

HERNANDO COUNTY BUS STOP ADA ASSESSMENT FINAL REPORT

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1.0 INTRODUCTION

Hernando County and The Hernando Express Bus (THE Bus) are interested in improving the access to and from, the security at, and the operations at their 174 stand-alone bus stops and 2 transfer points.

This study includes a comprehensive inventory of the conditions at THE Bus's bus stops and facilities and identifies and helps prioritize improvements to address accessibility, security, operation, and passenger comfort issues. Information relating to the accessibility of each bus stop and facility has been collected with the purpose of improving the MPO's and THE Bus's staff's understanding of accessibility issues pertaining to Americans with Disabilities Act (ADA) requirements, as they relate to bus stops and transit facilities, as well as to identify which bus stops and facilities are in compliance with the ADA and which are not. Not only does the placement of bus stops and facilities affect passenger amenities, but service speed and schedule adherence also can be adversely impacted by the implementation of too many stops. The MPO and THE Bus recognizes, however, that it is important to strike a balance between the potential need to eliminate stops and the community's need for convenient access to bus service. In an effort to ensure all of THE Bus's bus stops are compliant, safe, secure, and operationally efficient, all of THE Bus's bus stops were considered in this review, regardless of whether the original bus stop implementation or any subsequent improvements to the stop precede the ADA and, are therefore, grandfathered from having to meet current ADA requirements.

This document serves as a summary report outlining the development of the bus stop inventory and database, the prioritization of bus stop improvements, and the phasing plan to implement improvements based on anticipated funding available over the next five years. A separate appendix document has also been prepared, which includes a more detailed discussion and results of the analysis.



2.0 INVENTORY PROCESS

This section describes the processes and methodologies used to develop the master inventory database, including field data collection, quality control, and compilation of the master database. In addition, this process also included the development of a new tablet based application in order to directly input raw data into a master database. The prioritized list of improvements and phased implementation plan developed as part of this project are the result of the data collection effort conducted during the inventory process.

The data collected are used to record infrastructure, characteristics, and location of each bus stop, which can be utilized by Hernando County to identify infrastructure improvement needs.

2.1 FIELD DATA COLLECTION

TOA staff were sent into the field to collect data using a tablet based questionnaire. The questions and answers used may be found in Appendix A at this end of this report. It should be noted that the data was collected in September and October 2013.

2.2 BUS STOPS

The first step of the inventory process was to identify the list of the data items to be collected. This list was developed based primarily on the bus stop inventory performed for Hillsborough Area Regional Transit, performed in 2007. It also includes other data required to determine the accessibility of a bus stop using the ADA Accessibility Guidelines (ADAAG).

A comprehensive checklist of the data to be collected was prepared and developed into a software interface specifically designed and programmed for this study. The application developed allowed the surveyors to easily enter all the necessary data collected at each bus stop. The program also allowed the collected data to be exported to a database format for the analysis. This interface was accessed by the surveyors using Android tablets and smartphones. These devices all had wireless connectivity and GPS built into each of them. By utilizing the most up to date mobile technology, survey teams could determine the bus stops GPS coordinates, input data with prompted questions, and take photographs using a single tool. The following is a list of the primary equipment utilized by each survey team to conduct the inventory:

- Mobile Tablet or Smartphone
- Smart level
- Measuring wheel
- Compass
- Safety Vest



Figure 2-1 illustrates the primary equipment utilized by the surveyor teams during the data collection process.



Figure 2-1 Data Collection Tools

Following development of the program interface and distribution of the necessary data collection tools, the inventory process began. The inventory process consisted of three stages: a field test, data collection training, and the bus stop inventory.

- **Field Test** – The purpose of the field test was to check the established data collection methodology on several bus stops in order to determine whether any adjustments were needed prior to training.
- **Data Collection Training** – The data collection training presented the data collection process to the surveyors, including step-by-step instructions, reminders and pointers for collecting data at each stop, as well as contact information for appropriate project team members. Pertinent information related to the data collection was compiled into a Data Collection Training Manual for surveyors to use as a reference during the inventory process. The data collection training included one day of in-class training for all surveyors and two days of field training where the surveyors went out in smaller groups to practice at actual bus stops.
- **Bus Stop Inventory** – The inventory data collection was conducted by one and two-person teams of Tindale-Oliver staff at all stand-alone bus stops.

A copy of the Data Collection Training Manual provided to each surveyor during the data collection training class can be found in Appendix B. In addition, a comprehensive list of the data collected as part of the inventory process can be found in Appendix C.



2.3 TRANSIT FACILITIES

Accessibility assessments of THE Bus's two transfer points were conducted by members of the project team. Detailed field assessments of all accessibility features provided at each of the facilities were conducted and inventory data comparable to the data collected during the bus stop survey effort were collected.

It is important to recognize that the transit centers sometimes present features that are not common to regular bus stops, such as buildings, restrooms, ticketing facilities, tactile transit signage, and parking facilities. However, THE Bus's two transfer facilities, do not contain much additional infrastructure, when compared to the system's other sheltered bus stops. Due to their small size and minimal amenities, these transfer facilities were assessed in the same manner and against the same criteria as the system's other stand-alone bus stop and are therefore included in the overall assessment database.

2.4 QUALITY CONTROL AND COMPILATION OF MASTER DATABASE

The initial data collection process was conducted over a period of two months. During this time, quality control (QC) measures were continuously conducted by the project team to ensure that all information collected was complete and accurate. As the database was compiled, all records were reviewed and corrected for missing or incorrect data by matching the record to its corresponding photographs. Corrected information in the database was marked to reveal patterns of incorrect information in the database. Data elements with significant errors were closely analyzed to determine the source of the error (e.g., mis-entries, programming errors). It is important to note that some errors could be corrected by reviewing the photographs. Elements such as presence of benches or shelters could be corrected by viewing the photographs, while elements that require measurement, such as slope or width, could only be determined in the field.

The master database was finalized and prepared for analysis and is included in Appendix D. Following completion of the analysis, a digital version of the master database will also be transmitted to the MPO.

It should be noted that Hernando County intends to continuously maintain and update the inventory database to reflect ongoing changes made to the system's bus stops.

The initial analysis performed on the master database included the development of summary tables for each the category of data collected during the inventory. Appendix E provides a series of tables summarizing the frequency and distribution of data for all of THE Bus's bus stops collected during the inventory, including any applicable comments noted by the surveyors.

The remainder of this report summarizes the development of the Comprehensive Improvement Plan and associated data analysis. The purpose of this Plan is to identify



and prioritize needed improvements and recommend a phasing program for implementing the needed improvements, based on anticipated funding.

3.0 ADA REQUIREMENTS AND DATA COLLECTION

An analysis of the collected data was undertaken to develop a comprehensive list of deficiencies present and the subsequent improvement needs. This section provides an overview of the general requirements pertaining to bus stops and facilities and then presents the findings of the inventory process as it relates to the specific improvement needs.

3.1 GENERAL ADA REQUIREMENTS

Three primary guidance documents were utilized during this project to highlight specific design and infrastructure requirements related to accessibility: the ADAAG, the FDOT Accessing Transit Design Handbook for Florida Bus Passenger Facilities, and the FDOT Transit Facility Handbook. The general ADAAG/FDOT requirements for bus stops and transit facilities are as follows:

- The bus stop site must be chosen to provide the greatest degree of accessibility practicable.
- The boarding and alighting area must provide a firm, stable, slip resistant surface.
- The clear area of the boarding and alighting area must be equal to or no less than 60" parallel and 96" perpendicular to the curb or street/roadway edge and connected to the accessible route.
- The bus stop must have an accessible approach to the boarding and alighting pad and all amenities provided.
- The cross slope of the boarding and alighting pad (perpendicular to the curb) must be equal to or less than 2 percent.
- The running slope (parallel to the curb) of the boarding and alighting area should match the slope of roadway.
- The bus stop must be on or connect to an accessible route.
- Bus stop amenities must be connected to the accessible route, allow accessible maneuvering space, and be within 48" maximum reach range of all operating controls.
- If a shelter is provided, it must connect to the accessible route and allow a minimum space of 30" X 48" fully within the shelter.
- If a bench is included within a shelter, it must allow a minimum space of 30" X 48" resting/transfer space at one end of the bench.

Figure 3-1 illustrates a number of these general accessibility requirements.

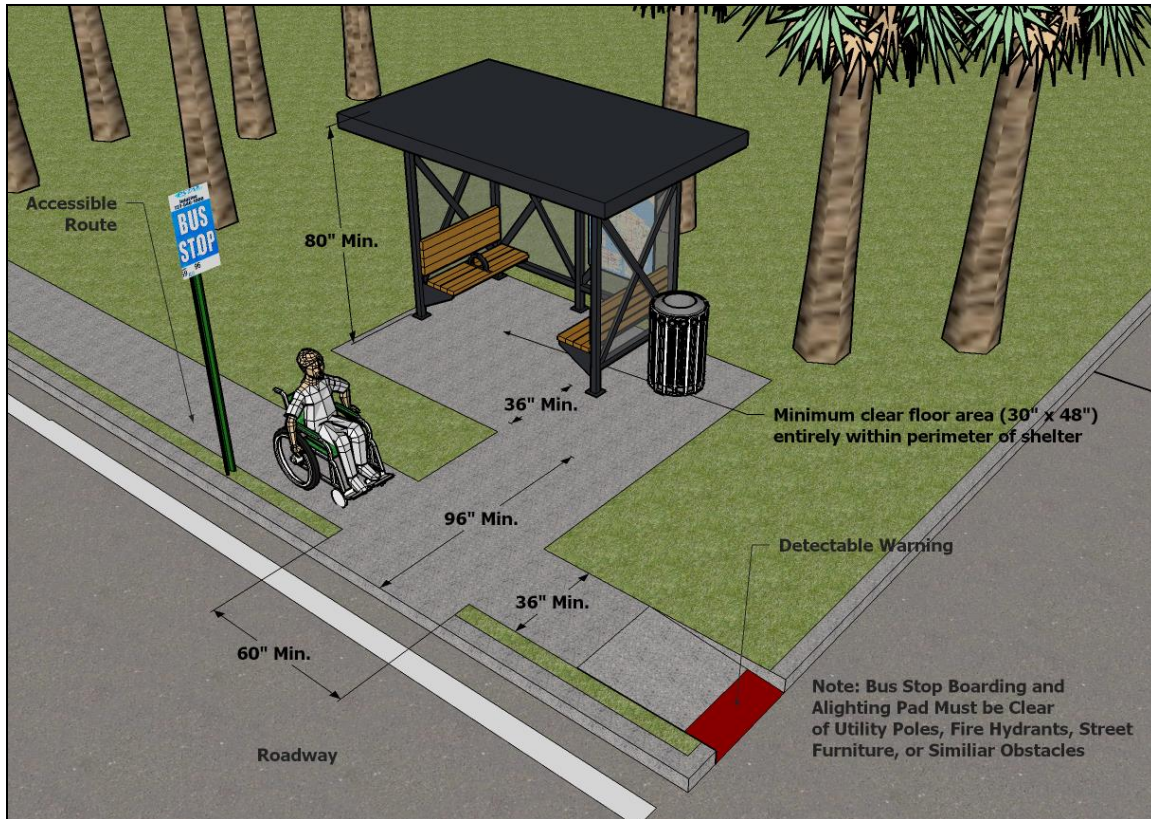


Figure 3-1 General Bus Stop Accessibility Standards Diagram

Many of the bus stops in THE Bus's system are not located in a dense urban environment. Therefore, many of these standards would not apply to stops located in suburban or rural locations where curbs and sidewalks are not present. In fact, some bus stops located in suburban or rural areas have no more than a bus stop sign staked in the grass. Standards for these stops are significantly less since it will not be required to implement much infrastructure like sidewalks and curbs. In these cases, it will only be required to install a boarding and alighting area that may not be connected with an accessible path to the surrounding area. However, if this is the case, a ramp should be provided making the boarding and alighting area accessible from the shoulder of the road.



3.2 BUS STOP REQUIREMENTS

There are five major elements related to bus stops that primarily impact their accessibility and/or compliance with ADA requirements. These include:

- Boarding and alighting areas,
- Bus stop signs,
- Accessible routes and sidewalks,
- Curb ramps, and
- Obstructions.

This section discusses the standards related to these elements and addresses the deficiencies that were noted throughout the system.

3.3 BOARDING AND ALIGHTING AREAS

Boarding and alighting areas (previously referred to as “landing” pads or areas) are critical for the safe and accessible boarding and alighting of passengers onto buses. They are particularly critical for the safe and accessible operation of wheelchair lifts.

Standards

Maximum width and length of the paved boarding and alighting area, as well as surface qualities, are regulated by the ADAAG/FDOT. Many of the same standards for sidewalk surfaces apply to landing areas. The standards for boarding and alighting areas are as follows:

- The clear area of the boarding and alighting area must be no less than 60” parallel and 96” perpendicular to the curb or street/roadway edge and connected to the accessible route.
- The cross slope of the boarding and alighting area (perpendicular to the curb) must be equal to or less than 2 percent.
- The running slope (parallel to the curb) of the boarding and alighting area should match the slope of roadway.
- The boarding and alighting area must provide a firm, stable, slip resistant surface.

Figure 3-2 illustrates some of these standards.

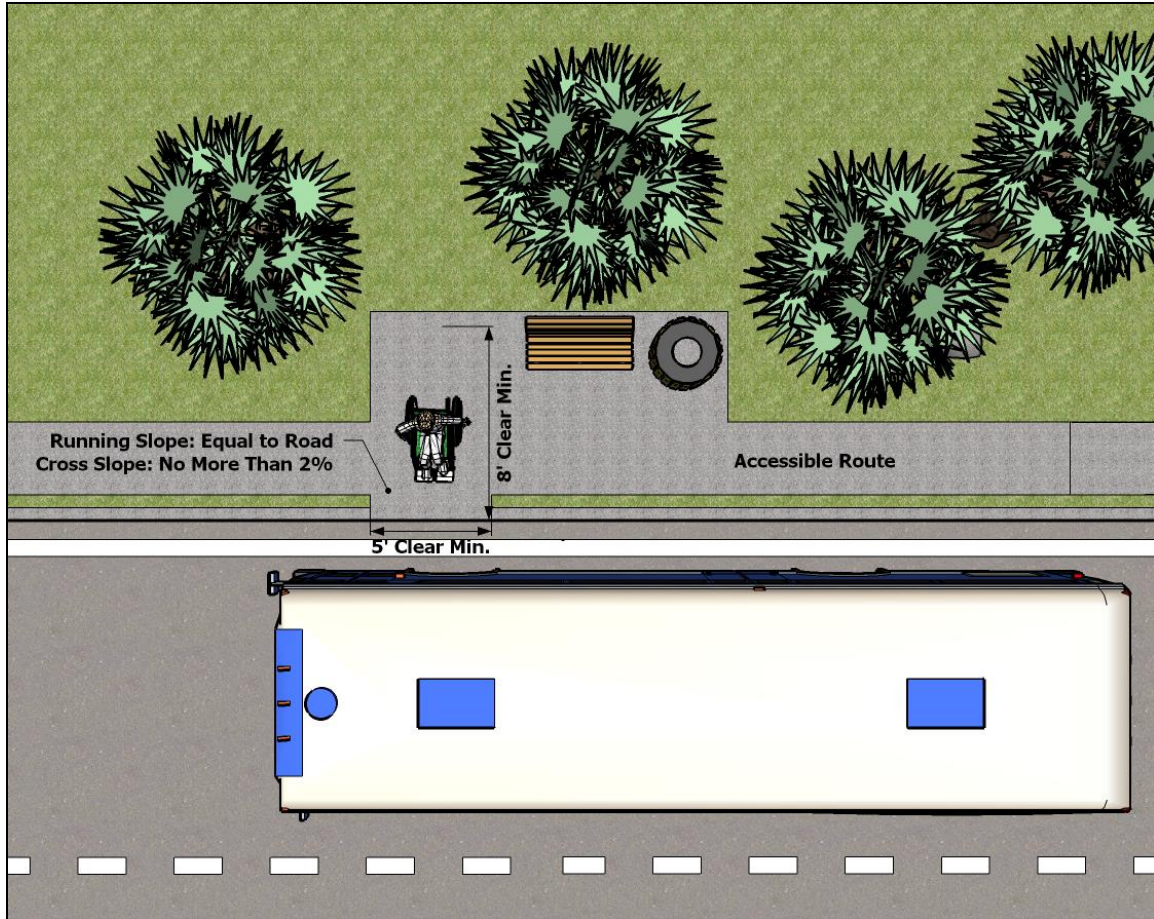


Figure 3-2 Landing Area Standards Diagram

Data Analysis and Results

To determine the deficiencies at each stop, data was collected in the field relating to the boarding and alighting areas. The following data elements were collected:

- Whether there is a boarding and alighting area of any kind present at the bus stop.
- Whether the boarding and alighting area is equal to or greater than 5-foot by 8-foot.
- Material of the boarding and alighting area.
- Whether the boarding and alighting area is free of defects such as cracks in the pavement.
- Whether the running-slope matches that of the road.
- Cross slope measurement.
- Running slope measurement.
- Whether there are any changes in elevation greater than 1/8".
- Whether there is a raised curb/landing area.



Data collected for the boarding and alighting area at each bus stop were analyzed for each of these elements. The results are displayed in Table 3-3.

Table 3-1 Total Deficiencies for Boarding and Alighting Areas

Deficiency	Total Stops
No boarding and alighting pad ⁽¹⁾ present at stop	16
Defect in boarding and alighting pad	162
Cross slope is greater than 2%	114
Running slope is greater than 5%	5
Elevation changes greater than 1/4"	5
No raised curb	102
Total stops with problematic boarding and alighting areas⁽²⁾	168

- (1) The presence of a boarding and alighting area refers to a clear area in which a person in a wheelchair could potentially access a wheelchair lift or ramp, regardless of standardized dimensions, slope, elevation changes, or connections to the surrounding area. Per the ADAAG, the material does not have to be concrete, but must be a firm and stable surface, such as packed dirt and not grass or gravel.
- (2) A problematic boarding and alighting area at a stop may have more than one of the deficiencies listed in this table. As such, this figure does not represent a sum of the deficiencies in this table.

As presented in Table 3-3, 16 bus stops have no boarding and alighting area either, designated or undesignated, 162 bus stops have a defect in the boarding and alighting area, 114 bus stops have a cross slope greater than 2%, 5 bus stops have a change in elevation of greater than 1/4", and 102 bus stops do not have a raised curb. Therefore, 168 stops have some kind of boarding and alighting area deficiency.

3.4 BUS STOP SIGNS

Bus stop signs are important because they identify the location of an active bus stop, but they also serve other important purposes. Bus stop signs are critical for showing passengers the correct area to board the bus and also serve as a guide to bus operators for positioning the bus. Bus stop signs must follow particular standards set by the ADAAG/FDOT for placement and visibility.

Standards

Bus stop signs providing route designations, bus numbers, destinations, and other access information must be designed for use by transit riders with vision impairments. The general ADAAG/FDOT standards for bus stop sign placement and visibility are as follows:



- The bottom of the sign should be at least 7 feet above ground level, however, it may be placed as low as 40 inches about ground level, and should not be located closer than 2 feet from the curb face. Placement of the sign is critical so that both passengers and drivers can identify and read the sign and so that the sign is not an obstruction to passing vehicles.
- Characters and the background of the sign should have a non-glare finish. This makes the sign clear and visible in bright sunlight or headlights.
- Minimum character height must be visible to the passenger and should comply with the ADAAG/FDOT standards are detailed on page 51 of the *Accessing Transit Handbook*.
- Other signs sharing the mount location also should be properly mounted.
- Ideally, and especially for bus stops that serve more than one route, the bus stop sign should also include the bus route number(s) that provide services to the stop.

Table 3-2 Visual Character Height Standards

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches to less than or equal to 70 inches	Less than 72 inches	5/8-inch
	72 inches and greater	5/8-inch, plus 1/8-inch per foot of viewing distance above 72 inches
Greater than 70 inches to less than or equal to 120 inches	Less than 180 inches	2 inches
	180 inches and greater	2 inches, plus 1/8-inch per foot of viewing distance above 180 inches
Greater than 120 inches	Less than 21 feet	3 inches
	21 feet and greater	3 inches, plus 1/8-inch per foot of viewing distance above 21 feet

Data Analysis and Results

To determine the compliance of the bus stop signs with the aforementioned standards, the following data elements were collected in the field:

- Whether there is a sign present at the bus stop.
- Whether the sign is the correct distance from the ground.
- Whether the sign follows the standards for proper visual character height and contrast.
- Whether the sign has an anti-glare surface.
- Whether signs that share the same location are properly mounted.



Following the field data collection, the information for these data elements was analyzed to determine the number of bus stop signs with specific deficiencies. Table 3-3 shows the stops noted for each element of deficiency.

Table 3-3 Total Deficiencies for Bus Stop Sign Placement and Visibility

Deficiency	Total Stops
No sign at stop	21
Sign not properly mounted	1
Sign not compliant⁽¹⁾	22

(1) A bus stop sign may have more than one of the deficiencies listed in this table. As such, this figure does not represent a sum of the deficiencies in this table.

In general, the typical sign design for THE Bus meets the requirements of the ADAAG/FAC. There are 21 stops without a bus stop sign and 1 bus stop that has a bus stop sign that is incorrect. Therefore, 22 bus stops have a bus stop sign deficiency or no bus stop sign present at the bus stop.

3.5 ACCESSIBLE ROUTES AND SIDEWALKS

Accessible routes and sidewalks leading to and from the bus stop are critical for all passengers, particularly those with disabilities, to reach the boarding and alighting area at the stop and any trip generators surrounding the stop.

Standards

An accessible route must be a sufficiently wide, continuous, and unobstructed path enabling passengers to access the bus stop and surrounding activity centers. The following are the specific guidelines for accessible routes and sidewalks set by the ADAAG/FDOT:

- Must be 36" minimum wide continuous unobstructed path.
- Must have a 32" minimum width at doorways.
- Must have 60" X 60" passing spaces at 200' intervals.
- Running slope (parallel to direction of travel) must be equal to or less than 5 percent (>5% = ramp).
- Cross slope (perpendicular to direction of travel) must be equal to or less than 2 percent.
- Surface must be firm, stable, and slip resistant (wet or dry).
- Changes in level between 1/4" and 1/2" must be beveled at 1:2 slope.
- Changes in level greater than 1/2" are not allowed or must be ramped.
- Gaps in gratings must be no greater than 1/2" wide and openings must be aligned perpendicular to travel.



Figure 3-3 illustrates these accessible route standards.

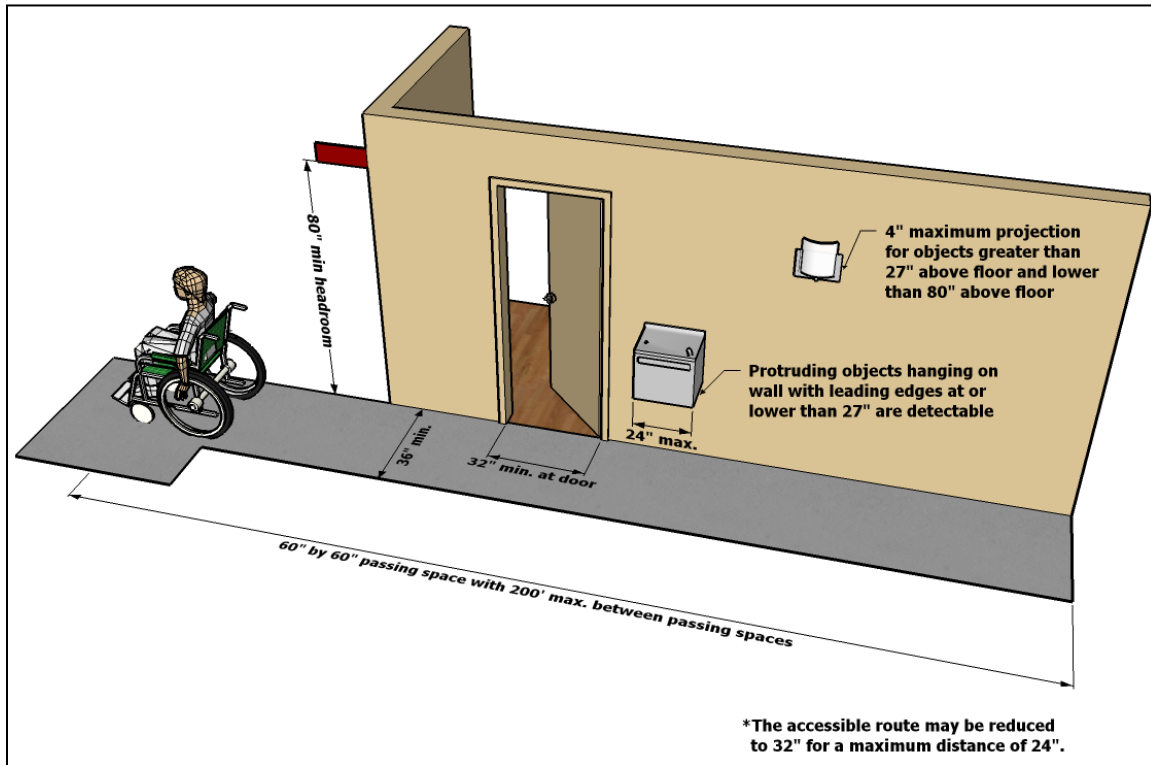


Figure 3-3 Accessible Route Standards Diagram

Data Analysis and Results

To determine the compliance of accessible routes and paths at bus stops, the following data were collected in the field:

- Whether a sidewalk is present at the stop.
- Whether the sidewalk at the bus stop is greater than or equal to 4 feet.

Following the field data collection, the information for these data elements was analyzed to determine the number of bus stop accessible routes and sidewalk deficiencies. Table 3-3 shows the stops noted for each element of deficiency.

Table 3-4 Total Deficiencies for Accessible Routes and Sidewalks

Deficiency	Total Stops
No sidewalk present	67
Sidewalk less than 3 feet wide	0
Running slope is greater than 5%	5
Sidewalk not compliant	69



As shown in Table 3-4, there are 69 stops that have no sidewalk present or a running slope >5%.

3.6 CURB RAMPS

Curb ramps provide a means of easily and safely accessing sidewalks from a crosswalk or other surface and should be provided wherever a curb is encountered along the path to transit services and facilities. These are particularly critical for those with disabilities requiring wheelchairs.

Standards

Particular standards limit the minimum width and maximum slope of the curb ramp to ensure accessibility. The following are the standards for curb ramps required by the ADAAG/FAC:

- The maximum ramp segment slope permitted is 1:12 (8.3%).
- The maximum cross slope permitted is 1:48 (2%).
- Curb ramps must have detectable warning material the full width of ramp and either the full length of ramp or 24" from back edge of curb.
- Curb ramps must have a 36" long landing at top of slope
- The ramped portion must be at least 36" wide. (Exception: Curb ramps that are part of an egress shall be not less than 44" wide.)
- Curb ramps must have detectable warnings in truncated domes with pattern and characteristics defined by regulations, including contrasting color.
- Detectable warnings also are required at landings and along with flush transitions at street crossings.

Figure 3-4 illustrates a number of these standards.

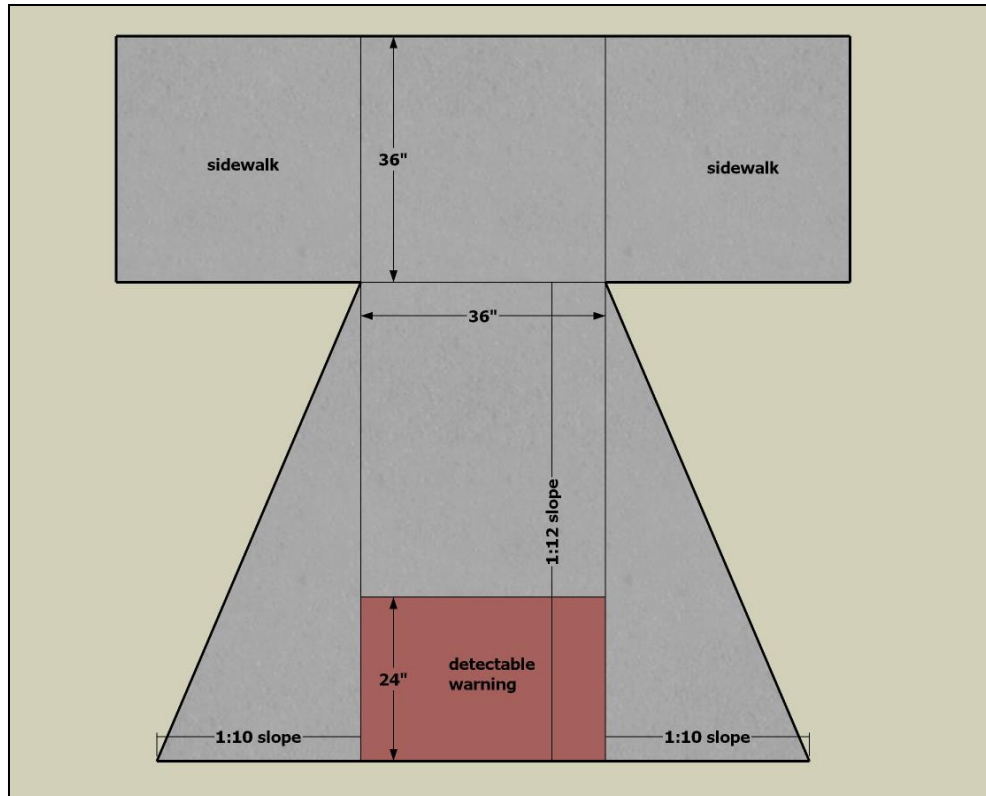


Figure 3-4 Curb Ramp Accessibility Standards Diagram

Data Analysis and Results

The compliance of curb ramps near bus stops was determined through an analysis and summary of data collected in the field. The following data elements were collected:

- Presence of curb ramps near the bus stop.
- Presence of detectable warnings on curb ramps.
- The condition of the detectable warnings,
- Whether the detectable warning is at least 24 inches from the throat of the ramp and extends the full width of the sidewalk,
- Whether the curb ramps are protected from being blocked by parked vehicles.
- Whether the transition of the curb ramp slope is flush and free of vertical change at top and bottom.
- Whether the slope of the curb ramp is 8.3 percent or less.
- Whether the surface of the ramped portion of the curb ramp is firm, stable, and slip resistant.

The curb ramp data were analyzed for each element. The summary results are presented below.



Table 3-5 Total Deficiencies for Curb Ramps

Deficiency	Total Stops
No curb ramps where sidewalk is present	13
Curb ramp without detectable warning strips	49
Detectable warning strips in poor condition	4
Detectable warning does not extend the full width of the sidewalk	21
Detectable warning not 24" from edge of pavement	11
Curb ramp without smooth transitions	2
Curb ramp slope greater than 8.3%	11
Unstable curb ramp surface	0
Total stops with non-compliant curb ramps⁽¹⁾	60

Note: Many of these deficiencies are the responsibility of other jurisdictions.

(1) A curb ramp at a stop may have more than one of the deficiencies listed in this table. As such, this figure does not represent a sum of the deficiencies in this table.

The data show that there is a significant deficiency regarding curb ramps for many of the bus stops in the system. There are 13 bus stops without curb ramps where a sidewalk is present and 49 curb ramps with no detectable warning strips present. There are a total of 60 bus stops in the system that has a deficient curb ramp or a sidewalk with no curb ramps.

3.7 OBSTRUCTIONS

Care should always be taken when designing or improving bus stops to keep the accessible path free of obstructions. Infrastructure such as shelters, benches, trashcans, utility boxes, and leaning rails should be placed in a manner as to not interfere with the sidewalks or the boarding and alighting area. Not only can these obstructions prevent passengers from using the path, but they can also present a potential safety concern.

To help clear existing accessible paths from obstructions, data was collected in the field on infrastructure such as benches, garbage cans, and newspaper racks to see whether they present an obstruction. Currently, the only benches maintained by THE Bus are the ones installed within the shelters. However, THE Bus is considering partnering with a local community service/advertising organization which has a program that places benches at bus stops with advertising on the backrest.

Based on the data collected, the difficulty level of removing an obstruction could range from moving a non-fixed 3rd party bench out of the path to redesigning the accessible



path around fixed infrastructure such as a utility pole. A summary of the obstruction deficiencies noted for the MPO's and THE Bus's bus stops are listed below.

Table 3-6 Total Obstruction Deficiencies

Deficiency	Total Stops
Bench is inaccessible	1
Bench is an obstruction	0
Trash Can inaccessible	0
Trash Can is an obstruction	0
Total Stops obstructions/inaccessible amenities	1

As shown in Table 3-6, there is 1 stop that has an inaccessible bench, 0 stops where the bench is an obstruction, 0 stops where the trash can is inaccessible, and 0 stops where the trash can is an obstruction. Therefore, only 1 stop have an amenity that is either inaccessible or an obstruction.

3.8 AMENITIES

While not required by the ADA, curb-side amenities, such as shelters and benches, are recommended. However, if they are installed, they need to be accessible to all users, as discussed in the previous section. As shown in Table 3-7, THE Bus currently has 12 stops that have either a shelter or bench installed.

Table 3-7 Total Existing Shelters and Benches

Current Amenity	Total Stops
Shelter Already Installed	4
Bench Already Installed	8

The decision to construct a shelter should be based on a number of factors, including ridership, location, and route connectivity. Accessing Transit, June 2013, suggests that a shelter be placed at rural stops that have at least 10 boardings per day. Furthermore, it also states that “benches are recommended when a shelter with seating is not provided and if bus headways are longer than 15 minutes.” Based on THE Bus's current schedule, all stops have a headway longer than 15 minutes. Since it is not feasible to concurrently place benches at all of THE Bus's stops, ridership thresholds were developed, as shown in Table 3-8, to prioritize the bench placement based upon their current average daily ridership.



Table 3-8 Suggested Amenity Thresholds

Suggested Amenity	Minimum Suggested Boardings	Total Stops
Shelter	10	4
High Priority Bench	3	30
Medium Priority Bench	2	43
Low Priority Bench	1	87

As shown in Table 3-8, it is suggested that a shelter be built at the 4 bus stops that meet or exceed the suggested minimum of 10 boardings per day. It is suggested that for bench placement, higher priority is given to stops with the greatest ridership. Therefore, the 30 bus stops with at least 3 boardings per day would be the highest priority candidates for benches, the 43 bus stops with 2 boardings per day would be medium priority candidates for benches, and the 87 bus stops with 1 boarding per day would be the lowest priority candidates for benches.



4.0 DEVELOPMENT OF IMPROVEMENT PROGRAM

The improvement needs presented in Section Three were reviewed and organized into categories or groups based on how they should be addressed and/or who would be responsible for addressing them. The development of the improvement program considered several steps, including:

- Step 1: Identify the entity responsible for the improvement (Hernando County or other).
- Step 2: Determine whether stops can be removed, consolidated, or relocated.
- Step 3: Prioritize improvements that are the County's responsibility through:
 - Determining improvements that should be addressed immediately (referred to as "quick fixes");
 - Determining whether funds can be leveraged from other entities' projects to cover costs of the improvements; and
 - Creating a phased implementation plan of prioritized bus stop improvements.

Figure 4-1 illustrates the process used to develop the phased implementation plan.

Step 1: Identify Responsible Entity

The first step in developing the phased implementation plan is to determine which improvements are the responsibility of THE Bus versus those improvements that are the responsibility of other entities. Although many of the identified potential bus stop improvements will need to be addressed by THE Bus, it also is the case that a number of the recommended improvements may fall under the responsibility of other entities such as FDOT, Hernando County, Brooksville, and/or a private entity. Based on the responsible entities identified for each type of improvement, which are presented in Table 4-1, those improvements identified to be the responsibility of an entity other than the County and THE Bus are removed from the list of improvements that are to be included in the phased implementation plan. These improvements will be considered separately, as THE Bus will need to coordinate with these entities to specify the needed improvements and determine the best course of action to complete them in an appropriate timeframe.

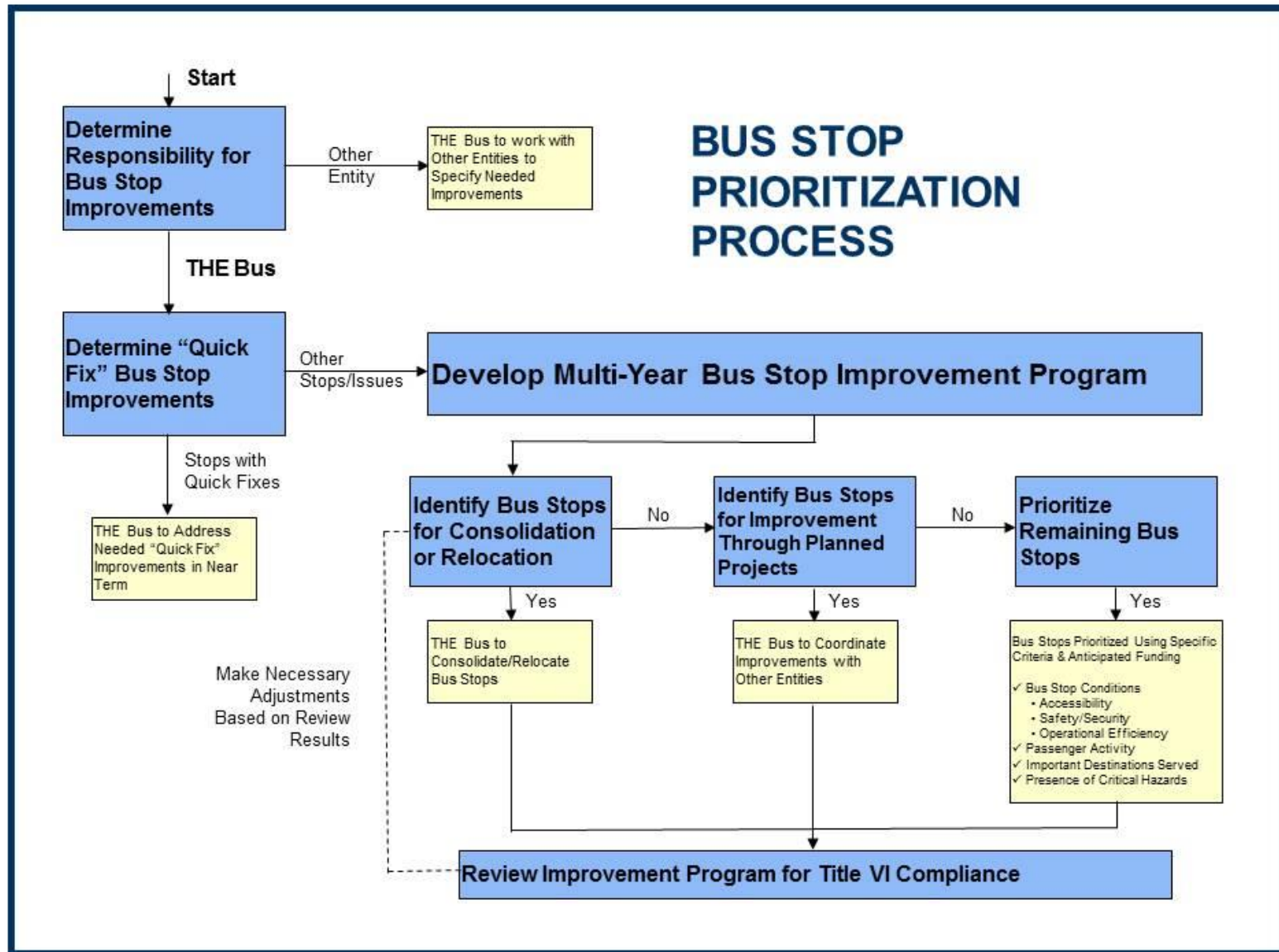


Figure 4-1 Prioritization Process Flow Chart



Table 4-1 Responsible Entity for Bus Stop Improvements

Description	Responsible Entity
Replace Sign at Stop	The County and THE Bus
Refurbish Shelter	The County and THE Bus
Bench Obstruction	The County and THE Bus /Bench's Owner
Install Lighting for Shelter	The County and THE Bus
Install Other Lighting Sources	Entity Bus Stop Located In
New Boarding and Alighting Area	The County and THE Bus
Resurface Boarding and Alighting Area	The County and THE Bus
New Connecting Path	The County and THE Bus
New Sidewalk	Entity Bus Stop Located In
Resurface Sidewalk	Entity Bus Stop Located In
New Curb Ramp	Entity Bus Stop Located In
Resurface Curb Ramp	Entity Bus Stop Located In
Relocate Bus Stop	The County and THE Bus

As seen in Table 4-1, THE Bus is not responsible for a number of infrastructure items that are primarily implemented and maintained by other jurisdictions. THE Bus is responsible for only the infrastructure pertaining to its bus stop directly, such as bus stop signs, shelters, and boarding and alighting areas. Sidewalks and curb ramps are maintained by other jurisdictional entities. Although sidewalks are maintained by the jurisdictional entity where the bus stop is located, Hernando County and THE Bus are responsible for the installation of a connecting path from the landing area to the sidewalk if one is present.



Step 2: Identify Consolidated/Relocated Bus Stops

The second step in developing the phased implementation plan was to determine which of THE Bus's bus stops have been identified for consolidation or elimination. With nearly 200 bus stops, it is possible that the system has some stops that can be consolidated (i.e., the grouping of two or more stops into a single stop) or eliminated altogether. The decision to consolidate or eliminate stops can be based on such factors as the existing level of passenger activity, the spacing between bus stops, the placement/location of the bus stop, and/or the severity of needed improvements. For this effort, the possibility of consolidating stops considered three specific criteria:

- *Distance* – A minimum bus stop spacing distance of one-eighth mile was considered for urban bus stops and one-quarter mile for suburban and rural bus stops. Stops that are spaced more closely than this were reviewed to determine whether consolidation may be feasible without negatively impacting passenger walk access.
- *Ridership* – The number of passengers boarding and alighting at each stop was evaluated.
- *Nearby Trip Generators* – The number of nearby trip generators were used to determine whether consolidation is recommended for each bus stop.
- *Bus Stop Conditions Priority Scoring* – The stage of the prioritization process that considered bus stop conditions (i.e., accessibility, safety/security, operational efficiency) was used to help determine the timing of the bus stops being proposed for consolidation (i.e., immediate, near term, long term).

Based on this analysis, zero bus stops are recommended for initial consolidation, a list of which is presented in Table 4-2.

It should be noted that this effort also included identifying bus stops that THE Bus may want to consider relocating, based on safety/security or operational efficiency issues identified during the inventory process. Scenarios warranting possible relocation include the following:

- Bus stop is located just over the crest of a hill;
- Bus stop is located just after the curve in the street;
- Bus stop is located near a railroad crossing or track;
- Waiting passengers are hidden from view of oncoming traffic;
- A stopped bus straddles the crosswalk or obstructs a curb ramp;
- Bus stop discharges passengers onto driveway apron; and
- Bus stop discharges passengers onto roadway;

A total of 59 bus stops were identified as having safety/security or operational efficiency issues that warranted possible relocation, a list of which is presented in Table 4-3.



Table 4-2 Bus Stops Recommended for Consolidation

#	Bus Stop ID	On Street	Cross Street
Not Applicable			

Table 4-3 Bus Stops Recommended for Relocation

#	Bus Stop ID	On Street	Cross Street
1	2	Main St	Hendrick Avenue
2	3	Main St	Mainbrook Apts
3	4	MLK	Stubbs Street
4	6	MLK	Buena Vista Ave
5	8	US 41	Winn-Dixie Plaza
6	9	US 41	Barnett Rd
7	11	US 41	Barnett Rd
8	12	Cortez Blvd	Publix
9	20	Cortez Blvd	Grove Rd
10	23	Cortez Blvd	Weeping Willow St
11	24	Cortez Blvd	Oak Hill Hospital/High Point
12	26	Cortez Blvd	Blackbird Ave
13	29	US 19	Northcliffe Blvd/Frontage
14	31	US 19	Pacific Ave
15	32	US 19	Home Depot
16	34	US 19	Brandy Dr
17	35	US 19	Spring Hill Lanes
18	36	US 19	Windward Village
19	45	US 19	SunTrust
20	46	US 19	Forest Oaks
21	48	US 19	Winchester Plaza
22	49	US 19	Northcliffe Blvd
23	56	Cortez Blvd	7-Eleven
24	66	Ponce de Leon Blvd	Trans-Hernando
25	67	PHCC - Brooksville	Parking loop
26	68	Ponce de Leon Blvd	Youth Drive
27	70	Howell Ave	Yontz Rd
28	72	Howell Ave	Croom Rd
29	73	Howell Ave	Sunset Drive
30	80	Mariner Blvd	Harper St



Table 3-3 Bus Stops Recommended for Relocation, continued

#	Bus Stop ID	On Street	Cross Street
31	87	Mariner Crossing	Hearth Road
32	91	Mariner Blvd	Linden Dr (1)
33	98	Mariner Blvd	Audie Brook Dr
34	101	Mariner Blvd	Sterling House ALF
35	106	Mariner Blvd	Quality Dr
36	107	Mariner Blvd	Wexford Blvd
37	108	Mariner Blvd	Audie Brook Dr
38	109	Mariner Blvd	YMCA
39	111	Seven Hills Plaza	Mariner Blvd
40	112	Mariner Blvd	Maderia St
41	114	Mariner Blvd	Linden Dr (1)
42	118	Mariner Blvd	Augustine Rd
43	121	Mariner Blvd	Mayberry Rd
44	123	Mariner Blvd	Seagate St
45	129	Northcliffe Blvd	Portillo Rd
46	130	Spring Hill Dr	Briarwood Village
47	140	Spring Hill Dr	SunTrust Bank
48	142	Spring Hill Dr	Pinehurst Dr (2)
49	144	Spring Hill Dr	Parker Ave
50	145	Spring Hill Dr	Boston Cooker
51	147	Spring Hill Dr	Kenlake Ave
52	148	Spring Hill Dr	Skyline Ct
53	149	Spring Hill Dr	Pinehurst Dr (2)
54	151	Spring Hill Dr	Kass Cir
55	156	Deltona Blvd	Founder Rd
56	159	Deltona Blvd	Delta Woods Park
57	160	Deltona Blvd	Sewell Ln
58	169	Deltona Blvd	Carthage Rd
59	170	Deltona Blvd	Century Dr



Step 3: Prioritization of THE BUS's Improvement Responsibilities

The third step in developing the phased implementation plan was to prioritize THE Bus's bus stop improvement responsibilities. This was accomplished using additional process steps. First, "quick fix" bus stop improvements were ascertained by defining identified issues that could be quickly and easily addressed by at relatively low cost. Second, bus stops were identified that could possibly be improved in conjunction with planned transportation projects. Third, the County is strongly encouraged to implement a five-year phased implementation plan starting FY 2014/15 to help guide THE Bus in addressing the more significant improvements at the remaining bus stops.

Identify Quick Fix Improvements

The first step in prioritizing THE Bus's improvement responsibilities was to determine which improvements are "quick fixes" and can be made in the near-term. This includes stops with comparatively minor issues that can be addressed with minimal effort and/or cost. These types of issues would represent an opportunity for a "quick fix" that falls under the responsibility of THE Bus and that can be addressed right away without a significant budgetary impact.

For purposes of this analysis, a quick fix improvement consists of the following:

- The addition, replacement, or modification of the bus stop sign is required, or
- The order-of-magnitude cost estimate is less than or equal to \$500 per stop

Other improvements, such as an obstruction or accessibility issue caused by a 3rd party bench or trash can, could be fixed rather easily; however, these improvements are not the responsibility of the County and are, therefore, not included in the list of quick fixes.

A list of those bus stops that have improvements considered to be quick fixes is presented in Table 4-4. It should be noted that this list was generated for those bus stops meeting the quick fix criteria needing the quick fix improvement listed above, regardless of whether other (non-quick fix) improvements also are needed at the bus stop. It should also be noted that "quick fix" does not mean full compliance when the work is complete; it is just addressing an immediate issue or deficiency.



Table 4-4 Bus Stops Recommended for Quick Fixes

#	Bus Stop	On Street	Cross Street
1	1	Brooksville City Hall	Parking lot at City Hall
2	7	US 41	Candlelight Blvd
3	10	US 41	Walmart
4	20	Cortez Blvd	Grove Rd
5	21	Cortez Blvd	Brookridge
6	22	Cortez Blvd	Transfer Station
7	23	Cortez Blvd	Weeping Willow St
8	27	Cortez Blvd	Weeki Wachee Village
9	33	US 19	Lakewood Plaza / Target
10	38	US 19	Wal-Mart
11	40	PHCC Spring Hill	US 19
12	55	Cortez Blvd	Grove Rd
13	63	Jefferson St	Darby Ln
14	76	Coastal Way Plaza	Sears
15	79	Mariner Blvd	Landover Blvd (2)
16	81	Mariner Blvd	Spring Hill Elementary
17	83	Mariner Blvd	Bali Ln
18	89	Mariner Blvd	Portillo Rd
19	90	Mariner Blvd	Landover Blvd (3)
20	92	Mariner Blvd	Claymore St
21	93	Mariner Blvd	Marysville St
22	95	Mariner Blvd	Lindsay Rd
23	110	Mariner Blvd	Linden Dr (2)
24	113	Mariner Blvd	Claymore St
25	115	Mariner Blvd	Springstead High
26	117	Mariner Commons	Publix
27	119	Mariner Blvd	Elwood Rd
28	128	SR 50	Walmart
29	137	Spring Hill Dr	Waterfall Dr
30	153	Spring Hill Dr	Malone Ave
31	166	Lakewood Plaza	Publix
32	176	Oak Hill Hospital	Oak Hill Hospital



Identify Fund Leveraging Opportunities

The second step in addressing THE Bus's improvement responsibilities was to determine which bus stop improvements can be completed in conjunction with various types of planned transportation projects, including roadway widening, and transportation enhancements being implemented by FDOT, Hernando County, and/or various municipalities. It was found that in the FDOT's 5 year work program, projects 424703-1, 407951-2, 407951-3, 430582-1, and 430585-1 occurs on sections of road that currently contains bus stops. Table 4-5 presents a list of the bus stops whose improvements may be able to be "piggy backed" with those transportation projects.

While it is believed that some cost efficiencies would result, it is not known at this time the amount that THE Bus could potentially save by completing the bus stop improvements concurrent with planned transportation projects. Therefore, no attempt has been made in this study to estimate the amount that may be saved. For those bus stop improvements that may be completed in conjunction with projects Florida Department of Transportation's (FDOT) Five Year Work Program for FY 2014-2018, the bus stops are noted in the phased implementation plan as possibly tying into the projects. The phasing takes into account the year the majority of project funding will be made available.



Table 4-5 Potential Piggy-Backed Bus Stops

#	Bus Stop ID	On Street	Cross Street	FDOT Item #
1	4	MLK	Stubbs Street	424703-1
2	5	MLK	Hale Ave	424703-1
3	6	MLK	Buena Vista Ave	424703-1
4	20	Cortez Blvd	Grove Rd	407951-2
5	21	Cortez Blvd	Brookridge	407951-2
6	23	Cortez Blvd	Weeping Willow St	407951-3
7	24	Cortez Blvd	Oak Hill Hospital/High Point Blvd	407951-3
8	25	Cortez Blvd	Oregon Chickadee Rd	407951-3
9	26	Cortez Blvd	Blackbird Ave	407951-3
10	27	Cortez Blvd	Weeki Wachee Village	407951-3
11	51	Cortez Blvd	Circle K	407951-3
12	52	Cortez Blvd	Seahorse Ave	407951-3
13	53	Cortez Blvd	Medical Center Dr	407951-3
14	54	Cortez Blvd	Sunoco	407951-2
15	55	Cortez Blvd	Grove Rd	407951-2
16	75	Howell Ave	Irene St	430582-1
17	139	Spring Hill Dr	Kass Cir	430585-1
18	140	Spring Hill Dr	SunTrust Bank	430585-1

Prioritization Process for Phased Implementation Plan

THE Bus's limited financial and staff resources prevent all of the required bus stop improvements from being implemented at one time. Therefore, a prioritization process was created with the intention to rate the conditions at each stop and assess needs to determine which improvements should be implemented first. This third and final step in addressing THE Bus's improvement responsibilities involved ranking the remaining bus stop improvements with a two-step process:

- Step 1: Rate the accessibility, safety/security, and operational efficiency conditions of each bus stop.
- Step 2: Assess the potential benefit to be derived by the improvements by reviewing bus stop activity and trip generator activity factors (i.e., community facilities).



Step 1: Rate Conditions at the Bus Stops

The initial assessment of the remaining bus stop improvement needs focused on issues with the bus stops related to three major characteristics: accessibility, safety/security, and operational efficiency. To conduct this analysis, three steps were followed to guide the prioritization of bus stops related to these three major characteristics. As part of the inventory process, information on multiple data elements were collected to support the evaluation of the accessibility, safety/security, and operational efficiency of each bus stop. This information was utilized to determine whether the overall condition assessment of each characteristic falls into one of three rating ranges: high, medium, or low. These ratings account for the fact that there are two factors that could drive the scores: the relative number of deficiencies present at the stop and the relative nature of those deficiencies (i.e., how critical they are compared to the deficiencies in other elements). Given these two factors, the meaning of each ratings range is as follows:

- High – Either the stop has no deficiencies or very few less-critical deficiencies.
- Medium – Either the stop has very few critical deficiencies or a greater number of less-critical deficiencies.
- Low – Either the stop has many critical deficiencies, a combination of critical and less-critical deficiencies, or all of its elements are deficient to some degree.



Accessibility

This category addresses how accessible and available the bus stop is to the passenger. It determines how easy or difficult the bus stop is to navigate by assessing obstructions within the accessible path or sidewalks, presence of infrastructure such as curb ramps or bus stop signs, and the compliance of that infrastructure. An overall accessibility score was developed for each bus stop using the following elements related to accessibility:

- bus stop location;
- presence of a controlled pedestrian crossing;
- presence of a curb and compliant curb ramp;
- ability to maneuver a wheelchair through shelter;
- bench obstruction;
- presence and compliance of a sidewalk;
- presence and compliance of landing area; and
- presence and compliance of the bus stop sign.

As noted previously, this information is utilized to determine whether the accessibility score calculated for each bus stop falls into one of three ratings ranges: high, medium, and low. Table 4-6 presents the distribution of the accessibility scores developed for the bus stops. Table 4-7 presents a list of the 10 bus stops with the highest accessibility scores. While Table 4-8 presents a list of the 10 bus stops with the lowest accessibility scores, signifying those stops with the greatest preponderance of accessibility issues.



Table 4-6 Distribution of Accessibility Scores

Ratings Range	# of Bus Stops	Distribution
Low (≤ 0)	100	57%
Medium (> 0 & < 1)	71	40%
High (≥ 1)	5	3%
Total	176	100%

Table 4-7 Bus Stops with Highest Accessibility Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	40	PHCC SPRING HILL & US 19	1.3
2	37	US 19 & TOWNE SQUARE/PINE FOREST DRIVE	1.3
3	38	US 19 & WAL-MART	1.3
4	166	LAKWOOD PLAZA & PUBLIX	1
5	43	US 19 & TIMBER PINES CENTRE	1
6	33	US 19 & LAKWOOD PLAZA / TARGET	0.8
7	10	US 41 & WALMART	0.8
8	59	BROOKSVILLE REGIONAL HOSPITAL & HOSPITAL AND SR 50	0.5
9	129	NORTHCLIFFE BLVD & PORTILLO RD	0.5
10	137	SPRING HILL DR & WATERFALL DR	0.5

Table 4-8 Top 10 Bus Stops with Lowest Accessibility Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	55	CORTEZ BLVD & GROVE RD	-0.9
2	20	CORTEZ BLVD & GROVE RD	-0.9
3	23	CORTEZ BLVD & WEEPING WILLOW ST	-0.9
4	63	JEFFERSON ST & DARBY LN	-0.9
5	27	CORTEZ BLVD & WEEKI WACHEE VILLAGE	-0.8
6	6	MLK & BUENA VISTA AVE	-0.8
7	21	CORTEZ BLVD & BROOKRIDGE	-0.6
8	159	DELTONA BLVD & DELTA WOODS PARK	-0.6
9	167	FOREST OAKS BLVD & THUNDERBIRD AVE	-0.6
10	62	JEFFERSON ST & ESTATES AVE	-0.6



Safety/Security

Similar to the accessibility score, an overall safety/security score was developed for each bus stop using seven elements related to safety/security. This category rates how safe or secure the passenger is when accessing the stop or standing at the stop while waiting for the bus. This involves such issues as location of the bus stop and whether the passengers/pedestrians would be visible to oncoming traffic, or potential hazards at the bus stop such as steep swales or guide wires. The following elements were used to develop the safety/security score:

- bus stop location;
- presence of a controlled pedestrian crossing;
- presence of detectible warnings on the curb ramp;
- presence of marked crosswalk(s);
- potential hazards;
- landing area in a safe location; and
- presence of lighting.

This information is utilized to determine whether the safety/security score calculated for each bus stop falls into one of three ratings ranges: high, medium, and low. Table 4-9 presents the distribution of the safety/security scores developed for the bus stops. Table 4-10 presents a list of the 10 bus stops with the highest safety/security scores, while Table 4-11 presents a list of the 10 bus stops with the lowest safety/security scores, signifying those stops with the greatest preponderance of Safety/security issues.



Table 4-9 Distribution of Safety/Security Scores

Ratings Range	# of Bus Stops	Distribution
Low (≤ 0)	4	2%
Medium (> 0 & < 1)	110	63%
High (≥ 1)	62	35%
Total	176	100%

Table 4-10 Top 10 Bus Stops with Highest Safety/Security Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	16	CORTEZ BLVD & COBB RD	1.4
2	17	CORTEZ BLVD & FT DADE AVE	1.4
3	18	CORTEZ BLVD & BW STEVENSON RD	1.4
4	57	CORTEZ BLVD & CALIFORNIA ST	1.4
5	58	CORTEZ BLVD & NUNN BLVD	1.4
6	92	MARINER BLVD & CLAYMORE ST	1.4
7	113	MARINER BLVD & CLAYMORE ST	1.4
8	115	MARINER BLVD & SPRINGSTEAD HIGH	1.4
9	116	MARINER BLVD & CHALMER ST	1.4
10	173	DELTONA BLVD & AZORA RD	1.4

Table 4-11 Bottom 10 Bus Stops with Lowest Safety/Security Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	72	HOWELL AVE & CROOM RD	-0.6
2	148	SPRING HILL DR & SKYLINE CT	-0.1
3	55	CORTEZ BLVD & GROVE RD	0
4	108	MARINER BLVD & AUDIE BROOK DR	0
5	22	CORTEZ BLVD & TRANSFER STATION	0.1
6	24	CORTEZ BLVD & OAK HILL HOSPITAL/HIGH POINT BLVD	0.1
7	27	CORTEZ BLVD & WEEKI WACHEE VILLAGE	0.1
8	51	CORTEZ BLVD & CIRCLE K	0.1
9	53	CORTEZ BLVD & MEDICAL CENTER DR	0.1
10	54	CORTEZ BLVD & SUNOCO	0.1



Operational Efficiency

An overall operational efficiency score was developed for each bus stop. This category rates each bus stop by its effectiveness to facilitate timely and efficient operation of the transit system. The following five elements related to operational efficiency were used to develop the score:

- bus location when stopped (e.g., right-turn lane, curb lane, parking lane, etc.);
- bus stop relation to nearest intersection (e.g., near side, far side mid-block, etc.)
- presence of controlled pedestrian crossing;
- potential hazards; and
- presence and compliance of a sign at the bus stop.

This information is utilized to determine whether the operational efficiency score calculated for each bus stop falls into one of three ratings ranges: high, medium, and low. Table 4-12 presents the distribution of the operational efficiency scores developed for the bus stops. Table 4-13 presents a list of the 10 bus stops with the highest operational efficiency scores, while Table 4-14 presents a list of the 10 bus stops with the lowest operational efficiency scores, signifying those stops with the greatest preponderance of operational efficiency issues.



Table 4-12 Distribution of Operational Efficiency Scores

Ratings Range	# of Bus Stops	Distribution
Low (≤ 0)	30	17.0%
Medium (> 0 & < 1)	86	48.9%
High (≥ 1)	60	34.1%
Total	176	100%

Table 4-13 Top 10 Bus Stops with Highest Operational Efficiency Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	14	CORTEZ BLVD & EMERALD SPRINGS WAY/POST OFFICE	1.3
2	16	CORTEZ BLVD & COBB RD	1.3
3	58	CORTEZ BLVD & NUNN BLVD	1.3
4	81	MARINER BLVD & SPRING HILL ELEMENTARY	1.3
5	97	MARINER BLVD & HENDERSON ST ACROSS FROM YMCA	1.3
6	101	MARINER BLVD & STERLING HOUSE ALF	1.3
7	116	MARINER BLVD & CHALMER ST	1.3
8	126	MARINER BLVD & DELBARTON ST	1.3
9	161	FOREST OAKS BLVD & ANDY PELLA DR	1.3
10	173	DELTONA BLVD & AZORA RD	1.3

Table 4-14 Bottom 10 Bus Stops with Lowest Operational Efficiency Score

Ranking	Bus Stop ID	Intersection	Accessibility Score
1	21	CORTEZ BLVD & BROOKRIDGE	-0.5
2	55	CORTEZ BLVD & GROVE RD	-0.5
3	117	MARINER COMMONS & PUBLIX	-0.5
4	22	CORTEZ BLVD & TRANSFER STATION	-0.3
5	20	CORTEZ BLVD & GROVE RD	-0.3
6	163	FOREST VILLAS CIR & FOREST OAKS BLVD	-0.3
7	164	FOREST VILLAS CIR & FOREST VILLAS	-0.3
8	63	JEFFERSON ST & DARBY LN	-0.3
9	2	MAIN ST & HENDRICK AVENUE	-0.3
10	33	US 19 & LAKEWOOD PLAZA / TARGET	-0.3



Step 2: Assess Factors Related to the Need for Improvements

The second step in the process was assessing factors that relate to the need for the improvement – where would the most benefits be derived. Passenger activities at the stop in conjunction with the adjacent destinations were used to make this determination. Therefore, the following two factors that were used for this assessment:

- Passenger activity at the stop – average daily passenger count data obtained from manual passenger counts.
- Destinations – which stops serve important community destinations

Bus Stop Activity

Bus stop activity is defined as the total number of passengers boarding and alighting at a single stop over the course of an average weekday. This particular criterion is important in helping establish the relative “necessity” of each stop because of the level of patron use. The higher the usage of the stop, the more pertinent are the deficiencies. Table 4-15 presents the distribution of the ridership at the bus stops. Table 4-16 presents a list of the 10 bus stops with the highest ridership, while Table 4-17 presents a list of the 10 bus stops with the lowest ridership.



Table 4-15 Distribution of Ridership Scores

Avg Daily Riders	# of Bus Stops	Distribution
Low (1)	85	48.3%
Medium (2)	43	24.4%
High (>=3)	45	25.6%
Not Reported	3	1.7%
Total	176	100%

Table 4-16 Top 10 Bus Stops with Highest Ridership

Ranking	Bus Stop ID	Intersection	Ridership
1	22	CORTEZ BLVD & TRANSFER STATION	77
2	41	US 19 & HAMPTON INN	22
3	40	PHCC SPRING HILL & US 19	21
4	38	US 19 & WAL-MART	21
5	1	BROOKSVILLE CITY HALL & PARKING LOT AT CITY HALL	13
6	166	LAKWOOD PLAZA & PUBLIX	13
7	88	MARINER BLVD & MURPHYS MARKET	13
8	33	US 19 & LAKEWOOD PLAZA / TARGET	11
9	94	MIDTOWN CENTRE & MADEIRA ST	10
10	10	US 41 & WALMART	8

Table 4-17 Bottom 10 Bus Stops with Lowest Ridership

Ranking	Bus Stop ID	Intersection	Ridership
1	20	CORTEZ BLVD & GROVE RD	1
2	60	CORTEZ BLVD & MOBLEY RD	1
3	68	PONCE DE LEON BLVD & YOUTH DRIVE	1
4	78	MARINER BLVD & LOLA DR	1
5	86	MARINER BLVD & AUGUSTINE RD	1
6	96	MARINER BLVD & LINDEN DR (2)	1
7	98	MARINER BLVD & AUDIE BROOK DR	1
8	99	MARINER BLVD & CASA GRANDE CIR	1
9	100	MARINER BLVD & RIO VISTA CT	1
10	126	MARINER BLVD & DELBARTON ST	1



Nearby Trip Generators

During the inventory process to collect the bus stop information, the surveyors also assessed and recorded information on various key trip generators (e.g., schools, offices, shopping centers, social service agencies, etc.) that were located near each bus stop. This information was taken into consideration when analyzing the stops, since some of these generators are typically more closely related to transit use. This criterion is also important in establishing the relative “necessity” of a particular stop. Stops that serve nearby transit generators are critical despite the level of ridership because the trips are critical. The more trip generators around the stop, the more pertinent the deficiencies. Table 4-15 list 20 bus stops that serve important trip generators that were noted during the inventory process.

Table 4-18 Stops Serving Major Trip Generators

Bus Stop ID	Intersection	Trip Generator
1	BROOKSVILLE CITY HALL & PARKING LOT AT CITY HALL	Government, Medical/Rehab
10	US 41 & WALMART	Office/Commercial
22	CORTEZ BLVD & TRANSFER STATION	Retail
33	US 19 & LAKEWOOD PLAZA / TARGET	Office/Commercial, Residential, Retail
38	US 19 & WAL-MART	Retail
40	PHCC SPRING HILL & US 19	Residential, School/Day Care
41	US 19 & HAMPTON INN	Residential, Retail
67	PHCC - BROOKSVILLE CAMPUS & PARKING LOOP	School/Day Care
87	MARINER CROSSING & HEARTH ROAD	Office/Commercial, Retail
88	MARINER BLVD & MURPHYS MARKET	Residential, Retail
89	MARINER BLVD & PORTILLO RD	Office/Commercial, Medical/Rehab, Residential, Retail
94	MIDTOWN CENTRE & MADEIRA ST	Office/Commercial, Residential, Retail
111	SEVEN HILLS PLAZA & MARRINER	Residential, Retail
117	MARINER COMMONS & PUBLIX	Retail, Office/Commercial
128	SR 50 & WALMART	Retail
130	SPRING HILL DR & BRIARWOOD VILLAGE	Office/Commercial, Retail
140	SPRING HILL DR & SUNTRUST BANK	Office/Commercial, Residential, Medical/Rehab, Government, Retail
151	SPRING HILL DR & KASS CIR	Medical/Rehab, Office/Commercial, Residential, Retail, Government
166	LAKWOOD PLAZA & PUBLIX	Office/Commercial, Medical/Rehab, Retail
176	OAK HILL HOSPITAL & OAK HILL HOSPITAL	Medical/Rehab



ADDITIONAL CONSIDERATION OF POTENTIAL HAZARDS

Generally speaking, a potential safety hazard is one that can be controlled, while a potential risk hazard is something that must be fixed. As part of the analysis, a separate score was developed for each bus stop pertaining to both potential safety and potential risk hazards.

Draft Implementation Plan

All of the previous factors were reviewed and a draft implementation program was prepared to prioritize the improvements. This draft implementation program was then reviewed to determine compliance with Title VI of the Civil Rights Act of 1964. As a federally funded transit system, THE Bus must ensure that the services and programs are in compliance with Title VI requirements, as described below:

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participating in, or denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The grantee must ensure that federally supported transit services and related benefits are distributed in an equitable manner.” (Source: FTA Triennial Review Workbook, FY 2008)

To review Title VI compliance, a GIS-based analysis of THE Bus’s service area was completed to assess the comparative nature and distribution of the proposed bus stop improvements, consolidations, and deletions with regard to both minority and non-minority portions of the service area.

Figure 4-2 and Figure 4-3 illustrates the GIS analysis conducted and resulting Title VI areas in THE Bus’s service area. Based on this analysis, 73 percent of the total bus stops are located in Title VI and 73 percent those bus stops identified as needing improvements are located in Title VI areas. Based on this review, it was concluded that the draft implementation program is in compliance with Title VI requirements.



Figure 4-2 Hernando County Low Income Title VI Areas

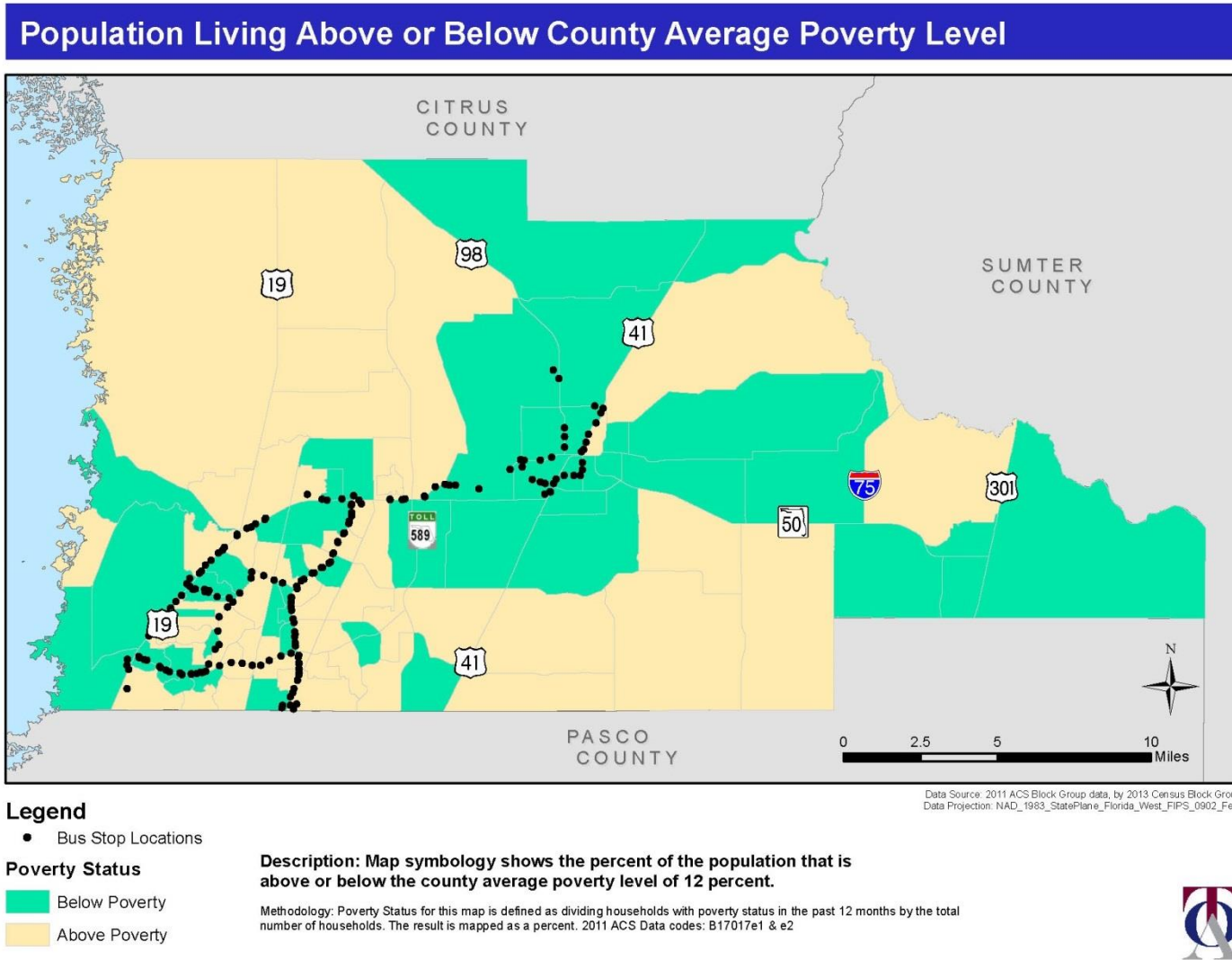
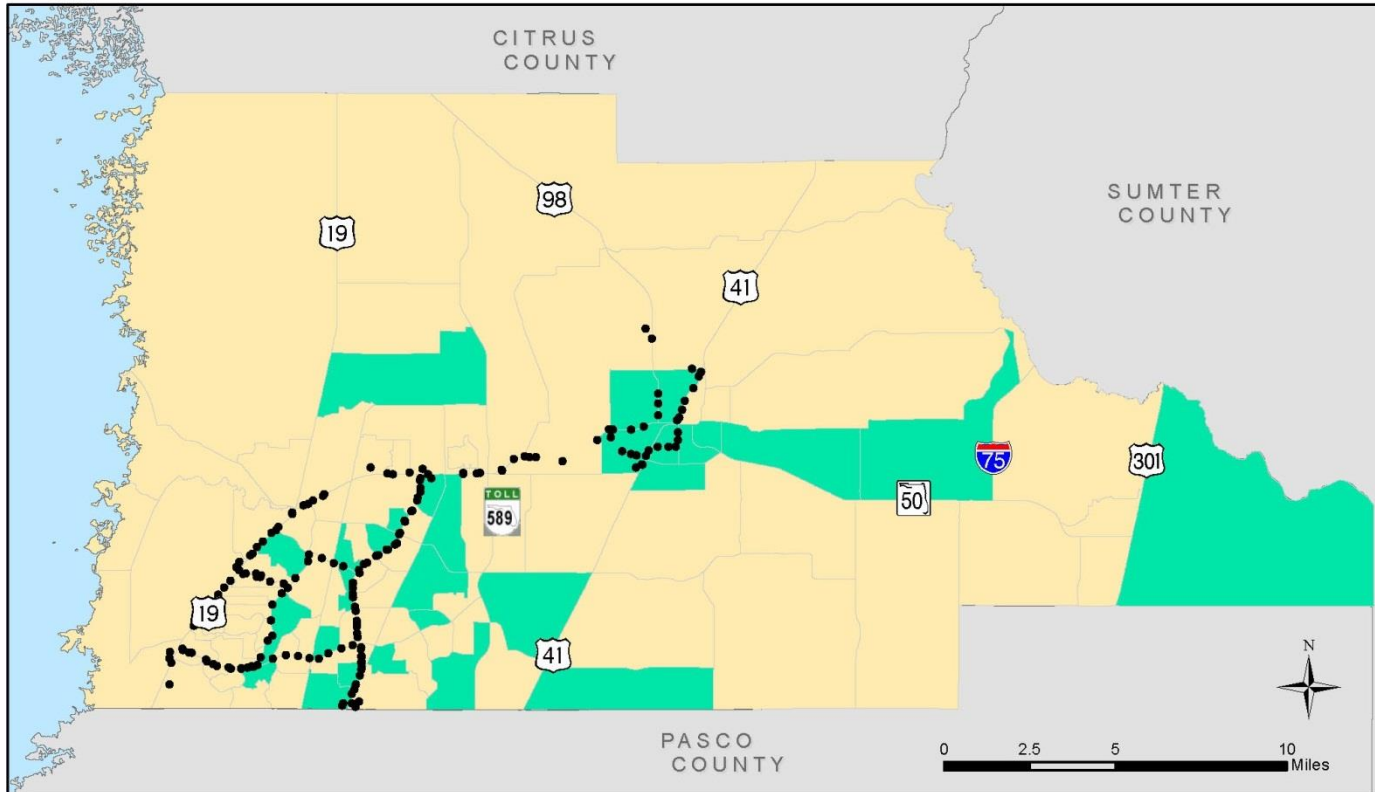




Figure 4-3 Hernando County Minority Population Title VI Areas

Areas with Minority Population Above or Below the County Average



Data Source: 2011 ACS Block Group data, by 2013 Census Block Group
Data Projection: NAD_1983_StatePlane_Florida_West_FIPS_0902_Feet

Legend

- Bus Stop Locations

Minority Population

- Minority Population
- Non Minority Population

Description: Map symbology shows the percent of the population that identifies as a minority group using the county average of 11 percent.

Methodology: Minority Population for this map is defined as Total Population minus White Population. The resulting population is divided by the total population to get the percent shown. 2011 ACS Data codes: B02001e1 & e2





5.0 IMPLEMENTATION PRIORITY PLAN

In the previous sections, the improvements that are required to improve accessibility conditions at bus stops and facilities were identified, and the entity responsible for undertaking the improvements was determined. The next step in the process is the development of an Implementation Priority Plan by the County for THE Bus's required improvements. This was undertaken through the following efforts:

- preparing cost estimates for the required improvements;
- identifying funding that is available for the improvements; and
- reviewing the specific improvements in more detail and categorizing them into two separate groups. These include:
 - quick fix improvements; and
 - improvements that require more time, effort, and/or funding.

It should be noted that, in an effort to ensure that all of the bus stops are compliant, safe and secure, and operationally efficient, all of THE Bus's bus stops were considered in this review, regardless of whether the original bus stop implementation or any subsequent improvements to the stop precede the ADA and, are therefore, grandfathered from having to meet current ADA requirements.

Development of Improvement Costs

In order to develop the Implementation Priority Plan, unit costs for each type of improvement were developed. These unit costs were based on recent experiences with other transit agencies and, when available, standard industry costs when local data was not available. **It is important to note that the unit costs include across-the-board assumptions that will need to be reviewed prior to the actual improvement being completed.**

Table 5-1 includes the unit costs for each type of improvement that were used to estimate the order-of-magnitude improvement costs. In addition, this table includes the total number of bus stops needing each type of improvement, as well as the total cost by improvement type.



Table 5-1 Order of Magnitude Cost Estimates

Improvement	Cost	Number of Bus Stops	Total Cost
Remove Bus Stop	\$200 each	0	\$ 0
Relocate Bus Stop	\$400 each	23	\$ 9,200
New Boarding & Alighting Area	\$600 each	109	\$ 65,400
Partial Boarding & Alighting Area	\$150 per sf @ 5' wide	59	\$ 10,000
New Connecting Path	\$75 linear foot	43	\$ 145,760
Add/Replace Bus Sign At Stop	\$175 each	19	\$ 3,850
Detectable Warning	\$135 per stop	181	\$ 24,440
Raised Curb	\$135 each @ 7' wide	97	\$ 13,100
Other Improvements	varies		\$ 145,230
Total Order of Magnitude Cost Estimates			\$ 416,980



Again, it should be noted that the estimates are intended to reflect the order-of-magnitude costs for the overall bus stop improvement needs over the timeframe of the plan; for specific projects nearing implementation, it will be necessary for a more detailed cost assessment.

Zero bus stops are recommended for consolidation and 59 bus stops were found to have potential safety/security or operational efficiency issues, such as the stops being located in front of a driveway, over the crest of a hill, where the passengers are not in view of oncoming traffic, etc. The total number of bus stops recommended for consolidation or relocation is 59. Relocation of the identified bus stops would provide many benefits, including correcting the potential safety hazards to passengers and/or increasing the overall operational efficiency of the bus stop.

THE Bus's staff will need to review each of the bus stops recommended for both consolidation and/or relocation in more detail following completion of this study to determine if it is appropriate to consolidate or relocate the bus stop, or instead make improvements to the stop at its current location. Any combination of consolidation, relocating, and improving the stops identified for consolidation and/or relocation will result in adjustments to the cost estimates, depending on whether the cost of needed improvements is less than or greater than the cost of relocating the bus stop.

The effort to determine which stops should be changed (e.g., removed, consolidated, or relocated) will require a focused effort by the staff. The analysis undertaken in this study provides specific information on bus stops with locational issues, such as the stop being located just over the crest of a hill, just after a curve, where waiting passengers are not in view of traffic, etc.

Development of the Implementation Priority Plan

Individual Bus Stops

Following the development of the Improvement Plan in Section Four, the Implementation Priority Plan was developed to identify when the improvements should occur, based on the relative priority of the improvements and anticipated level of funding that would be available for the County and THE Bus to address the improvements. The Implementation Priority Plan includes all improvements that are THE Bus's responsibility as well as some improvements that may end up being the responsibility of other entities.



Due to the nature of the quick fix improvements, it is assumed that all of the quick fix improvements identified in the previous table will be completed this fiscal year (FY 2014). Therefore, the funding plan that was developed reflects this assumption of the quick fix improvements being implemented over a 12-month period.

As previously mentioned in Section Four, it would be ideal if THE Bus could take advantage of “piggy backing” needed bus stop improvements with planned roadway projects. Under ideal circumstances, this would permit THE Bus to benefit either because the project directly addresses some or all of the needed stop improvements, or the project allows THE Bus to reduce its improvement costs due to the concurrent construction activities. It is not known at this time the amount of implementation costs that could potentially be saved by completing the bus stop improvements concurrent with planned transportation projects. Therefore, potential cost savings through fund leveraging are not included in the Implementation Priority Plan at this time. In the future, should the desire and ability to estimate the amount of costs that could be reduced through fund leveraging, the cost of the improvements for those impacted stops may be adjusted.

To develop the plan, the prioritized list of bus stop improvements determined to be THE Bus’s responsibility will be incorporated into the County’s Capital Improvements Element on the amount of anticipated funding available each year for the improvements.

It should be stressed that the Implementation Plan will serve as a general guide for the planning of bus stop and facility improvements and that several factors will influence the timing for implementation of specific improvements and the overall cost of the program, including:

- Opportunities for partnering with other jurisdictions or organizations on implementing improvements.
- Specific site conditions at individual stops, including landscaping, utilities, drainage, which can have a significant impact on the type of improvements required and the associated cost.
- Contracting opportunities, including awarding a unit-price contract for the implementation of improvements at multiple locations.
- Additional opportunities to relocate or consolidate individual bus stops.

On an annual basis, the list of needed improvements will be reviewed against the funding that is available that year to develop a specific work program. As previously mentioned, this will involve development of more detailed cost estimates based on a review of site conditions at individual stops.



Funding Plan for Needed Improvements

Improvements to Hernando County's bus stops and shelters are to be financed through several funding sources, which include:

- Advertising,
- FTA capital funding,
- Local government contributions, and
- State revenue.

Many factors will affect the actual revenues received by Hernando County, including future reauthorization of the federal transportation funding program, collections by local taxing authorities for the impact fees from developers, and future allocations of the competitive funding from other agencies.



Program Expenses:

Study Improvement Needs	\$407,780
Relocation of bus stops	\$9,200
Removal of bus stops	\$0
Total program	\$416,980

The relocation of bus stops assumes that all 59 stops will be relocated. However, keep in mind that the Study Improvement Needs represents the total estimate of probable cost, some of which will be the responsibility of other entities.

Table 5-2 presents the recommended expenditure program for accessibility improvements and associated amenity improvements¹. As previously discussed in Section 4, THE Bus is strongly encouraged to implement a five-year phased implementation plan starting FY 2014/15 to help guide THE Bus in addressing the more significant improvements at the remaining bus stops.

It should be noted that the costs are order-of-magnitude estimates, with the ultimate costs dependent upon how the work is undertaken, site conditions at individual stops, and material and labor prices in future years. The number of stops that are consolidated or relocated will also be an important variable.

It should be noted that other ongoing efforts will accelerate the implementation of the improvements, including:

- Road improvement projects undertaken by local jurisdictions and FDOT.
- Projects undertaken by developers through land use and concurrency agreements in Brooksville and Hernando County.

¹ The Recommendations are in priority order based upon usage and ridership.



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements

Priority	Bus Stop ID	Intersection	Recommended Amenities
1	94	MIDTOWN CENTRE & MADEIRA ST	Shelter
2	88	MARINER BLVD & MURPHYS MARKET	Shelter
3	41	US 19 & HAMPTON INN	Shelter
4	166	LAKEWOOD PLAZA & PUBLIX	High Priority Bench
5	90	MARINER BLVD & LANDOVER BLVD (3)	High Priority Bench
6	7	US 41 & CANDLELIGHT BLVD	High Priority Bench
7	111	SEVEN HILLS PLAZA & MARINER BLVD	High Priority Bench
8	10	US 41 & WALMART	High Priority Bench
9	130	SPRING HILL DR & BRIARWOOD VILLAGE	High Priority Bench
10	151	SPRING HILL DR & KASS CIR	High Priority Bench
11	64	PONCE DE LEON BLVD & WARD AVE	High Priority Bench
12	142	SPRING HILL DR & PINEHURST DR (2)	High Priority Bench
13	75	HOWELL AVE & IRENE ST	High Priority Bench
14	70	HOWELL AVE & YONTZ RD	High Priority Bench
15	117	MARINER COMMONS & PUBLIX	High Priority Bench
16	44	US 19 & TOUCAN TRAIL	High Priority Bench
17	53	CORTEZ BLVD & MEDICAL CENTER DR	High Priority Bench
18	165	FOREST OAKS BLVD & BANK OF AMERICA	High Priority Bench
19	63	JEFFERSON ST & DARBY LN	High Priority Bench
20	139	SPRING HILL DR & KASS CIR	High Priority Bench
21	89	MARINER BLVD & PORTILLO RD	High Priority Bench
22	169	DELTONA BLVD & CARTHAGE RD	High Priority Bench
23	170	DELTONA BLVD & CENTURY DR	High Priority Bench
24	127	MARINER BLVD & FRONTAGE RD	High Priority Bench
25	4	MLK & STUBBS STREET	High Priority Bench
26	135	SPRING HILL DR & MEREDITH DR	High Priority Bench
27	67	PHCC - BROOKSVILLE CAMPUS & PARKING LOOP	High Priority Bench
28	21	CORTEZ BLVD & BROOKRIDGE	High Priority Bench
29	55	CORTEZ BLVD & GROVE RD	High Priority Bench



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements, continued

Priority	Bus Stop ID	Intersection	Recommended Amenities
30	33	US 19 & LAKEWOOD PLAZA / TARGET	Shelter
31	40	PHCC SPRING HILL & US 19	Shelter Already Installed
32	95	MARINER BLVD & LINDSAY RD	Medium Priority Bench
33	79	MARINER BLVD & LANDOVER BLVD (2)	Medium Priority Bench
34	119	MARINER BLVD & ELWOOD RD	Medium Priority Bench
35	38	US 19 & WAL-MART	Shelter Already Installed
36	92	MARINER BLVD & CLAYMORE ST	Medium Priority Bench
37	93	MARINER BLVD & MARYSVILLE ST	Low Priority Bench
38	110	MARINER BLVD & LINDEN DR (2)	Low Priority Bench
39	81	MARINER BLVD & SPRING HILL ELEMENTARY	Low Priority Bench
40	137	SPRING HILL DR & WATERFALL DR	Low Priority Bench
41	113	MARINER BLVD & CLAYMORE ST	Low Priority Bench
42	115	MARINER BLVD & SPRINGSTEAD HIGH	Low Priority Bench
43	83	MARINER BLVD & BALI LN	Low Priority Bench
44	87	MARINER CROSSING & HEARTH ROAD	Bench Already Installed
45	76	COASTAL WAY PLAZA & SEARS	Bench Already Installed
46	128	SR 50 & WALMART	Bench Already Installed
47	1	BROOKSVILLE CITY HALL & PARKING LOT AT CITY HALL	Shelter Already Installed
48	173	DELTONA BLVD & AZORA RD	Medium Priority Bench
49	85	MARINER BLVD & ELWOOD RD	Medium Priority Bench
50	120	MARINER BLVD & NORVELL RD	Medium Priority Bench
51	8	US 41 & WINN-DIXIE PLAZA	Medium Priority Bench
52	59	BROOKSVILLE REGIONAL HOSPITAL & HOSPITAL AND SR 50	Medium Priority Bench
53	152	SPRING HILL DR & PORT CT	Medium Priority Bench
54	61	JEFFERSON ST & GRACE BAPTIST	Medium Priority Bench
55	164	FOREST VILLAS CIR & FOREST VILLAS	Bench Already Installed
56	91	MARINER BLVD & LINDEN DR (1)	Low Priority Bench
57	136	SPRING HILL DR & LAREDO AVE	Low Priority Bench
58	112	MARINER BLVD & MADERIA ST	Low Priority Bench
59	16	CORTEZ BLVD & COBB RD	Low Priority Bench
60	121	MARINER BLVD & MAYBERRY RD	Low Priority Bench
61	82	MARINER BLVD & ELGIN BLVD	Low Priority Bench
62	143	SPRING HILL DR & TREEHAVEN DR	Medium Priority Bench
63	96	MARINER BLVD & LINDEN DR (2)	Low Priority Bench
64	77	MARINER BLVD & GULFCOAST SPINE	Low Priority Bench



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements, continued

Priority	Bus Stop ID	Intersection	Recommended Amenities
65	163	FOREST VILLAS CIR & FOREST OAKS BLVD	Bench Already Installed
66	25	CORTEZ BLVD & OREGON CHICKADEE RD	Medium Priority Bench
67	100	MARINER BLVD & RIO VISTA CT	Low Priority Bench
68	122	MARINER BLVD & ELGIN BLVD	Medium Priority Bench
69	124	MARINER BLVD & HARPER ST	Medium Priority Bench
70	103	SPRING HILL HOSPITAL & QUALITY DR	Bench Already Installed
71	158	DELTONA BLVD & ERIC ST	Low Priority Bench
72	154	DELTONA BLVD & MEADOW LARK RD	Low Priority Bench
73	155	DELTONA BLVD & BELEN AVE	Low Priority Bench
74	129	NORTHCLIFFE BLVD & PORTILLO RD	Low Priority Bench
75	174	FOREST VILLAS CIR & FOREST OAKS BLVD	Low Priority Bench
76	50	US 19 & MOTEL 6	Low Priority Bench
77	168	FOREST OAKS BLVD & ANDY PELLA DR	Low Priority Bench
78	167	FOREST OAKS BLVD & THUNDERBIRD AVE	Low Priority Bench
79	39	SPORTS AUTHORITY / BEST BUY & BEST BUY	Medium Priority Bench
80	84	MARINER BLVD & NORVELL RD	Low Priority Bench
81	126	MARINER BLVD & DELBARTON ST	Low Priority Bench
82	2	MAIN ST & HENDRICK AVENUE	Medium Priority Bench
83	148	SPRING HILL DR & SKYLINE CT	Medium Priority Bench
84	52	CORTEZ BLVD & SEAHORSE AVE	Medium Priority Bench
85	175	FOREST VILLAS CIR & FOREST OAKS BLVD	Medium Priority Bench
86	12	CORTEZ BLVD & PUBLIX	Low Priority Bench
87	159	DELTONA BLVD & DELTA WOODS PARK	Medium Priority Bench
88	26	CORTEZ BLVD & BLACKBIRD AVE	Medium Priority Bench
89	22	CORTEZ BLVD & TRANSFER STATION	Shelter Already Installed
90	17	CORTEZ BLVD & FT DADE AVE	Low Priority Bench
91	153	SPRING HILL DR & MALONE AVE	Low Priority Bench
92	80	MARINER BLVD & HARPER ST	Low Priority Bench
93	123	MARINER BLVD & SEAGATE ST	Low Priority Bench
94	99	MARINER BLVD & CASA GRANDE CIR	Low Priority Bench
95	98	MARINER BLVD & AUDIE BROOK DR	Low Priority Bench
96	19	CORTEZ BLVD & WINTER ST	Low Priority Bench
97	15	CORTEZ BLVD & DONTOWAY	Low Priority Bench
98	171	DELTONA BLVD & MELROSE ST	Low Priority Bench
99	5	MLK & HALE AVE	Bench Already Installed



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements, continued

Priority	Bus Stop ID	Intersection	Recommended Amenities
100	157	DELTONA BLVD & KENWAY ST	Low Priority Bench
101	6	MLK & BUENA VISTA AVE	Low Priority Bench
102	14	CORTEZ BLVD & EMERALD SPRINGS WAY/POST OFFICE	Medium Priority Bench
103	97	MARINER BLVD & HENDERSON ST ACROSS FROM YMCA	Medium Priority Bench
104	71	HOWELL AVE & CHATFIELD DR	Low Priority Bench
105	62	JEFFERSON ST & ESTATES AVE	Low Priority Bench
106	104	MEDICAL BLVD & APPLEBEES	Low Priority Bench
107	28	US 19 & WEEKI WACHEE SPRINGS	Low Priority Bench
108	125	MARINER BLVD & HANLEY DR	Medium Priority Bench
109	30	US 19 & RIVER COUNTRY	Low Priority Bench
110	34	US 19 & BRANDY DR	Low Priority Bench
111	149	SPRING HILL DR & PINEHURST DR (2)	Medium Priority Bench
112	58	CORTEZ BLVD & NUNN BLVD	Low Priority Bench
113	3	MAIN ST & MAINBROOK APTS	Medium Priority Bench
114	101	MARINER BLVD & STERLING HOUSE ALF	Low Priority Bench
115	172	DELTONA BLVD & CENTURY DR	Medium Priority Bench
116	161	FOREST OAKS BLVD & ANDY PELLA DR	Low Priority Bench
117	73	HOWELL AVE & SUNSET DRIVE	Medium Priority Bench
118	35	US 19 & SPRING HILL LANES	Medium Priority Bench
119	57	CORTEZ BLVD & CALIFORNIA ST	Low Priority Bench
120	18	CORTEZ BLVD & BW STEVENSON RD	Low Priority Bench
121	162	FOREST OAKS BLVD & HARROW RD	Low Priority Bench
122	102	QUALITY DR & VISTA GRANDE RETIREMENT	Low Priority Bench
123	66	PONCE DE LEON BLVD & TRANS-HERNANDO	Low Priority Bench
124	48	US 19 & WINCHESTER PLAZA	Low Priority Bench
125	32	US 19 & HOME DEPOT	Low Priority Bench
126	45	US 19 & SUNTRUST	Low Priority Bench
127	31	US 19 & PACIFIC AVE	Low Priority Bench
128	72	HOWELL AVE & CROOM RD	Low Priority Bench
129	42	US 19 & BIG LOTS	Medium Priority Bench
130	23	CORTEZ BLVD & WEEPING WILLOW ST	Low Priority Bench
131	114	MARINER BLVD & LINDEN DR (1)	Low Priority Bench
132	20	CORTEZ BLVD & GROVE RD	Low Priority Bench
133	43	US 19 & TIMBER PINES CENTRE	Low Priority Bench
134	47	US 19 & LOWE'S	Medium Priority Bench



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements, continued

Priority	Bus Stop ID	Intersection	Recommended Amenities
135	132	SPRING HILL DR & BENTLEY AVE	Low Priority Bench
136	56	CORTEZ BLVD & 7-ELEVEN	Low Priority Bench
137	37	US 19 & TOWNE SQUARE/PINE FOREST DRIVE	Medium Priority Bench
138	141	SPRING HILL DR & GARRET AVE	Low Priority Bench
139	65	PONCE DE LEON BLVD & NORTH AVE	Low Priority Bench
140	68	PONCE DE LEON BLVD & YOUTH DRIVE	Low Priority Bench
141	138	SPRING HILL DR & MARKHAM AVE	Medium Priority Bench
142	133	SPRING HILL DR & BISHOP RD	Medium Priority Bench
143	13	CORTEZ BLVD & CANDLELIGHT BLVD	Low Priority Bench
144	86	MARINER BLVD & AUGUSTINE RD	Low Priority Bench
145	131	SPRING HILL DR & LINDEN DR (1)	Low Priority Bench
146	78	MARINER BLVD & LOLA DR	Low Priority Bench
147	134	SPRING HILL DR & HAULOVER AVE	Low Priority Bench
148	36	US 19 & WINDWARD VILLAGE	Low Priority Bench
149	108	MARINER BLVD & AUDIE BROOK DR	Low Priority Bench
150	156	DELTONA BLVD & FOUNDER RD	Low Priority Bench
151	9	US 41 & BARNETT RD	Medium Priority Bench
152	118	MARINER BLVD & AUGUSTINE RD	Low Priority Bench
153	160	DELTONA BLVD & SEWELL LN	Medium Priority Bench
154	51	CORTEZ BLVD & CIRCLE K	Medium Priority Bench
155	150	SPRING HILL DR & COBBLESTONE DR	Low Priority Bench
156	69	YONTZ RD & 3 SEASONS MOBILE HOME PARK	Low Priority Bench
157	140	SPRING HILL DR & SUNTRUST BANK	High Priority Bench
158	11	US 41 & BARNETT RD	Low Priority Bench
159	176	OAK HILL HOSPITAL & OAK HILL HOSPITAL	Bench Already Installed
160	60	CORTEZ BLVD & MOBLEY RD	Low Priority Bench
161	46	US 19 & FOREST OAKS	High Priority Bench
162	116	MARINER BLVD & CHALMER ST	Medium Priority Bench
163	145	SPRING HILL DR & BOSTON COOKER	High Priority Bench
164	24	CORTEZ BLVD & OAK HILL HOSPITAL/HIGH POINT BLVD	High Priority Bench
165	106	MARINER BLVD & QUALITY DR	Medium Priority Bench
166	74	HOWELL AVE & HIGHLAND ST	Medium Priority Bench
167	146	SPRING HILL DR & ACCESS HEALTH CARE	Medium Priority Bench
168	49	US 19 & NORTHCLIFFE BLVD	Low Priority Bench
169	27	CORTEZ BLVD & WEEKI WACHEE VILLAGE	Medium Priority Bench



Table 5-2 Phased Implementation Priority Plan for Bus Stop Improvements, continued

Priority	Bus Stop ID	Intersection	Recommended Amenities
170	109	MARINER BLVD & YMCA	Low Priority Bench
171	147	SPRING HILL DR & KENLAKE AVE	Low Priority Bench
172	29	US 19 & NORTHCLIFFE BLVD/FRONTAGE ROAD	Low Priority Bench
173	107	MARINER BLVD & WEXFORD BLVD	Low Priority Bench
174	54	CORTEZ BLVD & SUNOCO	Low Priority Bench
175	105	MARINER BLVD & JIFFY LUBE	Low Priority Bench
176	144	SPRING HILL DR & PARKER AVE	Low Priority Bench

Annually, the improvements will be needed to be reviewed and a work program developed specifying the improvements that will be undertaken. The improvements would be undertaken through task orders. It is envisioned that the effort would focus on implementation of improvements along specific corridors, which would enable improvements to be implemented more quickly.

THE Bus is strongly encouraged to incorporate the recommended improvements into the Capital Improvements Program, starting in Fiscal Year 2014/2015. The CIP would act as a phased implementation plan and would identify the improvements to be undertaken for a given year.

It should be stressed that the priority list is presented as an overall guide to the implementation of the improvements. The MPO's and THE Bus's staff will need to review the needed improvements and the available funding on an annual basis when developing the CIP.



6.0 NEXT STEPS

The following is a summary of next steps for the MPO and THE Bus to consider to ensure that the major goals of this Bus Stop Accessibility Study are achieved and maintained over time.

BUS STOP AND FACILITIES STANDARDS

- It is recommended that the MPO, the County, and THE Bus use the *Accessing Transit Design Handbook for Florida Bus Passenger Facilities, Version III, 2013* concerning the concepts of accessibility, safety/security, and operational efficiency to guide the design of new bus stops and facilities, as well as improvements to existing bus stops and facilities.

FUNDING FOR IMPROVEMENTS

- It is recommended that Hernando County and THE Bus identify funding for bus stop improvements.

GIS ANALYSIS TO DETERMINE JURISDICTIONAL RESPONSIBILITY

- It is recommended that Hernando County conduct an analysis to determine the specific improvements that fall within the responsibility of each respective jurisdiction (Brooksville, Hernando County, and FDOT).
- It is recommended that the County advise each jurisdiction of the specific improvement needs that are within their responsibility, based on the results of the GIS analysis.

ADVISE ENTITIES RESPONSIBLE FOR IMPROVEMENT NEEDS

- It is recommended that the County advise each entity of the list of needed improvements that fall within their responsibility.
- It is recommended that the County review and update standards as necessary (as ADAAG/FAC requirements change, etc.).
- It is recommended that the County continue to coordinate with FDOT and local jurisdictions on the development and implementation of strategies to implement accessibility improvements.



BUS STOP CONSOLIDATION/RELOCATION

- It is recommended that the County review the initial list of bus stops recommended for consolidation and confirm the final list of stops to be removed.
- It is recommended that the County provide the list of consolidated bus stops to their maintenance staff to flag each bus stop identified for consolidation, which shall provide notice to the riders utilizing the stop(s) identified for consolidation.
- It is recommended that the County and THE Bus determine additional public outreach efforts, as appropriate, based on the number and scale of the bus stops recommended for consolidation.
- It is recommended that the County and THE Bus conduct bus stop consolidation reviews to correspond with the service change route mark-ups that occur multiple times throughout the year.
- It is recommended that the County and THE Bus conduct a comprehensive review of additional stops that can be eliminated, relocated, or consolidated, using the spacing standards as well as ridership and bus stop inventory data.
- It is recommended that the County continue to identify consolidation opportunities as part of roadway improvement reviews requested by other agencies, including FDOT, Hernando County, and Brooksville.
- It is recommended that the County and THE Bus staff review the list of bus stops identified for relocation and determine whether the bus stops should be relocated or improvements made to correct any accessibility, safety/security, or operational efficiency issues, if feasible.

TRAINING

- It is recommended that the MPO, the County, and THE Bus review and discuss the standards for bus stops and facilities on an ongoing basis to ensure that staff has an understanding of accessibility issues, requirements, and procedures.
- It is recommended that the County and THE Bus review and discuss the procedures and responsibilities for implementing new stops and updating the inventory on an ongoing basis.



DATABASE MAINTENANCE PROCEDURES

- It is recommended that the County and THE Bus finalize the procedures and staff responsibilities for keeping the inventory up-to-date and ensuring that all new bus stops implemented are in compliance with the MPO's and THE Bus's adopted standards.
- It is recommended that the County and THE Bus, in the future, utilize the updated inventory to enable Customer Service, Service Planning, and Scheduling staff to access information on each stop, including photographs, list of available amenities, conditions at bus stop, and list of planned improvements.

IMPLEMENTATION SCHEDULE FOR QUICK FIX IMPROVEMENTS

- It is recommended that Hernando County and THE Bus develop a schedule for their Maintenance staff to complete the "quick fix" improvements.

REVIEW IMPLEMENTATION PRIORITY PLAN

- It is recommended that the County use the Implementation Priority Plan and the list of bus stops to be incorporated into the CIP and improved on an annual basis, as well as developing a specific action program for implementing the improvements.
- It is recommended that the County pursue mechanisms for increasing the efficiency with which improvements identified in the Implementation Plan are completed (i.e., pursuing unit price contracts, etc.).
- It is recommended that the MPO and THE Bus conduct high-level coordination between the MPO, THE Bus, FDOT, and local jurisdictions to ensure that necessary improvements are addressed.

UPDATE INVENTORY DATABASE REGULARLY

- It is recommended that the County and THE Bus update the inventory on a regular basis to reflect any revisions to routes and bus stops undertaken since completion of the initial inventory, including any stops that are removed or relocated to address bus stop consolidation and/or relocation issues.



ANNUAL REVIEW OF PROGRESS

- It is recommended that the County and THE Bus review the progress of addressing improvements identified in the Implementation Plan on an annual basis.
- It is recommended that the MPO, County, and THE Bus coordinate with local jurisdictions, FDOT, and stakeholder groups on strategies for implementing improvements.
- It is recommended that the County update the following year's work program to reflect the new list of needed improvements.

REGULARLY REPORT PROGRESS OF IMPLEMENTATION

- It is recommended that the MPO, County, and THE Bus regularly report the progress of implementing improvements to:
 - The MPO, Hernando County, and The City of Brooksville;
 - FDOT; and
 - The MPO and THE Bus ADA Coordinator and local jurisdictions.
- It is recommended that the MPO and THE Bus continue to coordinate with local jurisdictions, the development community, and stakeholder groups to advise them of the established standards and discuss strategies for implementing improvements.

REGULARLY UPDATE GIS ANALYSIS

- It is recommended that the MPO and the County provide updated GIS information and the results of GIS analyses conducted for THE Bus's bus stops to local jurisdictions and FDOT.

EXPLORE FUTURE APPLICATIONS FOR INVENTORY INFORMATION

- It is recommended that Hernando County and THE Bus explore future applications for making information from the inventory available to the public, including a list of amenities, conditions, and photographs for each bus stop, potentially tied to a system map and/or individual route maps and available via the Internet.
- It is recommended that Hernando County and THE Bus explore the feasibility of providing inventory information to the public via Google Transit.