Public Elementary School is located in a residential area bordered by a cemetery, railroad tracks and Hawks Park in the City of Edgewater. Few roadways within the walk zone include sidewalks.

Of the 662 students attending this school, 316 live within the walk zone area. During the 2007/2008 school year approximately 90 of these students walked or rode bicycles to school. At afternoon dismissal, most of these students walk to the YMCA located adjacent to the school.

At the time of this Study, there were two crossing guards located at U.S. Hwy. 1 and Ocean Avenue. For the 2008/2009 school year, one guard will be assigned to this location. The City of Edgewater provides a volunteer traffic control officer at the intersection of Ocean Avenue and Old County Road.

During the period 2005 to 2007, one bicycle crash occurred on Park Avenue at the intersection with Flagler Avenue when a student was riding along the sidewalk and rode into a vehicle turning onto Flagler Avenue. Increased bicycle and pedestrian safety education is recommended for this school.

The City of Edgewater has submitted funding requests for sidewalks along both sides of U.S. Hwy. 1 from Orange Avenue to Cory Drive on the east side, and from Ocean Avenue to Louisa Drive and from Turgot Avenue to Roberts Road on the west side.

Students living south of Indian River Boulevard who attend Edgewater Public Elementary School are currently provided bus transportation due to designated courtesy conditions. Future changes to the existing walk zone are possible with the planned construction of Elementary/Middle School FF.

This Study recommends the construction of several sidewalk sections within the walk zone of Edgewater Public Elementary School, with a sidewalk along the east side of Flagler Avenue from Park Avenue to 12th Street as a recommended Priority Project. There is also a need for sidewalks along Mango Tree Drive and 16th Street to provide a continuous sidewalk system for students living in the Florida Shores neighborhood.



Figure 3.3.1

Edgewater Public Elementary School – Summary Sheet

School Address: 801 South Old Country Road
Edgewater, FL 32132

School Principal: Ms. Lynda Moore
Phone: 386-424-2573
Email: lmoores@volusia.k12.fl.us

Volusia County School District Representative: Saralee Morrissey, AICP
Phone: 386-947-8786, ext. 50772
Email: smorris@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: Joan Marshall
Phone: 386-423-3301
Email: jmarshall@scso.fl.us

City Representative: Darren Lear, AICP, Development Services Director
Phone: 386-424-2412
Email: dlear@cityofedgewater.org

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: May 5, 2008 (weather: overcast in the morning, warm and clear in the afternoon)

Meeting Attendees:

- Lynda Moore, School Principal
- Darren Lear, City of Edgewater
- David Soltz, Volunteer traffic control
- Daniel Blazi, Edgewater Police
- Stephan Harris, MPO, Bicycle and Pedestrian Coordinator
- Ginger Hoke, RLA, Hoke Design

Number of Enrolled Students (2008 data): 662

Estimated Number of Students Living in Walk Zone: 316

Number of School Buses: 9

Number of Aftercare Buses/Vans: 1 (Boys and Girls Club)

Estimated Number of Walkers/Bicycle Riders: 85-95 (61 walk to the YMCA)

Number of Bicycles on Site: 16

Number of Bicycle Helmets (stored with bicycle): 7

Staggered Student Dismissal: Bicycle riders, unless accompanied by a parent, must wait for all the buses to leave before they are dismissed.

Estimated Number of Students Attending Breakfast: 180-200 (starts prior to 7:30 am)

Number of Students for School Site Aftercare: 100

Teachers Assisting in Arrival and Dismissal Safety:

Arrival: 6 Staff and principal **Dismissal:** 6 staff and principal

Title One School: No (44.01%)

Backpack Policy: No backpacks are permitted unless the student is a bicyclist. Canvas bags are provided.

Summary of Principal Comments:

- Expressed appreciation for City of Edgewater's responsiveness in assisting with sidewalk construction and traffic control
- Stated that sidewalks are needed on Flagler Avenue and that many parents have made a request for these facilities
- Concerned with motorists turning onto Old County Road after parking along Connecticut Avenue to avoid the student pick-up line
- The west side of Old County Road needs a sidewalk south of Ocean Avenue

Crossing Guard Locations:

- U.S. Hwy. 1 and Ocean Avenue (from two guards to one)
- City of Edgewater volunteer traffic control person at Ocean Avenue and Old County Road (cones prevent turning movement onto Ocean Avenue)
- Volunteer traffic control person also places cones at Flagler Avenue and West Ocean Avenue to block east bound traffic

Summary of Crossing Guard Supervisor Comments:

- 10th Street traffic tie-up because of the railroad
- Crossing guards are at their post from 7:15 to 8:15 in the morning
- Volunteer traffic control officer is available for morning and afternoon unless there is an emergency elsewhere. Occasionally, this may create a situation where no traffic control officer is available

Number of Bicycle and Pedestrian Crash Events within the Existing Walk Zone (elementary age, during estimated school travel times, 2005-2007): 1

Planned Road, Sidewalk, or other Improvements:

- East Central Regional Rail Trail
- U.S. Hwy. 1 sidewalks

Planned Development in Walk Zone:

- Elementary/Middle School "FF"
- Oakleaf Preserve Residential Development

Number of Students Transported (Designated as Courtesy): 14

South of Indian River Boulevard and west of U.S. Hwy. 1 is designated hazardous because Indian River Boulevard is a multi-lane road with no crossing guards (see the shaded blue area on the Bicycle and Pedestrian Master Plan)

Votran Route in Walk Zone: Yes

Findings and Recommendations

Finding: The wide sidewalk that connects to the trail leading to the YMCA does not have an access ramp or a crosswalk at the student pick-up and drop-off entrance.

Recommendation: Modify the existing curb to include an accessible ramp and a crosswalk connecting to the existing wide sidewalk/trail.



The new sidewalk on campus needs a curb ramp



A crosswalk is needed over the school access drive

Finding: The wide sidewalk connecting the school to the YMCA includes a short section that terminates into the parking area and may be a trip hazard.

Recommendation: Reconstruct the end of the sidewalk to include a curb ramp. If possible, round off the pointed angle and paint the edge yellow to increase curb visibility.



The sidewalk ends at a sharp angle into the parking area

Findings: The existing trail and sidewalk connections between Edgewater Public Elementary School, the YMCA, and the City of Edgewater Parks and Recreation site provide very good access for students. The sidewalk, however, does not continue beyond the Parks and Recreation building to connect to the bike lanes along U.S. Hwy. 1 (see Figure 3.3.2).

The City of Edgewater has submitted an application for funding for sidewalks along both sides of U.S. Hwy. 1 in this area.

Additionally, there are no sidewalks along Turgot Avenue from the rear of the school site to U.S. Hwy. 1. Due to safety concerns or perception of safety, students may not wish to use the sidewalk through the wooded area between the YMCA and the Parks and Recreation facility.

Recommendations: Provide a sidewalk connection from the existing sidewalk terminus near the Parks and Recreation building to the south side of West Turgot Avenue to U.S. Hwy. 1. Extend the sidewalk along Turgot Avenue to connect with the wide sidewalk connecting to Edgewater Public Elementary School. The sidewalk along Turgot Avenue will offer bicyclists and pedestrians a shorter overall connection to the school and provide an alternative to the route through the wooded area. Increasing the sense of safety may increase the number of students who walk or bicycle to school.



Figure 3.3.2



A wide sidewalk connects the YMCA to the rear of the School



Turgot Avenue looking east near the YMCA



A pedestrian pushes a stroller along the west side of U.S. Hwy. 1

Finding: A gap in the chain link fence located at the end of Paradise Lane provides a shortcut through the YMCA/Hawks Park property to the trail leading to the school.

Recommendation: Work with the YMCA to provide gates and pedestrian access along its property to encourage use of this shortcut.



Students may use the gap in the fence to access the School through Hawks Park

Findings: Old County Road provides direct access to Edgewater Public Elementary School. There are sidewalks along the east side of the roadway. There are no sidewalks along the west side of the roadway. Students living west of the school who use Ocean Avenue cross with the volunteer police officer. Since this is a volunteer position, this crossing location may occasionally be unattended.

Recommendations: A sidewalk along the west side of Old County Road between Ocean Avenue and the school should be constructed. If the volunteer traffic officer is not posted at Old County Road and Ocean Avenue, a sidewalk along the west side of Old County Road would allow students to cross this road near the school entrance. The existing school staff may be able to offer crossing assistance.

Additionally, a sidewalk in this location would serve the general public as they access the existing trail along the west side of the school property that connects the neighborhood to the YMCA and Hawks Park.

As an interim measure, the City may wish to add painted shoulders or bicycle lanes to both sides of Old County Road.



Students cross Old County Road with the City Traffic Control Volunteer



Old County Road looking south toward school property

Finding: Crossing guards are on duty from 7:15 am to 8:15 am (one hour). The photo to the right shows a student crossing U.S. Hwy. 1 prior to 7:15 am. According to the crossing guard, this student feels he does not need to cross with a guard and will likely not cross with a guard in the future. However, breakfast is served prior to 7:30 and students do not have time to cross with the guard and arrive for the start of breakfast.



A student crosses U.S. Hwy. 1 just as the crossing guard is going on duty

Recommendation: Because most students arrive at school prior to 8:00 in the morning, the crossing guard schedule should be reviewed for the possibility of shifting the designated time to 7:00am to 8:00am. The school may wish to consider increasing bicycle and pedestrian safety education for students attending this school.

Finding: There are no sidewalks along either side of Ocean Avenue from U.S. Hwy. 1 to Riverside Drive. Students living east of U.S. Hwy. 1 may use Riverside Drive to access Ocean Avenue to reach the crossing guard location.

Recommendation: Construct a minimum 5 foot wide sidewalk on the south side of Ocean Avenue from U.S. Hwy. 1 to Riverside Drive. Review the feasibility for a crosswalk over Riverside Drive to connect to the existing wide sidewalk along the east side of Riverside Drive.



Ocean Avenue looking east from U.S. Hwy. 1

Findings: Flagler Avenue serves students living west of the railroad who walk or bicycle to and from Edgewater Public Elementary School. Many of the students in the walk zone live in the Florida Shores neighborhood and travel along Lime Tree Drive, 12th Street and Flagler Avenue to Ocean Avenue to reach the traffic control officer at Old County Road. Students currently share the road with vehicles along Flagler Avenue between Park Avenue and 12th Street.



Flagler Avenue looking north from Ocean Avenue

Recommendation: Construct a minimum 5 foot wide sidewalk along the east side of Flagler Avenue from Park Avenue to the existing sidewalk on 12th Street. This sidewalk is recommended as a Priority Project and is further described at the end of this chapter.

Finding: The sidewalk along the east side of Lime Tree Drive terminates near the intersection with Mango Tree Drive. This route is likely used by students living in the Florida Shores neighborhood.

Recommendation: Extend the existing sidewalk along the east side of Lime Tree Drive/Mango Tree Drive to the intersection of 16th Street. A transportation engineer should review the possibility of making this intersection a 3-way stop. This may require reconfiguring the intersection of 16th Street with Orange Tree Drive to allow through traffic on 16th Street and create a stop condition for motorists using Orange Tree Drive.



The sidewalk along Lime Tree Drive terminates near the intersection with Mango Tree Drive



Lime Tree Drive turns into Mango Tree Drive at the angled intersection above

Findings: There are no sidewalks along 16th Street within the Edgewater Public Elementary School walk zone. Students living south of 16th Street and west of the railroad may use 16th Street to travel to Lime Tree Drive/Mango Tree Drive to access school.

Recommendations: Construct a 5 foot wide sidewalk on the south side of 16th Street from Willow Oak Drive to Hibiscus Drive. Construct a crosswalk connecting the proposed Mango Tree Drive sidewalk to the proposed 16th Street sidewalk.



16th Street looking west near Duck Lake Park

Finding: The intersection of Old County Road with Park Avenue does not have a stop bar or a crosswalk feature across Old County Road. A faded crosswalk crosses Park Avenue at the east side of the intersection and is signed with a “yield to pedestrian” sign.

The sidewalk at this location has been encroached by sand and grass reducing the width.

Recommendation: Provide a stop bar and crosswalk along Old County Road where it terminates into Park Avenue. Repaint the crosswalk over Park Avenue and provide pedestrian crossing signs visible to motorists traveling east or west along Park Avenue. Review the possibility of removing this crosswalk if it is safer for students to cross Park Avenue at U.S. Hwy. 1. Maintain the sidewalk width with regular maintenance.



Old County Road at Park Avenue looking north

Finding: A bicycle crash involving an elementary age student occurred at the intersection of Flagler Avenue and Park Avenue. A westbound motorist was turning left onto Flagler Avenue when a westbound bicyclist riding along the sidewalk rode into the turning vehicle. Most likely, the bicyclist did not look to the right and rear when crossing the intersection. Additionally, the motorist may have not expected a bicyclist on the sidewalk, especially riding against traffic, and may have not scanned to the left as he/she turned onto Flagler Avenue. The details for this crash event are included in Appendix H.



Park Avenue looking west

Recommendation: Increase student and motorist safety education. Wider sidewalks through this section of Park Avenue may also increase pedestrian safety and allow for multiple users simultaneously. Construction of a sidewalk along Flagler Avenue may create a better alternative for students living west of Old County Road. Fewer vehicles may be turning onto Flagler Avenue than Old County Road to reach the school. A sidewalk along Flagler Avenue is recommended as a Priority Project and is further detailed at the end of this chapter.

Findings: Sidewalks along the north and south side of Park Avenue are narrow. The sidewalk includes obstacles east of U.S. Hwy. 1 near the police station that prevent clear passage for all users. The continuity of sidewalks along Park Avenue is important because these provide the only east-west pedestrian routes between U.S. Hwy. 1 and Riverside Drive within the majority of the walk zone. Park Avenue is 40 feet wide with parallel parking along many sections of roadway.

Recommendations: Where obstacles exist, the sidewalk should be widened to extend into the roadway to provide a minimum 5 foot clear zone. Adding "bulb-outs" to further define the parallel parking area may assist with emphasizing a designated area for bicyclists and pedestrians. Wider sidewalks and a narrower roadway for the entire length of Park Avenue would provide the best possible solution but would be expensive to implement.

As an interim measure, the City may consider striping a 5 foot wide area along both sides of Park Avenue to create a buffer to the sidewalk and to provide a designated area for bicyclists, strollers and persons using wheelchairs. This may reduce or eliminate parallel parking along one side of the roadway.



Some sections of the sidewalk along Park Avenue do not provide clearance for users

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).

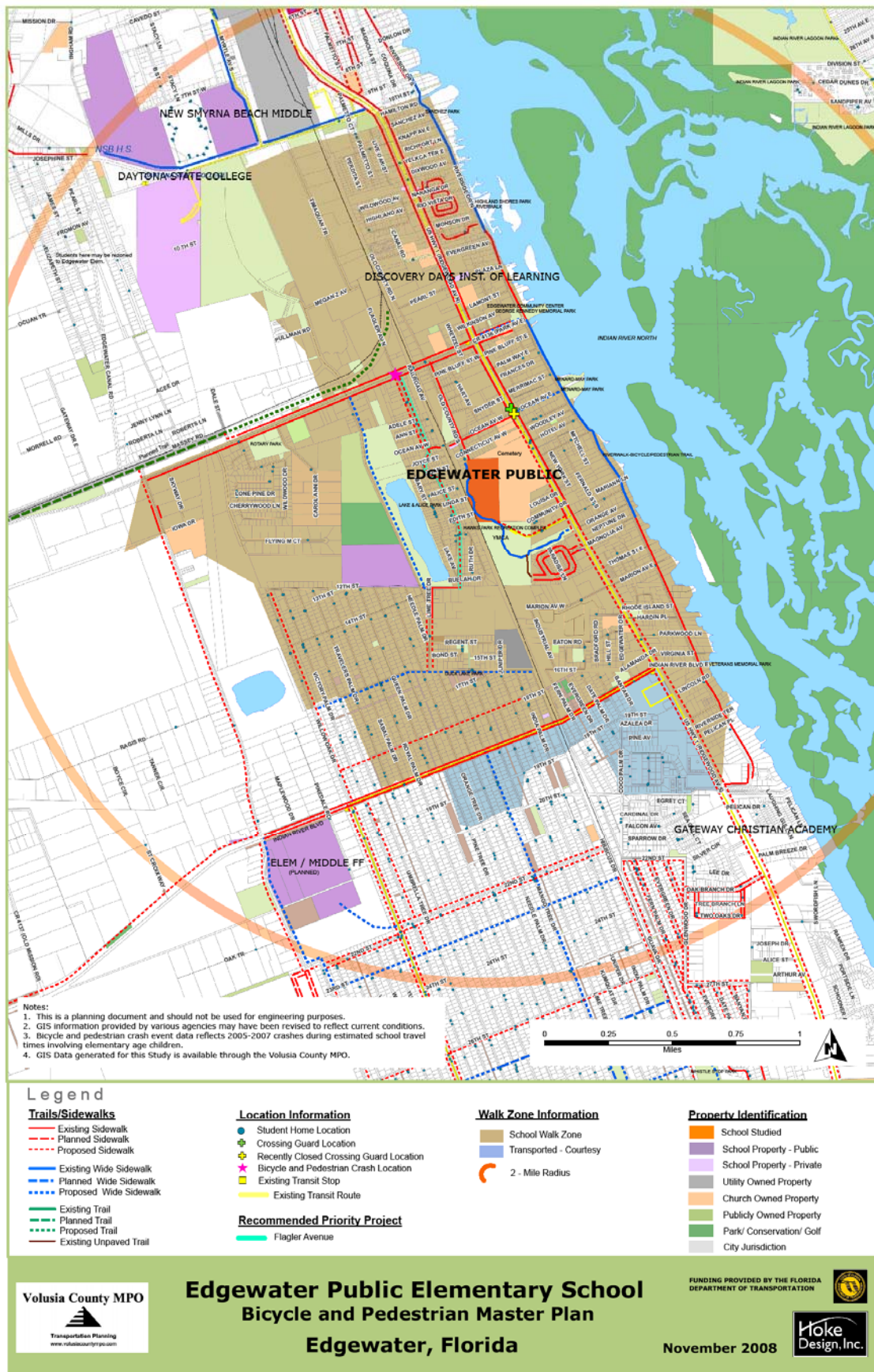
Planned Conditions:

- 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 Project



Flagler Avenue Sidewalk (East Side)

Project Location: The east side of Flagler Avenue from Park Avenue to 12th Street

Project Description: Minimum 5 foot wide sidewalk

Finding: Students living west of the railroad attending Edgewater Public Elementary School share the road with vehicles along Flagler Avenue.

Recommendation: Construct a minimum 5 foot wide sidewalk along the east side of Flagler Avenue connecting to the Park Avenue sidewalk to the north and to the sidewalk along 12th Street to the south.

School Served: Edgewater Public Elementary School

Maintaining Agency: City of Edgewater

Potential Constraints: A culvert under Flagler Avenue near 12th Street will need to be extended and a new head wall will be required to provide a level area for the proposed sidewalk. Additionally, the available right of way will need to be verified to determine project feasibility.

Potential Opportunities: The construction of this sidewalk will connect to an existing section of sidewalk along the south side of 12th Street and Lime Tree Drive. This may encourage more students living in the Florida Shores neighborhood to walk or ride bicycles to and from school.

Bicycle and Pedestrian Crash Event

Location: One bicycle crash occurred at the intersection of Flagler Avenue and Park Avenue.

Estimated Project Cost (not including right of way costs): \$456,500

Note: The Priority Project is highlighted blue on the corresponding Bicycle and Pedestrian Master Plan



Motorists park along the Flagler Avenue right of way



A canal will require the extension of a culvert and headwall along Flagler Avenue near 12th St.