

# #GPC IV-18

## Safe Routes to School Plans 2011

August 2012



Prepared by



Kimley-Horn  
and Associates, Inc.



Prepared for



# Safe Routes to School Plans 2011

Prepared for:



Miami-Dade County Metropolitan Planning Organization

Prepared by:



Work Order # GPC IV-18  
August 2012

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### Study Advisory Committee Members

|                     |                                                                |
|---------------------|----------------------------------------------------------------|
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## 1.0 INTRODUCTION

The Safe Routes to School (SRTS) concept dates back to the 1970s. The primary objective of this program is to encourage children in grades K-8 to walk and cycle to school by making walking and cycling to school safer and more appealing. In addition to encouraging more children to walk or cycle to school, the SRTS programs also address the safety needs of children who are already walking or cycling in less than ideal conditions. Among other benefits of the SRTS program include reducing traffic congestion near schools and reducing childhood obesity and inactivity.

The National Safe Routes to School program, which was established in 2005 through the SAFETEA-LU transportation reauthorization bill, provided a major boost to the expansion of SRTS initiatives. This bill allocated a total of \$612 million for the five-year period of the program, of which Florida has received \$29 million. Currently Florida is receiving approximately \$9.7 million annually through SAFETEA-LU for the SRTS program.

### 1.1 Study Goals

The Miami-Dade County Metropolitan Planning Organization (MPO) initiated the *Safe Routes to School Plans 2011* study with the following objectives:

- Develop a formalized method to prioritize elementary and K-8 school for SRTS infrastructure grant applications.
- Develop SRTS infrastructure improvements, cost estimates, and safe routes for 10 priority schools.
- Prepare the Florida Department of Transportation's (FDOT) Infrastructure Funding Application for the selected schools.



*Example of safety challenges experienced by student pedestrians*

## 1.2 SRTS Program in Miami-Dade County

Miami-Dade County, which experiences the highest number of pedestrian injuries and fatalities in Florida, has implemented several SRTS programs over the past several years. The Miami-Dade County Public Schools (MDCPS), in coordination with the Miami-Dade County Public Works and Waste Management Department (PWWMD) and Miami-Dade MPO, applies for the SRTS grants annually. The FDOT manages SRTS grants in Florida and projects are selected at the District level.

So far, SRTS infrastructure improvements have been implemented or funding has been secured for a total of 63 elementary and K-8 schools in Miami-Dade County (see Appendix A). There are approximately 220 elementary public schools in the County. As such, over 150 elementary schools were considered to select 10 schools to prepare grant applications through the *Safe Routes to School Plans 2011* study.

## 1.3 Study Process

The major steps of this study are identified in Figure 1. The study results are documented under the following chapters:

- Chapter 2 documents the development of a prioritization process for selecting schools for SRTS funding applications.
- Chapter 3 documents field assessment of priority schools.
- Chapter 4 documents the development of SRTS recommendations.
- Chapter 5 documents the preparation of funding applications.
- Chapter 6 provides a summary of the study.



*A student pedestrian crossing a multi-lane arterial outside of a designated crosswalk*

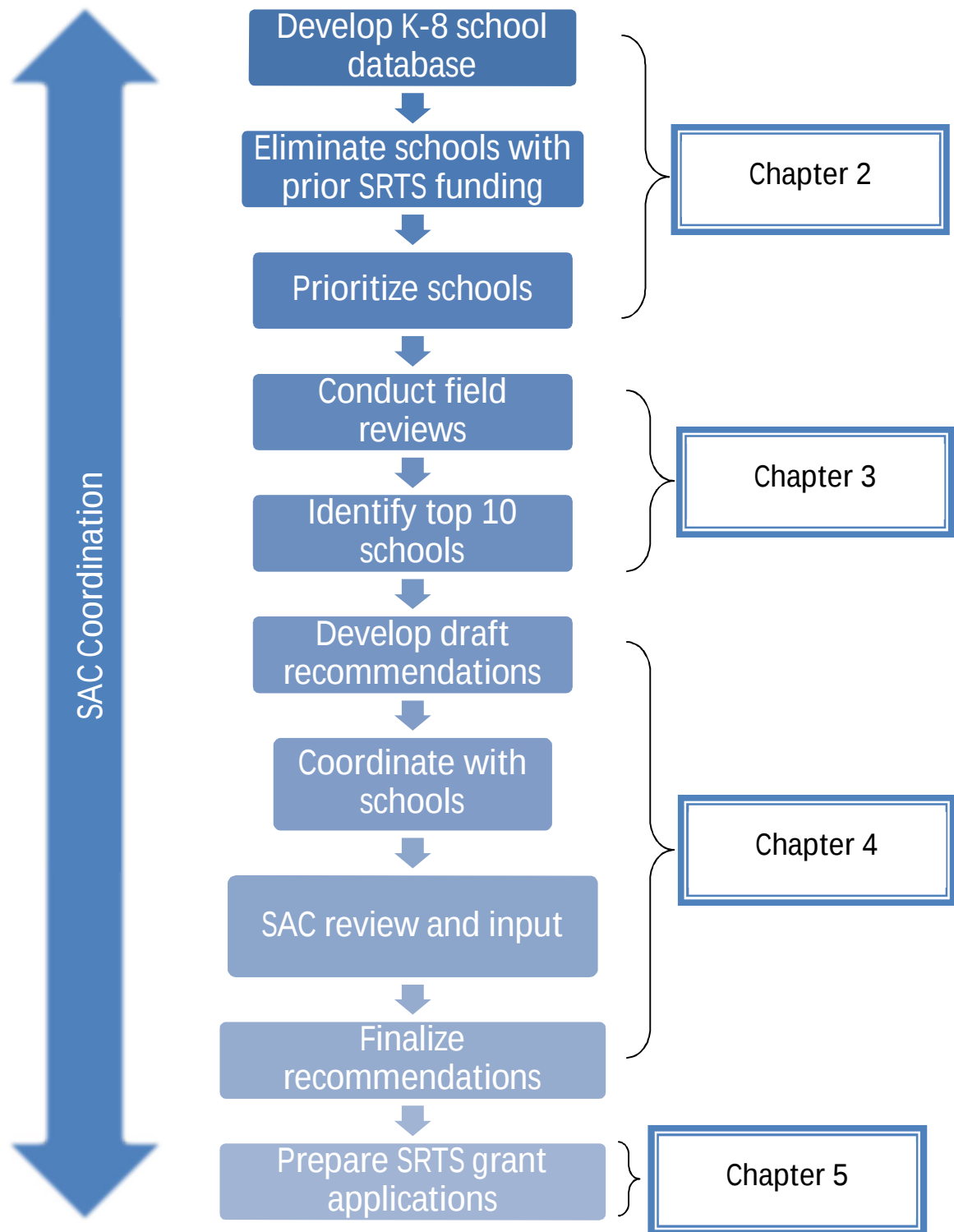


Figure 1: Study Process

## 2.0 DEVELOPMENT OF PRIORITIZATION CRITERIA

The purpose of developing a prioritization method is to ensure an objective approach is used to select 10 schools with the greatest needs out of over 150 eligible schools within the MDCPS system. This method can also contribute to the effective use of limited SRTS infrastructure funds. Once a prioritization method is in place, it can be reapplied in the future years to select schools for SRTS grant applications.

### 2.1 Literature Review

The National Center for Safe Routes to School (NCSRTS) proposed a methodology to prioritize schools for SRTS improvements in a paper *Prioritizing Schools for Safe Routes to School Infrastructure Projects*. This paper was published in the February 2010 issue of the Institute of Transportation Engineers (ITE) journal. It recommends categorizing schools into five groups as shown in Figure 2.

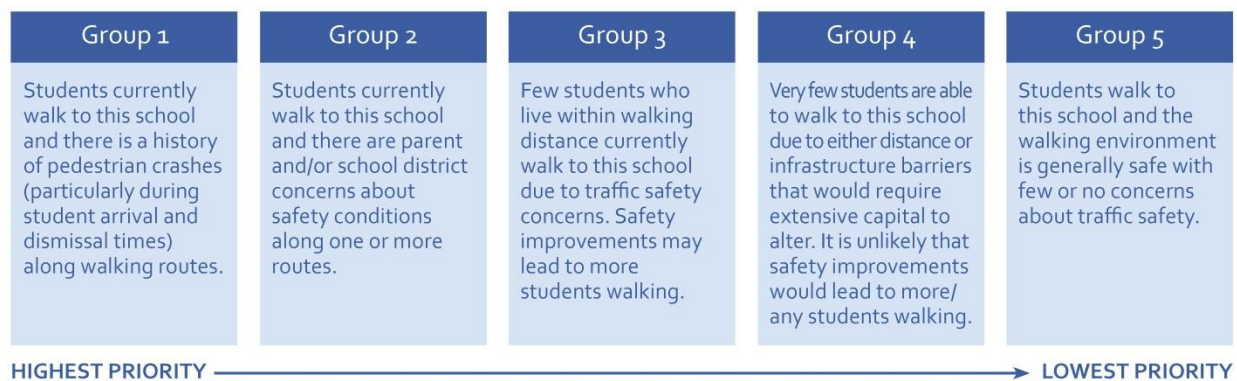


Figure 2: NCRS Recommended Prioritization Method

The proposed prioritization method relies upon three key factors: crash history, public and school officials' concerns, and current and potential pedestrian use. These factors can be used for determining safety concerns and risks for student pedestrians, and the school community's support for SRTS initiatives. After categorizing schools into five groups based on the three primary factors, road and driver characteristics such as traffic volume, travel speed, and existing infrastructure may be used to rank schools within each group.

This paper recommends a school's attendance boundary or a half-mile radius as the geographic area for evaluating the potential for SRTS improvements. The improvements closer to the school are most likely to yield greater benefits than improvements further away from the school. Therefore, priority should be given to improvements in close proximity to the schools and along frequently used walking routes.

The concepts presented in the ITE paper were utilized when developing the prioritization criteria for the Miami-Dade MPO's SRTS study.

## 2.2 Prioritization Criteria

The prioritization criteria consisted of quantitative factors rather than qualitative factors. Qualitative factors such as student/parent concerns were not available in a concise and consistent format for every school. The preliminary prioritization criteria were presented to the SAC for input. Table 1 lists the final prioritization factors.

Table 1: Prioritization Factors

| Factor                                   | Notes                                                                                                                                                                                                                                     |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Students living within 0.5 miles         | Schools with a high number of students living within a 0.5-mile radius are given priority since greater benefits of SRTS improvements are expected. The students living within 0.5 miles were estimated by MDCPS using its GIS databases. |
| Bicycle and pedestrian crashes           | A high number of pedestrian and bicycle crashes in general represents unsafe conditions and inadequate infrastructure. Crash data was provided by the Miami-Dade MPO for a five-year period between 2005 and 2009.                        |
| Juvenile pedestrian crashes              | Assumes juvenile pedestrian crashes are representative of safety challenges experienced by student pedestrians.                                                                                                                           |
| Percent of students walking to school    | Schools with a high percentage of student walkers are given priority. This information is collected by WalkSafe annually through surveys.                                                                                                 |
| Traffic volume on the nearest major road | The presence of a nearby major street is likely to present a barrier for safe walking to school. Traffic data was obtained from the FDOT and Miami-Dade County.                                                                           |
| Automobile ownership                     | Low household auto ownership typically indicates a high propensity for walking to school. This information was obtained at Traffic Analysis Zone (TAZ) level from the MPO's Long Range Transportation Plan model.                         |

Based on the input received from the SAC it was determined that some factors should be given a higher weightage than the others. Percent of students walking to school was assumed to be the most influential factor and was weighted by a factor of two. Similarly, automobile ownership, which was estimated at TAZ level, was determined to be the least influential and hence was assigned a factor of 0.5. The other factors were unadjusted.

## 2.3 Ranking of Schools

A database of all eligible schools was created with data for each factor listed in Table 1. Thereafter, schools were prioritized using the process outlined below.

- Rank schools based on the six individual factors. The result of this step is six separate ranks based on individual variables.
- Apply appropriate criteria weighting described in Section 2.2.
- Calculate the average of individual rankings. Sort the database in the ascending order based on the average of individual rankings to obtain the prioritized list of schools.

Although quantitative data was used to evaluate the schools, this is not a validated model with a known level of accuracy. Based on the numerical results, the schools have been grouped in quartiles so other factors can be considered in the selection for funding. In general, the top quartile schools are located within the urbanized areas such as the City of Miami, Miami Beach, and North Miami. The second, third, and fourth quartiles include more sub-urban area schools (i.e., northwest and southwest areas). The comprehensive ranking list is included as Appendix B. Appendix B also includes four maps depicting the geographic distribution of schools based on the rankings (grouped based on quartiles). Additional screening of top ranked schools before selecting 10 schools for SRTS grant applications is described in the next chapter.

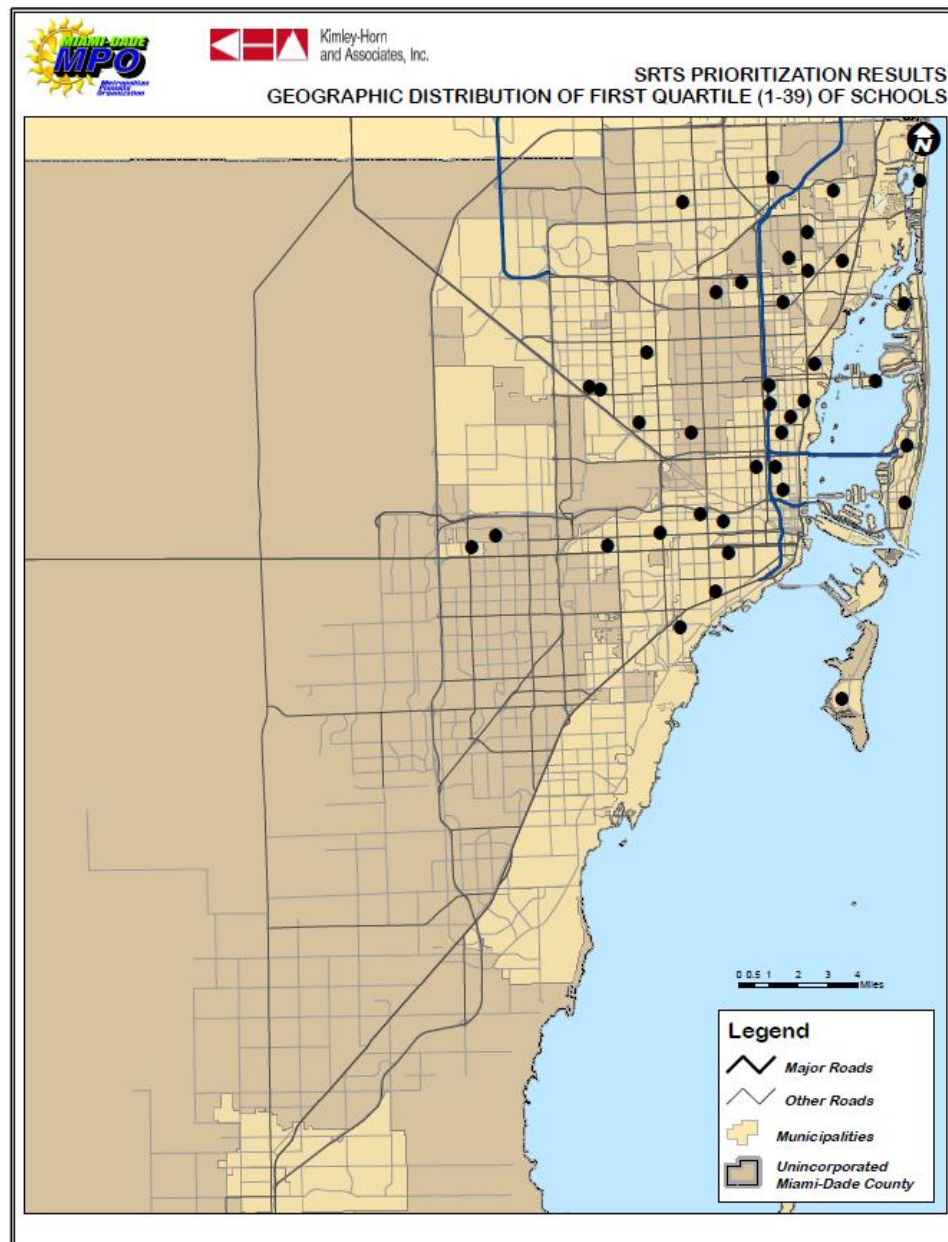


Figure 3: Results of Prioritization –Schools in the First Quartile

## 2.4 Lessons Learned

The process described in this report is the first attempt to prioritize Miami-Dade County schools for SRTS improvements. This method relies upon readily available quantitative data. The underlying assumption of this approach is that the six factors used to prioritize the schools have a direct correlation with pedestrian safety issues, infrastructure deficiencies, and propensity among students to walk. The potential drawbacks of this method are listed below.

- Availability and condition of existing infrastructure such as school flashers, crosswalks, sidewalks, and signage was not taken into consideration. The collection of such data is labor intensive for over eligible 150 schools.
- Input from school principals, parents, teachers, and law enforcement agencies was not obtained.

Based on the above observations and lessons learned, the following recommendations are made for consideration if this process is applied in the future:

- Consider replacing 'automobile ownership' with 'percentage of students eligible for free or reduced lunch.' The data on free/reduced lunch eligibility is available specific to each school from the MDCPS, unlike the 'automobile ownership' data, which is estimated at TAZ levels.
- Consider obtaining input from school principals on the need for pedestrian facilities and support for SRTS improvements. This information may be obtained via e-mail or through WalkSafe's annual survey. Specific questions geared to elicit input on the need as well as support should be directed along with a brief overview of the goals of SRTS program. As described in the ITE paper *Prioritizing Schools for Safe Routes to School Infrastructure Projects*, interest and support from school community is vital to the success of an SRTS program. The support for SRTS initiatives may vary based on the local area demographics. Based on our interviews with school staff, certain ethnic groups are more likely to walk than others. The FDOT's SRTS application also asks if there is a population of students near the school from a culture which traditionally walks a lot.

### 3.0 SITE ASSESSMENT OF PRIORITY SCHOOLS

Field reviews were conducted to assess pedestrian facilities and potential unsafe conditions for student pedestrians in the vicinity of schools in the first quartile. Table 2 lists the schools that were included in the top quartile based on the analysis in Chapter 2. If the existing facilities were deemed satisfactory or the necessary right-of-way is not available, such schools were eliminated from consideration. Field reviews were conducted sequentially based on the priority ranking and when a school was eliminated, the next ranked school was reviewed. This process was repeated until 10 schools with notable pedestrian infrastructure enhancement needs were identified. The first quartile schools not selected for SRTS improvements should be considered in future SRTS grant application cycles since the condition of pedestrian facilities, student travel patterns, and land use could change over time.

Table 2: Schools in the First Quartile

| School                                 | Address                | Municipality      |
|----------------------------------------|------------------------|-------------------|
| Sweetwater Elementary                  | 10655 SW 4th Street    | Sweetwater        |
| Phyllis Ruth Miller Elementary         | 840 NE 87th Street     | Miami             |
| Fienberg/Fisher K-8 Center             | 1420 Washington Avenue | Miami Beach       |
| Jesse J. McCrary Jr. Elementary        | 514 NW 77th Street     | Miami             |
| Toussaint L'ouverture Elementary       | 120 NE 59th Street     | Miami             |
| Kensington Park Elementary             | 711 NW 30th Avenue     | Miami             |
| Silver Bluff Elementary                | 2609 SW 25th Avenue    | Miami             |
| Citrus Grove Elementary                | 2121 NW 5th Street     | Miami             |
| Sunny Isles Beach Community School K-8 | 201 182nd Drive        | Sunny Isles Beach |
| Santa Clara Elementary                 | 1051 NW 29th Terrace   | Miami             |
| Linda Lentin K-8 Center                | 14312 NE 2nd Court     | Miami             |
| Phillis Wheatley Elementary            | 1801 NW 1st Place      | Miami             |
| Morningside Elementary                 | 6620 NE 5th Avenue     | Miami             |
| Treasure Island Elementary             | 7540 E Treasure Drive  | North Bay Village |
| J.W. Johnson Elementary                | 735 W 23rd Street      | Hialeah           |
| North Hialeah Elementary               | 4251 E 5th Avenue      | Hialeah           |
| Shenandoah Elementary                  | 1023 SW 21st Avenue    | Miami             |
| Fairlawn Elementary                    | 444 SW 60th Avenue     | Miami             |
| James H. Bright Elementary             | 2530 W 10th Avenue     | Hialeah           |
| Eneida Massas Hartner Elementary       | 401 NW 29th Street     | Miami             |

Table 2 continued...

| School                                   | Address               | Municipality      |
|------------------------------------------|-----------------------|-------------------|
| Hibiscus Elementary                      | 18701 NW 1st Avenue   | Miami Gardens     |
| Ruth K. Broad/Bay Harbor K-8 Center      | 1155 93rd Street      | Bay Harbor Island |
| Edison Park Elementary                   | 500 NW 67th Street    | Miami             |
| Kinloch Park Elementary                  | 4275 NW 1st Street    | Miami             |
| Benjamin Franklin Elementary             | 13100 NW 12th Avenue  | North Miami       |
| Gratigny Elementary                      | 11905 N Miami Avenue  | Miami             |
| Arch Creek Elementary                    | 702 NE 137th Street   | North Miami       |
| Key Biscayne Community School K-8 Center | 150 W McIntyre Street | Key Biscayne      |
| Lorah Park Elementary                    | 5160 NW 31st Avenue   | Miami             |
| Shadowlawn Elementary                    | 149 NW 49th Street    | Miami             |
| Greynolds Park Elementary                | 1536 NE 179th Street  | North Miami Beach |
| Myrtle Grove Elementary                  | 3125 NW 176th Street  | Miami Gardens     |
| Natural Bridge Elementary                | 1650 NE 141st Street  | North Miami       |
| E.W.F. Stirrup Elementary                | 330 NW 97th Avenue    | Miami             |
| Oak Grove Elementary                     | 15640 NE 8th Avenue   | Miami             |
| South Hialeah Elementary                 | 265 E 5th Street      | Hialeah           |
| Carrie P. Meek/Westview Elementary       | 2101 NW 127th Street  | Miami             |
| North Beach Elementary                   | 4100 Prairie Avenue   | Miami Beach       |
| Frances S. Tucker Elementary             | 3500 Douglas Road     | Miami             |

### 3.1 Schools Selected

Table 3 lists the schools selected for SRTS improvements based on field reviews. A location map of the 10 schools is included as Figure 4. Overall, six selected schools are located within the City of Miami, one each in Hialeah and North Miami, and two in unincorporated Miami-Dade County. Nine are elementary schools and one is a K-8 learning center. Sample photos illustrating pedestrian facilities in the vicinity of the subject schools are included in this section.

Table 3: Selected Schools for SRTS Improvements

| School                                                                | Address              | Municipality              |
|-----------------------------------------------------------------------|----------------------|---------------------------|
| Phyllis Ruth Miller Elementary                                        | 840 NE 87th Street   | Miami                     |
| Jesse J. McCrary Jr. Elementary<br>(formerly Little River Elementary) | 514 NW 77th Street   | Miami                     |
| Toussaint L'ouverture Elementary                                      | 120 NE 59th Street   | Miami                     |
| Kensington Park Elementary                                            | 711 NW 30th Avenue   | Miami                     |
| Santa Clara Elementary                                                | 1051 NW 29th Terrace | Miami                     |
| Linda Lentin K-8 Center                                               | 14312 NE 2nd Court   | Unincorporated Miami-Dade |
| Phillis Wheatley Elementary                                           | 1801 NW 1st Place    | Miami                     |
| North Hialeah Elementary                                              | 4251 E 5th Avenue    | Hialeah                   |
| Natural Bridge Elementary                                             | 1650 NE 141st Street | North Miami               |
| Oak Grove Elementary                                                  | 15640 NE 8th Avenue  | Unincorporated Miami-Dade |



Figure 4: Location Map of Selected Schools

### Phyllis Ruth Miller Elementary



*Crosswalk without access ramps and paved sidewalks*



*Absence of continuous sidewalk (and crosswalk)*

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Jesse J. McCrary Jr. Elementary



*Worn foot path (no paved sidewalk or crosswalk)*



*Crosswalk at a signalized intersection without pedestrian signal displays*

# Toussaint L'ouverture Elementary



*On-street parking partially blocking the view of pedestrian crossing*



*Absence of pedestrian facilities in a residential area*

Kensington Park Elementary



*Bicycle-vehicle conflict at an unmarked crossing*



*Crosswalk without access ramps and detectable warning pads*

# Santa Clara Elementary



*Discontinuous sidewalk*



*Crosswalk without access ramps and detectable warning pads*

Linda Lentin K-8 Center



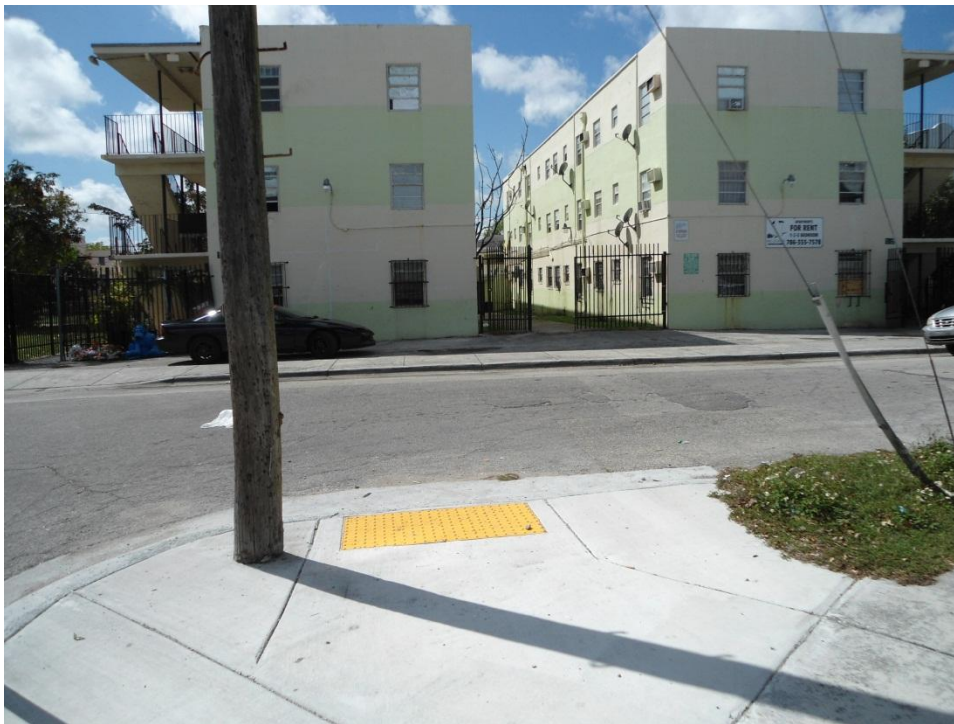
*Absence of pedestrian facilities over a culvert*



*Absence of pedestrian crossing facilities*

Phillis Wheatley Elementary

*On-street parking partially blocking the view of pedestrian crossing*



*Detectable warning pad at an unmarked crossing*

North Hialeah Elementary*Outdated crossing sign and absence of crossing facilities**Incorrect advance school crossing sign*

Natural Bridge Elementary

*Lack of connectivity of pedestrian facilities*



*Fence encroaching into the sidewalk (minimum sidewalk width not maintained per ADA requirements)*

Oak Grove Elementary



*Absence of pedestrian facilities in a residential area*



*Signalized crosswalk without pedestrian signal displays*

## 4.0 SRTS RECOMMENDATIONS

The development of SRTS improvements for the 10 schools listed in Table 3 is described in this chapter.

### 4.1 Methodology Overview

The primary focus area for SRTS improvements is the street network within 0.5 miles of a school. While SRTS funding guidelines allow improvements within two miles of a school, improvements closer to a school generally have a greater benefit than improvements further away from a school. Where needed, the study area was extended beyond 0.5 miles. To facilitate the identification of improvements, GIS maps were created to visualize land use, street network, traffic signal locations, and bicycle and pedestrian crash locations. Attendance boundary and 0.5-mile radius were also identified in the maps. Field reviews were conducted to observe students' walking patterns and existing infrastructure. Additional information was gathered from students, parents, and school staff through meetings and surveys. Thereafter, preliminary improvements were developed and presented to the SAC for input.

The SRTS improvements were developed based on the guidelines developed by the Miami-Dade MPO, FDOT, and NCSRTS. Specific documents referenced during the development of SRTS recommendations are listed below.

- *Safe Routes to School Program Procedure Manual*, Miami-Dade MPO, 2005.
- *Safe Routes to School Guide*, Pedestrian and Bicycle Information Center and National Center for Safe Routes to School, 2007.
- *Safe Ways to School Tool Kit*, University of Florida and Florida Department of Transportation.

### 4.2 Surveys

An important part of the development of SRTS plans is obtaining input from students and parents. In addition to school level meetings, surveys were also conducted. The parent and student surveys were conducted to estimate current travel modes to and from school, identify issues that prevent students from walking/biking, and obtain input on potential engineering, enforcement, and education initiatives to improve walking/biking. Table 4 lists SRTS survey forms developed by the Miami-Dade MPO and NCSRTS, and copies of the survey forms are included in Appendix C. The Miami-Dade MPO's parent survey form and NCSRTS student tally form were used for this study. Completing the student tally survey has been made mandatory by the FDOT for SRTS grant applications. The student tally data need to be processed through the NCSRTS, which could be done either by mailing survey forms to the NCSRTS (takes 4 to 6 weeks for processing) or by entering data to its website ([www.saferoutesinfo.org](http://www.saferoutesinfo.org)). To enter the student tally data, a user account needs to be created. The student tally data for the 10 schools were entered to the NCSRTS website and summary tables and figures were attached to the grant applications.

Table 4: SRTS Survey Forms

| Source         | Survey Form                                      | Purpose                                                                                                                     |
|----------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Miami-Dade MPO | SRTS User Survey                                 | To collect information from parents                                                                                         |
| Miami-Dade MPO | Site Assessment Sheet                            | To document field observations on pedestrian facilities, streets, traffic control devices, and safety and security concerns |
| NCSRTS         | Parent Survey About Walking and Biking to School | To collect information from parents                                                                                         |
| NCSRTS         | Students Arrival and Departure Tally Sheet       | To collect student travel mode data at classroom level                                                                      |

### 4.3 Coordination

Meetings were conducted with school staff and parents to obtain input for the study and review draft recommendations. Initially, representatives from the MDCPS, MPO, PWWMD, WalkSafe, and Kimley-Horn met with school staff. During these meetings, an overview was provided on the SRTS initiative and how schools could support to develop successful SRTS programs. Discussions also focused on the challenges experienced by students who walk to school and identified areas within attendance boundary that generate student walkers, commonly used walking routes, specific infrastructure improvements, opportunities for education and encouragement through WalkSafe programs, and the need for enforcement or crossing guards. Thereafter, the consultant and school staff participated in Educational Excellence Student Advisory Council (EESAC) or parent meetings to obtain additional input. Overall, 17 school level meetings were conducted.

Four SAC meetings were conducted during this project. The SAC was comprised of the members of the MDCPS Community Traffic Safety Team and included representatives from the MDCPS, PWWMD, Miami-Dade MPO, FDOT, University of Miami's WalkSafe Program, law enforcement agencies, and Citizen's Independent Transportation Trust (CITT). The diverse nature of the SAC membership ensured that all five major emphasis areas of the SRTS program (i.e., Engineering, Education, Enforcement, Encouragement, and Evaluation) were addressed during the development of recommendations. The SAC reviewed draft recommendations and grant applications. Miami-Dade County's PWWMD staff reviewed cost estimates, since the County is responsible for implementation of SRTS improvements.

Table 5 summarizes stakeholder meetings and copies of PowerPoint presentations made during the SAC meetings are included in Appendix D.

Table 5: SRTS Stakeholder Meetings

| Date       | Meeting With                                                                                  | Summary                                                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 10/13/2011 | Study Advisory Committee                                                                      | Reviewed draft prioritization criteria                                                                                                |
| 1/12/2012  | Study Advisory Committee                                                                      | Reviewed prioritization results and approved 10 schools selected for developing SRTS applications                                     |
| 3/19/2012  | School staff at Jesse J McCrary, Phillis Wheatley, Phyllis Ruth Miller, Toussaint L'ouverture | Explained SRTS program goals, obtained input on draft SRTS plan, sought support for conducting surveys and scheduling parent meetings |
| 3/20/2012  | School staff at Linda Lentin, Natural Bridge, Oak Grove                                       | Explained SRTS program goals, obtained input on draft SRTS plan, sought support for conducting surveys and scheduling parent meetings |
| 3/20/2012  | EESAC at Phyllis Ruth Miller                                                                  | Discussed benefits of SRTS program and obtained input on potential engineering and non-engineering improvements                       |
| 3/22/2012  | School staff at Kensington Park, North Hialeah, Santa Clara,                                  | Explained SRTS program goals, obtained input on draft SRTS plan, sought support for conducting surveys and scheduling parent meetings |
| 3/27/2012  | Parents at Jesse J McCrary, EESAC at Toussaint L'ouverture                                    | Discussed benefits of SRTS program and obtained input on potential engineering and non-engineering improvements                       |
| 3/30/2012  | Study Advisory Committee                                                                      | Reviewed draft recommendations                                                                                                        |
| 4/3/2012   | EESAC at Natural Bridge and North Hialeah                                                     | Discussed benefits of SRTS program and obtained input on potential engineering and non-engineering improvements                       |
| 4/4/2012   | Parents at Linda Lentin                                                                       | Discussed benefits of SRTS program and obtained input on potential engineering and non-engineering improvements                       |
| 4/12/2012  | Study Advisory Committee                                                                      | Reviewed draft applications                                                                                                           |
| 4/18/2012  | EESAC at Phyllis Ruth Miller                                                                  | Discussed benefits of SRTS program and obtained input on potential engineering and non-engineering improvements                       |
| 4/20/2012  | Staff from PWWMD, MDCPS, MPO, and WalkSafe                                                    | Reviewed SRTS applications and cost estimates                                                                                         |
| 4/24/2012  | MPO's Bicycle and Pedestrian Advisory Committee                                               | Presented an update of SRTS study and grant applications                                                                              |

#### 4.4 Site Assessment

The consultant conducted site assessments during school days to observe student walkers, enforcement/crossing guards, traffic control devices, motorist behavior, roadway environment, and pedestrian facilities. The site assessment forms included in Appendix C were used to document field observations. Where necessary, field reviews were extended beyond 0.5 miles to assess the need for improvements in areas with a concentration of residential developments or student walkers. Such areas were identified based on the input provided by school staff and parents. The land use, crash data, and aerial maps were also used to identify residential areas and potential safe routes. Some of the factors considered when identifying safe routes included:

- Route directness
- Potential student population served
- Input provided by school staff and parents
- Crash history
- Traffic volume, number of lanes, and speed limit
- Roadway surrounding and potential risk elements
- Existing traffic control devices and enforcement measures
- Right-of-way availability
- Implementation feasibility and cost

At the completion of the site assessment, draft improvements and SRTS maps were developed. Thereafter, additional site assessments were conducted with staff from PWWMD, MDCPS, and WalkSafe. These site assessments were used to review draft improvements and make necessary modifications to the proposed safe routes.

#### 4.5 Recommendations

Common SRTS recommendations include sidewalks, crosswalks, school crossing signs, and school flashers. FDOT and other applicable guidelines were reviewed when SRTS improvements were developed. Since SRTS is a federal grant program, recommendations were made for new or upgraded Americans with Disabilities Act (ADA) facilities for pedestrians within proposed safe routes. Existing signs and pavement markings that do not meet the current Manual on Uniform Traffic Control Devices (MUTCD) standards were recommended for replacement. Maintenance issues such as overgrown landscaping that reduces visibility of signs and signals, and damaged signs were also identified for notification to the appropriate agencies.

R J Behar and Associates developed cost estimates for the proposed improvements based on the FDOT's unit rates. Preliminary engineering, construction engineering inspection, maintenance of traffic, mobilization, and contingency costs were estimated based on the rates recommended in the FDOT's SRTS project development guidelines. Land use maps, bicycle and pedestrian crashes, safe routes, and cost estimates, are included in Appendix E. The following fact sheets and figures provide a summary of the SRTS recommendations by school.

|                                              |                                                                                    |
|----------------------------------------------|------------------------------------------------------------------------------------|
| School                                       | Phyllis Ruth Miller Elementary                                                     |
| Address                                      | 840 NE 87 Street, Miami, FL 33138                                                  |
| Enrollment                                   | 650                                                                                |
| Estimated students living within 0.5 miles   | 240                                                                                |
| Estimated percent of students walking/biking | 20% - 25%                                                                          |
| Recommendations                              | Countdown pedestrian signals, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$75,000                                                                           |





Figure 5 - Safe Routes to School Improvements  
Phyllis Ruth Miller Elementary  
840 NE 87th Street, Miami, FL

|                                              |                                                               |
|----------------------------------------------|---------------------------------------------------------------|
| School                                       | Jesse J McCrary Elementary (formerly Little River Elementary) |
| Address                                      | 514 NW 77 Street, Miami, FL 33150                             |
| Enrollment                                   | 520                                                           |
| Estimated students living within 0.5 miles   | 190                                                           |
| Estimated percent of students walking/biking | 35% - 45%                                                     |
| Recommendations                              | Sidewalks, crosswalks, signage, and ADA improvements          |
| Cost                                         | \$125,000                                                     |





|                                              |                                                                                                                        |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| School                                       | Toussaint L'ouverture Elementary                                                                                       |
| Address                                      | 120 NE 59 Street, Miami, FL 33137                                                                                      |
| Enrollment                                   | 440                                                                                                                    |
| Estimated students living within 0.5 miles   | 200                                                                                                                    |
| Estimated percent of students walking/biking | 40% - 45%                                                                                                              |
| Recommendations                              | Rectangular rapid flashing beacons, countdown pedestrian signals, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$156,000                                                                                                              |



# LEGEND

- |                                                   |                                                           |                                                   |                                                    |                                                  |
|---------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------------------|
| <b>A</b> Install sidewalk                         | <b>D</b> Install fluorescent yellow green pedestrian sign | <b>G</b> Install solar school flasher             | <b>J</b> Install rectangular rapid flashing beacon | <b>M</b> Install school zone pavement marking    |
| <b>B</b> Extend/connect sidewalk                  | <b>E</b> Install sidewalk extension/ramp                  | <b>H</b> Install pedestrian countdown signal head | <b>K</b> Install pedestrian push button            | <b>N</b> Install No Parking (include times) sign |
| <b>C</b> Install standard/high emphasis crosswalk | <b>F</b> Install advance school crossing sign             | <b>I</b> Install Use Crosswalk sign               | <b>L</b> Install solar speed back sign             |                                                  |

Figure 7 - Safe Routes to School Improvements  
Toussaint L'Ouverture Elementary  
120 NE 59th Street, Miami, FL



|                                              |                                                                            |
|----------------------------------------------|----------------------------------------------------------------------------|
| School                                       | Kensington Park Elementary                                                 |
| Address                                      | 711 NW 30th Avenue, Miami, FL 33125                                        |
| Enrollment                                   | 1,200                                                                      |
| Estimated students living within 0.5 miles   | 250                                                                        |
| Estimated percent of students walking/biking | 5%                                                                         |
| Recommendations                              | School zone flashers, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$136,000                                                                  |



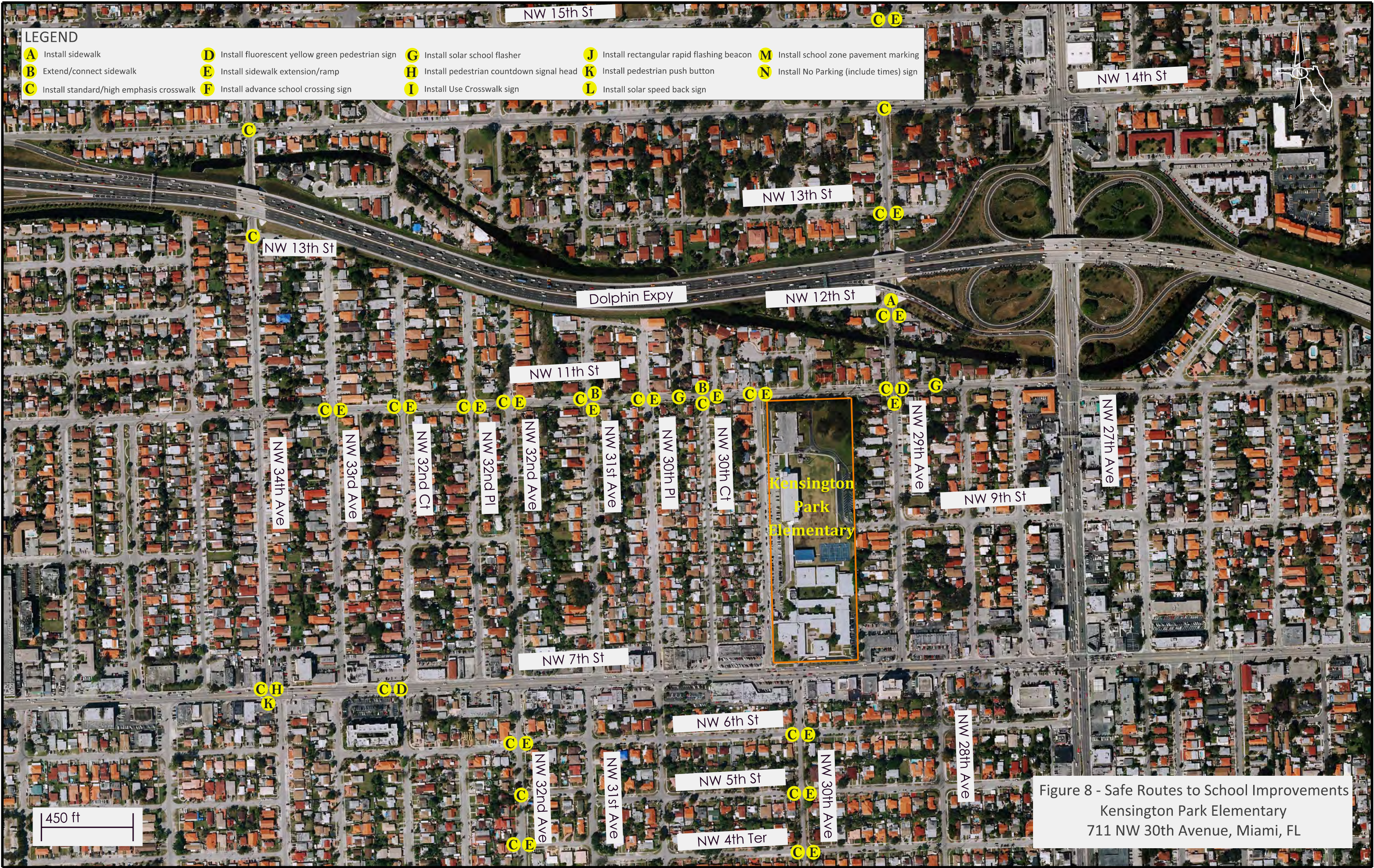
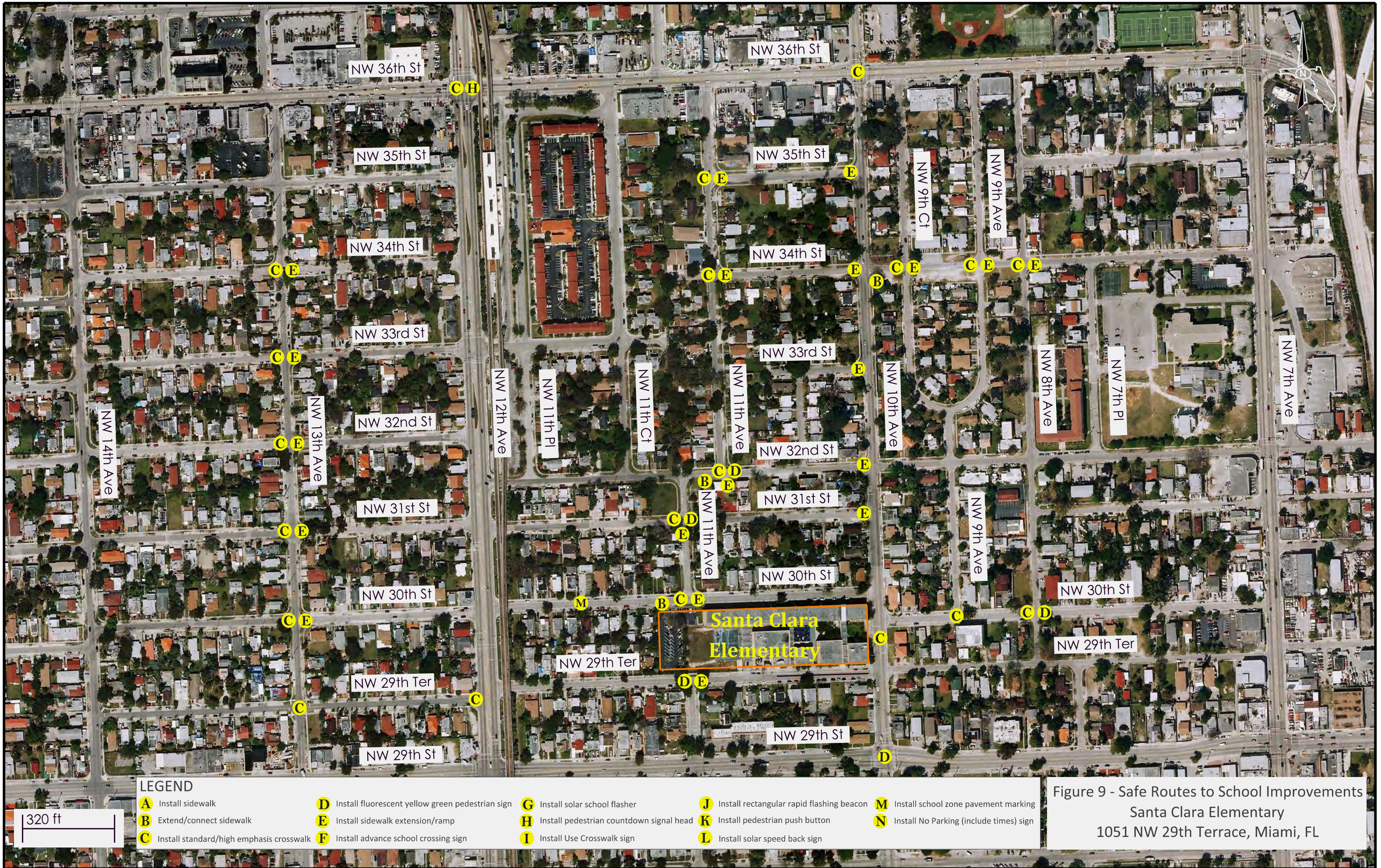


Figure 8 - Safe Routes to School Improvements  
Kensington Park Elementary  
711 NW 30th Avenue, Miami, FL

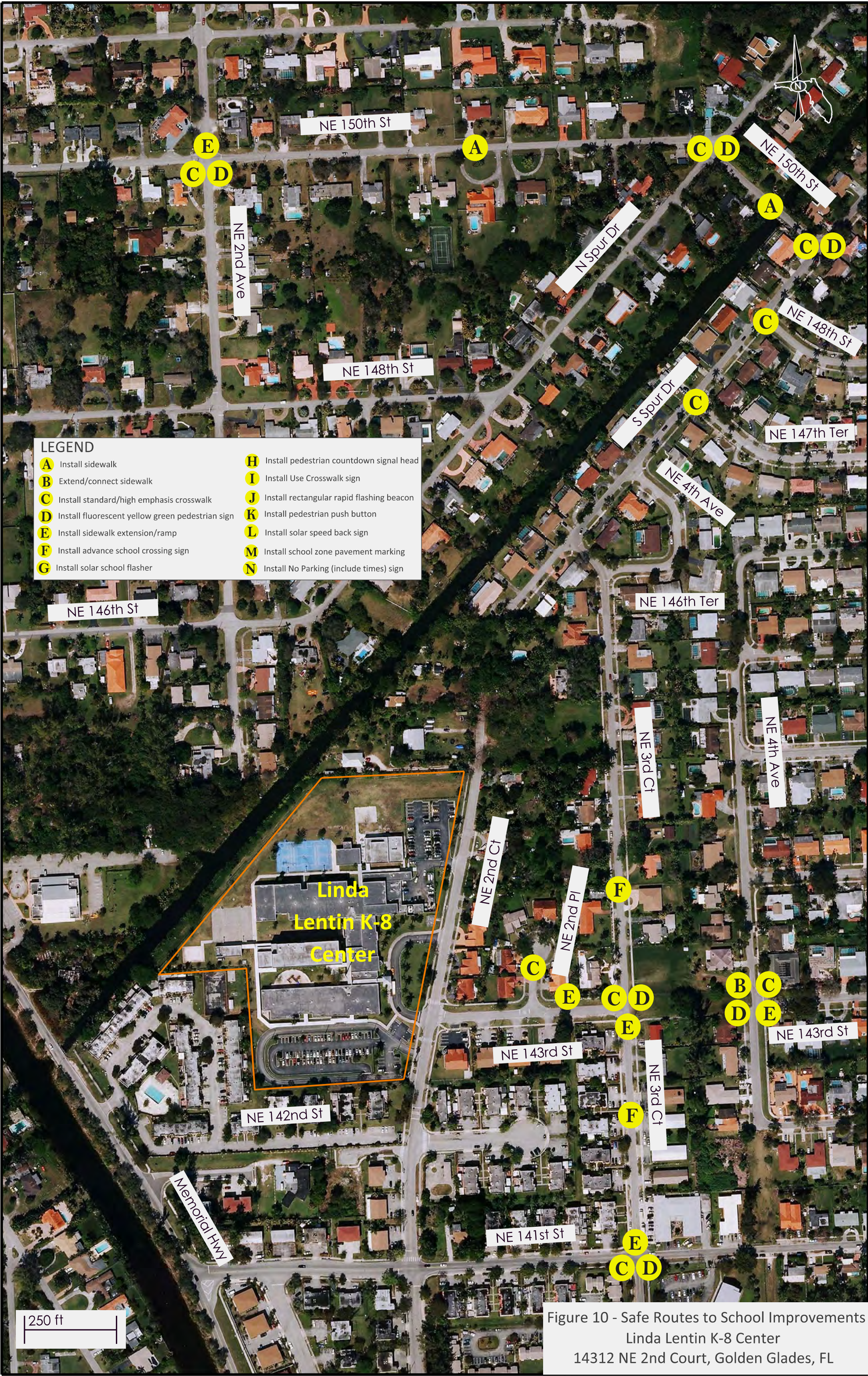
|                                              |                                                                                    |
|----------------------------------------------|------------------------------------------------------------------------------------|
| School                                       | Santa Clara Elementary                                                             |
| Address                                      | 1051 NW 29 Terrace, Miami, FL 33127                                                |
| Enrollment                                   | 540                                                                                |
| Estimated students living within 0.5 miles   | 350                                                                                |
| Estimated percent of students walking/biking | 30% - 35%                                                                          |
| Recommendations                              | Countdown pedestrian signals, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$117,000                                                                          |





|                                              |                                                      |
|----------------------------------------------|------------------------------------------------------|
| School                                       | Linda Lentin K-8 Center                              |
| Address                                      | 14312 NE 2 Court, Miami, FL 33161                    |
| Enrollment                                   | 950                                                  |
| Estimated students living within 0.5 miles   | 180                                                  |
| Estimated percent of students walking/biking | 30% - 35%                                            |
| Recommendations                              | Sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$169,000                                            |





|                                              |                                                                                                  |
|----------------------------------------------|--------------------------------------------------------------------------------------------------|
| School                                       | Phillis Wheatley Elementary                                                                      |
| Address                                      | 1801 NW 1 Place, Miami, FL 33136                                                                 |
| Enrollment                                   | 200                                                                                              |
| Estimated students living within 0.5 miles   | 110                                                                                              |
| Estimated percent of students walking/biking | 45% - 50%                                                                                        |
| Recommendations                              | School zone flashers, speed feedback signs, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$124,000                                                                                        |





Figure 11 - Safe Routes to School Improvements  
Phillis Wheatley Elementary  
1801 NW 1st Place, Miami, FL

|                                              |                                                                                                                                      |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| School                                       | North Hialeah Elementary                                                                                                             |
| Address                                      | 4251 E 5 Avenue, Hialeah, FL 33013                                                                                                   |
| Enrollment                                   | 640                                                                                                                                  |
| Estimated students living within 0.5 miles   | 250                                                                                                                                  |
| Estimated percent of students walking/biking | 5%                                                                                                                                   |
| Recommendations                              | Rectangular rapid flashing beacons, school zone flashers, speed feedback signs, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$175,000                                                                                                                            |



|                                                   |                                                           |                                                   |                                                    |                                                  |
|---------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------------------|
| <b>A</b> Install sidewalk                         | <b>D</b> Install fluorescent yellow green pedestrian sign | <b>G</b> Install solar school flasher             | <b>J</b> Install rectangular rapid flashing beacon | <b>M</b> Install school zone pavement marking    |
| <b>B</b> Extend/connect sidewalk                  | <b>E</b> Install sidewalk extension/ramp                  | <b>H</b> Install pedestrian countdown signal head | <b>K</b> Install pedestrian push button            | <b>N</b> Install No Parking (include times) sign |
| <b>C</b> Install standard/high emphasis crosswalk | <b>F</b> Install advance school crossing sign             | <b>I</b> Install Use Crosswalk sign               | <b>L</b> Install solar speed back sign             |                                                  |

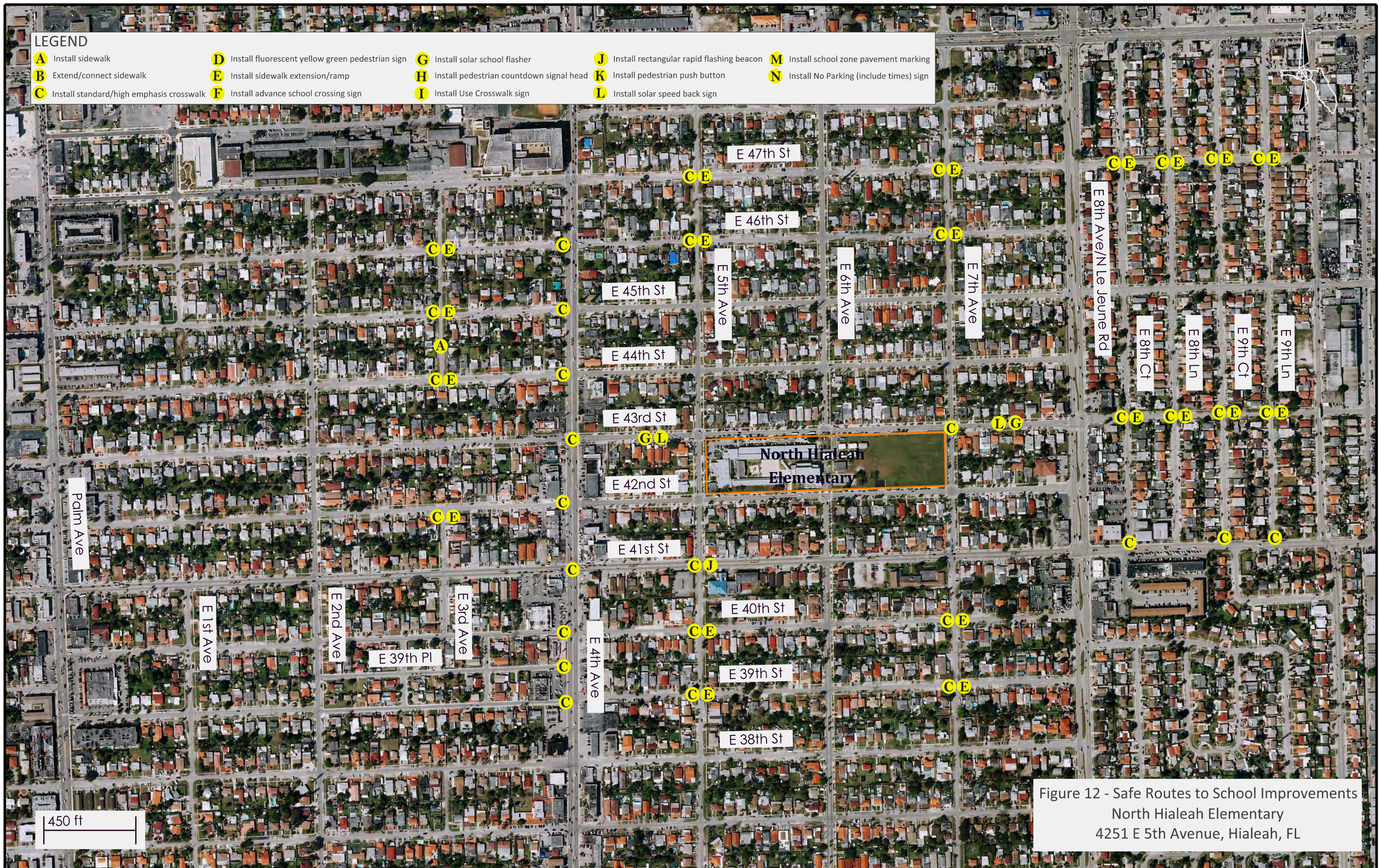
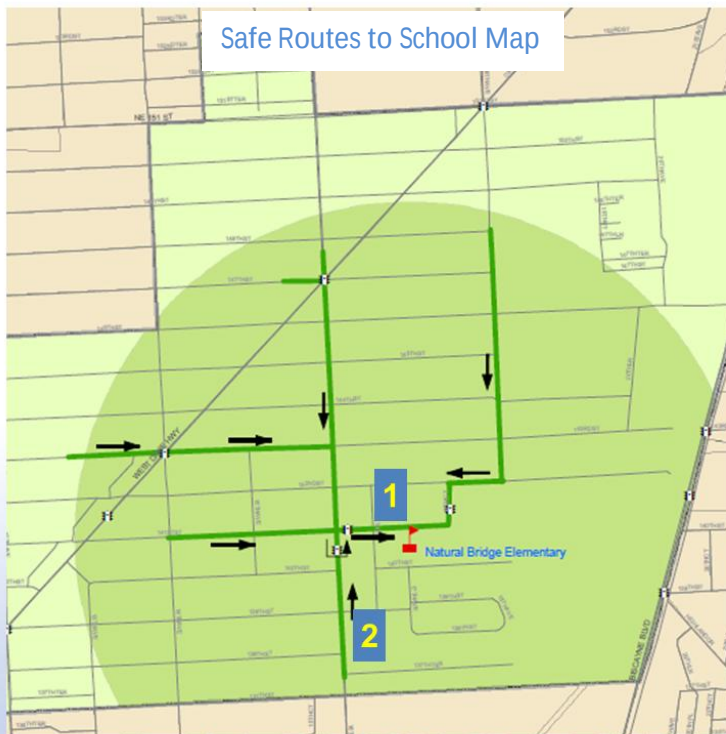


Figure 12 - Safe Routes to School Improvements  
North Hialeah Elementary  
4251 E 5th Avenue, Hialeah, FL

|                                              |                                                                                                                                                                        |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| School                                       | Natural Bridge Elementary                                                                                                                                              |
| Address                                      | 1650 NE 141 Street, North Miami, FL 33181                                                                                                                              |
| Enrollment                                   | 560                                                                                                                                                                    |
| Estimated students living within 0.5 miles   | 180                                                                                                                                                                    |
| Estimated percent of students walking/biking | 20% - 25%                                                                                                                                                              |
| Recommendations                              | Rectangular rapid flashing beacons, remove pedestrian traffic signal, school zone flashers, speed feedback signs, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$130,000                                                                                                                                                              |



LEGEND

A

Install sidewalk

B

Extend/connect sidewalk

C

Install standard/high emphasis crosswalk

D

Install fluorescent yellow green pedestrian sign

E

Install sidewalk extension/ramp

F

Install advance school crossing sign

G

Install solar school flasher

H

Install pedestrian countdown signal head

I

Install Use Crosswalk sign

J

Install rectangular rapid flashing beacon

K

Install pedestrian push button

L

Install solar speed back sign

M

Install school zone pavement marking

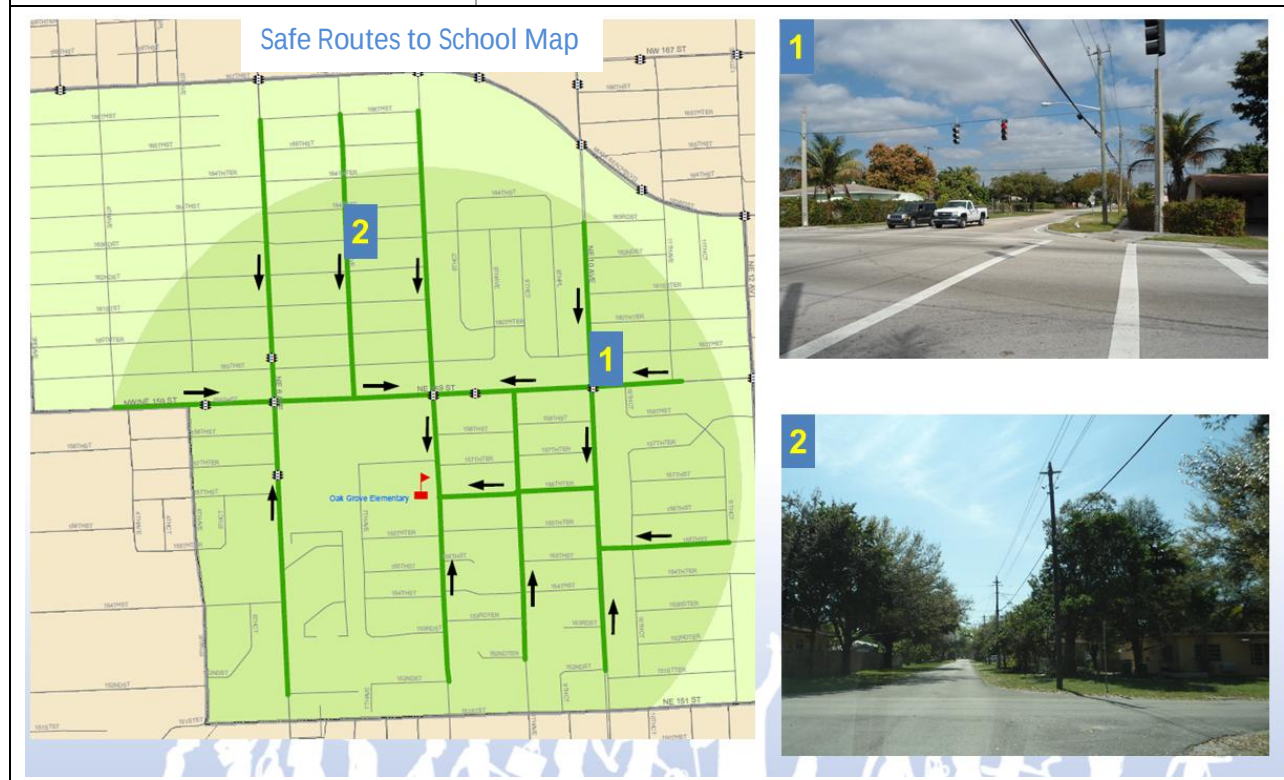
N

Install No Parking (include times) sign



Figure 13 - Safe Routes to School Improvements  
Natural Bridge Elementary  
1650 NE 141st Street, North Miami, FL

|                                              |                                                                                                                                |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| School                                       | Oak Grove Elementary                                                                                                           |
| Address                                      | 15640 NE 8 Avenue, Miami, FL 33162                                                                                             |
| Enrollment                                   | 700                                                                                                                            |
| Estimated students living within 0.5 miles   | 200                                                                                                                            |
| Estimated percent of students walking/biking | 20% - 25%                                                                                                                      |
| Recommendations                              | School zone flashers, speed feedback signs, countdown pedestrian signals, sidewalks, crosswalks, signage, and ADA improvements |
| Cost                                         | \$200,000                                                                                                                      |



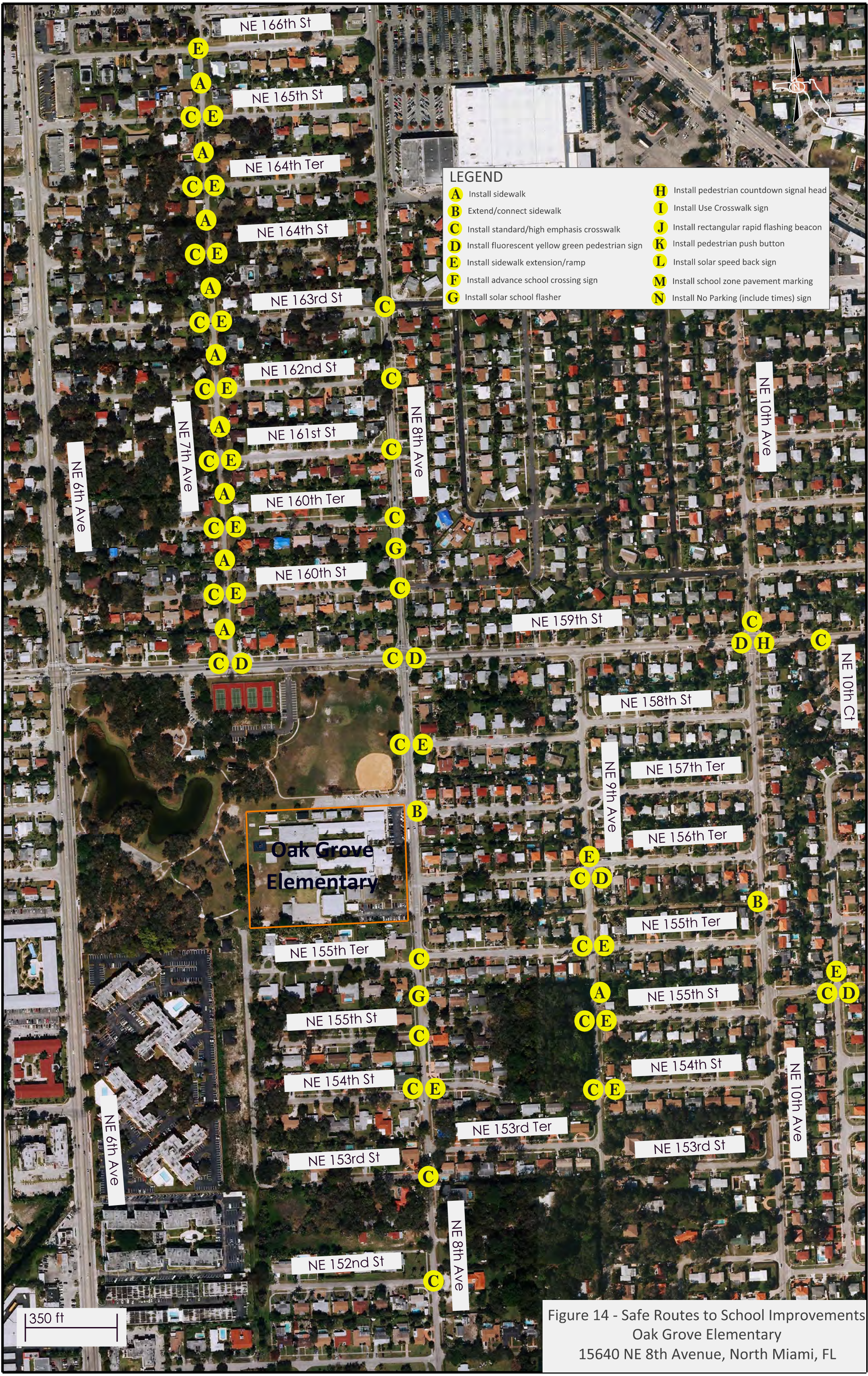


Figure 14 - Safe Routes to School Improvements  
Oak Grove Elementary  
15640 NE 8th Avenue, North Miami, FL

## 5.0 SRTS GRANT APPLICATIONS

The FDOT is the administrator of SRTS grants in Florida. SRTS funds are administered through the FDOT Districts and overseen by the State Safe Routes to School Coordinator. The SRTS program guidelines and other documents for infrastructure projects and non-infrastructure programs are available on the FDOT program webpage [http://www.dot.state.fl.us/safety/SRTS\\_files/SRTS.shtm](http://www.dot.state.fl.us/safety/SRTS_files/SRTS.shtm). Since FDOT plans its work according to a 5-year Work Program, it solicits projects for future years in anticipation that the SRTS program will be continued in the next Transportation Act. As such, projects submitted in FY 2011-12 are expected to be funded during FY 2017.

### 5.1 FDOT Application Requirements

The FDOT requires all SRTS infrastructure grant requests to be submitted by completing FORM 500-000-30. Please refer to Appendix F for FDOT grant application and guidelines. The FDOT typically updates the application and guidelines before each call for applications. Therefore, it is important to download the latest version prior to the preparation of grant application. Key requirements of the FY 2011-12 grant application cycle are listed below.

- Form a school based SRTS committee. This committee is required to meet at least three times during the development of SRTS improvements. The MDCPS Community Traffic Safety Team served as the school based SRTS committee and met four times during the project. Additional meetings were conducted with school staff and parents.
- Conduct Student In-Class Travel Tally using the form and process of the NCSRTS. The survey data must be processed through the NCSRTS website and summary tables attached to the grant application.
- Prioritize infrastructure applications when multiple applications are submitted. The MDCPS included a cover letter outlining the prioritization of schools as approved by the SAC.
- Include the following three maps: (1) a map showing the 2-mile radius around the school, including attendance area; (2) an aerial map showing the 1-mile radius around the school, including the urban form near the school; and (3) a map showing the proposed project area with the existing conditions and recommended improvements identified.
- Include color digital photographs depicting existing conditions and issues that are proposed to be improved through the SRTS project.
- Proposed projects must be within the school's attendance area and within a 2-mile radius from the school, on existing public right-of-way.
- Submit both electronic and hard copies of the grant applications. The applications need to be signed by the sponsor, maintaining agency, and MPO.

## 5.2 SRTS Grant Applications

Ten SRTS grant applications were submitted to the FDOT District Six requesting funding for the proposed infrastructure improvements. The total funding request of the 10 applications is approximately \$1.4 million. A summary of the funding request is provided in Table 6. The grant applications also identified education, encouragement, and enforcement strategies, which could complement engineering improvements, to implement a comprehensive SRTS program. The MDCPS, school staff, parents, law enforcement agencies, and WalkSafe are expected to coordinate implementation of non-infrastructure SRTS initiatives. Further, evaluation methodologies were identified to gauge the success of SRTS improvements. Establishing an evaluation method also helps to identify necessary adjustments to the SRTS program to ensure goals and objectives are met. The FDOT requires reporting of data from before and after studies using the NCSRTS Student In-Class Travel Tally and Parent Surveys.

Table 6: Summary of SRTS Grant Request

| School                                                                | Priority <sup>1</sup> | Funding Request <sup>2</sup> |
|-----------------------------------------------------------------------|-----------------------|------------------------------|
| Phyllis Ruth Miller Elementary                                        | 1                     | \$75,000                     |
| Jesse J. McCrary Jr. Elementary<br>(formerly Little River Elementary) | 2                     | \$125,000                    |
| Toussaint L'ouverture Elementary                                      | 3                     | \$156,000                    |
| Kensington Park Elementary                                            | 4                     | \$136,000                    |
| Santa Clara Elementary                                                | 5                     | \$117,000                    |
| Linda Lentin K-8 Center                                               | 6                     | \$169,000                    |
| Phillis Wheatley Elementary                                           | 7                     | \$124,000                    |
| North Hialeah Elementary                                              | 8                     | \$175,000                    |
| Natural Bridge Elementary                                             | 9                     | \$130,000                    |
| Oak Grove Elementary                                                  | 10                    | \$200,000                    |
| Total                                                                 |                       | \$1,407,000                  |

1. Priority rankings as identified in the MDCPS grant application cover letter.
2. Rounded to the nearest \$1,000.

## 6.0 SUMMARY

The *Safe Routes to School Plans 2011* study was conducted in support of the MDCPS efforts to leverage federal SRTS funds to make walking and cycling to school safer and more appealing for the children in grades K-8. As the first task, a prioritization method was developed to identify schools with the greatest need and potential for effective SRTS improvements. The prioritization method consists of two steps: ranking of schools based on quantitative factors, and conducting field reviews to ascertain the potential for SRTS improvements for the highest ranked schools (based on quantitative analysis). Through the prioritization process 10 schools were identified for developing SRTS infrastructure improvements. The SRTS improvements were developed in coordination with the Community Traffic Safety Team of the MDCPS, school staff, and parents. Common SRTS recommendations include sidewalks, crosswalks, school crossing signs, and school flashers. Ten SRTS grant applications were submitted to FDOT District Six requesting funding for the proposed infrastructure improvements. The total value of the proposed SRTS improvements exceeds \$1.4 million with individual applications ranging between \$75,000 and \$200,000. Further, opportunities for education, encouragement, and enforcement strategies, which could complement engineering improvements, were also identified.



*A comprehensive 5E approach is necessary for successful SRTS initiatives*

*Source: Safe Routes to School Guide, 2007*