

**Volusia County
MPO**

November 2008



Tomoka Elementary School

Bicycle and Pedestrian School Safety Review Study Phase 3B



School Summary

Tomoka Elementary School is located south of S.R. 40, west of Nova Road in the City of Ormond Beach.

Of the 840 students attending this school, 351 live within the designated walk zone area. During the 2007/2008 school year approximately 70 of these students walked or rode bicycles to school. Many of these students live within The Trails community on the north side of S.R. 40. Two crossing guards assist students crossing S.R. 40 at Main Trail/Old Tomoka Road.

The school campus includes sidewalk access on the east and west side of the property frontage and works well to reduce pedestrian/bicycle conflict with vehicles. Most of the students riding bicycles wore helmets and were escorted by adults.

Students and their escorts appeared to consistently follow bicycle and pedestrian safety rules, including helmet use, waiting at the painted yellow line, and dismounting bicycles to cross the street. Students staying after school are provided with an escort to cross S.R. 40 safely.

There was one reported bicycle crash during estimated school travel times involving an elementary school age child within the walk zone during the last three years.

Students living in The Forest Hills subdivision no longer receive bus transportation. This Study recommends that the City of Ormond Beach pursue funding for a trail connection with a pedestrian bridge between this subdivision and Mayfield Terrace. This project is further described as a recommended Priority Project at the end of this chapter.



Figure 3.10.1

Tomoka Elementary School – Summary Sheet

School Address: 999 Old Tomoka Road
Ormond Beach, FL 32174

School Principal: Ms. Julie Johnson
Phone: 386-258-4676
Email: JGJohnso@volusia.k12.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: Cindy Pagliari, Crossing Guard Supervisor
Phone: 386-323-0151
Email: cpagliari@vcso.us

City Representative: Ric Goss, Planning Director
City of Ormond Beach
Phone: 386-676-3343
Email: goss@ormondbeach.org

Site Visit Observation Date: May 20, 2008 and May 21, 2008 (weather: sunny, seasonal)

Coordination Meeting: May 21, 2008

Meeting Attendees:

- Julie Johnson, Principal
- Brenda Cullinan, Crossing Guard
- Stephan Harris, MPO Bicycle and Pedestrian Coordinator
- Ginger Hoke, Hoke Design, Inc.
- Meera Shenoy, Hoke Design, Inc.

Number of Enrolled Students (2008 data): 840

Estimated Number of Students Living in Walk Zone: 351

Number of School Buses: 7 (2 additional Pre-K at 10:30)

Number of Aftercare Buses/Vans: 11

Estimated Number of Walkers/Bicycle Riders: 65-75

Number of Bicycles on Site: 47 bicycles, 4 scooters and one set of in-line skates

Number of Bicycle Helmets (stored with bicycle): 27 (Note: some students carried their bicycle helmets to classroom)

Staggered Student Dismissal: Students are dismissed by building at 1:55pm, 2:00pm, and 2:05pm

Estimated Number of Students Attending Breakfast: 150-180 (breakfast starts prior to 7:30am)

Number of Students for School Site Aftercare: 75

Teachers Assisting in Arrival and Dismissal Safety:

Arrival: 12

Dismissal: every staff member

Title One School: No (38%)

Backpack Policy: no rolling backpacks allowed on campus

Summary of Principal Comments:

- Cones are placed to prohibit cars from blocking the sidewalk along Old Tomoka Road
- No more than one book is sent home at night, and books are available online

Crossing Guard Locations:

- S.R.40 and Old Tomoka Road (2 guards)

Summary of Crossing Guard Comments:

- High number of parental/adult escorts with children
- The crossing guard alternates the release of bicyclists / pedestrians with the buses

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: None that will impact the school walk zone

Planned Development in Walk Zone: None that will impact the school walk zone

Number of Students Transported (Designated as Courtesy): 40

Students living east of Nova Road would need to cross a multi-lane roadway without a crossing guard

Votran Route in Walk Zone: Yes

Findings and Recommendations

Finding: Tomoka Elementary School has recently implemented a second drop-off/pick-up queue area to increase efficiency during arrival and dismissal. Pedestrian access to the waiting area is separated from vehicular traffic.

Recommendation: This design solution should be considered at other schools experiencing high numbers of “car riders” and limited stacking room.



A second drop-off area reduces car rider lines

Finding: Although the accessible parking spaces have recently been improved, school architectural features encroach into the sidewalk area and create a potential safety issue for sidewalk users. The window is angled and is not constructed all the way to the ground, potentially causing a problem for people who use a cane to navigate or for those with limited vision.

Recommendation: Block in the open area underneath the window feature to create a solid space. As an interim measure, place a trash receptacle or similar object beneath the obstruction. In the future, review construction plans to ensure all pedestrian routes have clear access and are predictable to the user.



The window feature protrudes into the sidewalk area and may become an unexpected obstacle

Finding: A sign is located on the service area showing a pedestrian crossing. However, no crosswalk connects the school building to the new sidewalk located to the east side of the school.

Recommendation: If possible, extend the sidewalk at the bus ramp to better align with the existing sidewalk on the east side of the service access drive. As an interim measure, a crosswalk should be painted connecting the end of the sidewalk to the curb ramp at the end of the bus ramp.



A crosswalk connecting the east side sidewalk to the school building is missing

Finding: The bicycle racks at the western entrance are placed to the rear of the fenced area. Students park their bicycles along the fence and in the bicycle racks located closest to the gate.

Recommendation: To encourage bicyclists to ride to and from school, bicycle parking areas should be paved and provide a logical layout of bicycle racks. Providing shade or an overhead structure would also serve to protect bicycles. Locking the gate during the school day may also reduce the possibility of bicycle theft.



The bicycle rack area is unpaved and students park bicycles along the fence

Pave the fenced-in bicycle rack area on the west side and relocate bicycle racks closer to the gate to provide easier access for students. Extra bicycle racks should be transferred to the east side bicycle rack (see next finding).

Finding: The newer bicycle rack area connected to the eastern access sidewalk is too small to accommodate the number of bicycles observed during the site visit.

Recommendation: Consider expanding the paved area to include an additional bicycle rack. Bicycle racks can be transferred from the west-side bicycle rack area. If bicycle theft is an issue, provide a lockable fenced area or provide individual bicycle locks to students.



Bicycles overflow the new bicycle rack located on the east side of the school

Findings: Motorists park along the north side of Old Tomoka Road and students cross the street at random locations to reach the sidewalk located along school property.

Cones are placed along the south side of Old Tomoka Road to prevent motorists from parking on the sidewalk.

Recommendation: A minimum five foot wide sidewalk should be constructed on the north side of Old Tomoka Road and a crosswalk should be painted to connect to the school sidewalk system. The crosswalk should be located between the two school entrance drives and placed to avoid the church entrance drives on the north side of the road. The crossing location should be reviewed by a transportation engineer and evaluated for a crossing guard.



Pedestrians cross Old Tomoka Road at various locations



Cones prevent motorists from parking along the right of way on the south side of Old Tomoka Road

Finding: A bicycle crash involving a school age student occurred at the intersection of Old Tomoka Road with Brookwood Drive. A bicyclist riding west on the south side of Old Tomoka Road rode into a vehicle approaching the stop sign on Brookwood Drive at Old Tomoka Road. Details of this crash event are included in Appendix H.

The sight distance for the sidewalk user and the motorist may have been reduced by a brick column (subdivision sign remnant) and fence.

Recommendations: Remove the brick column to increase the view for motorists using Brookwood Drive and for sidewalk users using the sidewalk along Old Tomoka Road. Review the nearby fence to determine if it encroaches into the sight distance for motorists exiting Brookwood Drive.



Sight distance is reduced by an unused brick column at the intersection of Brookwood Drive with Old Tomoka Road

Finding: The wide sidewalks along S.R. 40 allow for pedestrians and bicyclists to use the sidewalk simultaneously. Motorists' speed and heavy traffic may reduce the feeling of safety and comfort for sidewalk users. The two students (see photograph to the right) walked along the far edge of the right of way to increase their distance from the road.

Recommendation: Whenever possible, sidewalks should be located as far from the travel lane as right of way allows. The maintaining agency should continue the frequent mowing schedule to provide a walkable surface further from the roadway edge.



Students walk through the grass area to gain greater distance from S.R. 40

Finding: Some pedestrians crossed S.R. 40 away from the crossing guard location. These students crossed S.R. 40 with an adult near the intersection with Winding Woods Trail. Traveling to the crossing guard location to cross S.R. 40 would more than double their trip to and from school.

Recommendation: Students, especially pedestrians, will most likely continue to travel the shortest route to and from school. The use of bicycles may encourage students to ride along the north side of S.R. 40 and cross with the crossing guards at Old Tomoka Road. Students attempting to cross this roadway without an adult should be instructed to cross with the crossing guards.



Pedestrians cross S.R. 40 away from the crossing guard location

Finding: Many intersections within the walk zone do not include painted crosswalks.

Recommendation: Provide painted crosswalks connecting sidewalks across intersections within the school walk zone.



There are no crosswalks along Sawtooth Lane and Old Tomoka Road.

Finding: The Trails subdivision located on the north side of S.R. 40 includes a series of connected trails and sidewalks, creating an optimal walking and bicycling environment for students and residents alike. Main Trail is the major connecting road through this subdivision and it does not include sidewalks on both sides of the roadway. The lack of sidewalks on both sides results in the need for sidewalk users to cross the roadway more than one time to stay on the sidewalk/trail system.

Recommendation: The City and community should work together to provide sidewalks along both sides of Main Trail to reduce the number of roadway crossings. As an interim measure, the use of a shell path may provide a usable surface at a reduced cost. The enclosed bicycle and pedestrian master plan indicates sidewalk recommendations that will increase efficiency and safety for students living in this community.



Narrow trails provide a separate route for pedestrian and bicyclists

Finding: Due to recent reductions in budget, students living in the Forest Hills neighborhood are no longer provided courtesy bus transportation for the 2008/2009 school year.

Recommendation: The City may wish to consider pursuing the construction of a trail to connect the Forest Hills neighborhood to Mayfield Terrace to provide students with an alternative to Nova Road. This project is further described as a recommended Priority Project at the end of this chapter.



A short trail and pedestrian bridge over a canal would provide a shortcut for students living in the Forest Hills neighborhood

Finding: Hidden Hills Drive has a sidewalk only on the south side of the road.

Recommendations: The City of Ormond Beach should consider the construction of a minimum five foot wide sidewalk section on the north side of Hidden Hills Drive from Knollwood Estates Drive to S.R. 40. As an interim measure, the City may wish to construct a sidewalk along the north side of Hidden Hills Drive from Knollwood Estates Drive to S.R. 40.

This project should include the removal of the vacated section of Old Tomoka Road to further delineate the walking area from the roadway.



Hidden Hills Drive looking west toward the intersection with Knollwood Estates Drive

Finding: Knollwood Estates Drive is 26' wide with no sidewalks on either side of the road. Students living west of Knollwood Estates Drive and north of Hidden Hills Drive most likely share the road with motorists along Knollwood Estates Drive to reach Hidden Hills Drive.

Recommendation: The City of Ormond Beach may wish to review the possibility of adding a sidewalk along the west side of Knollwood Estates Drive or painted shoulders along both sides of the road to create a dedicated bicycle and pedestrian area. This sidewalk or bicycle lanes should connect .



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).

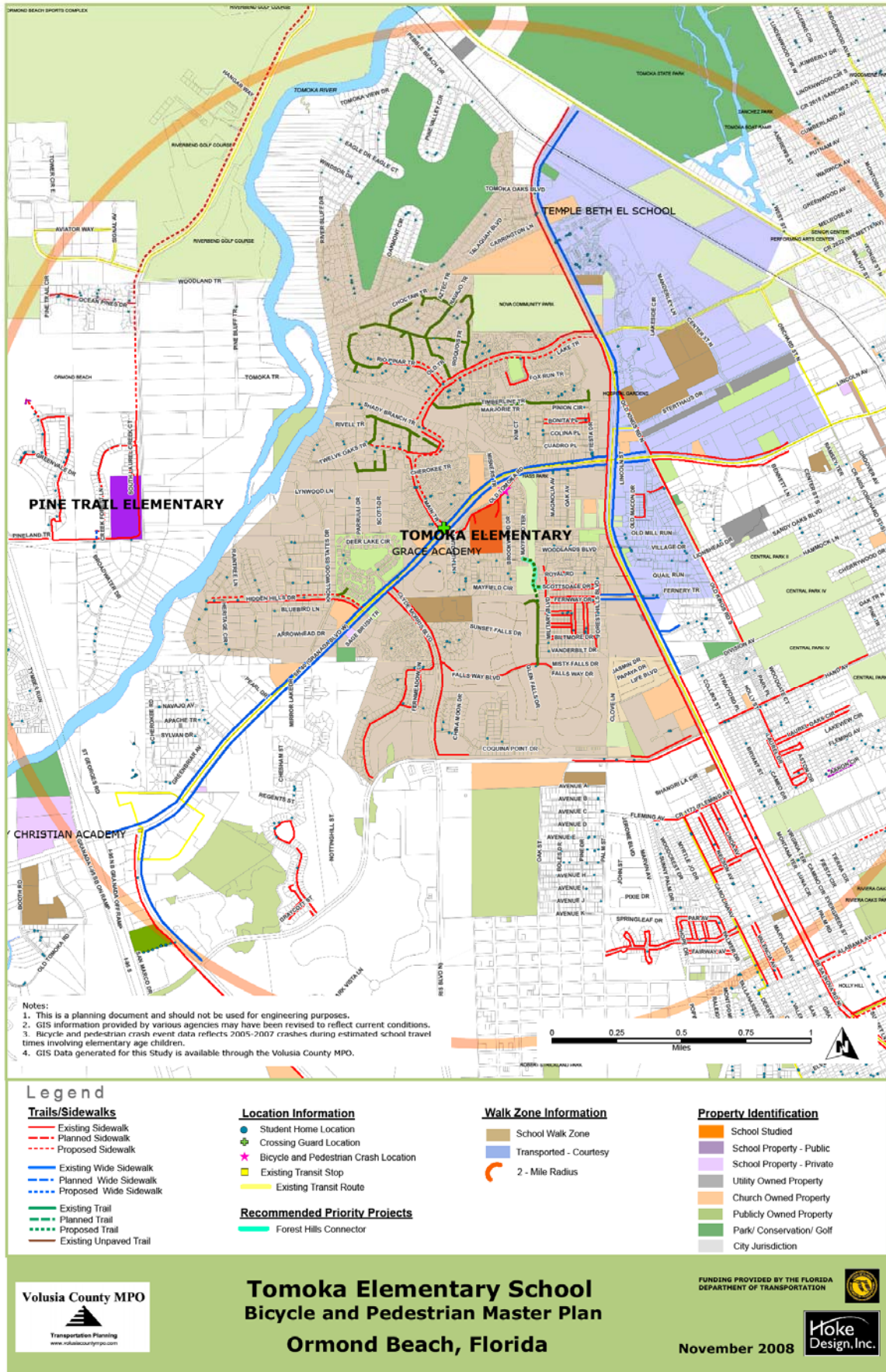
Planned Conditions:

- 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

Forest Hills Connector (Trail and Bridge)

Project Location: Between Scottsdale Drive and Mayfield Terrace (see Figure 3.10.3)

Project Description: A trail or wide sidewalk with a pedestrian bridge over the canal extending from the end of Scottsdale Drive to the curve in the road on Mayfield Terrace.

School Served: Tomoka Elementary School

Maintaining Agency: The City of Ormond Beach

Finding: Students living in the Forest Hills subdivision are no longer provided courtesy bus transportation. If they walk or ride bicycles to and from school, they currently would need to travel along Nova Road and S.R. 40 to reach Old Tomoka Road and the school. These roads are busy and the distance exceeds one mile.

Recommendations: Review the possibility of obtaining a trail easement for the section of private property located along the east side of Mayfair Terrace. If possible, provide a trail connection from the terminus of Scottsdale Drive to the City-owned property along the creek to the Mayfield Terrace. This will require a pedestrian bridge to provide access over the creek.

Potential Constraints: If the property owner is not willing to work with the City to implement this trail, the trail could be extended along the east side of the creek to S.R. 40 where it would connect to the existing wide sidewalk on the south side of the road. This option does not require a pedestrian bridge but will result in a longer trail.

Potential Opportunities: The construction of a trail connection to Tomoka Elementary School would provide students living in the Forest Hills and Woodland Subdivisions with a route to school away from heavily traveled roadways.

Estimated Project Cost (not including right of way costs): \$95,000 plus the cost of the pedestrian bridge.



An easement may be needed to cross a section of private property



Scottsdale Drive continues to the City-owned property along the creek

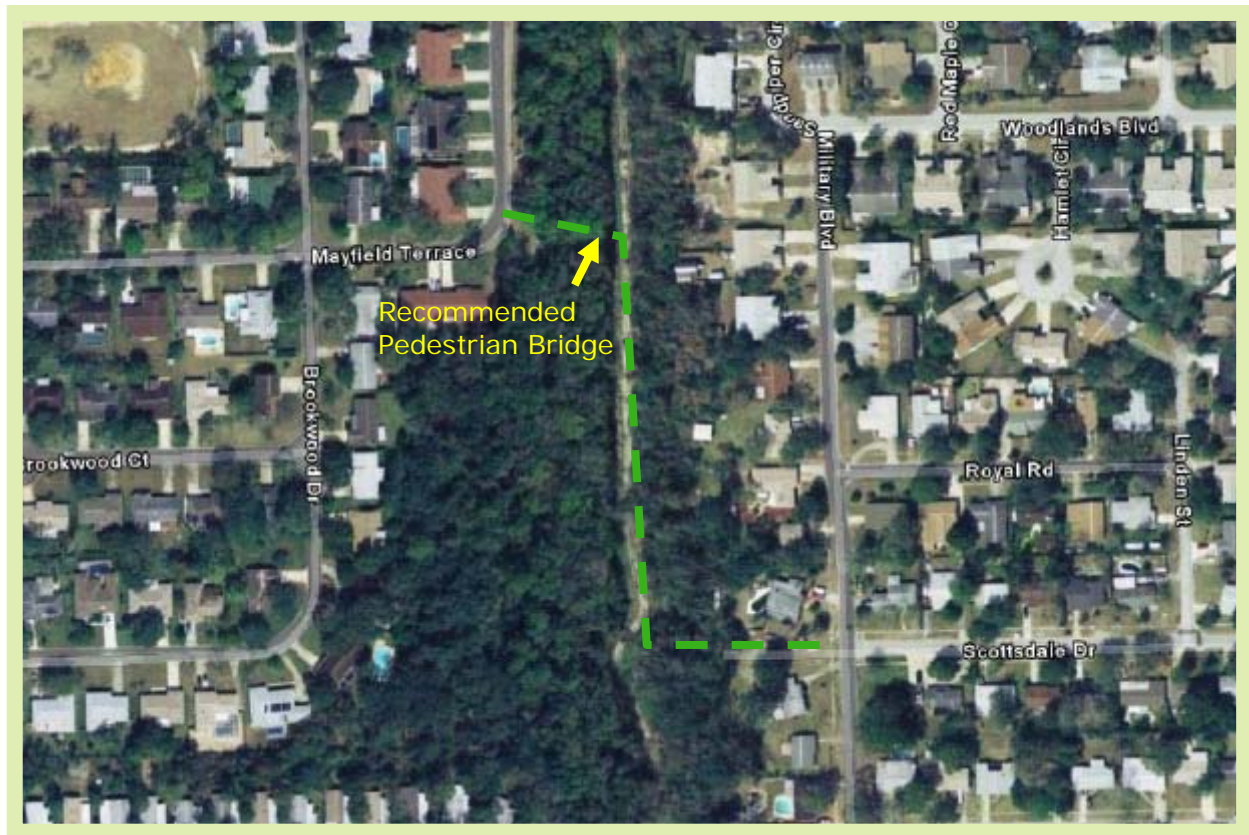


Figure 3.10.3

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