February 2013

McDonald Road

Sidewalk Feasibility Study

City of Port Orange, Florida

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Volusia TPO

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I. EXECUTIVE SUMMARY

The Volusia Transportation Planning Organization (VTPO) recognizes the importance of developing a cohesive transportation network that provides safe, efficient, and accessible pedestrian and bicycle facilities. One way to accomplish this goal is to expand the integrated bicycle and pedestrian transportation system by continuing the feasibility studies of prioritized projects. The McDonald Road Sidewalk Feasibility Study is a VTPO 2011 prioritized XU Bicycle/Pedestrian project as requested by the City of Port Orange, Volusia County, Florida.

The purpose of this project is to conduct a limited corridor study that will assess the feasibility of providing a minimum five (5) foot wide sidewalk along the west side of McDonald Road extending approximately 2,640 feet from the intersection of Madeline Avenue and Sugarhouse Drive through the intersection of Sauls Street/Madeline Avenue to 6th Street (See ***Location Map – Figure 1)***. The objective of the project is to identify the width of the path and its location in an effort to design a cost-effective path that fits within the existing right-of-way.

This project was identified as a needed project in the Sugar Mill Elementary School Safe Routes to School Study conducted in 2007 for increasing safety to and from the school. The City Council approved submittal of this project to the VTPO as part of the call for 2011 prioritized XU Bicycle/Pedestrian projects. The City has also received a letter of support from the Principal of Sugar Mill Elementary School. The City's support for pedestrian safety and facilities is evident in their Comprehensive Plan and Land Development Codes. The city of Port Orange is a Local Agency Program (LAP) certified agency. McDonald Road is a non-state roadway on the Federal aid-eligible system.

A site visit was conducted on September 26, 2012 and November 14, 2012 which consisted of traversing the project corridor in order to document the current constraints and opportunities within the apparent right of way. Photographic documentation, graphic depiction and measurements, and aerial maps assisted in recording the important details of the project and to note obstacles that might impede the project's constructability. Members of the evaluation team collected information on field conditions and located potential constraints and opportunities associated with the proposed project. Together, with engineering and professional planning-level judgment, this information serves as the foundation for the recommendations included in this study.

- *McDonald Road is a city collector roadway maintained by the City of Port Orange. All plans, plats, and surveys were provided by the City.*
- *Public involvement has occurred for the project through the City of Port Orange. Support letters have been provided endorsing the project.*
- *The concept plan and typical cross sections included within this report were formulated based on the results of compiling data regarding existing conditions and applicable FDOT design guidelines.*
- *Adequate right of way exists along the corridor to construct the desired facilities without the need for encroachment outside the apparent right-of-way boundaries with* ***one exception****. McDonald Road maintains an apparent right of way width that varies from approximately 50 to 80 feet from*

north to south along the extent of the project. However, a 60.40 foot jogged section of the right-of-way creates an area with approximately 5 feet between the existing edge of pavement and back of apparent ROW. Right of way acquisition may be required in order to maintain minimum recommended horizontal separation (clear zone) between the travel way and pedestrian traffic.

- *Based on the data gathered, adequate clear zone exists along the majority of the corridor between the travel way and pedestrian traffic. Approximately 4 to 14 feet exists from the edge of pavement to the proposed sidewalk along the length of the corridor **EXCEPT** for two instances.*
    - *Within one 60.40 foot section approximately 5 feet lies between the existing edge of pavement and back of apparent ROW. Though room exists for a 5 foot sidewalk, this may not allow for adequate clear zone between the travel way and pedestrian traffic.*
    - *Adequate clear zone does not exist at the T-Intersection that would allow for the safe location of a 5 foot sidewalk within the existing ROW that is safe and cost-effective.*
- *Potential conflicts may arise along this proposed path that can be resolved by field relocation of the sidewalk. For instance, the sidewalk may be routed around utility structures as shown in the corridor design plans.*
- *Potential encroachment of private property landscape/mailboxes was noted during the site reconnaissance of the corridor from Old Sugar Mill Road to 6th Street (See **Existing Corridor Photos, Figure 2C and 2D**). However a corridor specific survey for the study area should be completed prior to the development of a sidewalk design and engineering drawings.*
- *Environmental conditions were considered as part of the feasibility study. Due diligence performed during the field reconnaissance and data review revealed conditions that may require additional design or permitting costs including wetlands and other surface waters.*
- *Parts of the schedule which may be impacted by the findings include de-minimus permitting requirements outlined by SJRWMD pertaining to ditch crossing which may take up to 45 days to obtain a permit.*
- *Generally, the water management districts consider sidewalk projects exempt from stormwater permitting. The sidewalk construction will not significantly change drainage and is built in uplands therefore it appears as if the project qualifies for exemption to permitting **EXCEPT** for the aforementioned ditch crossing.*
- *Sidewalk will be constructed at grade or less than five percent in accordance with chapter four of the ADA guidelines (28 CFR part 36). The sidewalk will be constructed in accordance with the City of Port Orange Standard Construction requirements utilizing fiberglass rebar.*
- *An Opinion of Probable Cost was developed that fully considers project development requirements and costs.*

The results of the study identified that the recommended width of the sidewalk (minimum 5 feet) and its location (west side of McDonald Road from the intersection of Sauls Street/Madeline Avenue to 6th Street) was feasible, with a few exceptions, in order to design a cost-effective path that fits within the existing right-of-way. This Study provides appropriate, constructible, and cost effective solutions to a significant traffic operation and or safety issue.

II. INTRODUCTION

The Volusia Transportation Planning Organization (VTPO) recognizes the importance of developing a cohesive transportation network that provides safe, efficient, and accessible pedestrian and bicycle facilities. One way to accomplish this goal is to expand the integrated bicycle and pedestrian transportation system by continuing the feasibility studies of prioritized projects. The McDonald Road Sidewalk Feasibility Study is a VTPO 2011 prioritized XU Bicycle/Pedestrian project as requested by the City of Port Orange, Volusia County, Florida.

III. PURPOSE AND OBJECTIVES

The purpose of this project is to conduct a limited corridor study that will assess the feasibility of providing a minimum five (5) foot wide sidewalk along the west side of McDonald Road extending approximately 2,640 feet from the intersection of Madeline Avenue and Sugarhouse Drive through the intersection of Sauls Street/Madeline Avenue to 6th Street (See ***Location Map – Figure 1)***. The objective of the project is to identify the width of the path and its location in an effort to design a cost-effective path that fits within the existing right-of-way.

The proposed sidewalk is located near many community facilities including Sugar Mill Elementary School and the Sugar Mill Historic Site and Botanical Park. An eight foot wide sidewalk now exists on the east side of McDonald Road adjacent to, and leading from, the elementary school property. Most of the students within the walk zone are living to the west of the school and are using roadways with one sidewalk or no sidewalks. It has been recommended that since the majority of students who walk or ride bicycles live west of the school site, there should be sidewalks along the west side of McDonald Road. This would encourage students to cross the roadway where a crossing guard or cross walk is located. Many children and parents with children cross McDonald Road near Christy Drive to directly access the school through the side gate to the bicycle rack area. This is not a marked crossing and there is no crossing guard. Currently there is a crossing guard stationed at the intersection of Charles Street and McDonald Road as well as at the T-Intersection of Madeline Avenue/Saul Street and McDonald Road.

The project will provide a safer pedestrian and bicycle route on the west side of McDonald Road, particularly for school children who cross the street to access the residential developments on the west side. The sidewalk will provide a formal route to direct children to the crosswalks and is expected to be constructed within the existing apparent right-of-way (ROW).

City of Port Orange

The City of Port Orange was incorporated in 1926 in Volusia County and consists of 28 square miles with a population of approximately 56,048 according to the 2010 census data. Port Orange is one of the major urban areas within the county and according to the city web page, it contains 150 distinct neighborhoods.

This project was identified as a need in the Sugar Mill Elementary School Safe Routes to School Study conducted in 2007 for increasing safety to and from the school. The City Council approved submittal of this project to the VTPO as part of the call for 2011 prioritized XU Bicycle/Pedestrian projects. The City has also received a letter of support from the Principal of Sugar Mill Elementary School. The City's support for pedestrian safety and facilities is evident in their Comprehensive Plan and Land Development Codes. The City of Port Orange is a Local Agency Program (LAP) certified agency. McDonald Road is a non-state roadway on the Federal aid-eligible system and is maintained by the City of Port Orange.

The City requested the following considerations as part of the feasibility project:

- Up to two cross walks at locations determined by the feasibility study from the west side of McDonald Road to the existing 8 foot sidewalk on the east side;

FUTURE LAND USE ELEMENT

GOALS, OBJECTIVES AND POLICIES
GOAL 1: SUSTAINABILITY
PROVIDE FOR DEVELOPMENT THAT MEETS THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THEIR OWN NEEDS.

Objective 1.2: *Smart Growth.* Future land use designations, requests for rezoning, and development approval shall be in accordance with the following principals of smart growth in order to maintain a sense of place and community.

Policy 1.2.6: Expand transportation choices by ensuring an efficient network of roads, sidewalks, and bike paths that are safe for pedestrians, bicyclists and vehicular traffic.

TRANSPORTATION ELEMENT

GOAL 1: MOBILITY IMPROVEMENT
ESTABLISH A TRANSPORTATION SYSTEM THAT PROVIDES MOBILITY, ACCESS AND CHOICES, THAT ENCOURAGES INFILL DEVELOPMENT AND ENERGY-EFFICIENT MULTI-MODAL TRANSPORTATION THROUGH THE DESIGNATION MOBILITY IMPROVEMENT ZONES.

Objective 1.5: *Community Design*. The City shall seek to create a more pedestrian-oriented and transit-friendly transportation network by utilizing a variety of context-sensitive designs for transportation facilities and urban design standards for new development, as may be applicable within each MI zone.
Policy 1.5.2: By 2013, the City will develop a "complete streets" strategy to include multiple transportation modes into proposed plans for road improvements. The intent of this policy is to develop a comprehensive, integrated, multi-modal street network by coordinating transportation planning strategies and private development activities as follows: Provide safe and convenient on-site pedestrian circulation.

- Realignment of the existing crosswalk at the intersection of McDonald Road and Charles Street as recommended by the Sugar Mill Elementary School Assessment Report (March 2007);
- Two drainage structure crossings requiring engineering review and recommendation in order to provide a structure conducive to both pedestrian safety and stormwater drainage;
- Safety barrier improvements along Madeline Avenue from Saul to Sugarhouse Drive;
- Intersection improvements at Madeline Avenue/Saul Street and McDonald Road.

IV. STUDY METHODOLOGY

The following tasks were completed per the project scope to provide an informed feasibility report in accordance with VTPO policies, procedures, guidelines and rules. In addition, the tasks will meet the

procedures currently used by the Florida Department of Transportation (FDOT), District Five Office to evaluate Enhancement (XU funded) bicycle and pedestrian corridor projects.

1. A project coordination meeting was held with the VTPO's Project Manager and the City of Port Orange representatives on September 26, 2012 for the purpose of scoping the project and obtaining relevant project information.

2. Data collection for the project consisted of obtaining copies of readily available planning, land use, and engineering information, including the following:

    a. City of Port Orange, as-built drawings for Amber Woods from Ashley Ct. to 6th Street (West side). Right-of-way and as-built for McDonald Road sidewalk in Amber Village SD.

    b. City of Port Orange, Amber Village Plat, January 1995.

    c. City of Port Orange, Plantation Acres Plat, February 1955.

    d. City of Port Orange, Map of Dun-Lawton, January 1882.

    e. City of Port Orange, LIDAR.

    f. City of Port Orange McDonald Road specific purpose survey, January 2006.

    g. Volusia County Property Appraisers parcel maps were downloaded to further delineate the area. This information serves as the most current apparent right of way data available at the time of this evaluation. All measurements are assumed and for planning purposes only.

    h. Data also consisted of referencing readily available information from a variety of sources, including: VTPO, Volusia County, City of Port Orange, and FDOT.

3. A site visit was conducted on September 26, 2012 and November 14, 2012 which consisted of traversing the project corridor in order to document the current constraints and opportunities within the apparent right of way. Photographic documentation, graphic depiction and measurements, and aerial maps assisted in recording the important details of the project and to note obstacles that might impede the project's constructability. Members of the evaluation team collected information on field conditions and located potential constraints and opportunities associated with the proposed project. Together, with engineering and professional planning-level judgment, this information serves as the foundation for the recommendations included in this study.

4. A concept plan and typical cross sections were formulated based on the results of the previous tasks and applicable design guidelines. The concept plan and the typical section are based on design criteria for pedestrian facilities contained in the Florida Department of Transportation (FDOT) Pedestrian Facilities Planning and Design Handbook; the FDOT Plans Preparation Manual (PPM); and the Manual on Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, The Florida Greenbook. In accordance with these reference manuals, a feasible design for the project was determined.

5. An Engineer's Opinion of Probable Costs (EOPC) for Construction based on the refined conceptual design was prepared to construct a sidewalk within the proposed corridor. The EOPC was formulated based on FDOT District Five standards using their historical cost data.

6. Preparation of a Final Report followed receipt of comments by the VTPO, the FDOT, and the City.

V. EXISTING CONDITIONS

The project is located within the City of Port Orange along the west side of McDonald Road (Road) from the intersection of Madeline Avenue and Sugar House Drive to the intersection of 6th Street and McDonald Road (See ***Location Map – Figure 1***). This section of McDonald Road serves mainly residential, recreational, and public land uses. The roadway is currently a two-lane undivided City collector with an eight foot pathway along the east side of the road. The grassed and gravel shoulders along the western edge of pavement indicate that pedestrians and vehicles frequently utilize this area in an undefined manner creating safety issues.

The speed limit is 25 miles per hour (MPH) along the entire project length, including the curve. The speed limit becomes 15 MPH in the school zone when flashing. Utilities along the corridor include: water, cable, phone, sewer, storm water, and overhead electric. No known road improvement projects are currently scheduled for the Road.

Within a ½ mile radius of the project corridor the majority of the surrounding area consist of single family residential developments. Safety is of paramount concern for the consideration of this project. Due to the number and variety of residential land uses in the area and the proximity to Sugar Mill Elementary School, it is imperative a safe passage be provided for the residents and students. Properly planned and constructed sidewalks can address pedestrian safety by separating pedestrians from vehicle traffic, providing a safe and functional space for all users of the corridor.

Bicyclists riding on sidewalks are common in residential areas with young children. Sidewalks are generally not acceptable for commuter bicyclists; however inexperienced recreational bicyclists often use sidewalks if a bike lane is not available or is perceived as unsafe. The City of Port Orange does not prohibit bicycle usage on sidewalks.

The following describes the McDonald Road corridor's existing conditions and constraints. Refer to ***Existing Corridor Photos – Figure 2A-D*** for visual images relating to the existing corridor**.** The corridor presents different opportunities and constraints best described in sections starting from the north end and ending in the south.

Intersection of Madeline Avenue and Sugar House Drive (Refer to photo's 1 - 13, Figure 2A)

- Rural section of road without curb and gutter
- T-Intersection at Madeline Avenue and Saul Street
- McDonald Road begins south of T-Intersection of Madeline Avenue/Sauls Street/McDonald Road

- McDonald Road contains a blind curve south of the T-Intersection
- The apparent right of way is approximately 50 feet from Sugar House Drive to east of Saul Street
- Approximately 10 to 15 feet of apparent right of way is available from edge of pavement to back of ROW on the west side of McDonald Road **EXCEPT** at T-Intersection
- The apparent right of way width can accommodate sidewalks **EXCEPT** in constrained area at T-Intersection which contains an open drainage ditch
- No obstructions were located within proposed path of the sidewalk that would require relocation **EXCEPT** at the T-Intersection
- Steep slopes to adjacent open drainage ditch exist along the apparent right of way from Sugar House Drive past T-Intersection (**See Photos 1 and 2, Figure 2A**)

- Approximately seven (7) feet of apparent right of way exists between edge of pavement and top-of-bank of open drainage ditch at T-Intersection on south side of Madeline Avenue
- Placement of a sidewalk along this segment will require barrier fencing and/or drainage reconfiguration (i.e. piped) due to inadequate apparent right of way width
- Placement of a sidewalk along this segment will require wetland and other surface water permitting to the existing environmentally sensitive area and drainage system along the inside blind curve of McDonald Road
- Beginning of the project connects to a short segment of existing sidewalk on the south side of Madeline Avenue serving the Sugar Forest Subdivision adjacent to the edge of pavement and an open drainage ditch without adequate barrier
- Existing sidewalk intersects with existing crosswalk at drainage flume, no barrier into open drainage ditch
- School crossing signage and markings, including flashing school crossing zone sign, exists at T-Intersection

- Cross walks at T-Intersection are marked from south side of Madeline to north side, then from west side of Saul Street to east side, connecting to existing 8 foot pathway along the northeast ROW of McDonald Road
- Sidewalk ramps do not have detectable warning surfaces
- Drainage inlet within existing sidewalk/crosswalk on northwest corner of intersection

- Additional pedestrian crossing at T-Intersection not recommended due to limited visibility at curve on McDonald Road
- Crosswalks require greater visibility due to T-Intersection configuration and limited visibility curve in road
- School crossing guard at T-Intersection

Intersection of McDonald Road and Christy Drive (Refer to photo's 1 - 4, Figure 2B)

- Rural section of road without curb and gutter
- Apparent right of way approximately 50 feet along corridor to south of Christy Drive
- Horizontal separation transitions from approximately 10 to 20 feet of apparent right of way available from edge of pavement
- No obstructions located within proposed path of the sidewalk that would require relocation
- Existing utilities within the proposed path of the sidewalk can be routed around
- Single family residential homes located along McDonald Road
- Concrete and dirt residential driveway openings exist along corridor
- Stormwater drainage consists of natural percolation within the apparent right of way, no existing structures
- Sidewalk construction will not significantly change drainage
- No crosswalk at cross street of Christy Drive

Intersection of McDonald Rd and Charles St. (Refer to photo's 1-11, Figure 2C)

- Rural section of road without curb and gutter
- Apparent right of way approximately 50 feet to north of Nixon Lane, then widens to approximately 80 feet south of Amber Circle
- Approximately 20 feet of horizontal separation available from edge of pavement to apparent back of right of way
- No obstructions located within proposed path of the sidewalk that would require relocation
- Existing utilities within the proposed path of the sidewalk can be routed around
- Concrete and dirt residential driveway openings exist along corridor
- Stormwater drainage consists of natural percolation within the apparent right of way, no existing structures

- Sidewalk construction will not significantly change drainage

- No crosswalk at cross streets along McDonald Road including Nixon Lane and Old Sugar Mill Road
- School crossing marking and signage at intersection of McDonald Road and Charles Street
- Crosswalk at the intersection of McDonald Road and Charles Street on east side of road is painted to avoid the stop bar on Charles Street, placing pedestrians in the roadway for a longer distance.
- Sidewalk ramps do not have detectable warning surfaces
- Crosswalk crosses McDonald Road from NE corner of Charles Street to west side of McDonald.
- No landing area or sidewalk connection on west side of McDonald Road
- School crossing guard at intersection of Charles Street and McDonald Road

Intersection of McDonald Rd and 6th St. (Refer to photo's 1-14, Figure 2D)

- Rural section of road without curb and gutter
- Apparent right of way approximately 80 feet to 6th Street, except for one constrained area approximately 60.40 feet north of the drainage ditch crossing
- Approximately 30 feet of horizontal separation from edge of pavement to back of apparent right of way, except at the constrained area which maintains approximately 5 feet of horizontal
- Existing metal guardrail and sidewalk crossing on east side of McDonald Road within City of Port Orange drainage easement/apparent right of way
- Existing utilities within the proposed path of the sidewalk can be routed around
- Obstructions located within proposed path of the sidewalk that may require relocation include private property landscaped areas and mailboxes from Old Sugar Mill Road to 6th Street (See **Existing Corridor Photos, Figure 2C and 2D**).
- Drainage swale within apparent right of way south of drainage ditch to 6th Street
- Drainage headwall at each driveway crossing
- Single family residential homes located along McDonald Road
- Concrete residential driveway openings exist along corridor
- Sidewalk construction will not significantly change drainage

- No crosswalk at cross street of Ashley Circle
- Existing 4 foot wide concrete sidewalk south of Ashley Circle to end of project at 6th Street, outside of apparent right of way.

VI. GENERAL DESIGN PRINCIPALS

The concept plan and typical cross sections included within this report were formulated based on the results of compiling data regarding existing conditions and applicable FDOT design guidelines. Study recommendations are based on design criteria for pedestrian facilities contained in the FDOT Pedestrian Facilities Planning and Design Handbook, the FDOT Plans Preparation Manual (PPM) and the Manual on Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, The Florida Greenbook. The following summarizes design guidelines applicable to this feasibility report.

Horizontal Separation

Sidewalks according to the Florida Pedestrian Planning and Design Handbook are defined as "paved area (typically concrete) which normally runs parallel to vehicular traffic and is separated from the road surface by at least a curb and gutter." A sidewalk is designed for preferential or exclusive use by pedestrians. The number one goal in designing sidewalks shall be the elimination of vehicle-pedestrian conflicts. Though it is not possible to eliminate all vehicle-pedestrian conflicts within the typical roadway corridor, steps should be taken to minimize the effects of all vehicle-pedestrian conflicts through proper design.

1. The effective minimum width of a sidewalk within a residential area is 5 feet. A minimum width of 6 feet of horizontal clear zone is recommended for urban facilities where no curb and gutter is present. If 6 feet is not available, a "barrier" is recommended between the pedestrian way and the vehicular travel way. The definition of "barrier" may consist of curb and gutter, landscaping, or a permanent structure, such as railing or fencing.

2. To properly account for horizontal separation (clear zone) between the roadway and sidewalk, the design must, at a minimum, meet Florida Greenbook requirements. The Florida Greenbook states that sidewalks shall be separated from the travel lane of a rural (non-curbed) roadway based on the following criteria listed in order of desirability:

    a. Outside of the highway right-of-way in a separately dedicated corridor
    b. At or near the right-of-way line
    c. Outside of the designed roadside clear zone.
    d. Outside of the minimum required roadside clear zone
    e. As far from the edge of the driving lane as possible.

3. On curbed roadways, the minimum width of a sidewalk shall be 5 ft. when separated from the curb by a buffer strip. The minimum recommended separation for a 5 ft. sidewalk from the back of curb is 2 ft. The buffer strip should be 6 ft. where possible to eliminate the need to narrow or reroute sidewalks around driveways. If the sidewalk is located adjacent to the curb, the minimum recommended width of sidewalk is 6 ft.

4. The following guidelines will be useful in standardizing the identification and treatment of drop-off hazards for pedestrians and bicyclists. There are two cases that require shielding…a drop-off

greater than 10 inches that is closer than 2 feet from the pedestrians' or bicyclists' pathway or edge of sidewalk is considered a hazard and shall be shielded. Also, a slope steeper than 1:2 (as called for in the plans) that begins closer than 2 feet from the pedestrians' or bicyclists' pathway or edge of sidewalk is considered a hazard and shall be shielded when the total drop-off is greater than 60 inches…. Installing fencing or railings are two ways to shield the drop-offs. Fencing is generally intended for use in rural areas along paths and trails. Standard railing is generally intended for urbanized areas, locations attaching to bridge rail or along concrete walkways.

5. Ideally, a 3 foot "shy" width should be provided behind the sidewalk for above ground utilities.

Accessibility/Safety

Curb ramps, maximum slopes, minimum widths, clear zones, and design treatments for the visually impaired, such as truncated domes, are design features that result in part from the Americans with Disabilities Act (ADA). These design features, when included in pedestrian facility planning, produce "ADA-compliant" facilities.

1. The Florida Greenbook states that curb ramps meeting the requirements of ADA Accessibility Guidelines and the Florida Accessibility Code for Building Construction shall be constructed at crosswalks at all intersections where curbs and sidewalks are constructed in order to give persons with disabilities safe access.

2. In general, proper design of pedestrian crossings shall consider the following:

    a. Crossings should be placed at locations with ample sight distances

    b. At crossings, the roadway should be free from changes in alignment or cross section

    c. The entire length of the crosswalk shall be visible to drivers at a sufficient distance to allow a stopping maneuver

    d. STOP bars shall be provided adjacent to all signalized crosswalks to inform drivers of the proper location to stop. The STOP bar should be well separated from the crosswalk, but should not be closer than 4 feet.

    e. All crosswalks shall be easily identified and clearly delineated, in accordance with Manual on Uniform Traffic Control Devices (MUTCD) (Rule 14-15.010)

3. The single most important design consideration for persons with disabilities is curb cuts. Therefore, new and retrofitted streets with sidewalks should have curb cuts installed at all delineated crossings and it is desirable to provide separate ramps for each crosswalk at intersections with perpendicular approaches. Two curb cuts at each corner with a curb separating each ramp provides a greater amount of information to visually impaired pedestrians in street crossing designs. However a single uniform diagonal ramp including both crossings is also acceptable, when installed with truncated dome warning strips along the edge of the curb line.

4. Crossings shall also meet the same grade and cross slope requirements as sidewalks where the grade should not exceed 5%, and the maximum cross slope shall be no more than 2%.

5. Marked crosswalks shall be provided at all side streets where a pedestrian facility meets the roadway.

6. Marked crosswalks on an uncontrolled leg of an intersection or midblock shall be supplemented with other treatments (including beacons, curb extensions, raised medians, raised traffic islands, or enhanced overhead lighting) when any of the following conditions exist: 1. Where posted speeds are greater than 40 miles per hour (MPH), 2. Inadequate stopping sight distance exists such as on hills or curves, 3. Block length is shorter than 600 feet and high pedestrian volumes exist, and 4. Multiple conflict points that demand driver attention away from the crosswalk.

7. All new facilities (and existing when possible) should have some degree of access control, since each point of access produces a traffic conflict. The control of access is one of the most effective, efficient, and economical methods for improving the capacity and safety characteristics of streets and highways. The reduction of the frequency of access points and the restriction of turning and crossing maneuvers, which should be primary objectives, is accomplished more effectively by the design of the roadway geometry than by the use of traffic control devices.

Signage

Pedestrian safety is maximized when drivers are aware of the crosswalk location and know when a pedestrian is attempting to cross. Flashing lights that are activated only when a pedestrian is attempting to cross can enhance crosswalk detection by motorists. The flashing lights, in conjunction with advanced warning signs for the lights, can provide the motorists with more warning of the crossing.

Signs and markings should be utilized whenever possible to provide the pedestrian clear direction. The signs and markings should conform to the standards set forth in the MUTCD.

1. School pavement markings and crosswalk markings should be clear and visible in order to warn motorists that they are entering a school zone and children are crossing the road.

2. The FDOT's current standard (Index No. 17346) uses a special emphasis crosswalk that lengthens the life of the crosswalk marking.

3. Crosswalks should align with sidewalk ramps and should be installed where walkers and bicyclists are in the pavement for the shortest distance and time possible.

4. Pavement markings should be accompanied by the required signage standards set forth in the MUTCD.

5. Walkers and bicyclists should be dissuaded from crossing at intersections or mid-block crossings where heavy traffic exists unless accompanied by crossing guards.

6. Finally, illumination of the roadway should also provide sufficient lighting for the pedestrian facility. This is particularly important at pedestrian crossings or other areas of potential vehicle-pedestrian conflict.

A variety of intermittent lighting styles may be used, including:

a. Flashing traffic signals over the crosswalk;
b. Imbedded flashing lights in the crosswalk surface; and
c. Flashing signals to warn motorists if pedestrians are present.

The purpose of the In-Roadway Warning Light enhanced crosswalk system and associated signage is for safety purposes (Refer to **Exhibit 1**). This system is to both inform motorists that there is a pedestrian in the crosswalk and to increase the visibility of the crosswalk.

Exhibit 1. *Imbedding lights in the asphalt at the edge of a crosswalk is a method for making crosswalks more visible to motorists.*

Permitting

1. Sidewalk construction will not significantly change drainage therefore no permit should be required in accordance with St. Johns River Water Management District Compliance Coordinator, Bill Carlie. As long as the sidewalk is constructed within the uplands, a permit exemption letter may be requested at time of design and construction. The following email response was received on 12/12/12 per a request to review the corridor for any known projects or issues.
2. A permit may be required for drainage ditch crossing structures or impacts to any surface waters along the route. Impacts are assumed to be de-minimus according to design recommendations. Therefore, a General Permit may be obtained by the SJRWMD for minor ditch crossings.

"Thank you for the inquiry this morning. I searched the District's GIS database regarding the proposed sidewalk projects along Victoria Gardens Boulevard from Clyde Morris to Appleview Way and Madeline Avenue/McDonald Road to 6th Street. Based on my search, I have not identified any issues. Should you need additional information, please do not hesitate to contact me."

Cathy

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VII. CONCEPTUAL DESIGN RECOMMENDATIONS

In accordance with the opportunities and constraints described above and applicable industry design standards, the preferred sidewalk location and improvements has been determined for McDonald Road. The following outlines the feasible design recommendations for the project corridor depicted on ***Project Corridor Design Plans, Maps 1 – 5,*** *and* ***Typical Sections and Miscellaneous Details, Map 6.***

Right-of-way width and encroachments dictate the most feasible and cost effective location of a sidewalk. Based on the data gathered, adequate clear zone and apparent right of way exists along the majority of the corridor between the travel way and pedestrian traffic for a 5 foot concrete sidewalk to be located with a variable width offset from along the backside of the apparent right of way. Two conflict points have been identified:

- Within one 60.40 foot section approximately 5 feet lies between the existing edge of pavement and back of apparent ROW. Though room exists for a 5 foot sidewalk, this may not allow for adequate clear zone between the travel way and pedestrian traffic.
- Adequate ROW and clear zone does not exist at the T-Intersection that would allow for the safe location of a 5 foot sidewalk within the existing apparent ROW that is safe and cost-effective.

Generally, sidewalks may be field relocated to rout around existing utility structures as shown in the corridor design plans. Potential encroachment of private property landscape and mailboxes was noted during the site reconnaissance of the corridor. A corridor specific survey for the study area should be completed prior to the development of a sidewalk design and engineering drawings in order to identify the placement and limits of these obstructions.

The following lists conceptual design recommendations for the corridor:

- Construct longitudinal grade of the sidewalk to be at grade or less than five percent in accordance with chapter four of the ADA guidelines (28 CFR part 36).
- Maintain minimum horizontal separation requirements between the travel land or a rural (non-curbed) roadway and sidewalk.

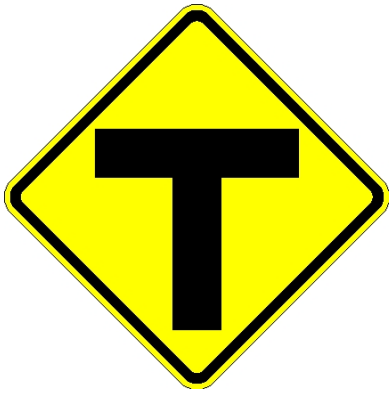
- Install pedestrian signage and a special emphasis crosswalk at Christy Drive to prevent uncontrolled crossing of students/parents during school hours.
- Replace special emphasis crosswalk markings to existing crosswalk at T-Intersection and Charles Street.
- Add school safety signage in accordance with MUTCD.
- Utilize additional signs and markings whenever possible to provide the pedestrian and motorist clear direction.
- Provide ADA compliant sidewalk ramps at all new crosswalk locations.
- Include detectable warning surface on curb cuts at all crosswalk locations.
- Route sidewalk around existing utilities within the proposed path of the sidewalk.
- Construct the sidewalk in accordance with the City of Port Orange Standard Construction requirements utilizing fiberglass rebar.
- Install flashing pedestrian signage to signal traffic approaching mid-block crosswalk at Christy Drive and T-intersection crosswalks. Recommended to maximize awareness of the crosswalk location and when a pedestrian is attempting to cross.
- Install longitudinal railing for the open drain crossing located at the T-Intersection and drainage crossing south of Amber Circle.
- Install stop bars and pedestrian crosswalks at all roadway crossings as shown on ***Maps 1 – 5.***

Please see below for specific details recommended for each section of the corridor.

Intersection of Madeline Avenue and Sugar House Drive - Map 2

The following is recommended for this section in order to provide appropriate, constructible, and cost effective solutions to a significant traffic operation and safety issue.

A. Due to the lack of accessible horizontal separation, adequate room is not available to provide a safe clear zone from the existing 5 foot sidewalk, from Sugar House Drive to the T-Intersection, and the adjacent travel way. The sidewalk cannot be moved closer to the outside right-of-way line due to the proximity of the open drainage ditch. Therefore, it is recommended that the sidewalk should be raised to include a curb and gutter in order to provide a barrier to the existing adjacent roadway. A thickened edge accommodates a safety railing adjacent to the open drain.



B. Due to the lack of visibility at this intersection created by the blind curve to the south and the T-Intersection, an additional cross walk is not recommended in this area. However, pedestrian activated special emphasis crosswalks with in-pavement LED crosswalk lights and LED border

enhancement signage is recommended to assist in the safety of the pedestrians crossing Madeline Avenue. These functional changes will serve the residents within the Sugar House Drive (Sugar Forest Subdivision) neighborhood (**Refer to Exhibit 1**). Due to the proximity of the Madeline Avenue/Sauls Street crosswalk to the roadway curve immediately to the east, northbound traveling vehicles do not have enough advance warning indicating there may be pedestrians within the crosswalk. This crosswalk is also utilized by school children on their commute to and from school. The combination of these two factors warrants the emphasized crosswalk in order to provide a safe environment.

C. Due to the existing alignment of the crosswalk at the T-Intersection, relocation of the crosswalk a few feet to the west was recommended in order to provide a better alignment with the existing sidewalk along Sauls Street; and provide ADA accessible landings separated from the existing drainage inlet on the north and drainage flume on the south side of Madeline Avenue.

D. Due to the following concerns, it is recommended that a sidewalk along the southern side of Madeline Avenue/McDonald Road, east of Sauls Street, not be constructed:

1. Adequate apparent right of way does not exist at the T-Intersection without having to pipe the drainage ditch or provide a bridge structure. Therefore, extensive work would be required in order to create adequate room and horizontal separation for a sidewalk including: drainage capacity study and routing design, wetland and other surface water impacts and permitting, and structural design.
2. Safety for pedestrian use of a system that includes a T-Intersection and a blind curve are of paramount concern. The lack of visibility along this route is created by the blind curve to the south and the T-Intersection. Encouraging pedestrian and bicyclist to travel on both sides of the corridor may create opportunity for uncontrolled crossing of the road at blind spots.
3. Volusia County owns the parcel south of the drainage ditch headwall which appears to contain potential wetlands and drainage conveyance for stormwater to the south. Construction of a sidewalk within an environmentally sensitive area may trigger environmental and stormwater concerns, requiring further analysis.

Therefore, in order to provide appropriate, constructible, and cost effective solutions to a significant traffic operation and safety issue, the piping of the ditch and construction of a sidewalk along the inside of a blind curve has not been recommended. The preferred alignment is to reconstruct the existing sidewalk and crosswalk to meet up with the existing 8 foot pathway located on the east side of the outside curve along McDonald Road.

Intersection of McDonald Road and Christy Drive – Map 3

The following is recommended for this section in order to provide appropriate, constructible, and cost effective solutions to a significant traffic operation and safety issue.

A. Due to the lack of available minimum recommended horizontal separation, sidewalks are recommended to begin at the start of residential homes on the western side of the corridor, just north of Christy Drive, in order to provide pedestrian facilities for the existing users.

B. Due to the issues and recommendations stated within the Sugar Mill Elementary School Safe Routes to School Study, it was recommended that a high emphasis crosswalk **(refer to Exhibit 1)** is located south of Christy Drive and McDonald Road intersection. Many children and parents with children cross McDonald Road near Christy Drive to more readily access the schools back entrance gate and sidewalk to the bicycle rack area. Appropriate signage and markings have been recommended in accordance with applicable standards.

Intersection of McDonald Rd and Charles St. – Map 4

The following is recommended for this section in order to provide appropriate, constructible, and cost effective solutions to a significant traffic operation and safety issue.

A. Due to the issues and recommendations stated within the Sugar Mill Elementary School Safe Routes to School Study, the existing crosswalk at Charles Street should be reconstructed in order to reduce the exposure of pedestrians within the travel way of McDonald Road. The configuration takes into consideration the following:

1. Site line, visibility, at intersection
2. Safe pedestrian landings which accommodate ADA standards
3. High emphasis crosswalk markings and signage in accordance with applicable standards

Intersection of McDonald Rd and 6th St. – Map 5

The following is recommended for this section in order to provide appropriate, constructible, and cost effective solutions to a significant traffic operation and safety issue.

A. Due to a constrained apparent right of way, a 60.40 foot jogged section of the corridor creates an area with approximately 5 feet between the existing edge of pavement and back of apparent ROW. Though room exists for a 5 foot sidewalk, this may not allow for adequate clear zone between the travel way and pedestrian traffic. Right of way acquisition may be required in order to maintain adequate clear zone between the travel way and pedestrian traffic. Approximately 725 square feet of ROW acquisition will be required in order to accommodate the recommended minimum clear zone and a 5 foot sidewalk. Specific forms are required by FDOT for acquisition of ROW with federal funds. These forms have been included for reference in **Appendix A**.

B. Due to a lack of available minimum recommended horizontal separation (clear zone), it is recommended that in order to traverse the existing drainage ditch, the existing headwall be relocated to provide adequate available right of way for construction of the sidewalk and required safety railing.

VIII. FINANCIAL FEASIBILITY

Table 1 provides an ***Engineer's Opinion of Probable Cost*** to construct and maintain the proposed corridor based on FDOT 2012 Basis of Estimates Handbook. The item number and unit of measure are based on the FDOT Basis of Estimates manual. The following definitions were utilized to determine cost basis for the estimated work. The estimate does not include utility relocations that are found to be

necessary during the final design process. This estimate is based primarily upon the FDOT 12 Month Moving Average Item Unit Cost Report for Area 6, with costs through 11/30/2012. The unit costs from the FDOT report were then increased based on an inflation factor of five percent to bring them to year 2013 costs. Cost projections have been shown for sequential years up to 2016 based on a unit cost annual increase based on an inflation factor of five percent. As shown on ***Table 1***, the total estimated cost for design and construction of the sidewalks along the McDonald Road corridor as discussed in this report for the year 2013 is **$207,053.00.**

- *Mobilization* – Consists of work and operations necessary to begin work on a project. Includes moving in equipment and personnel, establishing temporary offices, safety equipment and sanitary facilities. May include surveying, bond and insurance expenses.
- *Maintenance of Traffic* – Includes all items required to safely maintain traffic throughout a transportation work zone with minimal inconvenience to the public and fit into one of the following categories:1) cannot reasonably be quantified; 2) cannot be addressed under current pay items; 3) are incidental to the operation necessary to safely maintain traffic throughout a work zone.
- *Erosion Control* – The contractor shall be required to provide Turbidity and Pollution Control Devices in accordance with all State, Local, and Federal Standards, Section 104 Prevention, Control, and Abatements of Erosion and Water Pollution of the Standard Specifications, and applicable FDOT Roadway and Traffic Design Standards for this project.
- *Clearing and Grubbing* – This Item is included to account for the clearing that is necessary to build the sidewalk.
- *Removal of Existing Concrete Pavement* –This item is included to account for the removal and disposal of existing concrete sidewalks.
- *Earthwork/Embankment* – The bid price for this item shall include, but not be limited to, the requirements of Section 120 Excavation and Embankment of the Standard Specifications.
- *Concrete Class I, Endwalls* – Includes the concrete and reinforcing steel to construct the endwall per FDOT Roadway and Traffic Design standards.
- *Pipe Culvert, 18" RCP* – Includes cost of the pipe and concrete collar and is included to extend the existing pipe to the new endwall location.
- *Pedestrian/Bicycle Railing – Tubular Railing* – This item is included to account for the construction of a pedestrian railing to guard against hazardous field conditions.
- *Curb & Gutter Conc (Type F)* –This item is included to replace existing valley curb.
- *Sidewalk Conc (4" Thick)* –This item is included to account for the cost of placing the majority of the sidewalk along the proposed route. The sidewalk ramps are also included in this cost as well as the Fiberglass Rebar in accordance with the City of Port Orange Standard Construction Sidewalk requirements.
- *Sidewalk Conc (6" Thick)* –This item is included to account for the cost of placing the sidewalk in areas with traffic bearing situations.

- *Detectable Warning on Existing surface* – This pay item is to be used for detectable warnings applied to existing walking surfaces (retrofit for previous projects), used in coordination with index 304.
- *Detectable Warning Surface* – This item is included as an ADA compliant feature included within all sidewalk ramps. This item accounts for retrofitting existing sidewalk ramps with detectable warning surfaces.
- *Performance Turf, Sod* – This item is included to sod all areas disturbed by construction of the proposed sidewalk.
- *LED Crosswalk System* – This item is included to account for the signs with LED border enhancement and in-pavement lighting. The cost includes the conduit, conductors, advance warning signs and any other items required for complete installation.
- *Single Post Sign, F&I, Less than 12 SF* – This item is included for the pedestrian crosswalk signage, and various additional signs throughout the project.
- *Single Post Sign, F&I, Greater than 12 SF* – This item is included for the pedestrian crosswalk signage, and various additional signs throughout the project that have a combined square footage greater than 12 square feet.
- *Single Post Sign, Relocate* – This item accounts for the relocation of signage along the corridor.
- *Single Post Sign, Remove* – This item accounts for the removal of signage along the corridor.
- *Thermoplastic, Std, White, Solid, 12" and 24"* - These items are included to mark the special emphasis crosswalks, as detailed in the FDOT Design Standards, Index 17346.
- *Pavement Message* – Each word is paid as one message.

Table 1 - Engineer's Opinion of Probable Costs

McDonald Road Sidewalk

(For Design and Construction of Sidewalk & Pedestrian Safety Features along McDonald Road)

Port Orange, FL

Pay Item Number	Description	Estimated Quantity	Unit of Measure	2012 Unit Price	Average Number of Units	Adjusted Price	Inflation Factor	Extended Cost Year 2013	2014	2015	2016
0101-1	Mobilization	1	LS	-	-	$ 15,000.00	5%	$ 15,750.00	$ 16,537.50	$ 17,364.38	$ 18,232.59
0102-1	Maintenance of Traffic	1	LS	-	-	$ 10,000.00	5%	$ 10,500.00	$ 11,025.00	$ 11,576.25	$ 12,155.06
104-10-3	Erosion Control	1	LS	-	-	$ 5,000.00	5%	$ 5,250.00	$ 5,512.50	$ 5,788.13	$ 6,077.53
0110-1-1	Clearing and Grubbing	1.12	AC	$ 7,974.87	21	$ 17,920.00	5%	$ 21,073.92	$ 22,127.62	$ 23,234.00	$ 24,395.70
0110-4-2	Removal of Existing Concrete Pavement	115	SY	$ 10.82	136	$ 11.00	5%	$ 1,328.25	$ 1,394.66	$ 1,464.40	$ 1,537.62
0110-7-1	Mailbox, Furnish and Install	7	EA	$ 100.00	22	$ 110.00	5%	$ 808.50	$ 848.93	$ 891.37	$ 935.94
0400-1-2	Concrete Class I, Endwalls	2	SY	$ 858.66	34	$ 880.00	5%	$ 1,848.00	$ 1,940.40	$ 2,037.42	$ 2,139.29
0430-174-118	Pipe Culvert, 18" RCP	8	LF	$ 46.63	93	$ 56.00	5%	$ 470.40	$ 493.92	$ 518.62	$ 544.55
515-2-301	Pedestrian/Bicycle Railing (Aluminium, 42")	125	LF	$ 36.90	932	$ 45.00	5%	$ 5,906.25	$ 6,201.56	$ 6,511.64	$ 6,837.22
520-1-10	Type 'F' Curb and Gutter	110	LF	$ 8.13	16866	$ 10.00	5%	$ 1,155.00	$ 1,212.75	$ 1,273.39	$ 1,337.06
0522-1	Concrete Sidewalk, 4" Thick (w/ Fiberglass Rebar)	1080	SY	$ 20.19	7335	$ 30.00	5%	$ 34,020.00	$ 35,721.00	$ 37,507.05	$ 39,382.40
522-2	Concrete Sidewalk, 6" Thick (w/ Fiberglass Rebar)	45	SY	$ 26.14	4302	$ 35.00	5%	$ 1,653.75	$ 1,736.44	$ 1,823.26	$ 1,914.42
527-1	Detectable Warning on Existing Walking Surface	3	EA	$ 364.78	12	$ 410.00	5%	$ 1,291.50	$ 1,356.08	$ 1,423.88	$ 1,495.07
0570-1-2	Performance Turf, Sod	2000	SY	$ 1.95	57929	$ 2.50	5%	$ 5,250.00	$ 5,512.50	$ 5,788.13	$ 6,077.53
0699-1-1A	LED Crosswalk System	1	EA	-	-	$ 30,000.00	5%	$ 31,500.00	$ 33,075.00	$ 34,728.75	$ 36,465.19
0700-20-11	Single Post Sign, F&I, Less than 12 SF	12	AS	$ 226.53	33	$ 240.00	5%	$ 3,024.00	$ 3,175.20	$ 3,333.96	$ 3,500.66
0700-20-12	Single Post Sign, F&I, Greater than 12 SF	1	AS	$ 469.11	12	$ 475.00	5%	$ 498.75	$ 523.69	$ 549.87	$ 577.37
0700-20-40	Single Post Sign, Relocate	4	AS	$ 75.21	6	$ 75.00	5%	$ 315.00	$ 330.75	$ 347.29	$ 364.65
0700-20-60	Single Post Sign, Remove	3	AS	$ 10.03	26	$ 10.10	5%	$ 31.82	$ 33.41	$ 35.08	$ 36.83
0711-11-123	Thermoplastic, Std, White, Solid, 12"	830	LF	$ 1.58	3214	$ 2.00	5%	$ 1,743.00	$ 1,830.15	$ 1,921.66	$ 2,017.74
0711-11-125	Thermoplastic, Std, White, Solid, 24"	460	LF	$ 3.51	2417	$ 4.00	5%	$ 1,932.00	$ 2,028.60	$ 2,130.03	$ 2,236.53
0711-14-160	Pavement Message	2	EA	$ 178.00	42	$ 220.00	5%	$ 462.00	$ 485.10	$ 509.36	$ 534.82
							CONSTRUCTION COSTS SUBTOTAL	$ 145,812.00	$ 153,103.00	$ 160,758.00	$ 168,796.00
							CONSTRUCTION COSTS TOTAL	$ 145,812.00	$ 153,103.00	$ 160,758.00	$ 168,796.00
-	Design (Including Bid Package)	1	LS	30%				$ 43,744.00	$ 45,931.00	$ 48,227.00	$ 50,639.00
-	CEI	1	LS	12%				$ 17,497.00	$ 18,372.00	$ 19,291.00	$ 20,256.00
							DESIGN COSTS	$ 61,241.00	$ 64,303.00	$ 67,518.00	$ 70,895.00
							TOTAL PROJECT COST	$ 207,053.00	$ 217,406.00	$ 228,276.00	$ 239,691.00

GENERAL NOTES:

1) THIS OPC IS BASED ON CONCEPTUAL DESIGN.

2) THIS OPC IS BASED ON HISTORICAL COST INFORMATION MADE AVAILABLE BY THE FDOT. UNIT PRICES ARE PREDOMINANTLY DERIVED FROM THE CURRENT 12-MONTH MOVING AREA AVERAGE FOR AREA 06, BUT STATEWIDE AVERAGE UNIT PRICES MAY BE UTILIZED IN SOME INSTANCES. UNIT PRICES OF SOME QUANITIES MAY HAVE BEEN INFLATED TO ACCOUNT FOR THE SMALL NATURE OF THE PROJECT. ACTUAL CONSTRUCTION COSTS WILL VARY.

3) THE COSTS FOR YEARS 2013 THROUGH 2016 WERE GENERATED USING A 5% INFLATION RATE.

4) THIS OPC DOES NOT INCLUDE THE COSTS FOR ANY RIGHT-OF-WAY OR EASEMENT ACQUISITIONS, AS THEY ARE NOT ANTICIPATED TO BE REQUIRED.

5) THIS OPC DOES NOT INCLUDE THE COSTS ASSOCIATED WITH OBTAINING PERMITS.

6) THE ESTIMATE FOR DESIGN FEE INCLUDES 20% FOR ENGINEERING DESIGN & PERMITTING AND 10% FOR SURVEY. THE LIMITS OF SURVEY ARE ANTICIPATED TO BE FROM THE BACK OF CURB TO THE RIGHT OF WAY LINE FOR THE LENGTH OF THE PROJECT.

7) COST OF PRE/POST CONSTRUCTION VIDEO AND AS-BUILTS ARE INCLUDED IN THE CEI COSTS.

THE ENGINEER HAS NO CONTROL OVER THE COST OF LABOR, MATERIALS, EQUIPMENT, OR OVER THE CONTRACTOR'S METHODS OF DETERMINING PRICES OR OVER COMPETITIVE BIDDING OR MARKET CONDITIONS. OPINIONS OF PROBABLE COSTS PROVIDED HEREIN ARE BASED ON THE INFORMATION KNOWN TO ENGINEER AT THIS TIME AND REPRESENT ONLY THE ENGINEER'S JUDGMENT AS A DESIGN PROFESSIONAL FAMILIAR WITH THE CONSTRUCTION INDUSTRY. THE ENGINEER CANNOT AND DOES NOT GUARANTEE THAT PROPOSALS, BIDS, OR ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM ITS OPINIONS OF PROBABLE COSTS.

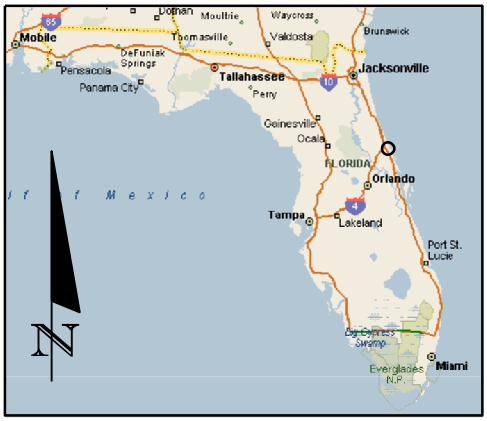
IX. DATA COLLECTION REFERENCES

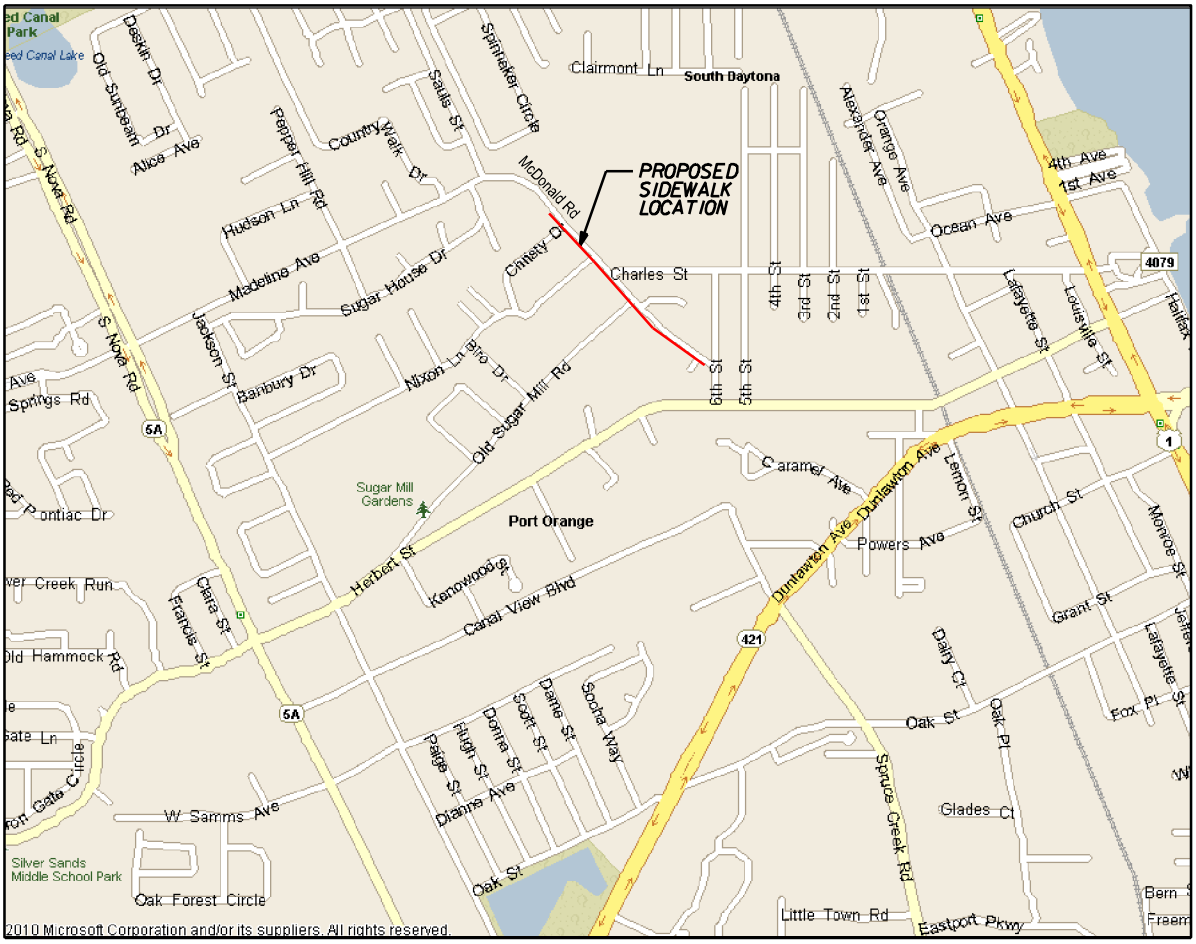
Data collection consisted of referencing readily available information including:

- The Volusia County MPO Bicycle/Pedestrian Plan, January 25, 2005
- Volusia County, http://www.volusia.org/
- Volusia TPO, http://www.volusiatpo.org/
- Florida Department of Transportation (FDOT), http://www.dot.state.fl.us/
- Florida Pedestrian Planning and Design Handbook, FDOT, 1999
- Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, May 2011, (Florida Greenbook")
- American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- FDOT Plans Preparation Manual (PPM), January 2012
- FDOT 2012 Basis of Estimates Handbook
- ADA Standards for Accessible Design, Code of Federal Regulations, 28 CFR Part 36,
- Manual on Uniform Traffic Control Devices (MUTCD), 2009
- FDOT Roadway and Traffic Design Standards, 2012
- City of Port Orange Comprehensive Plan Policy Document 2010-2025, October 2010
- Bicycle and Pedestrian Safety Review Study, Sugar Mill Elementary School, Port Orange, Florida, March 2007

FIGURES AND MAPS

SOURCE: MICROSOFT STREETS AND TRIPS, 2011





LEGEND

PROPOSED SIDEWALK LOCATION

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
PHONE (772)794-4100
FAX (772)794-4130

FIGURE 1 - LOCATION MAP

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 14726900	DECEMBER 2012	PAGE XX

FIG. 2A - INTERSECTION OF MADELINE AVENUE AND SUGAR HOUSE DRIVE

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
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EXISTING CORRIDOR PHOTOS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NSSHOWN	PROJECT NO. 147269001	DECEMBER 2012	PAGE XX

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FIG. 2B - INTERSECTION OF MCDONALD RD. AND CHRISTY DR.

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

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EXISTING CORRIDOR PHOTOS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 147269001	DECEMBER 2012	PAGE XX

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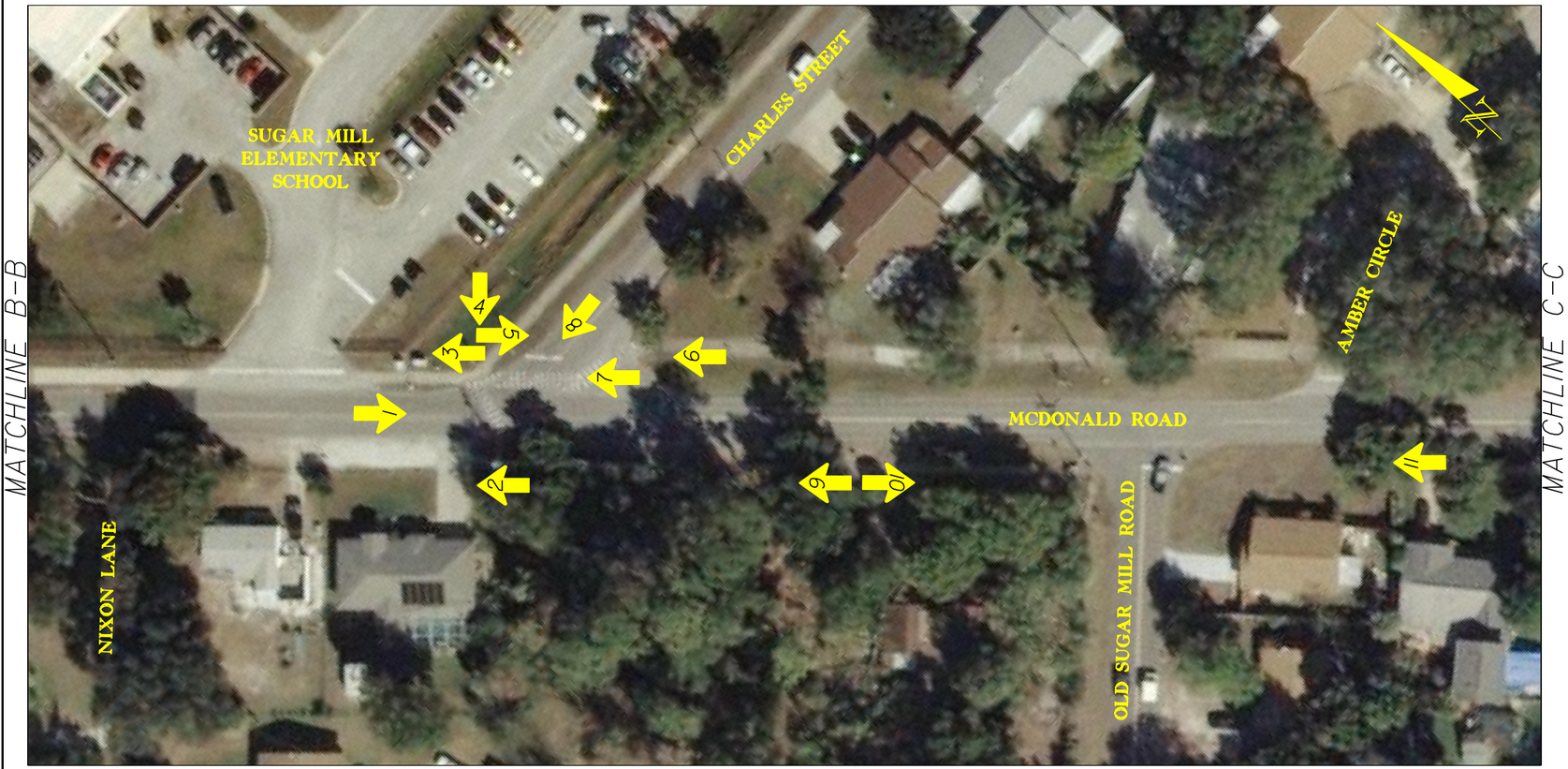
MATCHLINE B-B



MATCHLINE C-C

FIG. 2C - INTERSECTION OF MCDONALD RD AND CHARLES ST.

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
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EXISTING CORRIDOR PHOTOS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 147269001	DECEMBER 2012	PAGE xx

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MATCHLINE C-C

FIG. 2D - INTERSECTION OF MCDONALD RD. AND 6TH ST.

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TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

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EXISTING CORRIDOR PHOTOS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 147269001	DECEMBER 2012	PAGE XX

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MAP 1 - PLAN LAYOUT SHEET

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
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PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 147269001	DECEMBER 2012	PAGE XX

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LEGEND

- EXIST. POWERPOLE
- EXIST. FIRE HYDRANT
- EXIST. SIGN
- EXISTING PARCEL BOUNDARY
- EXISTING R/W
- EXISTING SIDEWALK
- EXISTING VALLEY GUTTER
- EXISTING EDGE OF PAVEMENT
- PROPOSED SIGN
- PROPOSED 5' SIDEWALK (4" CONCRETE)
- PROPOSED TYPE 'F' CURB AND GUTTER
- PROPOSED 2' DETECTABLE WARNING SURFACE
- CONCRETE TO BE REMOVED
- PAVEMENT TO REMAIN
- PROPOSED 6' SIDEWALK (4" CONCRETE)
- PROPOSED 8' SIDEWALK (4" CONCRETE)

SAULS STREET

MADELINE AVENUE

SUGAR HOUSE DRIVE

MCDONALD ROAD

COUNTY OF VOLUSIA

SI-I W16-7P (PROPOSED SIGN WITH LED BORDER ENHANCEMENT)

SI-I W16-7P (EXIST. TO BE REMOVED)

TIE TO EXIST. SIDEWALK

CONCRETE TO BE REMOVED

EXIST. INLET AND PAVEMENT TO REMAIN

PROPOSED SPECIAL EMPHASIS CROSSWALK (INDEX NO. 17346)

EXIST. INLET TO REMAIN

PROPOSED DETECTABLE WARNING SURFACE (INDEX NO. 310)

PROPOSED SPECIAL EMPHASIS CROSSWALK WITH IN PAVEMENT LED CROSSWALK SYSTEM (INDEX NO. 17346)

SEE INSET A FOR INFORMATION

EXIST. HEADWALL TO REMAIN

EXIST. R/W

EXIST. HEADWALL TO REMAIN

SI-I W16-7P (PROPOSED SIGN WITH LED BORDER ENHANCEMENT)

SI-I W16-7P (EXIST. TO BE REMOVED)

EXIST. R/W

SI-I W16-9P (EXIST. TO BE REMOVED)

AHEAD

OMI-1(4) R6-4 (2) (EXIST. TO REMAIN)

N

0 10 50

Feet

MATCHLINE A-A

NOTE:

1. ALL EXISTING INFORMATION SHOWN HAS BEEN OBTAINED FROM AERIAL INTERPRETATION AND AVAILABLE PUBLIC INFORMATION. THE ROADWAY CORRIDORS HAVE NOT BEEN FIELD SURVEYED. LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO BE USED IN PREPARING CONSTRUCTION DRAWINGS.

2. ALL SCHOOL SIGNS AND MARKINGS ARE TO CONFORM TO FDOT INDEX NO. 17344.

PROPOSED CURB RAMP (INDEX NO. 304)

PROPOSED TYPE 'F' CURB AND GUTTER (INDEX NO. 300)

PROPOSED CURB RAMP (INDEX NO. 304)

PROPOSED 6' SIDEWALK WITH 8" THICKENED EDGE AND APPROXIMATELY 82 LF OF RAILING (SEE MAP 6 FOR DETAILS) (INDEX NO. 870)

PROPOSED URBAN FLARE TO TIE TO EXIST. FLUME

EXIST. HEADWALL TO REMAIN

INSET A

MAP 2 - INTERSECTION OF MADELINE AVENUE AND SUGAR HOUSE DRIVE

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

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PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: AS SHOWN	PROJECT NO. 14726900I	DECEMBER 2012	PAGE xx

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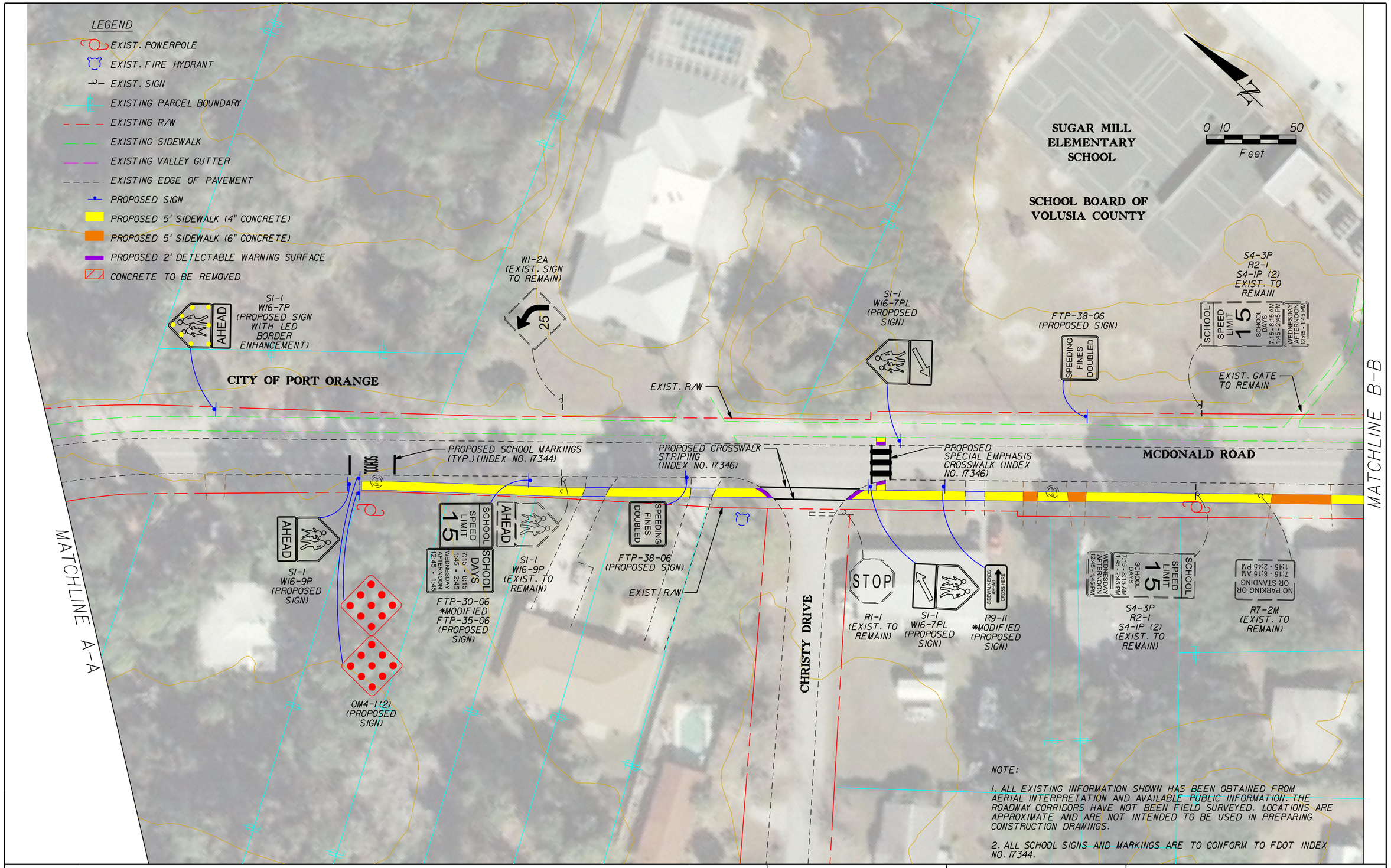

MAP 3 - INTERSECTION OF MCDONALD RD. AND CHRISTY DR.

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
445 24th STREET, SUITE 200
VERO BEACH, FL 32960
PHONE (772) 794-4100
FAX (772) 794-4130

PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: AS SHOWN	PROJECT NO. 14726900I	DECEMBER 2012	PAGE XX

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LEGEND

EXIST. POWERPOLE
EXIST. FIRE HYDRANT
EXIST. SIGN
EXISTING PARCEL BOUNDARY
EXISTING R/W
EXISTING SIDEWALK
EXISTING VALLEY GUTTER
EXISTING EDGE OF PAVEMENT
PROPOSED SIGN
PROPOSED 5' SIDEWALK (4" CONCRETE)
PROPOSED 5' SIDEWALK (6" CONCRETE)
PROPOSED 2' DETECTABLE WARNING SURFACE
CONCRETE TO BE REMOVED
PROPOSED 6' SIDEWALK (4" CONCRETE)
PROPOSED 8' SIDEWALK (4" CONCRETE)

SUGAR MILL ELEMENTARY SCHOOL

SCHOOL BOARD OF VOLUSIA COUNTY

N

0 10 50
Feet

AMBER CIRCLE

MATCHLINE B-B

MATCHLINE C-C

R1-1 (EXIST. TO BE RELOCATED)

TIE TO EXIST. SIDEWALK

S1-1 W16-7P (EXIST. SIGN TO BE RELOCATED)

S1-1 W16-9P (PROPOSED SIGN)

EXIST. R/W

PROPOSED STOP BAR STRIPING (INDEX NO. 17346)

TIE TO EXIST. SIDEWALK

S5-1 (EXIST TO REMAIN)

SCHOOL SPEED LIMIT 15 WHEN FLASHING

PROPOSED SCHOOL MARKINGS (TYP.) (INDEX NO. 17344)

PROPOSED CROSSWALK STRIPING (INDEX NO. 17346)

TIE TO EXIST. SIDEWALK

PROPOSED SPECIAL EMPHASIS CROSSWALK (INDEX NO. 17346)

MCDONALD ROAD

PROPOSED CROSSWALK STRIPING (INDEX NO. 17346)

PROPOSED STOP BAR STRIPING (INDEX NO. 17346)

SIDEWALK TO BE FORMED AROUND EXISTING UTILITY POLE

EXIST. R/W

NIXON LANE

R1-1 (EXIST. TO REMAIN)

PROPOSED STOP BAR STRIPING (INDEX NO. 17346)

S1-1 W16-7P R10-7 *MODIFIED (EXIST. TO BE RELOCATED)

O1-1 W1-7 (EXIST. TO REMAIN)

R7-2M (EXIST. TO REMAIN)

R7-2M (EXIST. TO REMAIN)

R7-2M (EXIST. TO REMAIN)

R7-2M (EXIST. TO REMAIN)

NO PARKING OR STANDING 7:15 - 8:15 AM 1:45 - 2:45 PM

END SCHOOL ZONE

S5-2 (EXIST. TO REMAIN)

OLD SUGAR MILL ROAD

R1-1 (EXIST. TO REMAIN)

NOTE:

1. ALL EXISTING INFORMATION SHOWN HAS BEEN OBTAINED FROM AERIAL INTERPRETATION AND AVAILABLE PUBLIC INFORMATION. THE ROADWAY CORRIDORS HAVE NOT BEEN FIELD SURVEYED. LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO BE USED IN PREPARING CONSTRUCTION DRAWINGS.

2. ALL SCHOOL SIGNS AND MARKINGS ARE TO CONFORM TO FDOT INDEX NO. 17344.

MAP 4 - INTERSECTION OF MCDONALD RD AND CHARLES ST.

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
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PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: AS SHOWN	PROJECT NO. 147269001	DECEMBER 2012	PAGE XX

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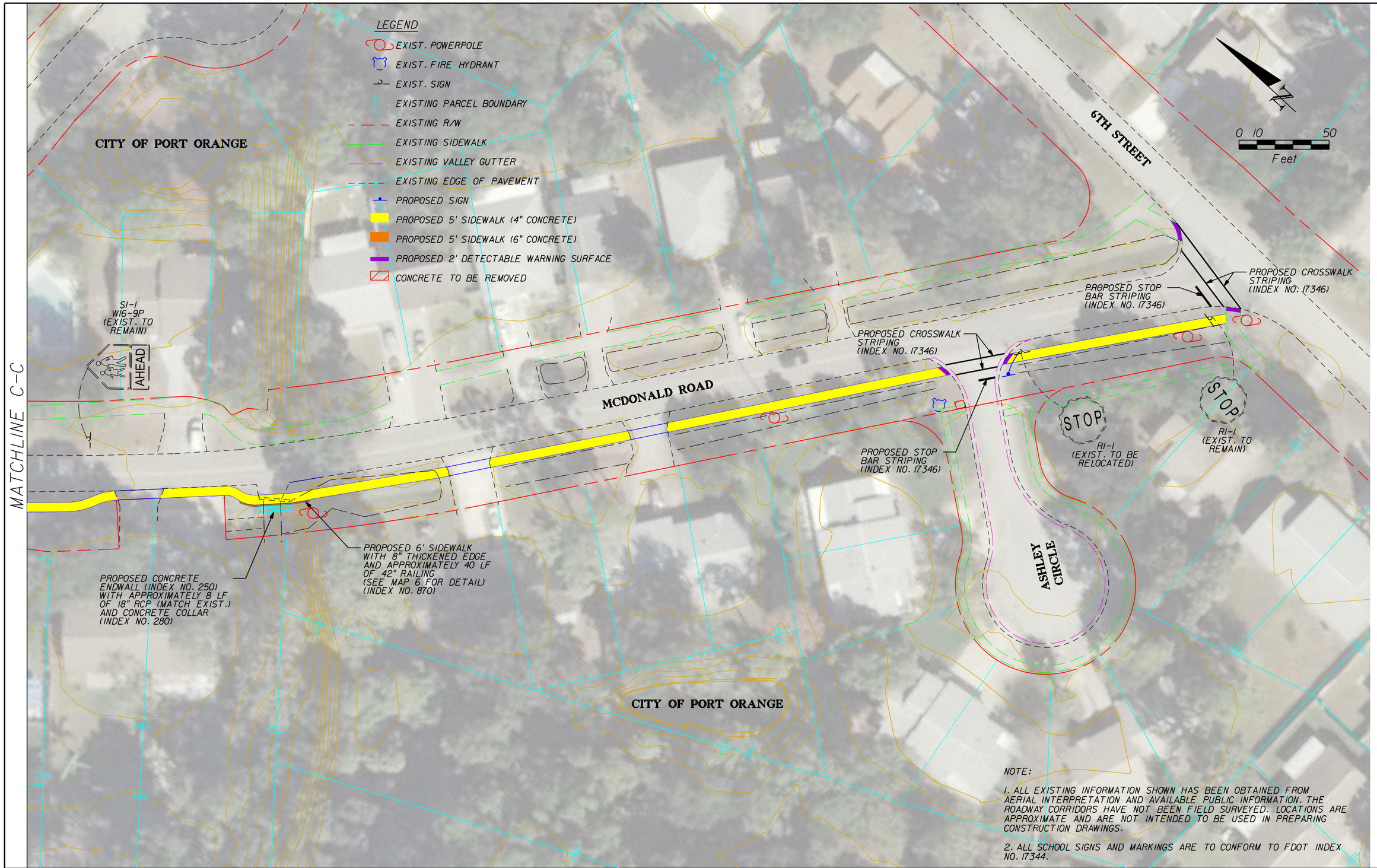

NOTE:

1. ALL EXISTING INFORMATION SHOWN HAS BEEN OBTAINED FROM AERIAL INTERPRETATION AND AVAILABLE PUBLIC INFORMATION. THE ROADWAY CORRIDORS HAVE NOT BEEN FIELD SURVEYED. LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO BE USED IN PREPARING CONSTRUCTION DRAWINGS.

2. ALL SCHOOL SIGNS AND MARKINGS ARE TO CONFORM TO FDOT INDEX NO. 17344.

MAP 5 - INTERSECTION OF MCDONALD RD. AND 6TH ST.

VOLUSIA TPO
TRANSPORTATION PLANNING ORGANIZATION
VISION - PLAN - IMPLEMENT

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PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: AS SHOWN	PROJECT NO. 14726900I	DECEMBER 2012	PAGE XX

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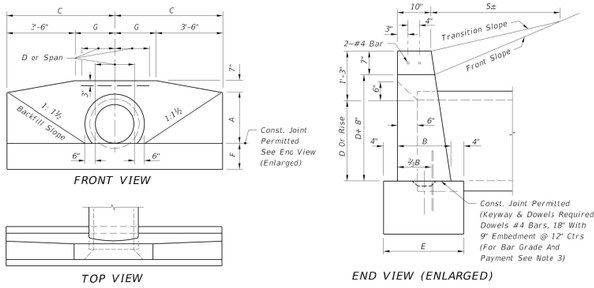
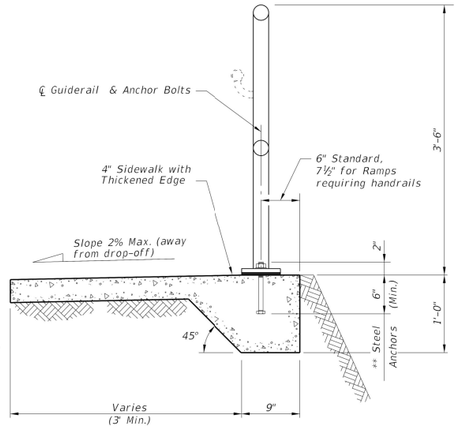
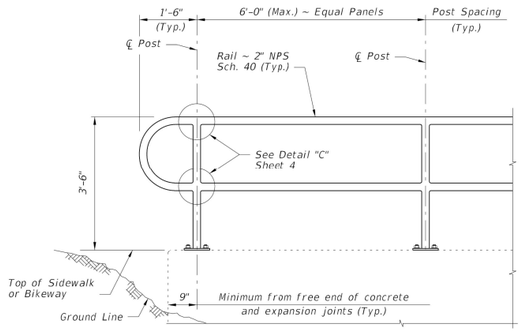


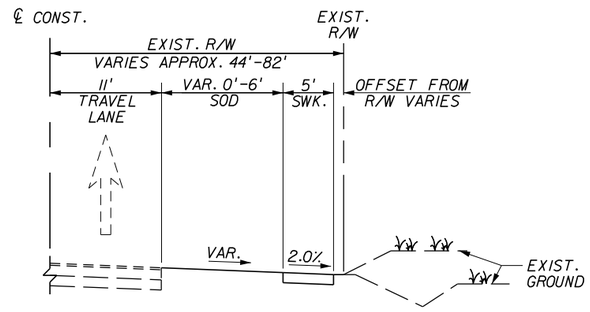
STRAIGHT CONCRETE ENDWALL
PER FDOT INDEX 250 PAGE 1 OF 2



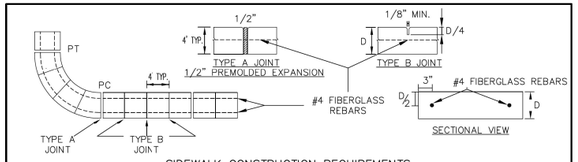
SIDEWALK & RAILING WITH THICKENED EDGE
PER FDOT INDEX 870 PAGE 5 OF 5



TYPICAL RAILING DETAILS & RAILINGS ON GRADES 0 PERCENT TO 5 PERCENT
PER FDOT INDEX 870 PAGE 2 OF 5



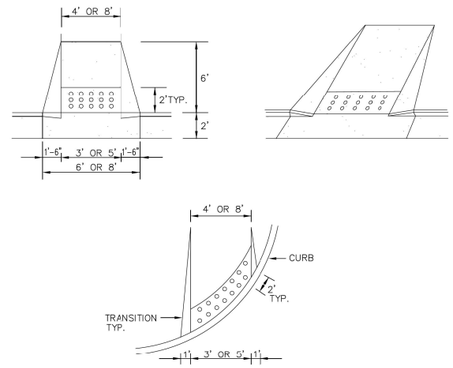
MCDONALD ROAD TYPICAL SECTION



SIDEWALK CONSTRUCTION REQUIREMENTS

1. ALL CONCRETE SIDEWALKS & BIKE PATHS IN PUBLIC RIGHT-OF-WAY, PRIVATE RIGHT-OF-WAY AND ON NON-RESIDENTIAL SITES SHALL CONTAIN FIBERGLASS REINFORCMENT EXCEPT REPAIRS TO NON-REINFORCED EXISTING SIDEWALKS. FBERGLASS REINFORCEMENT SHALL NOT BE REQUIRED ON PRIVATE RESIDENTIAL SIDEWALKS.
2. SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH FIBERGLASS REINFORCEMENT, HAVING A MAXIMUM SLUMP OF 3 INCHES, A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 3000 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
3. 2-#4 CONTINOUS FIBERGLASS BARS (6" OVERLAP REQUIRED) SHALL BE INSTALLED LONGITUDINALLY. 3" FROM THE EDGE OF ALL BIKEPATHS AND SIDEWALKS, TO CONTROL DIFFERENTIAL MOVEMENT AT JOINTS.
4. SIDEWALKS AND BIKEPATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE SIDEWALK REMAINS WITHIN THE RIGHT-OF-WAY OR AN APPROVED SIDEWALK EASEMENT ABUTTING THE RIGHT OF WAY. SIDEWALKS AND BIKE PATHS SHOULD BE LOCATED AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT UNLESS OTHERWISE APPROVED BY THE CITY.
5. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
6. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEFATHS. JOINT MATERIAL SHALL BE PREFORMED JOINT FILLER MEETING F.D.O.T. SPECIFICATIONS.
7. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 4 FEET WHICHEVER IS GREATEST.
8. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL 3E TOOLED TO ELIMINATE SHARP CORNERS.
9. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
10. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
12. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
13. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.

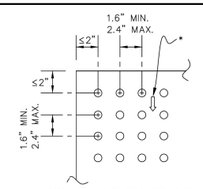
CITY OF PORT ORANGE FLORIDA 1867	STANDARD CONSTRUCTION DETAIL SIDEWALK CONSTRUCTION REQUIREMENTS REV. 12/08	FILE NAME: M3.DWG DETAIL REF: M-3

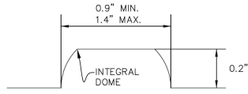


NOTES:

1. RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN COMFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS.
2. CURBED RAMPS SHALL HAVE FLARED SIDES WITH A MAXIMUM SLOPE OF 12:1.
3. RAMPS SHALL HAVE A CETECTABLE WARNING SURFACE AS SHOWN.
4. RAMPS ARE TO BE CONSTRUCTED AT ALL LOCATIONS SHOWN IN THE PLANS EVEN WHEN A SIDEWALK IS NOT CONSTRUCTED CONCURRENTLY.
5. NO CURB TRANSITION IS NEEDED FOR MIAMI CURBS.
6. ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304 AND HANDICAPPED ACCESSIBILITY REQUIREMENTS IN ACCORDANCE WITH THE AMERICAN DISABLITIES ACT.

CITY OF PORT ORANGE FLORIDA 1867	STANDARD CONSTRUCTION DETAIL SIDEWALK AND BIKEPATH RAMP REV. 12/08	FILE NAME: M4.DWG DETAIL REF: M-4





NOTES:

* ON RAMPS TAT ARE PERPENDICULAR WITH THE CURB LINE, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL. ON RAMPS INTERSECTING CURBS ON A RADIUS, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL TO THE EXTENT PRACTICAL.

CITY OF PORT ORANGE FLORIDA 1867	STANDARD CONSTRUCTION DETAIL SIDEWALK AND BIKEPATH RAMP REV. 12/08	FILE NAME: M5.DWG DETAIL REF: M-5

MAP 6 - TYPICAL SECTION AND MISCELLANEOUS DETAILS

VOLUSIA TPO — TRANSPORTATION PLANNING ORGANIZATION — VISION - PLAN - IMPLEMENT

Kimley-Horn and Associates, Inc.
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VERO BEACH, FL 32960
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PROJECT CORRIDER DESIGN PLANS

Bicycle/Pedestrian Feasibility Study
McDonald Road Sidewalk
City of Port Orange, Florida

SCALE: NTS	PROJECT NO. 14726900I	DECEMBER 2012	PAGE XX

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Appendix A

NOTE: THIS FORM SHOULD BE PRINTED ON OFFICIAL LETTERHEAD

Donation of Property to the County / or City

USE THIS AREA FOR TYPING NAME & ADDRESS

ITEM/SEGMENT NO.:

F.A.P. NO.:

COUNTY / CITY ROAD NO. or PROPERTY ADDRESS:

COUNTY/CITY:

PARCEL NO.:

INTEREST CONVEYED:

This is to advise that the undersigned, as owner of the property or property interest referenced above and as shown on Right of Way maps for referenced project, desires to make a voluntary donation of said property or property interest to the County / City for the use and benefit of the County / City.

The undersigned hereby acknowledges that he/she has been fully advised by a City / County representative of his/her right to have the referenced property or property interest appraised, to accompany the appraiser during the appraisal inspection of the property, to receive full compensation for the above referenced property, and to receive reimbursement for reasonable fees and costs incurred, if any. Having been fully informed of the above rights, I hereby waive those rights unless otherwise noted below.

Owner's Signature

Type or Print Property Owner's Name

Street Address

City, State, Zip Code

Date

Local Agency Program Right of Way Acquisition Worksheet

Quality Assurance Review

Agency: _____ Project No.:_____ Parcel No.:_____ Consultant/Agent:_____

Project Description:_____

FDOT Item/Segment No.:_____ FAP No.:_____ Owner:_____ IN Date:_____

QA Review by:_____ QA Review Date:_____

I. Property Owner Notification	Yes	No	N/A	Comments
1. Was Notice to Owner (FDOT Form No. 575-030-031(32) or equivalent) delivered at or before Negotiations? *Date Delivered:* _____				
2. Was the Notice sent to the owner's last known address listed on the county ad valorem tax roll?				
3. Was the Notice personally delivered or sent certified mail, return receipt requested?				
4. Was ownership in the form of a representative capacity, i.e., corporation, partnership or trust?				
5. If answer to #4 is yes, was Public Disclosure Notice (FDOT Form No. 575-030-18 or equivalent), delivered to the owner?				
II. Business Owner Notification	**Yes**	**No**	**N/A**	**Comments**
1. Are there any businesses located on this parcel?				
2. If answer to #1 is yes, was Notice to Business Owner (FDOT Form No. 575-030-033(34) or equivalent) delivered at or after I.N.? *Date Delivered:*_____				
3. Based on the Secretary of State, Division of Corporations, was the registered agent notified?				
4. Was the business eligible for business damages?				
5. Was a business damage claim paid?				
III. Offer(s)	**Yes**	**No**	**N/A**	**Comments**
1. Was Offer and Purchase Agreement (FDOT Form No. 575-030-07 or equivalent) delivered directly to the Property Owner?				
2. Did we obtain a written acknowledgement of the Property Owner's receipt of the Offer? *If property owner refused to sign, note in comment section.*				
3. Was the offer amount based on recommended compensation?				
4. Was use of Appraisal Waiver properly executed?				
5. If an uneconomic remnant was identified by the review appraiser, was an offer to purchase the uneconomic remnant made?				
IV. Good Faith Negotiations	**Yes**	**No**	**N/A**	**Comments**
1. Were good faith negotiations carried out with representative after Representative Authorization (FDOT Form No. 575-030-02 or equivalent) was received? *If property owner was not represented, write "N/A" in the comment section.*				
2. Did property owner request copies of appraisal, maps or plans?				
3. If answer to #2 is yes, were copies provided within 15 days of owner's request?				
4. Were good faith negotiations conducted with current appraisal values?				
5. If real property was donated, was the owner informed of his/her right to have an appraisal performed and a right to compensation?				
6. Did the Agency provide any construction or regulatory elements in lieu of compensation that exceeded the value of the real estate?				

V. Suit	Yes	No	N/A	Comments
1. Did 30 days pass after offer was made before suit was filed?				
2. If applicable, was notice to business owner delivered prior to filing of suit?				
3. Was the Public Disclosure Affidavit returned within 48 hours after OT deposit was made for ownerships in the form of a representative capacity such as a corporation, partnership or trust?				
VI. Agreement	**Yes**	**No**	**N/A**	**Comments**
1. Was an Agreement reached?				
2. Was Agreement inclusive of Fees & Costs?				
3. Was Agreement reviewed by Legal?				
4. Was Final Agency Acceptance granted at least 30 days after agreement was signed by both parties? *FAA Date* _____				
VII. Closing	**Yes**	**No**	**N/A**	**Comments**
1. Was Closing Statement (FDOT Form No. 575-030-16 or equivalent) prepared? *Date of Closing* _____				
2. Did the closing take place within 60 days after Final Agency Acceptance?				
3. Were documents accurate and properly executed?				
4. Were all closing documents recorded no later than 48 hours after closing?				
5. Was the Public Disclosure Affidavit returned at least 10 days prior to closing for ownerships in the form of a representative capacity, such as a corporation, partnership or trust?				
VIII. Settlements	**Yes**	**No**	**N/A**	**Comments**
1. Was Settlement Approval (FDOT Form No. 575-030-24 or equivalent) approved by the proper authority?				
2. Was the settlement a justifiable expenditure based on settlement criteria?				
IX. Fees and Costs	**Yes**	**No**	**N/A**	**Comments**
1. Were fees and costs based on an invoice or statutory formula? *Method Used:* _____				
2. Were fees and costs identified on the Purchase Agreement/Supplemental Agreement?				
X. 1099S	**Yes**	**No**	**N/A**	**Comments**
1. Was Request for Taxpayer ID (FDOT Form No. 575-030-27 or equivalent) delivered to non-excluded property owners? (Excluded = de minimis transactions and exempt transferors)				
2. Was Form 1099S delivered to the property owner at closing or before December 31 of the calendar year in which the closing was held?.*1099S Delivery Date:*_____				
XI. LAP Certification	**Yes**	**No**	**N/A**	**Comments**
1. Was the Right of Way Certification (FDOT Form No. 575-095-05 or equivalent) executed**,** accurate, and submitted to the Right of Way Office prior to letting? *Date Certified :*_____				
Additional Comments:				

RIGHT OF ENTRY AGREEMENT

Financial Project ID: 2402333
County Road: SR 434
County: SEMINOLE
Parcel No.: 116 (Claire Beatrice Clegg)

STATE OF Florida
COUNTY OF Seminole

THIS AGREEMENT, made and entered into on the _____ day of _____, 2009, by and between

CLAIRE BEATRICE CLEGG

Hereinafter called the "owner" and the State of Florida Department of Transportation, herein after called the 'DEPARTMENT".

WITNESSETH:

WHEREAS, the Department is conducting roadway improvements relative to the above referenced project; and

NOW, THEREFORE, in consideration of the above stated premises, the Owner and the Department hereby agree that the Department and/or its duly authorized representative shall have the right to enter upon the Owner's remaining lands for the purpose of performing demolition activities as noted below*. It is further understood and agreed that the Department and/or its duly authorized representative will restore the remaining lands to a safe and sanitary condition.

*1. The contractor shall maintain access to 1311 Windsor Avenue during demolition in accordance with FDOT regulations.

*2. The contractor shall contact the owner at 407/831-4053, prior to commencing any work on the owner's property.

*3. This right of entry is limited to demolishing the owner's tennis court and accessory structures only (consisting of fencing, a light post, 10'clf, net/posts, water fountain, and concrete court itself) and re-seeding with grass.

OWNER:

Claire Beatrice Clegg

By:_____
Signature Date

_____
Name (Please print or type)

DEPARTMENT:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORATION

By:_____
Signature Date

_Dana Cole Wainwright_____
Name (Please print or type)