Coral Reef Elementary School
7955 SW 152nd Street
Palmetto Bay, FL 33157

SAFE ROUTES TO SCHOOL – 2010

CORAL REEF ELEMENTARY SCHOOL
SAFE ROUTES REPORT

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1.0 INTRODUCTION

Safe Routes to School is a federally mandated program emerging from the latest Federal transportation authorization, the *Safe, Accountable, Flexible, Transportation Equity Act, a Legacy for Users* (SAFTEA-LU). It is an effort to create a more favorable environment for non-motorized transportation to and from local schools. To complete such a study necessarily involves cooperation of multiple agencies and local jurisdictions as well as technical review of several factors influencing transportation and behavior. In initiating the study, an examination of crash data was undertaken as the primary criteria for the Traffic Safety Team to select the schools for study. Each school was contacted and met with to determine their individual needs. Extensive site visits were undertaken to collect relevant data and examine existing conditions. Safe Routes were recommended, as were projects along those routes to make them adequate for pedestrian and bicycle travel. A cost estimate was provided for each project. Ultimately an application for each school will be submitted in an effort to attain funds for the needed improvements.

2.0 DEVELOPMENT OF SAFE ROUTES

Safe Routes to School for Coral Reef Elementary School were developed based on guidelines contained in the *Safe Routes to School, Procedure Manual* developed by the Miami-Dade MPO in 2005. Several additional reference sources also provided guidance in developing safe routes for the project school. Notable among these were:

- National Center for Safe Routes to School: http://www.saferouteroutesinfo.org/
- Federal Highway Safe Routes to School: http://safety.fhwa.dot.gov/saferoutes/

Site visits were taken to evaluate the conditions. Field measurements were verified through aerial photography. The philosophical approach to the application of this project was to focus on providing access to and from all four cardinal directions in the immediate school area. Priority was given to providing route densities close to the schools, within the ½ mile radius, which is most conducive to walking. Route density decreases as distance from the school increases. Routes central to residential areas were preferred, as were those that were major corridors connecting residential areas and the school.

Notification at all levels was provided on this project. Each pertinent county commissioner was notified and met with if possible, as was the presiding School Board Member. Letters were mailed to, and meetings were subsequently held with, the school principal and other key staff members to further develop and refine the proposed Safe Routes program. Input was also gained from the Parent Teachers Association (PTA) and the project steering committee that included representatives from the MPO, FDOT, the School Board and the Public Works Department.

Preliminary Safe Routes were developed for the project school based on reviews of several planning factors including examination of the school boundary, aerial photography, existing and future land uses, crash data (particularly involving juveniles), roadway characteristics as examined through site reconnaissance, observed or counted traffic volumes, posted speed limits, and the location of traffic control devices.

3.0 SCHOOL DATA

Name: Coral Reef Elementary School
Address: 7955 SW 152nd St Palmetto Bay, Fl 33157
Enrollment: 901students (2010-2011 enrollment)
School Attendance Boundary: Shown in Site Map
Estimated mode split for transportation to/from school (based on interviews with school officials):
• Walk/Ride = 5%
• Private Car/ Buses = 95%

Coral Reef Elementary School Site Map

4.0 AGENCY COORDINATION

This aspect of the project consisted of a technical review of a variety of information and a coordination with the project management team and the individual schools. Subject schools were determined by a project committee consisting of MDCPW, MDCPS, FDOT and MPO. The schools were provided to The Corradino Group for review and research. At several times during the project, The Corradino Group reported back to the project committee and the Miami Dade County Public Schools Community Traffic Safety Team.

4.1 Technical Review

An extensive technical review was undertaken, including a review of accident data, and a review of existing traffic counts. Additionally site visits were performed and each route was physically examined, its deficiencies were identified and measured, and estimates of probable costs were provided. A full map series has been produced including the suggested Safe Routes, the existing land use, and the existing traffic control devices in the study area.

4.2 Distribution Mailing List

Each school principal was contacted by email and by telephone. Meetings were held between each principal and, if available, each PTA chairperson to further explain the study and determine how best to distribute the mode preference survey. These surveys were distributed throughout the school and incorporated into the analysis.

SAMPLE LETTER:

Fred Albion
Principal
Coral Reef Elementary School
7955 SW 152nd St
Palmetto Bay, FL 33157

RE: Safe Routes to School Program in District 9

Principal Albion,
I am contacting you on behalf of The Metropolitan Planning Organization, who is working in cooperation with the Florida Department of Transportation, Miami-Dade Public Works, and the Miami Dade Public Schools is conducting a "Safe Routes to School" study for several schools in your district. This letter is to make you aware of the program, and make the project team available to you to answer any questions. We will be calling to see if we can set up an appointment to meet with you and subsequently the PTA chairperson.

The purpose of this project is to prepare Safe Routes to School plans for ten elementary schools. The product will be the identification of a safe route within the school attendance boundary of each school. The result will be to recommend infrastructure improvements and cost estimates for each route. These improvements will be focused on improving safety, reducing traffic conflicts, and mitigating environmental considerations.

Collecting data and working with the individual schools is integral to this effort. We hope to interact with you as principal and PTSA to survey the parents and students concerning their attitudes about walking or biking to school.

The Safe Routes to School Program is a national program that was developed to encourage children to walk and bicycle to school. It stems from a latest Federal Transportation Authorization, which will contribute over $600 million in Federal-aid highway funds to State governments before the end of 2009.

A Study Committee has been formed consisting of individuals from the Miami Dade MPO, the Miami Dade County Public Schools, the Florida Department of Transportation, Miami Dade County Pubic Works Department, and the University Of Miami Miller School Of Medicine's WalkSafe Program. Ten schools have been selected for study.

Throughout the project we will be interacting with the Miami-Dade County Public Schools Community Traffic Safety Team (MDCPS CTST) for interagency coordination.

To do this correctly it is important to coordinate at the school level with each schools principal, PTSA, as well as local municipal police and municipal public works department, as necessary. A project mailing list has been developed for each school.
We will collect and map a series of data on a Geographic Information System database. The information we are looking for includes:

- *mode split and attitudinal information,*
- *current school attendance boundary*
- *roadway facilities data*
- *pedestrian facilities data*
- *traffic controls and devices*
- *existing and proposed land use*
- *traffic volumes*
- *pedestrian crash data*

The attitude information will be collected through a survey. The roadway facility data will be verified by field investigation and modified as necessary. Site assessments will be made to verify existing data, obtain other relevant data and identify preliminary safe routes. If deficiencies are identified, a list of recommended improvements will be prepared to the safe route and intersection crossings. Cost estimates for each improvement will be provided. Finally a funding application to the State will be prepared for each school so that the improvements may be moved toward implementation.

Please feel free to contact me if you have any questions or concerns about this effort. Again, we will be calling to set up a meeting at your convenience.
Sincerely,

Josh Bocks
*THE **CORRADINO** GROUP*

5.0 CRASH HISTORY

Integral to selecting each school for study was an examination of the pedestrian and bicycle crashes reported in the two mile radius of the schools attendance boundary for the previous several years. This data was collected through the MPO as reported to Miami-Dade County during the time frame. The analysis identified fatal crashes, injury crashes and juvenile crashes.

Crash data for this study was collected for the years 2000 through 2004. Overall in the four year analysis period there have been 10 injuries and no fatalities due to crashes in the area. Of the four years analyzed crashes occurred in all years. Only one crash occurred close to the school. The following tables and map detail the data.

Based on the field reviews that were conducted for this study, recommended improvements were developed to address roadway and traffic deficiencies that would enhance overall safety conditions for pedestrian and bicycle traffic using the proposed safe routes.

Coral Reef Elementary Crash History

Case Number	Pedestrian Date of Birth	Road Name	Segment	2001		2002		2003		2004		**Total**	
				Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj
72166904	11/02/1988	US-1 & SW 144TH ST	Intersection	0	0	0	0	0	0	0	1	0	1
74313308	10/20/1970	US-1 & SW 144TH ST	Intersection	0	1	0	0	0	0	0	0	0	1
74313309	1/06/1989	US-1 & SW 152nd ST	Intersection	0	0	0	0	0	1	0	0	0	1
75519854	12/03/1940	US-1 & SW 152nd ST	Non-Intersection	0	0	0	0	0	1	0	0	0	1
70410005	6/09/1962	SW 77th Ave & SW 152nd ST	Intersection	0	0	0	1	0	0	0	0	0	1
70578013	11/04/1971	OLD CUTLER RD & SW 152nd ST	Non-Roadway	0	0	0	0	0	0	0	1	0	1
72015939	1/02/1944	OLD CUTLER RD & SW 144th ST	Non-Intersection	0	0	0	1	0	0	0	0	0	1
72047717	12/9/1989	OLD CUTLER RD & SW 168th ST	Intersection	0	1	0	0	0	0	0	0	0	1
72051323	2/10/1987	SW 160TH ST & SW 87th AVE	Non-Intersection	0	0	0	0	0	1	0	0	0	1
72052171	2/2/1952	SW 160TH ST & SW 76th AVE	Intersection	0	0	0	0	0	0	0	1	0	1
Total				0	2	0	2	0	3	0	3	0	10

Coral Reef Elementary School

7955 SW 152nd Street - Palmetto Bay, FL 33157

CRASH MAP

6.0 ROUTE DEFICIENCY IDENTIFICATION / FIELD REVIEW

In this task the school survey is reviewed, and the boundaries are explained and mapped. Additionally, the existing facilities have been inventoried through site visits, aerial photography review and other means of data collection. These facilities included roadway facilities, pedestrian facilities, and traffic control devices. A base map has been produced, and Safe Routes have been identified.

6.1 Survey

After contact was made with each school principal, meetings were set up between the project team, the Principal and the PTA chairperson. The main goal was to explain the project, its process, the intended results and to determine how best to understand the feelings of the parents, students and teachers relative to walking or biking to school. A survey was discussed which could be distributed by the School PTA to the children, to be filled out by the parents and returned to the teacher, should the project be funded. Below is a sample survey form.

In an effort to improve student safety in and around our schools, the Miami-Dade County Metropolitan Planning Organization, in collaboration with Miami-Dade County Public Schools and other governmental agencies, is looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions.

1. What grade is your child in? ___

2. Approximately how far does your child travel to school?
__ ½ mile or less __ ½ mile to 1 mile __ between 1 to 2 miles __ over 2 miles

3. How does your child usually travel to and from school: (put a check in the appropriate box)
Arrival Dismissal
a. walk
b. bicycle
c. car
d. school bus
e. private bus
f. city bus
g. other (please explain)_____ _____

4. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. ***Please circle YES(Y) or NO(N).***
a. Schools provided walking and bicycling route maps to parents and students. ***Y N***
b. Additional crossing guards were provided at busy intersections. ***Y N***
c. There were continuous sidewalks or bike paths from my neighborhood to the school. ***Y N***
d. Bicycle/pedestrian pathways separated from traffic. ***Y N***
e. There were fewer cars around where children are walking to school. ***Y N***
f. Speed limits were strictly enforced in school speed zones. ***Y N***
g. School speed zones were marked with flashing signals. ***Y N***
h. There was better street lighting along routes to school. ***Y N***
i. A greater presence of police officers and safety monitors along safe routes. ***Y N***
j. Designated safe route signs along safe route paths at children's eye level. ***Y N***
k. There were painted footsteps designating safe routes along sidewalks. ***Y N***

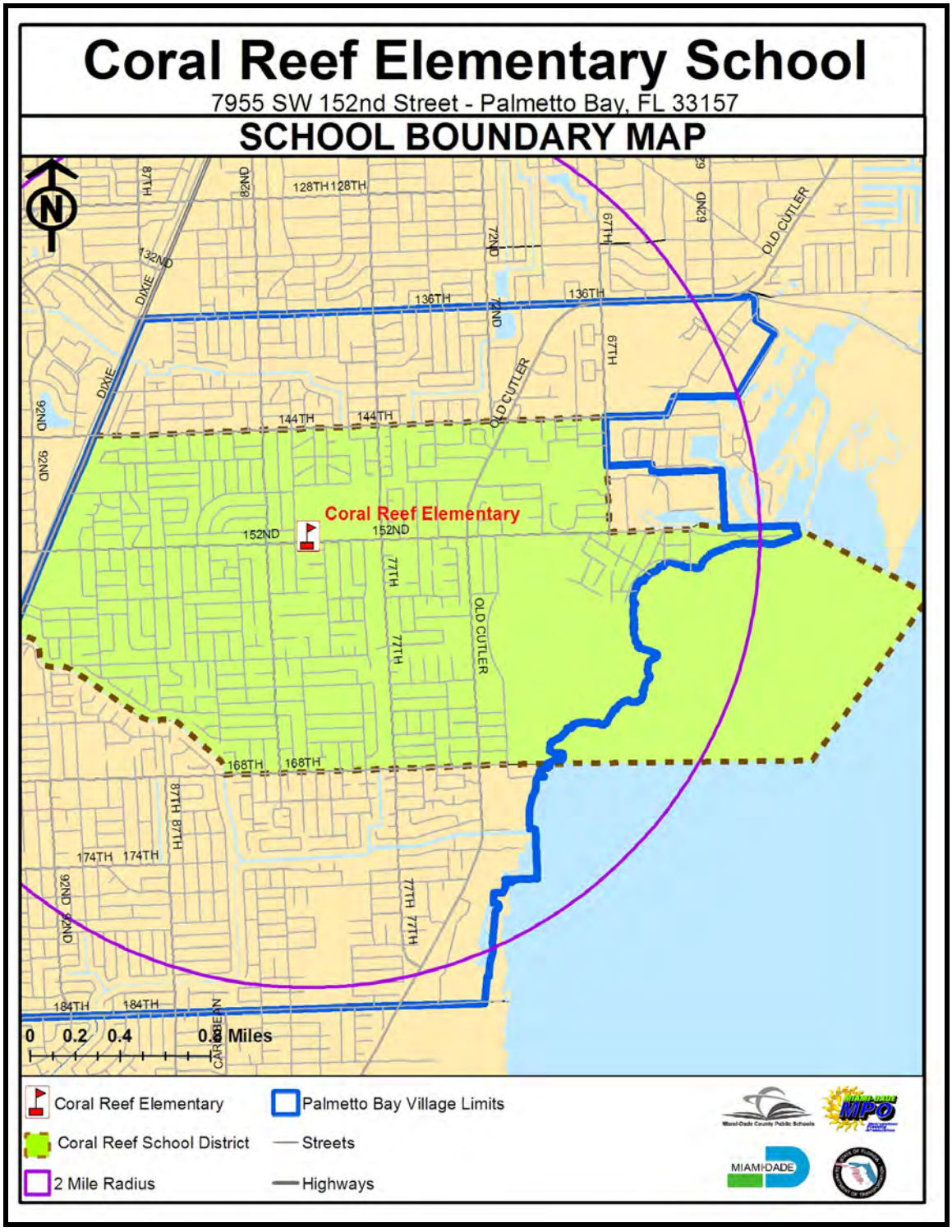
5. Please identify specific safety problems of concern to you in your neighborhood or around your child's school (i.e. broken sidewalks, dangerous street crossings, crime areas, railroad crossing, high-speed vehicles) and indicate their locations.
_____
_____
_____
_____

6. Please write down any additional factors that might influence your decision to let your child walk or bicycle to school:
_____
_____
_____
_____

Thank you for your participation. Please return this survey to your child's teacher.

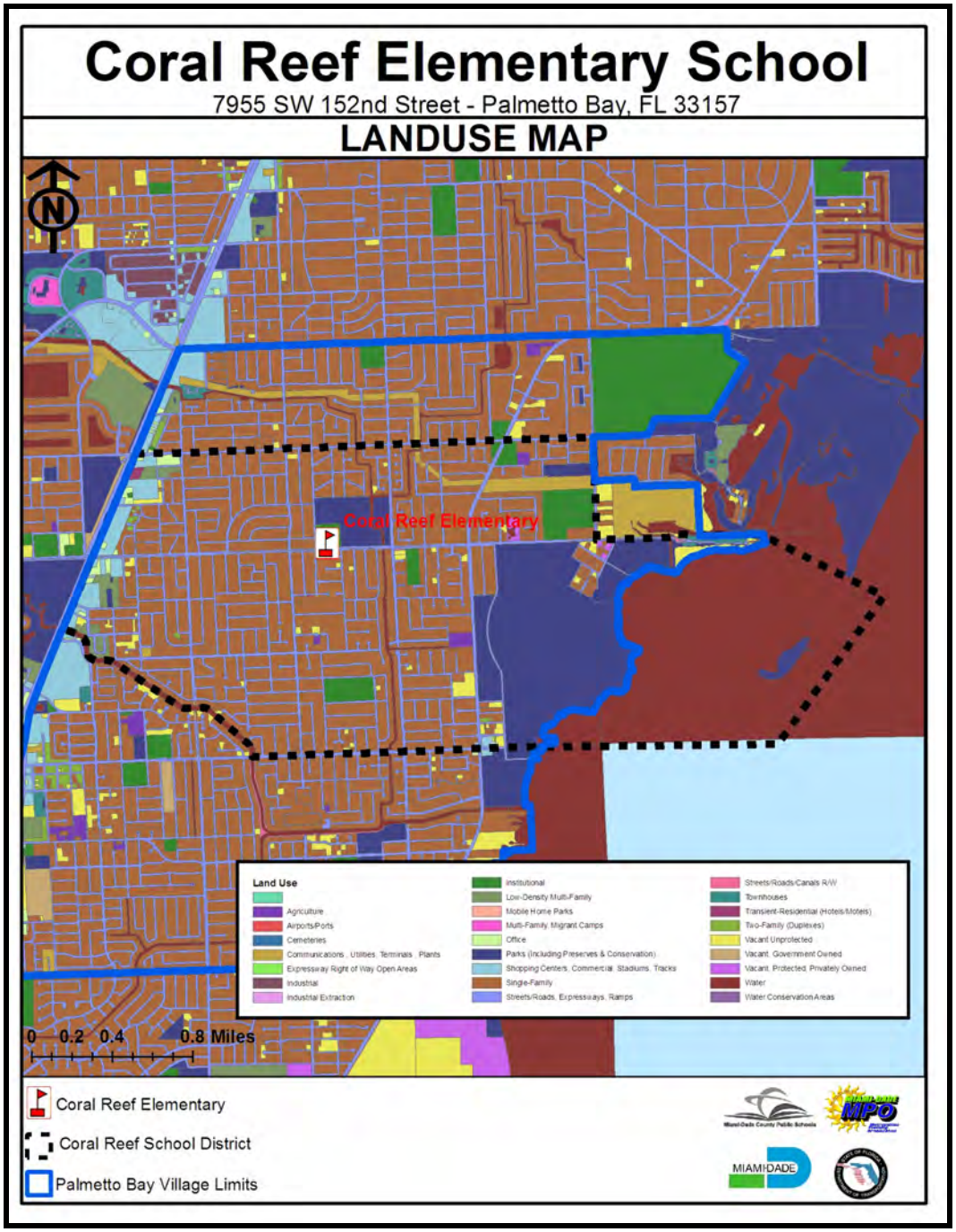
6.2 School Zone Boundary

The Coral Reef Elementary School boundary is not completely within the 2-mile radius of the school. The school sits in the center of a irregularly shaped attendance area bound on the north by 144th Street and 152nd Street, on the west by US1 and a canal, on the South by 168th St. The eastern boundary is generally the Biscayne Bay but also is bound by 67th Ave.



6.3 Land Use

Land use in the study area is primarily low density Single Family Residential. It does include a few small parks and a conservation area. Immediately surrounding the school is Coral Reef Park and single family residential lots. All of the surrounding land is already developed. Because the area is already developed the roadway network is already in a mature state. Higher levels of traffic in this area are not expected. There appears to be a lack of adequate pedestrian facilities in the area.



6.4 Existing Roadway Characteristics

Through site assessments and research of existing data, roadway characteristics have been developed for each of the Safe Routes. Roads in the area are predominantly local streets, with low speed limits. They are generally suburban residential in nature. These roadways were determined to be the safest and most direct ways through the immediate neighborhood to Coral Reef Elementary. There were two pedestrian crashes within these proposed Safe Routes on 152nd Street. The projects recommended in this analysis will focus specifically on improvements to 152nd Street, especially directly in front of the school.

Table 6.4
Coral Reef Elementary School
Roadway Characteristics

Road	Segment		Facility Type	Speed Limit	AADT*	Bike and Ped Crashes**
	From	To				
87th Avenue	144th Street	160th Street	Local Street	15 mph	low	0
86th Avenue	152nd Street	151st Street	Local Street	15 mph	low	0
	156th Street	160th Street	Local Street	15 mph	low	0
84th Avenue	156th Street	160th Street	Local Street	15 mph	low	0
82nd Avenue	144th Street	151st Street	Collector	30 mph	839	0
	151st Street	152nd Street	Collector	15 mph	839	0
80th Avenue	144th Street	152nd Street	Local Street	15 mph	low	0
	152nd Street	156th Street	Local Street	15 mph	low	0
	160th Street	168th Street	Local Street	15 mph	low	0
74th Avenue	152nd Street	148th Street	Local Street	15 mph	low	0
79th Avenue	144th Street	145th Street	Local Street	15 mph	low	0
	152nd Street	160th Street	Local Street	15 mph	low	0
77th Avenue	145th Street	168th Street	Collector	35 mph	1128	0
146th Street	89th Avenue	82nd Avenue	Local Street	35 mph	low	0
148th Street	87th Avenue	S. Dixie Hwy	Local Street	15 mph	low	0
	75th Avenue	Old Cutler Road	Local Street	15 mph	low	0
151st Street	86th Avenue	80th Avenue	Local Street	30mph	low	0
152nd Street	S. Dixie Hwy	86th Avenue	Minor Arterial	35 mph	1779	0
	82nd Avenue	School Entrance	Minor Arterial	35 mph	1779	0
	School Entrance	67th Avenue	Minor Arterial	35 mph	low	2
155th Street	86th Avenue	80th Avenue	Local Street	15 mph	low	0
156rd Street	86th Avenue	80th Avenue	Local Street	15 mph	low	0
160th Street	90th Avenue	79th Avenue	Local Street	15 mph	low	1
164th Street	77th Avenue	Old Cutler Road	Local Street	15 mph	low	0
168th Street	77th Avenue	80th Avenue	Collector	35 mph	700	0

* For road segments where AADT was not readily available, traffic volume was assessed as light, moderate, heavy based on field observations

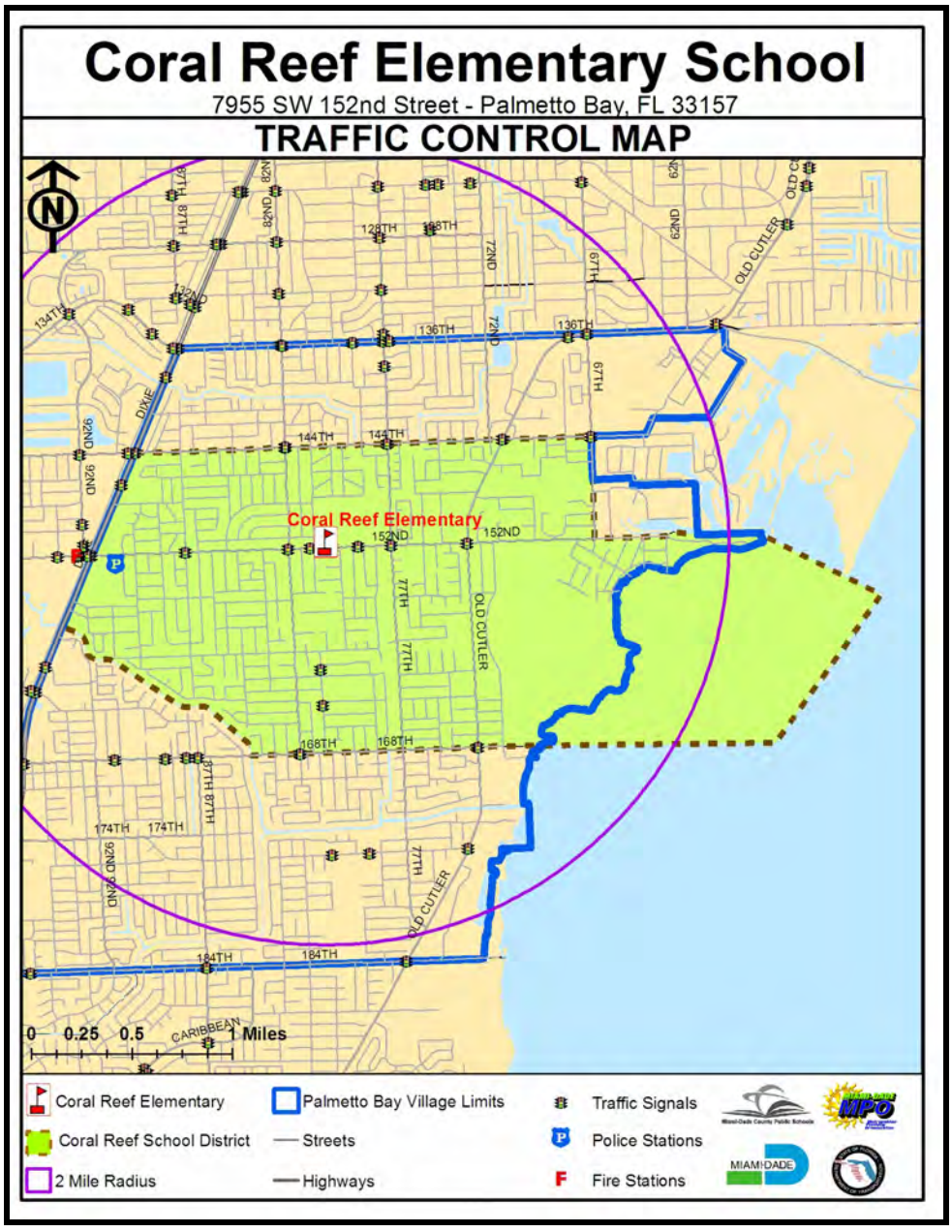
** Total pedestrian and bicycle crashes, 2000 - 2004

6.5 Site Assessment and Inventory of Existing Facilities

Field reviews for Coral Reef Elementary School were conducted in December, 2009. The primary deficiencies that were identified along the proposed safe routes were missing sidewalks, missing crosswalks and missing ADA accessible sidewalk extensions connecting the crosswalk or edge of pavement through the swale to the sidewalk. The area surrounding Coral Reef Elementary School is generally built-out as an established single family residential neighborhood and a neighborhood park. It is not anticipated that significant changes to the character of the area will occur. Therefore, off-site conditions will not change with future development.

6.5.1 Roadway Facilities / Pedestrian Facilities / Traffic Controls and Devices

There are six traffic lights in the immediate area, yet at the main entrance to the school at 152nd Street there is just one signal which protects pedestrians and bicyclists. Most other signals are on the section-line and half-section line roads particularly along US-1, 152nd Street and 144th Street. About 17 signals are currently located within the attendance boundary. The roadway facilities function as more suburban than urban, due to the nature of the land use and its geographic location. In some areas there are gaps in the infrastructure, making it more dangerous to access the school on foot or bicycle. There is very little development expected to occur, therefore it is important that there are other resources to provide these important improvements which will increase safety.



7.0 RECOMMENDED ROUTES and NECESSARY IMPROVEMENTS

Following the process described in Section 2, "Development of Safe Routes", the recommended SRTS were developed for Coral Reef Elementary School. The map in the next section shows the recommended SRTS. The table below shows pertinent roadway and traffic improvements for the road segments along the recommended SRTS.

Table 7:
Coral Reef Elementary School
Opinion of Probable Costs

Road Segment	Recommended Improvements	Length (ft)	Unit	Total
87th Avenue (144th Street and 160th Street)	Install 5' sidewalk both sides from 146th St to 152nd St where gaps exist	1,000	ft	38,900.00
	Install solar powered pedestrian crossing flashers at 152nd Street - all ways	4	AS	6,400.00
86th Avenue (156th Street and 160th Street)	None			
84th Avenue (156th Street and 160th Street)	None			
82nd Avenue (144th Street to 152nd Street)	Install 5' sidewalk both sides from 146th St to 152nd St where gaps exist	500	ft	19,450.00
	Install solar powered pedestrian crossing flashers at 152nd Street - all ways	4	AS	6,400.00
	Install painted 10' crosswalk at 152nd Street - all sides	200	ft	500.00
80th Avenue (144th Street to 168th Street)	Install 5' sidewalk on the east side from 152nd to 155th St	1,000	ft	38,900.00
74th Avenue (152nd Street and 148th Street)	Install 5' sidewalk on the east side from 152nd to 148th St	1,300	ft	50,570.00
79th Avenue (144th Street to 160th Street)	None			
77th Avenue (145th Street to 168nd Street)	Install 5' sidewalk east side between 145th Street and 152nd Street	2,650	ft	103,085.00
	Install 5' sidewalk east side between 159th Street and 156th Street	1,000	ft	38,900.00
	Install painted 10' crosswalk at 152nd Street - all legs	200	ft	500.00
146th Street (89th Avenue to 82nd Avenue)	None			
148th Street (87th Avenue to S. Dixie Hwy)	None			
148th Street (75th Avenue to Old Cutler Road)	Install 5' sidewalk on south side between Old Cutler Road and 75th Avenue	1,500	ft	58,350.00
151st Street (86th Avenue to 80th Avenue)	None			
152nd Street (S. Dixie Hwy to 67th Avenue)	Install painted crosswalks north and south sides of 152nd St for east/west crossing at 12 locations	360	ft	900.00
	Install solar powered pedestiran crossing flashers at intersections with 67th Ave and 77th Ave	8	AS	12,800.00
	Install "No Parking" signs in bus lanes in front of school	5	AS	2,250.00
	Install painted crosswalks at intersections of Old Cutler Road; 77th Ave; 82nd Ave;	500	ft	1,250.00
155th Street (86th Avenue to 80th Avenue)	Install 5' sidewalk on the north & south side from SW 82nd Ave to SW 80 th Ave	1,000	ft	38,900.00
160th Street (90th Avenue to 79th Avenue)	Install 5' sidewalk on both sides between 90th Avenue and 79th Avenue where gaps exist	1,200	ft	46,680.00
	Install painted 10' crosswalk at 79th Avenue intersection - all sides	200	ft	500.00
164th Street (77th Avenue and Old Cutler Road)	Install 5' sidewalk on the north side from Old Cuter Road to 77th Avenue	2,000	ft	77,800.00
168th Street (77th Avenue and 80th Avenue)	None			
Preliminary Costs				543,035.00
Contingency (20%)				108,607.00
Mobilization (10%)				54,303.50
Maintenance of Traffic (10%)				54,303.50
Opinion of Total Costs				**760,249.00**

8.0 SAFE ROUTES MAP

Priority was given to providing route densities close to the schools, within the ½ mile radius, which is most conducive to walking. Route density decreases as distance from the school increases. Routes central to residential areas were preferred, as were those that were major corridors connecting residential areas and the school. Routes are shown to cover a 2 mile radius in each direction for bike routes. Distances greater than ½ mile are not as conducive to walking, however this is still considered a reasonable distance for a child to bike.

Coral Reef Elementary School

7955 SW 152nd Street - Palmetto Bay, FL 33157

SAFE ROUTES MAP

9.0 APPLICATION

Howard Drive Elementary School
7750 SW 136th Street
Palmetto Bay, FL 33157

SAFE ROUTES TO SCHOOL – 2010

HOWARD DRIVE ELEMENTARY SCHOOL
SAFE ROUTES REPORT

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2.0 DEVELOPMENT OF SAFE ROUTES

Safe Routes to School for Howard Drive Elementary School were developed based on guidelines contained in the *Safe Routes to School, Procedure Manual* developed by the Miami-Dade MPO in 2005. Several additional reference sources also provided guidance in developing safe routes for the project school. Notable among these were:

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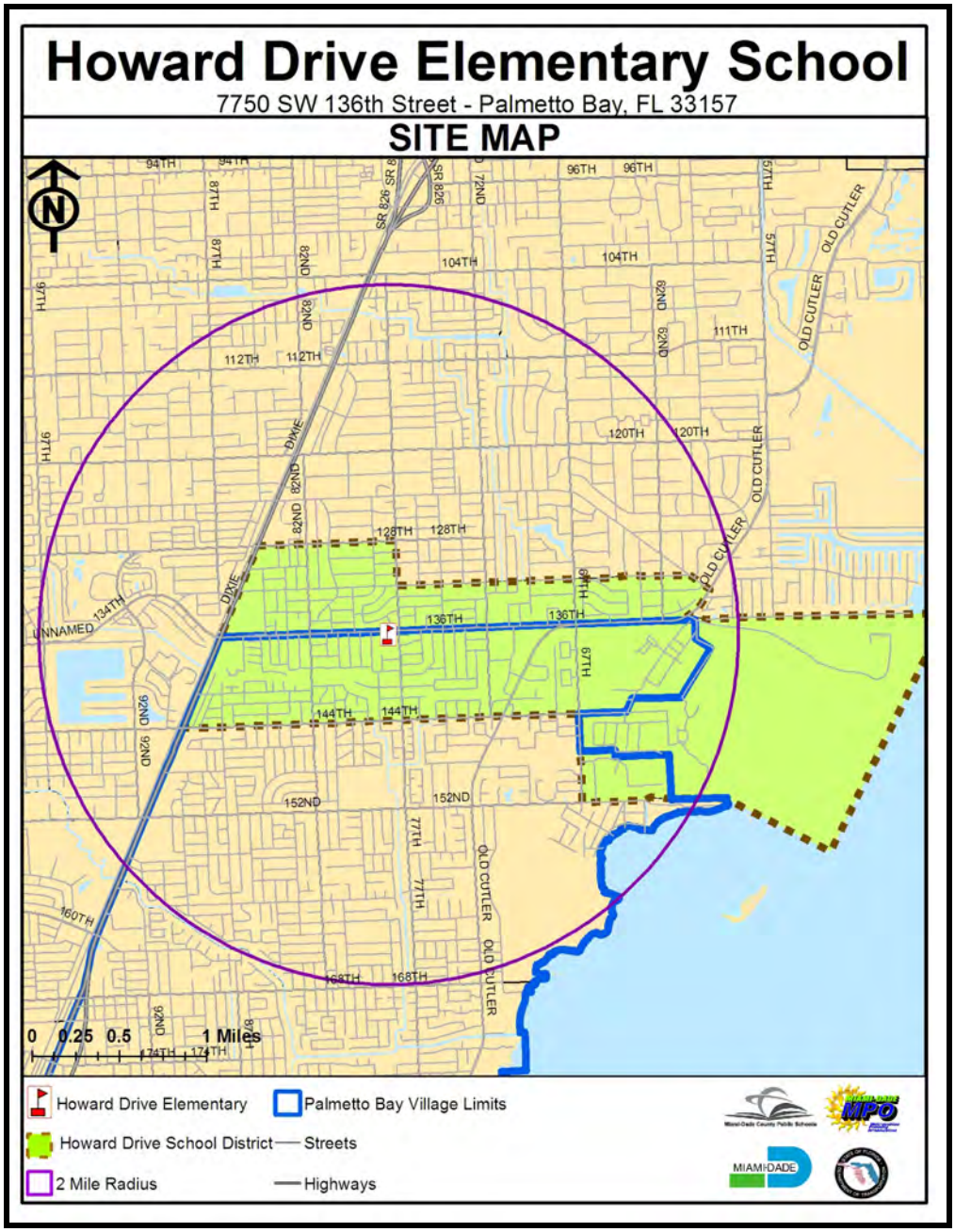
Preliminary Safe Routes were developed for the project school based on reviews of several planning factors including examination of the school boundary, aerial photography, existing and future land uses, crash data (particularly involving juveniles), roadway characteristics as examined through site reconnaissance, observed or counted traffic volumes, posted speed limits, and the location of traffic control devices.

3.0 SCHOOL DATA

Name: Howard Drive Elementary School
Address: 7750 SW 136th Street, Palmetto Bay, Florida 33157
Enrollment: 645 students (School year 2010 to 2011)
School Attendance Boundary: Shown in Site Map
Estimated mode split for transportation to/from school (based on interviews with school officials):
• Walk/Ride = 5%
• Private Car/ Buses = 95%



Howard Drive Elementary School, Site and Location Maps

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This aspect of the project consisted of a technical review of a variety of information and a coordination with the project management team and the individual schools. Subject schools were determined by a project committee consisting of Miami-Dade County Public Works, Miami-Dade County Public School District, Florida Department of Transportation and Miami-Dade Metropolitan Planning Organization. The schools were provided to The Corradino Group for review and research. At several times during the project, The Corradino Group reported back to the project committee and the Miami Dade County Public Schools Community Traffic Safety Team.

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An extensive technical review was undertaken, including a review of accident data, and a review of existing traffic counts. Additionally site visits were performed and each route was physically examined, its deficiencies were identified and measured, and estimates of probable costs were provided. A full map series has been produced including the suggested Safe Routes, the existing land use, and the existing traffic control devices in the study area.

4.2 Distribution Mailing List

Each school principal was contacted by email and by telephone. Meetings were held between each principal and, if available, each PTA chairperson to further explain the study and determine how best to distribute the mode preference survey. These surveys were distributed throughout PTA and incorporated into the analysis. Additionally the School Board Member in the district and each of the two County Commissioners were contacted by mail and when possible met with to explain the project.

SAMPLE LETTER:

Deanna Dalby
Principal
Howard Drive Elementary School
7750 SW 136TH St
PALMETTO BAY, FL 33157

RE: Safe Routes to School Program in District 9

Principal Doyle,
I am contacting you on behalf of The Metropolitan Planning Organization, who is working in cooperation with the Florida Department of Transportation, Miami-Dade Public Works, and the Miami Dade Public Schools is conducting a "Safe Routes to School" study for several schools in your district. This letter is to make you aware of the program, and make the project team available to you to answer any questions. We will be calling to see if we can set up an appointment to meet with you and subsequently the PTA chairperson.

The purpose of this project is to prepare Safe Routes to School plans for ten elementary schools. The product will be the identification of a safe route within the school attendance boundary of each school. The result will be to recommend infrastructure improvements and cost estimates for each route. These improvements will be focused on improving safety, reducing traffic conflicts, and mitigating environmental considerations.

Collecting data and working with the individual schools is integral to this effort. We hope to interact with you as principal and PTSA to survey the parents and students concerning their attitudes about walking or biking to school.

The Safe Routes to School Program is a national program that was developed to encourage children to walk and bicycle to school. It stems from a latest Federal Transportation Authorization, which will contribute over $600 million in Federal-aid highway funds to State governments before the end of 2009.

A Study Committee has been formed consisting of individuals from the Miami Dade MPO, the Miami Dade County Public Schools, the Florida Department of Transportation, Miami Dade County Pubic Works Department, and the University Of Miami Miller School Of Medicine's WalkSafe Program. Ten schools have been selected for study.

Throughout the project we will be interacting with the Miami-Dade County Public Schools Community Traffic Safety Team (MDCPS CTST) for interagency coordination.

To do this correctly it is important to coordinate at the school level with each schools principal, PTSA, as well as local municipal police and municipal public works department, as necessary. A project mailing list has been developed for each school.
We will collect and map a series of data on a Geographic Information System database. The information we are looking for includes:

- *mode split and attitudinal information,*
- *current school attendance boundary*
- *roadway facilities data*
- *pedestrian facilities data*
- *traffic controls and devices*
- *existing and proposed land use*
- *traffic volumes*
- *pedestrian crash data*

The attitude information will be collected through a survey. The roadway facility data will be verified by field investigation and modified as necessary. Site assessments will be made to verify existing data, obtain other relevant data and identify preliminary safe routes. If deficiencies are identified, a list of recommended improvements will be prepared to the safe route and intersection crossings. Cost estimates for each improvement will be provided. Finally a funding application to the State will be prepared for each school so that the improvements may be moved toward implementation.

Please feel free to contact me if you have any questions or concerns about this effort. Again, we will be calling to set up a meeting at your convenience.
Sincerely,

Josh Bocks
*THE **CORRADINO** GROUP*

5.0 CRASH HISTORY

Integral to selecting each school for study was an examination of the pedestrian and bicycle crashes reported in the two mile radius of the schools attendance boundary for the previous several years. This data was collected through the MPO as reported to Miami-Dade County during the time frame. The analysis identified fatal crashes, injury crashes and juvenile crashes.

Crash data for this study was collected for the years 2001 through 2004. Overall in the four year analysis period there have been 8 injuries and no fatalities due to crashes in the area. Of the four years analyzed, crashes occurred in all years, however no crashes involved juveniles. No crashes occurred in proximity to the school. The following table and map detail the data.

Based on the field reviews that were conducted for this study, recommended improvements were developed to address roadway and traffic deficiencies that would enhance overall safety conditions for pedestrian and bicycle traffic using the proposed safe routes.

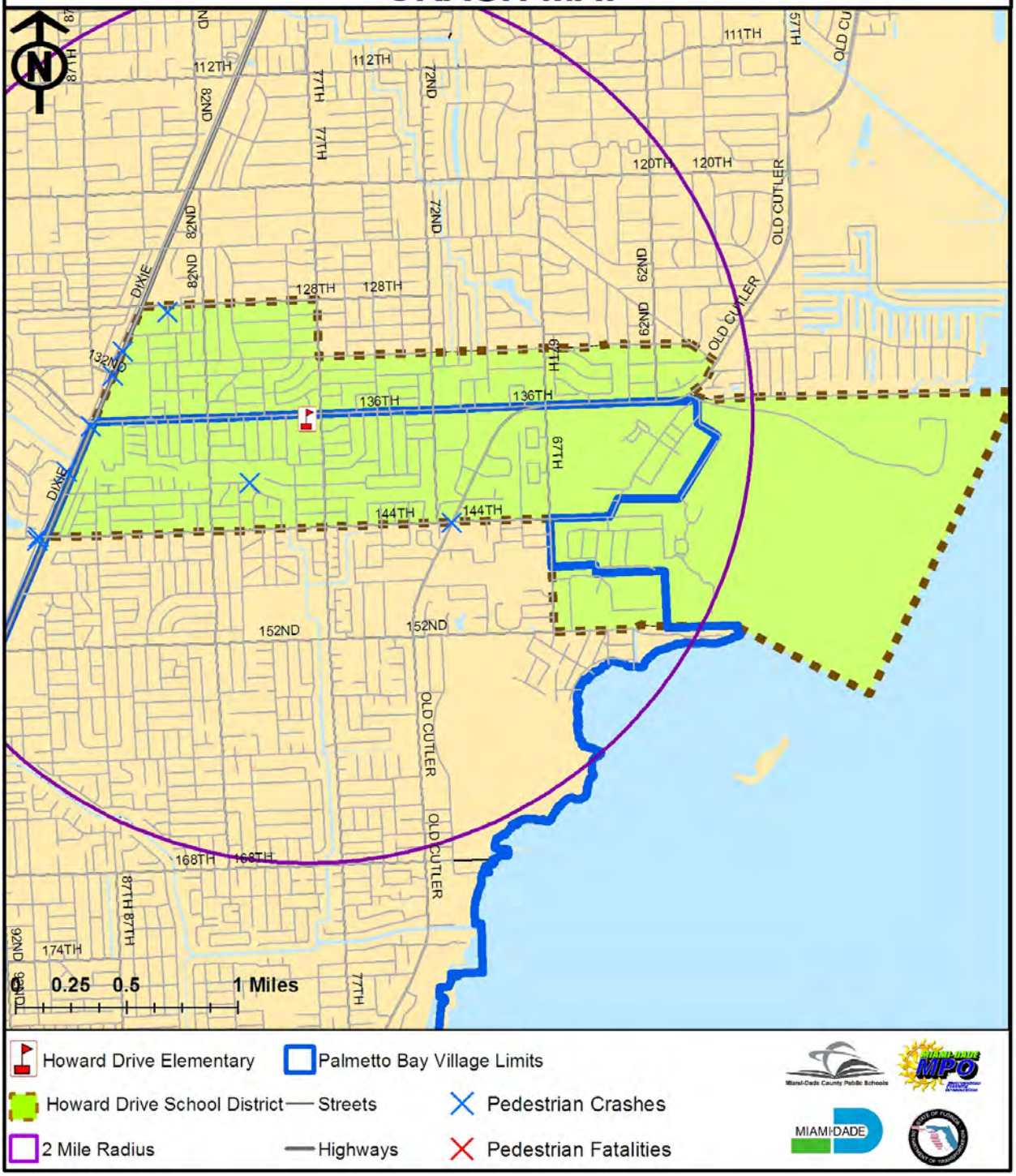
Howard Drive Elementary Crash History

Case Number	Pedestrian Date of Birth	Road Name	Segment	2001		2002		2003		2004		**Total**	
				Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj
75487803	11/02/1988	US-1 & SW 136TH ST	Intersection	0	0	0	0	0	0	0	1	0	1
70350745	1/06/1959	12845 SW 83RD CT	Non-Intersection	0	0	0	0	0	1	0	0	0	1
73900485	11/23/1940	US-1 & SW 144TH ST	Non-Intersection	0	0	0	0	0	1	0	0	0	1
70558628	8/22/1969	8501 SW 132ND ST	Non-Roadway	0	0	0	1	0	0	0	0	0	1
72054888	1/13/1917	14401 OLD CUTLER RD	Non-Roadway	0	0	0	1	0	0	0	0	0	1
72125301	1/20/1939	BUSWAY & SW 144TH ST	Non-Intersection	0	0	0	1	0	0	0	0	0	1
572975040	4/10/1985	SW 140TH TER & SW 79TH CT	Non-Intersection	0	1	0	0	0	0	0	0	0	1
598288460	2/26/1948	13112 US 1	Non-Roadway	0	1	0	0	0	0	0	0	0	1
Total				0	2	0	3	0	2	0	1	0	8

Howard Drive Elementary School

7750 SW 136th Street - Palmetto Bay, FL 33157

CRASH MAP



6.0 ROUTE DEFICIENCY IDENTIFICATION / FIELD REVIEW

In this task the school survey is reviewed, and the boundaries are explained and mapped. Additionally, the existing facilities have been inventoried through site visits, aerial photography review and other means of data collection. These facilities included roadway facilities, pedestrian facilities, and traffic control devices. A base map has been produced, and Safe Routes have been identified.

6.1 Survey

After contact was made with each school principal, meetings were set up between the project team, the Principal and the PTA chairperson. The main goal was to explain the project, its process, the intended results and to determine how best to understand the feelings of the parents, students and teachers relative to walking or biking to school. A survey was discussed which could be distributed by the School PTA to the children, to be filled out by the parents and returned to the teacher, should the project be funded. Below is a sample survey form.

In an effort to improve student safety in and around our schools, the Miami-Dade County Metropolitan Planning Organization, in collaboration with Miami-Dade County Public Schools and other governmental agencies, is looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions.

1. What grade is your child in? ___

2. Approximately how far does your child travel to school?
__ ½ mile or less __ ½ mile to 1 mile __ between 1 to 2 miles __ over 2 miles

3. How does your child usually travel to and from school: (put a check in the appropriate box)
Arrival Dismissal
a. walk
b. bicycle
c. car
d. school bus
e. private bus
f. city bus
g. other (please explain)_____ _____

4. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. ***Please circle YES(Y) or NO(N).***
a. Schools provided walking and bicycling route maps to parents and students. ***Y N***
b. Additional crossing guards were provided at busy intersections. ***Y N***
c. There were continuous sidewalks or bike paths from my neighborhood to the school. ***Y N***
d. Bicycle/pedestrian pathways separated from traffic. ***Y N***
e. There were fewer cars around where children are walking to school. ***Y N***
f. Speed limits were strictly enforced in school speed zones. ***Y N***
g. School speed zones were marked with flashing signals. ***Y N***
h. There was better street lighting along routes to school. ***Y N***
i. A greater presence of police officers and safety monitors along safe routes. ***Y N***
j. Designated safe route signs along safe route paths at children's eye level. ***Y N***
k. There were painted footsteps designating safe routes along sidewalks. ***Y N***

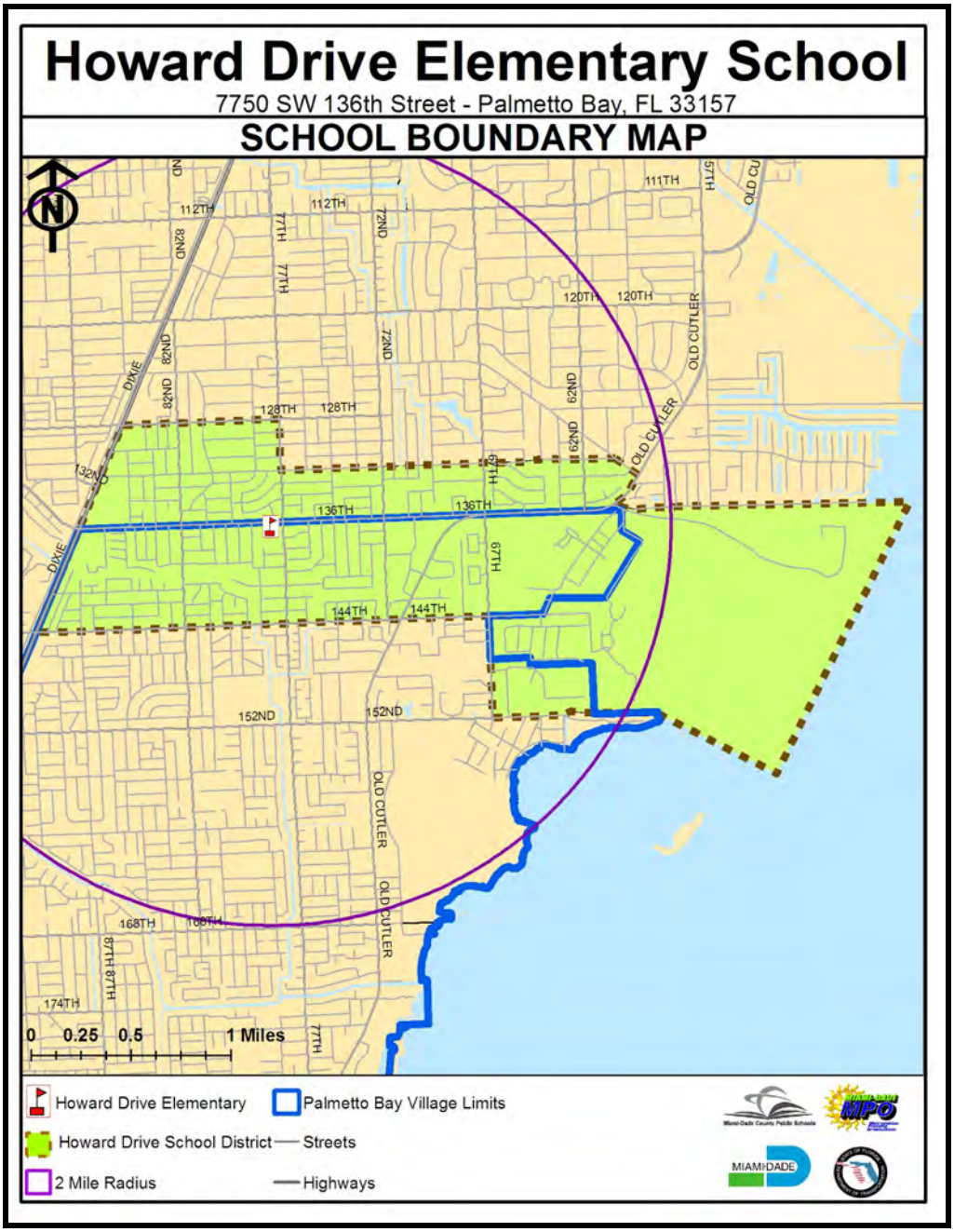
5. Please identify specific safety problems of concern to you in your neighborhood or around your child's school (i.e. broken sidewalks, dangerous street crossings, crime areas, railroad crossing, high-speed vehicles) and indicate their locations.
_____
_____
_____
_____

6. Please write down any additional factors that might influence your decision to let your child walk or bicycle to school:
_____
_____
_____
_____

Thank you for your participation. Please return this survey to your child's teacher.

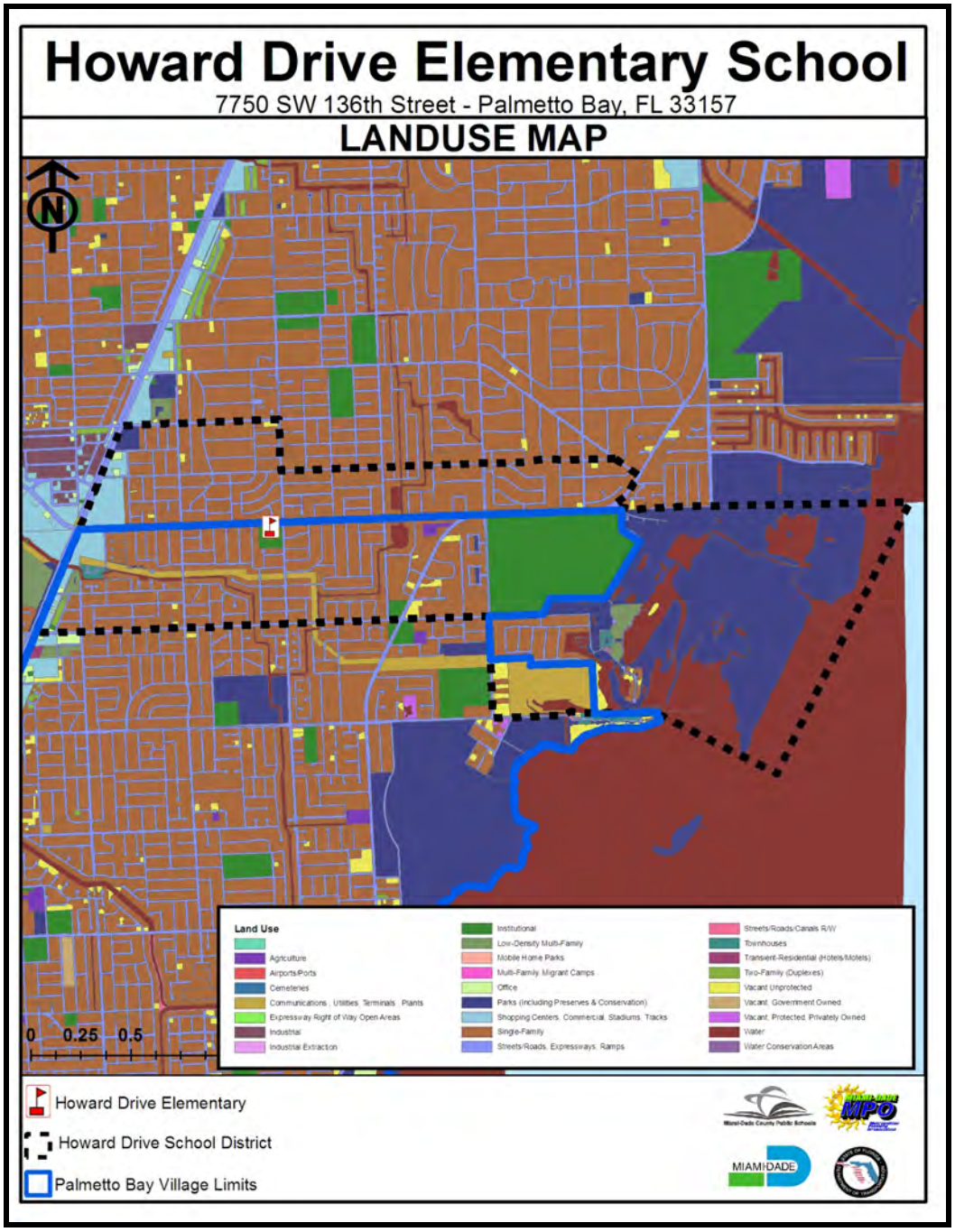
6.2 School Zone Boundary

The Howard Drive Elementary School boundary stretches beyond the 2-mile radius east of the school, however, due to the generally linear shape of the area, many of the attendees live relatively close. Additionally, the school attendance boundary is unique, due to the fact that it extends into the Village of Pinecrest to the north and into the City of Coral Gables to the east. Due to the proximity to the border with Pinecrest, some safe routes extend into this neighboring municipality. The school sits in the center of a irregularly shaped attendance area, generally bounded on the north by 128th Street and 132nd Street, on the west by US-1, on the South by 144th Street and 152nd Street. The eastern boundary extends all the way to Biscayne Bay.



6.3 Land Use

Land use in the study area is primarily low density Single Family Residential, with Institutional making up the second biggest land use category within the school attendance boundary. The commercial land uses in the area are located on the US-1 corridor, approximately ¾ of a mile to the west of the school. The area is primarily built out, with very few vacant land tracts. The land uses are not expected to change in any significant way from what currently exists today. It is the Villages' goal to protect and enhance the residential neighborhoods in a way that is compatible with what exists today.



6.4 Existing Roadway Characteristics

Through site assessments and research of existing data, roadway characteristics have been developed for each of the Safe Routes. Roads in the area are predominantly local streets, with low speed limits. They are generally suburban residential in nature. These roadways were determined to be the safest and most direct ways through the immediate neighborhood to Howard Drive Elementary. There are no bike or pedestrian crashes within these proposed Safe Routes.

Table 6.4
Howard Drive Elementary School
Roadway Characteristics

Road	Segment		Facility Type	Speed Limit	AADT*	Bike and Ped Crashes**
	From	To				
139th Terrace	82nd Avenue	77th Avenue	Local Road	15 mph	low	0
140th Street	77th Avenue	72nd Avenue	Local Road	15 mph	low	0
141st Street	74th Court	78th Avenue	Local Road	15 mph	low	0
141st Street	82nd Avenue	S. Dixie Hwy	Local Road	15 mph	low	0
144th Street	77th Avenue	67th Avenue	Collector	30 mph	700	0
70th Ave	136th Street	134th Street	Local Road	15 mph	low	0
77th Avenue	144th Street	136th Street	Collector	30 mph	1128	0
	136th Street	133rd Street	Local Road	15 mph	low	0
79th Avenue	134th Street	132nd Street	Local Road	15 mph	low	0
80th Avenue	132nd Street	128th Street	Local Road	15 mph	low	0
82nd Avenue	141st Street	139th Street	Local Road	15 mph	low	0
132nd Street	79th Avenue	S. Dixie Hwy	Local Road	15 mph	low	0
133rd Street	79th Avenue	81st Avenue	Local Road	15 mph	low	0
136th Street	82nd Avenue	Farmer Road	Collector	30	1,000	0
134th Street	79th Avenue	72nd Avenue	Local Road	15 mph	low	0
138th Street	77th Avenue	72nd Avenue	Local Road	15 mph	low	0
Farmer Road	136th Street	Old Cutler Rd	Local Road	15 mph	low	0
72nd Avenue	144th Street	136th Street	Local Road	15 mph	mod	0

* For road segments where AADT was not readily available, traffic volume was assessed as light, moderate, heavy based on field observations

** Total pedestrian and bicycle crashes, 2000 - 2004

6.5 Site Assessment and Inventory of Existing Facilities

Field reviews for Howard Drive Elementary School were conducted in December, 2009. The primary deficiencies that were identified along the proposed safe routes were missing sidewalks, missing crosswalks and missing ADA accessible sidewalk extensions connecting the crosswalk or edge of pavement through the swale to the sidewalk. The area surrounding Howard Drive Elementary School is generally built-out as an established single family residential neighborhood. It is not anticipated that significant changes to the character of the area will occur. Therefore, off-site conditions will not change with future development.

6.5.1 Roadway Facilities / Pedestrian Facilities / Traffic Controls and Devices

There are few traffic lights in the immediate area, yet at the main entrance to the school on 136th Street there are two signals in the area which protect pedestrians and bicyclists. Most other signals are on the section-line and half-section line roads particularly along US-1. About 23 signals are currently located within the attendance boundary. The roadway facilities function as more suburban than urban, due to the nature of the land and its geographic location. As such pedestrian facilities are not comprehensive in location. There are occasional gaps in the infrastructure, making it seemingly more dangerous to access the school on foot or bicycle. There is very little development expected to occur, therefore it is important that there are other resources to provide these important improvements which will increase safety.

7.0 RECOMMENDED ROUTES and NECESSARY IMPROVEMENTS

Following the process described in Section 2, "Development of Safe Routes", the recommended SRTS were developed for Howard Drive Elementary School. The map in the next section shows the recommended SRTS. The table below shows pertinent roadway and traffic improvements for the road segments along the recommended SRTS.

Table 7:
Howard Drive Elementary School
Opinion of Probable Costs

Road Segment	Recommended Improvements	Priority	Length	Unit	Total
136th Street (82nd Avneue to Farmer Rd)	Install plastic delineators at 78th Court to prevent south bound traffic from entering street	I	25	ft	200.00
	Modify timing of traffic light at 77th Avenue to improve traffic flow	I	N/A	N/A	
	Post "No U Turn" signs in front of school on 136th Str	I	1	AS	200.00
	Install painted 10' crosswalk at 78th Court and at school entrance	I	80	ft	200.00
Farmer Rd (136th Street to Old Cutler Rd)	Install 5' sidewalk on the east side between 136th Street an Old Cutler Road	II	2,300	ft	89,470.00
139th Terrace (82nd Avnue to 77nd Avenue)	Install painted 10" crosswalk on north side at 82nd Ave, 80th Ave, 79th Ct, 78th Pl, and 78th Ct,	I	200	ft	500.00
140th Terrace (74th Avenue to 72nd Avenue)	None				
140th Street and 77th Avenue	Install painted 10' crosswalk at intersection - all sides	I	100	ft	2.50
141st Street (74th Court to78th Avenue)	Install painted 10' crosswalk north and south side at 74th Ave, 73rd Ct, 73rd Ave, and 72nd Ct	I	400	ft	1,000.00
141st Street (82nd Avenue to S. Dixie Hwy)	Install 5' sidewalk on north side between 82nd Ave and S. Dixie Hwy	II	3,400	ft	132,260.00
144th Street (77th Avenue to 67th Avenue)	None				
70th Avenue (136th Street to 134th Street)	None				
77th Avenue (144th Street to 133rd Street)	Install 8' multi-use path - east side from 144th St to 139th St	III	3.9	miles	617,800.00
	Install painted 10' wide east/west crosswalk at school entrance	I	50	ft	125.00
79th Avenue (134th Street to 132nd Street)	None				
80th Avenue (132nd Street to 128th Street)	None				
82nd Avenue (141st Street to 139th Street)	Install 5' sidewalk on east side north of the canal to 139th Street	I	300	ft	11,670.00
132nd Street (79th Avenue to S. Dixie Hwy)	None				
133rd Street (79th Avenue to 81st Avenue)	None				
133rd Terrace (69th Avenue to 67th Avenue)	None				
134th Street (79th Avenue to 72nd Avenue)	None				
134th Street (70th Avenue to 69th Avenue)	None				
138th Street (77th Avenue to 72nd Avenue)	None				
72nd Avenue (144th Street to 136th Street)	Install 5' sidewalk on east side between 144th Ave and 136th Ave	II	2,700	ft	105,030.00
	Install painted 10' wide crosswalk at 136th Street	I	175	ft	450.00
Preliminary Costs					958,907.50
Contingency (20%)					191,781.50
Mobilization (10)					95,890.75
Maintenance of Traffic (10%)					95,890.75
Opinion of Total Costs					**1,342,470.50**

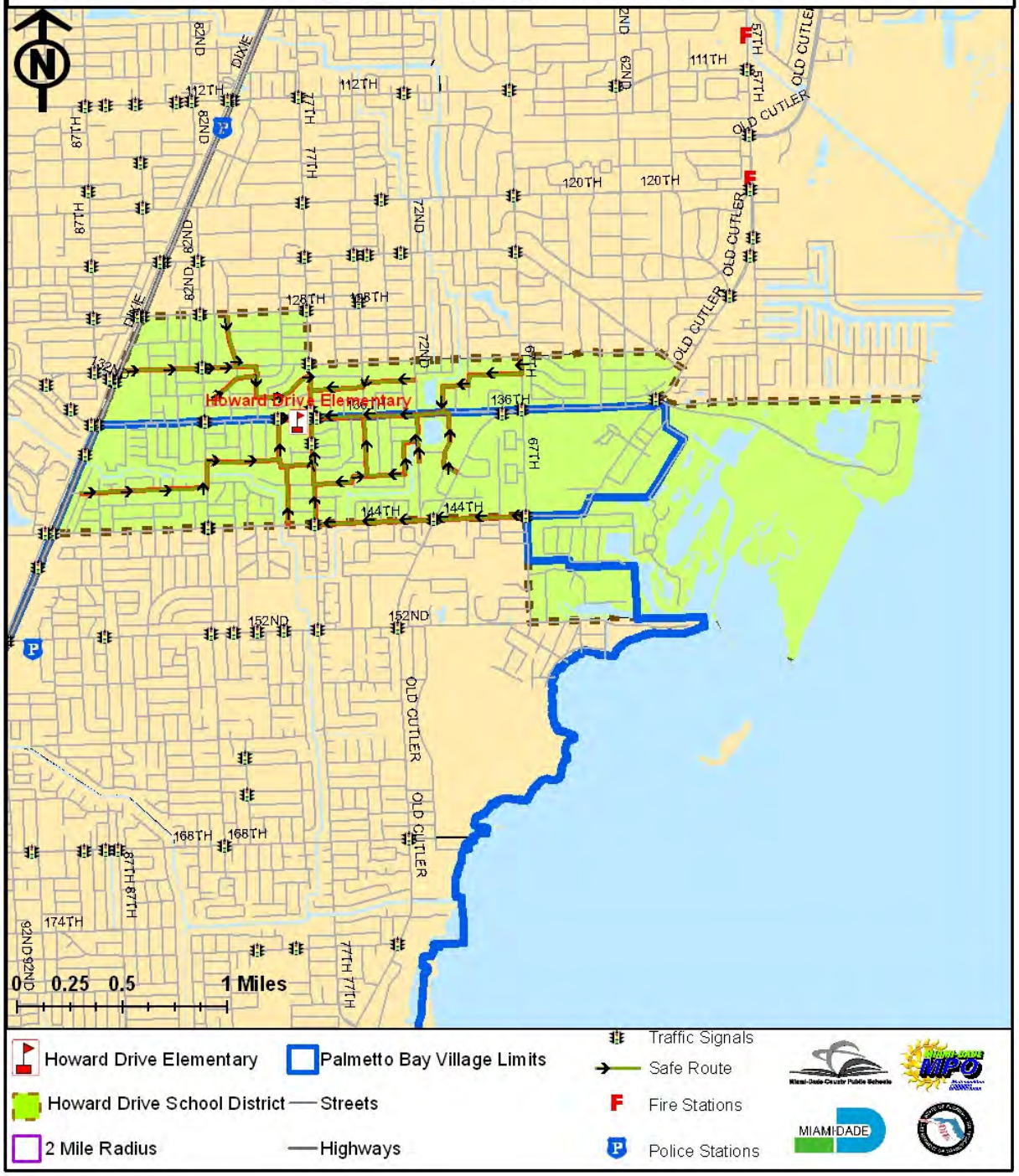
8.0 SAFE ROUTES MAP

Priority was given to providing route densities close to the schools, within the ½ mile radius, which is most conducive to walking. Route density decreases as distance from the school increases. Routes central to residential areas were preferred, as were those that were major corridors connecting residential areas and the school. Routes are shown to cover a 2 mile radius in each direction for bike routes. Distances greater than ½ mile are not as conducive to walking, however this is still considered a reasonable distance for a child to bike.

Howard Drive Elementary School

7750 SW 136th Street - Palmetto Bay, FL 33157

SAFE ROUTES MAP



9.0 APPLICATION

Perrine Elementary School
8851 SW 168th Street
Palmetto Bay, FL 33157

SAFE ROUTES TO SCHOOL – 2010

PERRINE ELEMENTARY SCHOOL
SAFE ROUTES REPORT

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2.0 DEVELOPMENT of SAFE ROUTES

3.0 SCHOOL DATA

4.0 AGENCY COORDINATION
- 2.1 Technical Review
- 2.2 Distribution Mailing List

5.0 CRASH HISTORY

6.0 ROUTE DEFICIENCY IDENTIFICATION / FIELD REVIEW
- 6.1 Survey
- 6.2 School Zone Boundary
- 6.3 Land Use
- 6.4 Roadway Characteristics
- 6.5 Site Assessment and Inventory of Existing Facilities
  - 6.5.1 Roadway Facilities / Pedestrian Facilities /Traffic Controls and Devices

7.0 RECOMMENDED ROUTES and NECESSARY IMPROVEMENTS

8.0 SAFE ROUTE MAP

9.0 APPLICATION

1.0 INTRODUCTION

Safe Routes to School is a federally mandated program emerging from the latest Federal transportation authorization, the *Safe, Accountable, Flexible, Transportation Equity Act, a Legacy for Users* (SAFTEA-LU). It is an effort to create a more favorable environment for non-motorized transportation to and from local schools. To complete such a study necessarily involves cooperation of multiple agencies and local jurisdictions as well as technical review of several factors influencing transportation and behavior. In initiating the study, an examination of crash data was undertaken as the primary criteria for the Traffic Safety Team to select the schools for study. Each school was contacted and met with to determine their individual needs. Extensive site visits were undertaken to collect relevant data and examine existing conditions. Safe Routes were recommended, as were projects along those routes to make them adequate for pedestrian and bicycle travel. A cost estimate was provided for each project. Ultimately an application for each school will be submitted in an effort to attain funds for the needed improvements.

2.0 DEVELOPMENT OF SAFE ROUTES

Safe Routes to School for Perrine Elementary School were developed based on guidelines contained in the *Safe Routes to School, Procedure Manual* developed by the Miami-Dade MPO in 2005. Several additional reference sources also provided guidance in developing safe routes for the project school. Notable among these were:

- National Center for Safe Routes to School: http://www.saferouteroutesinfo.org/
- Federal Highway Safe Routes to School: http://safety.fhwa.dot.gov/saferoutes/

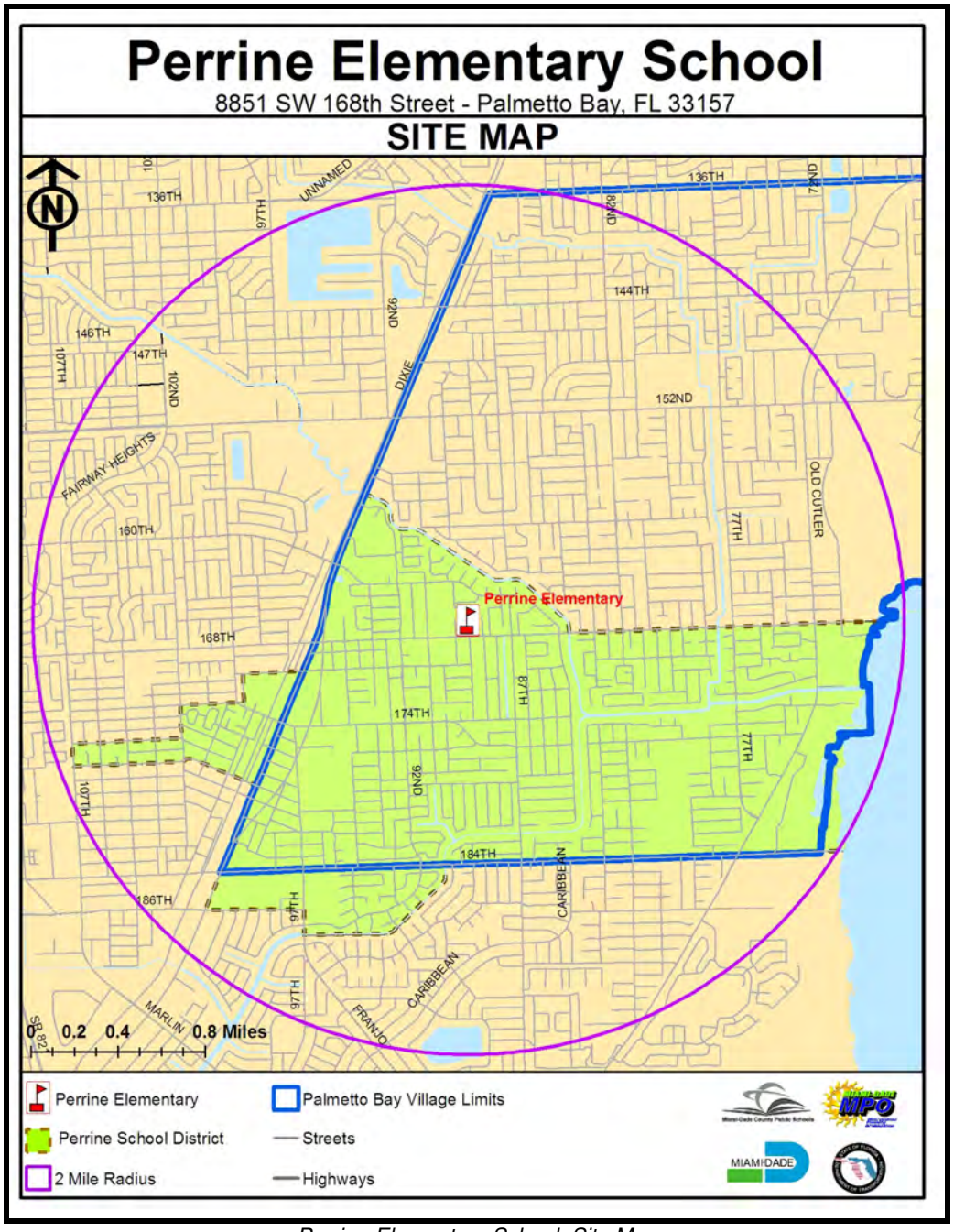
Site visits were taken to evaluate the conditions. Field measurements were verified through aerial photography. The philosophical approach to the application of this project was to focus on providing access to and from all four cardinal directions in the immediate school area. Priority was given to providing route densities close to the schools, within the ½ mile radius, which is most conducive to walking. Route density decreases as distance from the school increases. Routes central to residential areas were preferred, as were those that were major corridors connecting residential areas and the school.

Notification at all levels was provided on this project. Each pertinent county commissioner was notified and met with if possible, as was the presiding School Board Member. Letters were mailed to, and meetings were subsequently held with, the school principal and other key staff members to further develop and refine the proposed Safe Routes program. Input was also gained from the Parent Teachers Association (PTA) and the project steering committee that included representatives from the MPO, FDOT, the School Board and the Public Works Department.

Preliminary Safe Routes were developed for the project school based on reviews of several planning factors including examination of the school boundary, aerial photography, existing and future land uses, crash data (particularly involving juveniles), roadway characteristics as examined through site reconnaissance, observed or counted traffic volumes, posted speed limits, and the location of traffic control devices.

3.0 SCHOOL DATA

Name: Perrine Elementary School
Address: 8851 SW 168th Street, Palmetto Bay, Florida 33157
Enrollment: 810 students (School year 2010 to 2011)
School Attendance Boundary: Shown in Site Map
Estimated mode split for transportation to/from school (based on interviews with school officials):
• Walk/Ride = 5%
• Private Car/ Buses = 95%



Perrine Elementary School, Site Map

4.0 AGENCY COORDINATION

This aspect of the project consisted of a technical review of a variety of information and a coordination with the project management team and the individual schools. Subject schools were determined by a project committee consisting of the Village of Palmetto Bay, MDCPW, MDCPS, FDOT and MPO. The schools were provided to The Corradino Group for review and research. At several times during the project, The Corradino Group reported back to the project committee and the Miami Dade County Public Schools Community Traffic Safety Team.

4.1 Technical Review

An extensive technical review was undertaken, including a review of accident data, and a review of existing traffic counts. Additionally site visits were performed and each route was physically examined, its deficiencies were identified and measured, and estimates of probable costs were provided. A full map series has been produced including the suggested Safe Routes, the existing land use, and the existing traffic control devices in the study area.

4.2 Distribution Mailing List

Each school principal was contacted by mail and by telephone. Meetings were held between each principal and, if available, each PTA chairperson to further explain the study and determine how best to distribute the mode preference survey. These surveys were distributed throughout the school and incorporated into the analysis.

SAMPLE LETTER:

Maileen Alicea Ferrer
Principal
Perrine Elementary School
8851 SW 168TH St
PALMETTO BAY, FL 33157

RE: Safe Routes to School Program in District 9

Principal Ferrer,
I am contacting you on behalf of The Metropolitan Planning Organization, who is working in cooperation with the Florida Department of Transportation, Miami-Dade Public Works, and the Miami Dade Public Schools is conducting a "Safe Routes to School" study for several schools in your district. This letter is to make you aware of the program, and make the project team available to you to answer any questions. We will be calling to see if we can set up an appointment to meet with you and subsequently the PTA chairperson.

The purpose of this project is to prepare Safe Routes to School plans for ten elementary schools. The product will be the identification of a safe route within the school attendance boundary of each school. The result will be to recommend infrastructure improvements and cost estimates for each route. These improvements will be focused on improving safety, reducing traffic conflicts, and mitigating environmental considerations.

Collecting data and working with the individual schools is integral to this effort. We hope to interact with you as principal and PTSA to survey the parents and students concerning their attitudes about walking or biking to school.

The Safe Routes to School Program is a national program that was developed to encourage children to walk and bicycle to school. It stems from a latest Federal Transportation Authorization, which will contribute over $600 million in Federal-aid highway funds to State governments before the end of 2009.

A Study Committee has been formed consisting of individuals from the Miami Dade MPO, the Miami Dade County Public Schools, the Florida Department of Transportation, Miami Dade County Pubic Works Department, and the University Of Miami Miller School Of Medicine's WalkSafe Program. Ten schools have been selected for study.

Throughout the project we will be interacting with the Miami-Dade County Public Schools Community Traffic Safety Team (MDCPS CTST) for interagency coordination.

To do this correctly it is important to coordinate at the school level with each schools principal, PTSA, as well as local municipal police and municipal public works department, as necessary. A project mailing list has been developed for each school.
We will collect and map a series of data on a Geographic Information System database. The information we are looking for includes:

- *mode split and attitudinal information,*
- *current school attendance boundary*
- *roadway facilities data*
- *pedestrian facilities data*
- *traffic controls and devices*
- *existing and proposed land use*
- *traffic volumes*
- *pedestrian crash data*

The attitude information will be collected through a survey. The roadway facility data will be verified by field investigation and modified as necessary. Site assessments will be made to verify existing data, obtain other relevant data and identify preliminary safe routes. If deficiencies are identified, a list of recommended improvements will be prepared to the safe route and intersection crossings. Cost estimates for each improvement will be provided. Finally a funding application to the State will be prepared for each school so that the improvements may be moved toward implementation.

Please feel free to contact me if you have any questions or concerns about this effort. Again, we will be calling to set up a meeting at your convenience.
Sincerely,

Josh Bocks
*THE **CORRADINO** GROUP*

5.0 CRASH HISTORY

Integral to selecting each school for study was an examination of the pedestrian and bicycle crashes reported in the two mile radius of the schools attendance boundary for the previous several years. This data was collected through the MPO as reported to Miami-Dade County during the time frame. The analysis identified fatal crashes, injury crashes and juvenile crashes. Juvenile crashes are considered to be children 13 years or younger. These incidents are noted in the table with an asterisk (*).

Crash data for this study was collected for the years 2000 through 2004 Overall in the five year analysis period there have been 43 injuries and no fatalities due to crashes in the area. Of the five years analyzed crashes occurred in all years. Only one crash occurred in proximity to the school. The following table and map provide details of the data.

Based on the field reviews that were conducted for this study recommended improvements were developed to address roadway and traffic deficiencies that would enhance overall safety conditions for pedestrian and bicycle traffic using the proposed safe routes.

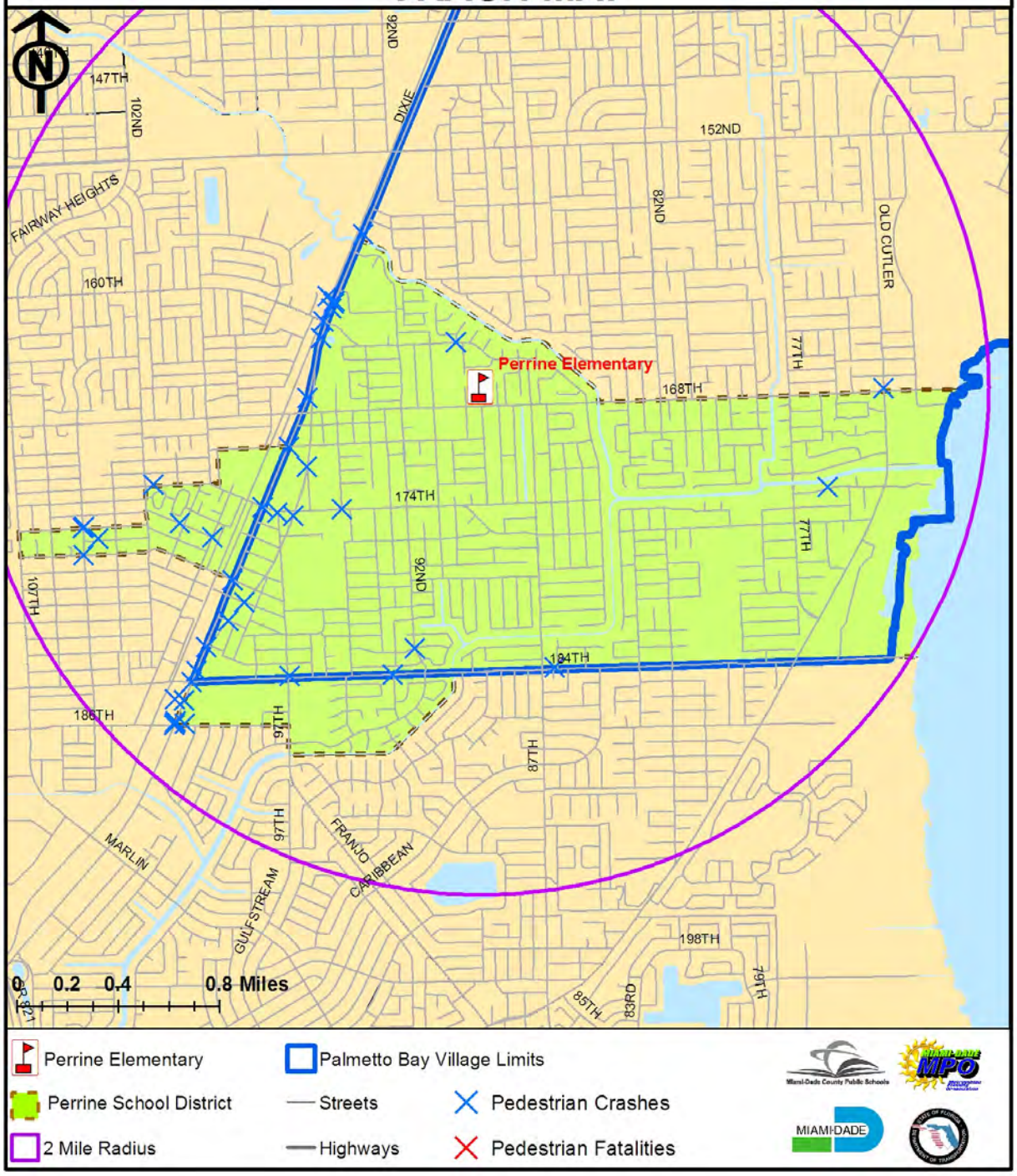
Perrine Elementary Crash History

Case Number	Pedestrian Date of Birth	Road Name	Segment	2000		2001		2002		2003		2004		**Total**	
				Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj	Fat	Inj
70239350	2/17/1972	16251 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	0	0	1	0	1
70504446	3/15/1976	17195 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	0	0	1	0	1
72019590	12/19/1973	SW 170TH ST & US-1	N/A	0	0	0	0	0	0	0	0	0	1	0	1
72166406	5/30/2001	SW 97TH AVE & BANYAN ST	Intersection	0	0	0	0	0	0	0	0	0	1*	0	1
72166904	5/12/1976	16780 OLD CUTLER RD	Non-Roadway	0	0	0	0	0	0	0	0	0	1	0	1
74313308	11/25/1981	FRANJO RD & US-1	Intersection	0	0	0	0	0	0	0	0	0	1	0	1
74313309	7/20/1982	US-1 & SW 168TH ST	Non-Intersection	0	0	0	0	0	0	0	0	0	1	0	1
75519854	2/11/1957	US-1 & SW 160TH ST	Non-Intersection	0	0	0	0	0	0	0	1	0	1	0	1
70410005	2/25/1941	16501 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	1	0	0	0	1
70578013	9/16/1953	US 1 & SW 160TH ST	Non-Intersection	0	0	0	0	0	0	0	1	0	0	0	1
72015939	7/31/1990	SW 174TH ST & SW 94TH AVE	Intersection	0	0	0	0	0	0	0	1*	0	0	0	1
72047717	2/19/1933	S DIXIE HWY & WAYNE AVE	Intersection	0	0	0	0	0	0	0	1	0	0	0	1
72051323	7/27/1979	18590 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	1	0	0	0	1
72052171	5/25/1967	18485 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	1	0	0	0	1
72856130	9/12/1979	16165 S DIXIE HWY	Non-Roadway	0	0	0	0	0	0	0	1	0	0	0	1
73892703	N/A	18341 S DIXIE HWY	Non-Roadway	0	0	0	0	0	1	0	0	0	0	0	1
70560461	4/24/1994	SW 104TH AVE & SW 174TH TER	Intersection	0	0	0	0	0	1*	0	0	0	0	0	1
70707110	1/01/1979	SW 176TH ST	Intersection	0	0	0	0	0	1	0	0	0	0	0	1
70850722	10/30/1924	US 1 & QUAIL ROOST DR	Intersection	0	0	0	0	0	1	0	0	0	0	0	1
72050104	10/17/1952	18485 S DIXIE HWY	Non-Roadway	0	0	0	0	0	1	0	0	0	0	0	1
72052243	4/04/1978	SW 182ND ST & SW 92ND AVE	Non-Intersection	0	0	0	0	0	1	0	0	0	0	0	1
72052664	2/11/1957	SW 184TH ST & S DIXIE HWY	Non-Intersection	0	0	0	0	0	1	0	0	0	0	0	1
74200317	5/13/1977	US 1 & INDIGO ST	Intersection	0	0	0	0	0	1	0	0	0	0	0	1
74204208	5/13/1938	BISCAYNE BLVD & HIBISCUS ST	Intersection	0	0	0	1	0	0	0	0	0	0	0	1
571368240	1/30/1965	SW 164TH ST & SW 89TH CT	Non-Intersection	0	0	0	1	0	0	0	0	0	0	0	1
580155420	7/07/1947	18485 S DIXIE HWY	Non-Roadway	0	0	0	1	0	0	0	0	0	0	0	1
585593570	N/A	SW 184TH ST & SW 92ND PL	Intersection	0	0	0	1	0	0	0	0	0	0	0	1
592767720	N/A	18210 S DIXIE HWY	Non-Roadway	0	0	0	1	0	0	0	0	0	0	0	1
594512370	4/21/1978	FERN ST & DUVAL AVE	Intersection	0	0	0	1	0	0	0	0	0	0	0	1
605394800	2/12/1959	STATE ROAD 5 & SW 174TH ST	Non-Roadway	0	0	0	1	0	0	0	0	0	0	0	1
609311250	5/28/1974	18583 S DIXIE HWY	Non-Roadway	0	1	0	0	0	0	0	0	0	0	0	1
568545400	9/10/1974	SW Homestead AVE & Fern St	Intersection	0	1	0	0	0	0	0	0	0	0	0	1
551023730	10/31/1958	SW 174th TER & SW 104th AVE	N/A	0	1	0	0	0	0	0	0	0	0	0	1
558603570	11/18/1993	7521 SW 174 ST	N/A	0	1	0	0	0	0	0	0	0	0	0	1
568497250	7/01/1944	SW 184TH ST & FRANJO RD	N/A	0	1	0	0	0	0	0	0	0	0	0	1
568545720	8/20/1935	SW 186th ST & S Dixie HWY	N/A	0	1	0	0	0	0	0	0	0	0	0	1
569313430	2/05/1994	SW 172ND ST & SW 102ND AVE	N/A	0	1*	0	0	0	0	0	0	0	0	0	1
570131500	7/15/1971	State Road 5 & SW 160th ST	N/A	0	1	0	0	0	0	0	0	0	0	0	1
570133290	12/02/1935	SW 158th ST & State Road 5	N/A	0	1	0	0	0	0	0	0	0	0	0	1
581164950	12/15/1974	STATE ROAD 5 & SW 186TH ST	N/A	0	1	0	0	0	0	0	0	0	0	0	1
581424010	7/04/1954	10360 SW 175th ST	N/A	0	1	0	0	0	0	0	0	0	0	0	1
583773740	10/20/1961	SW 86th CT & SW 184th ST	N/A	0	1	0	0	0	0	0	0	0	0	0	1
Total				0	12	0	7	0	8	0	8	0	8	0	43

Perrine Elementary School

8851 SW 168th Street - Palmetto Bay, FL 33157

CRASH MAP



6.0 ROUTE DEFICIENCY IDENTIFICATION / FIELD REVIEW

In this task the school survey is reviewed, and the boundaries are explained and mapped. Additionally, the existing facilities have been inventoried through site visits, aerial photography review and other means of data collection. These facilities included roadway facilities, pedestrian facilities, and traffic control devices. A base map has been produced, and Safe Routes have been identified.

6.1 Survey

After contact was made with each school principal, meetings were set up between the project team, the Principal and the PTA chairperson. The main goal was to explain the project, its process, the intended results and to determine how best to understand the feelings of the parents, students and teachers relative to walking or biking to school. A survey was discussed which could be distributed by the School PTA to the children, to be filled out by the parents and returned to the teacher, should the project be funded. Below is a sample survey form.

In an effort to improve student safety in and around our schools, the Miami-Dade County Metropolitan Planning Organization, in collaboration with Miami-Dade County Public Schools and other governmental agencies, is looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions.

1. What grade is your child in? ___

2. Approximately how far does your child travel to school?
__ ½ mile or less __ ½ mile to 1 mile __ between 1 to 2 miles __ over 2 miles

3. How does your child usually travel to and from school: (put a check in the appropriate box)
Arrival Dismissal
a. walk
b. bicycle
c. car
d. school bus
e. private bus
f. city bus
g. other (please explain)_____ _____

4. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. ***Please circle YES(Y) or NO(N).***
a. Schools provided walking and bicycling route maps to parents and students. ***Y N***
b. Additional crossing guards were provided at busy intersections. ***Y N***
c. There were continuous sidewalks or bike paths from my neighborhood to the school. ***Y N***
d. Bicycle/pedestrian pathways separated from traffic. ***Y N***
e. There were fewer cars around where children are walking to school. ***Y N***
f. Speed limits were strictly enforced in school speed zones. ***Y N***
g. School speed zones were marked with flashing signals. ***Y N***
h. There was better street lighting along routes to school. ***Y N***
i. A greater presence of police officers and safety monitors along safe routes. ***Y N***
j. Designated safe route signs along safe route paths at children's eye level. ***Y N***
k. There were painted footsteps designating safe routes along sidewalks. ***Y N***

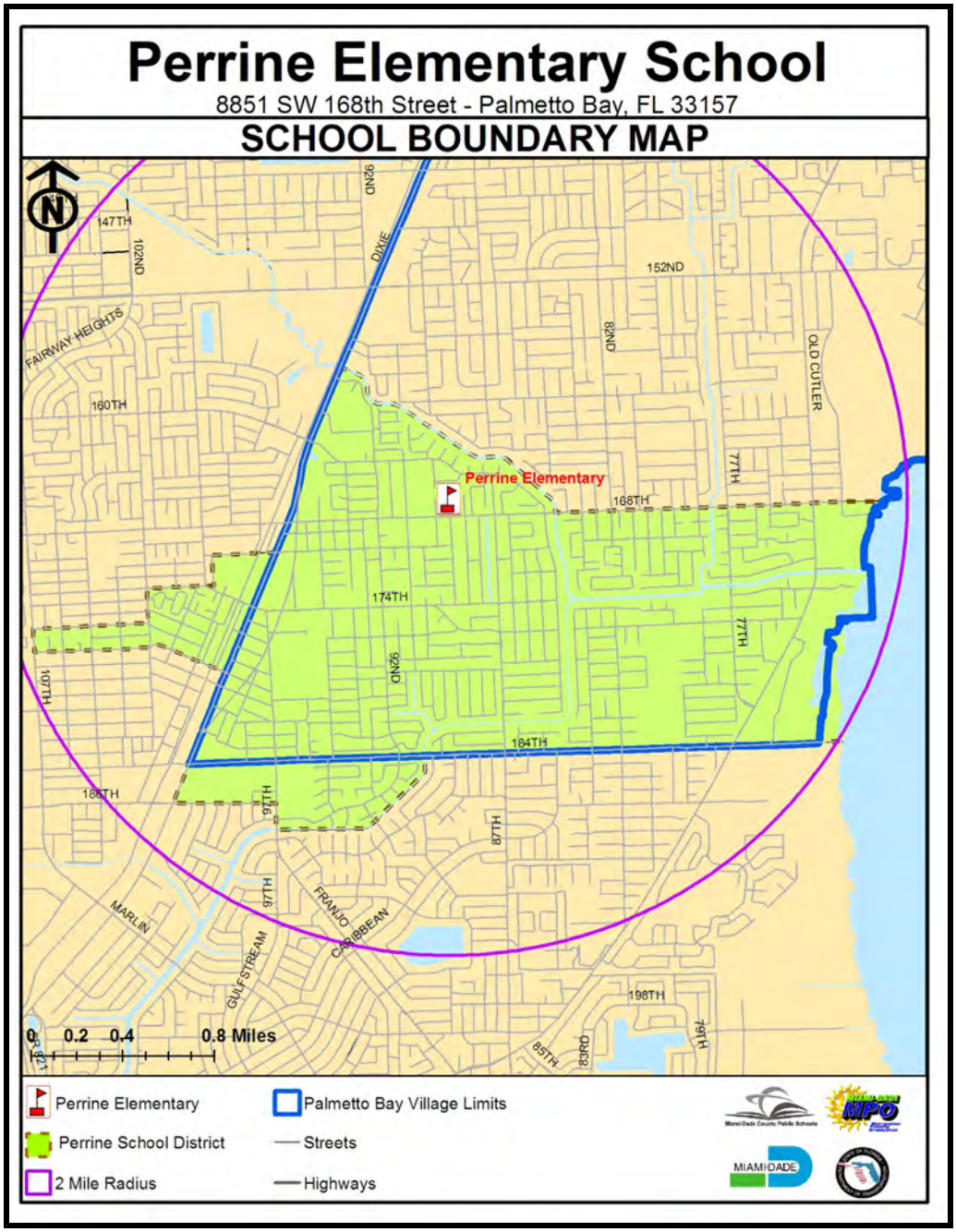
5. Please identify specific safety problems of concern to you in your neighborhood or around your child's school (i.e. broken sidewalks, dangerous street crossings, crime areas, railroad crossing, high-speed vehicles) and indicate their locations.
_____
_____
_____
_____

6. Please write down any additional factors that might influence your decision to let your child walk or bicycle to school:
_____
_____
_____
_____

Thank you for your participation. Please return this survey to your child's teacher.

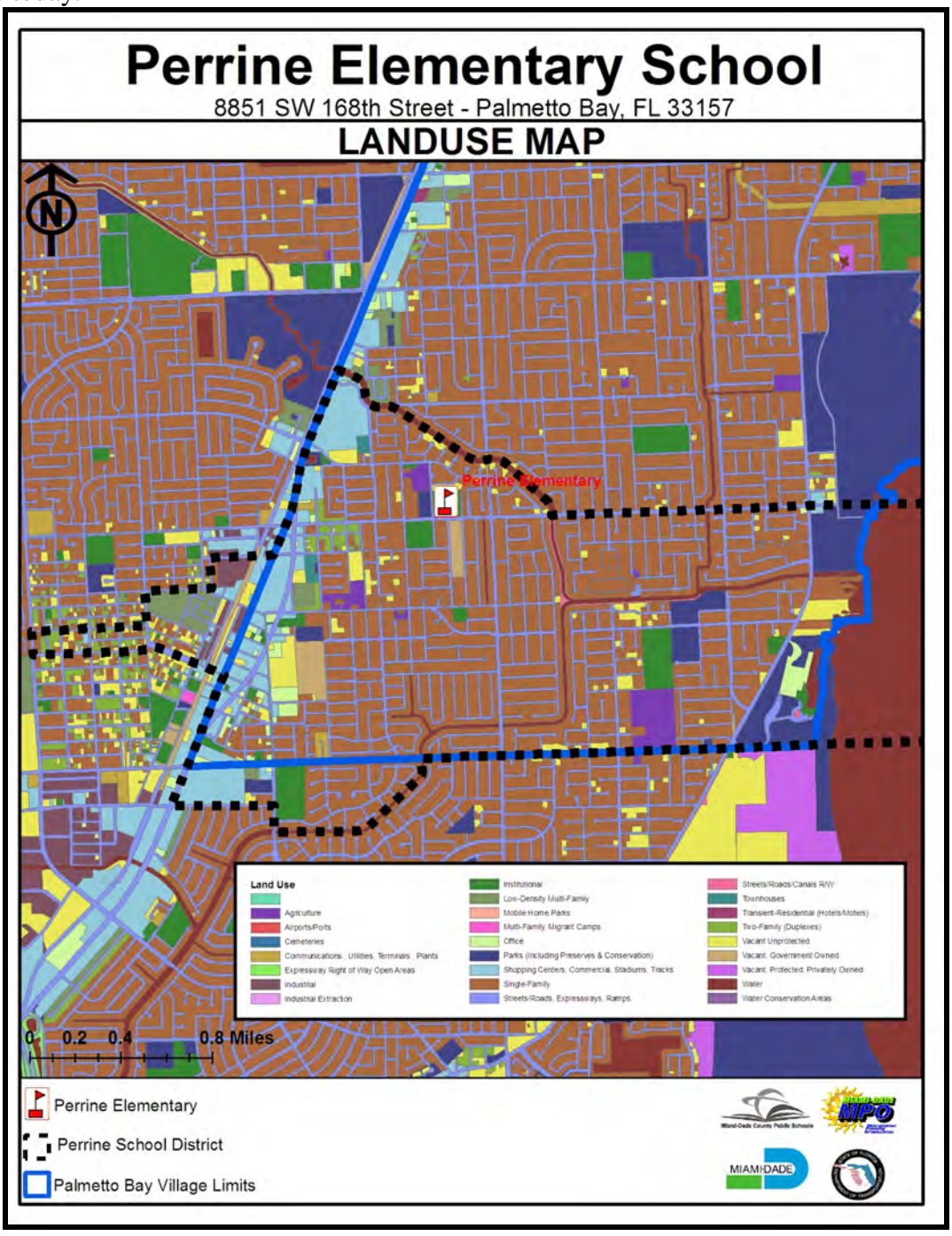
6.2 School Zone Boundary

The Perrine Elementary School boundary is completely within the 2-mile radius of the school. The school sits in the north end of an irregularly shaped attendance area bound on the north by a canal and 168th Street, on the west by Dixie Hwy and 107th Ave, on the South by 184th St and 188th St, as well as a canal. The eastern boundary is Biscayne Bay. Perrine Elementary School District is primarily within the Village of Palmetto Bay but does extend south into the town of Cutler Bay and west into unincorporated Miami-Dade County. Additionally, many students are bused in from areas outside of the school attendance boundary.



6.3 Land Use

Land use in the study area is primarily low density Single Family Residential, with Shopping Center, Commercial; Agriculture and Institutional making up the next biggest land use categories within the school attendance boundary. The commercial land uses in the area are located on the US-1 corridor, approximately one half of a mile to the west of the school. The area is primarily built out, with few vacant land tracts. The land uses are not expected to change in any significant way from what currently exists today. It is the Villages' goal to protect and enhance the residential neighborhoods in a way that is compatible with what exists today.



6.4 Existing Roadway Characteristics

Through site assessments and research of existing data, roadway characteristics have been developed for each of the Safe Routes. Roads in the area are predominantly local streets, with low speed limits. They are generally suburban in nature. Where the suburban character of the road, meets the more commercial character, conflicts occur. This is seen in the predominance of crashes along West Dixie Highway. It is an underlying factor that stresses the importance of the Safe Routes to School program. None of the Safe Routes recommended here are having the students cross West Dixie Highway.

Table 6.4
Perrine Elementary School
Roadway Characteristics

Road	Segment		Facility Type	Speed Limit	AADT*	Bike and Ped Crashes**
	From	To				
77th Avenue	168th Street	Old Cutler Rd	Local Road	15 mph	low	0
79th Avenue	168th Street	166th Street	Local Road	15 mph	low	0
97th Avenue	180th Street	181st Street	Local Road	15 mph	low	0
94th Avenue	176th Street	180th Street	Local Road	15 mph	low	0
92nd Avenue	158th Street	176th Street	Collector	30 mph	mod	0
91st Avenue	173rd Street	166th Street	Local Road	15 mph	low	0
88th Court	174th Street	164th Street	Local Road	15 mph	low	0
87th Avenue	184th Street	163rd Street	Local Road	35 mph	1086	0
83rd Avenue	174th Street	172nd Street	Local Road	15 mph	low	0
161st Street	S. Dixie Hwy	90th Avenue	Local Road	30 mph	mod	1
164th Street	90th Avneue	87th Avenue	Local Road	15 mph	low	0
168th Street	92nd Avenue	Old Cutler Rd	Local Road	30 mph	mod	0
170th Street	94th Avenue	88th Court	Local Road	15 mph	low	0
	81st Avenue	79th Avenue	Local Road	15 mph	low	0
172nd Street	91st Avenue	88th Court	Local Road	15 mph	low	0
174th Street	91st Avenue	88th Court	Local Road	15 mph	low	0
176th Street	94th Avenue	87th Avenue	Local Road	15 mph	low	0
180th Street	94th Avenue	97th Avenue	Local Road	15 mph	low	0
184th Street	87th Avenue	Old Cutler Rd	Minor Arterial	40 mpg	500	0

* For road segments where AADT was not readily available, traffic volume was assessed as light, moderate, heavy based on field observations

** Total pedestrian and bicycle crashes, 2000 - 2004

6.5 Site Assessment and Inventory of Existing Facilities

Field reviews for Perrine Elementary School were conducted in January, 2010. The primary deficiencies that were identified along the proposed safe routes were missing sidewalks, missing crosswalks and missing ADA accessible sidewalk extensions connecting the crosswalk or edge of pavement through the swale to the sidewalk. The area surrounding Perrine Elementary School is already developed. Site conditions are not expected to change. With the Villages Green Initiatives the level of Pedestrian traffic is expected to increase.

6.5.1 Roadway Facilities / Pedestrian Facilities / Traffic Controls and Devices

There are few traffic lights in the immediate area, yet at the main entrance to the school on 168th Street there are four signals in the area which protect pedestrians and bicyclists. Most other signals are on the section-line and half-section line roads particularly along US-1. About 30 signals are currently located within the attendance boundary. The roadway facilities function as more suburban than urban, due to the nature of the land and its geographic

location. As such pedestrian facilities are not comprehensive in location. There are occasional gaps in the infrastructure, making it seemingly more dangerous to access the school on foot or bicycle. As development occurs these pedestrian facilities are being incorporated into the built environment.

7.0 RECOMMENDED ROUTES and NECESSARY IMPROVEMENTS

Following the process described in Section 2, "Development of Safe Routes", the recommended SRTS were developed for Perrine Elementary School. The map in the next section shows the recommended SRTS. The table below shows pertinent roadway and traffic improvements for the road segments along the recommended SRTS.

Table 7:
Perrine Elementary School
Opinion of Probable Costs

Road Segment	Recommended Improvements	Priority	Length	Unit	Total
77th Avenue (168th Street to Old Cutler Rd)	Install 5' sidewalk between 168th St and Old Cutler Rd - west side	II	1,200	ft	46,680.00
79th Avenue (168th Street to 166th Street)	None				
97th Avenue (180th Street to 181st Street)	None				
94th Avenue (176th Street to 180th Street)	None				
92nd Avenue (158th Street to 176th Street)	Install 5' sidewalk between 160th St and 176th Street - west side	II	5,300	ft	206,170.00
	Install painted 10' wide crosswalks at 168th Street intersection - all sides	I	200	ft	500.00
91st Avenue (173rd Street to 166th Street)	None				
88th Court (174th Street 164th Street)	None				
87th Avenue (184th Street to 163rd Street)	Install 5' sidewalk between 163rd St and 168th Street - west side	I	900	ft	35,010.00
	Extend School Zone paint on road north and south of 168th St	I	70	ft	200.00
	Install School Zone flashers	I	2	AS	10,000.00
83rd Avenue (174th Street to 172nd Street)	None				
160st Street/ 164th Street (S. Dixie to 90th Avenue)	Install 5' sidewalk on north and south side from S. Dixie to 90th Avenue	II	2,200	ft	85,580.00
164th Street (90th Avenue to 87th Avenue)	None				
168th Street (92nd Avenue to Old Cutler Rd)	Extend School Zone paint on road north and south of 168th St	I	70	ft	200.00
	Install School Zone flashers and speed flashback signs in front of school	I	2	AS	10,000.00
	Install solar powered pedestrian crossing sign at traffic circle at 87th Avenue	I	4	AS	6,400.00
	Install painted 10' wide crosswalk at key intersections and at school entrance	I	700	ft	1,750.00
170th Street (81st Avenue to 79th Avenue)	None				
172nd Street (91st Avenue to 88th Court)	None				
174th Street (91st Avenue to 88th Court)	None				
176th Street (94th Avenue to 87th Avenue)	Install 5' sidewalk on north and south side from 90th Avenue to theoretical 88th Court	II	1,800	ft	70,020.00
	Install painted 10' wide crosswalk at key intersections	I	700	ft	1,750.00
181st Terrace (97th Aveenue to 99th Avenue)	Innstall 5' sidewalk on north side from 97th Ave to 99th Ave	II	900	ft	35,010.00
184th Street (87th Avenue to Old Cutler Road)	Innstall 5' sidewalk on north side where gaps exist	II	2,500	ft	97,250.00
Preliminary Costs					606,520.00
Contingency (20%)					121,304.00
Mobilization (10%)					60,652.00
Maintenance of Traffic (10%)					60,652.00
Opinion of Total Costs					**849,128.00**

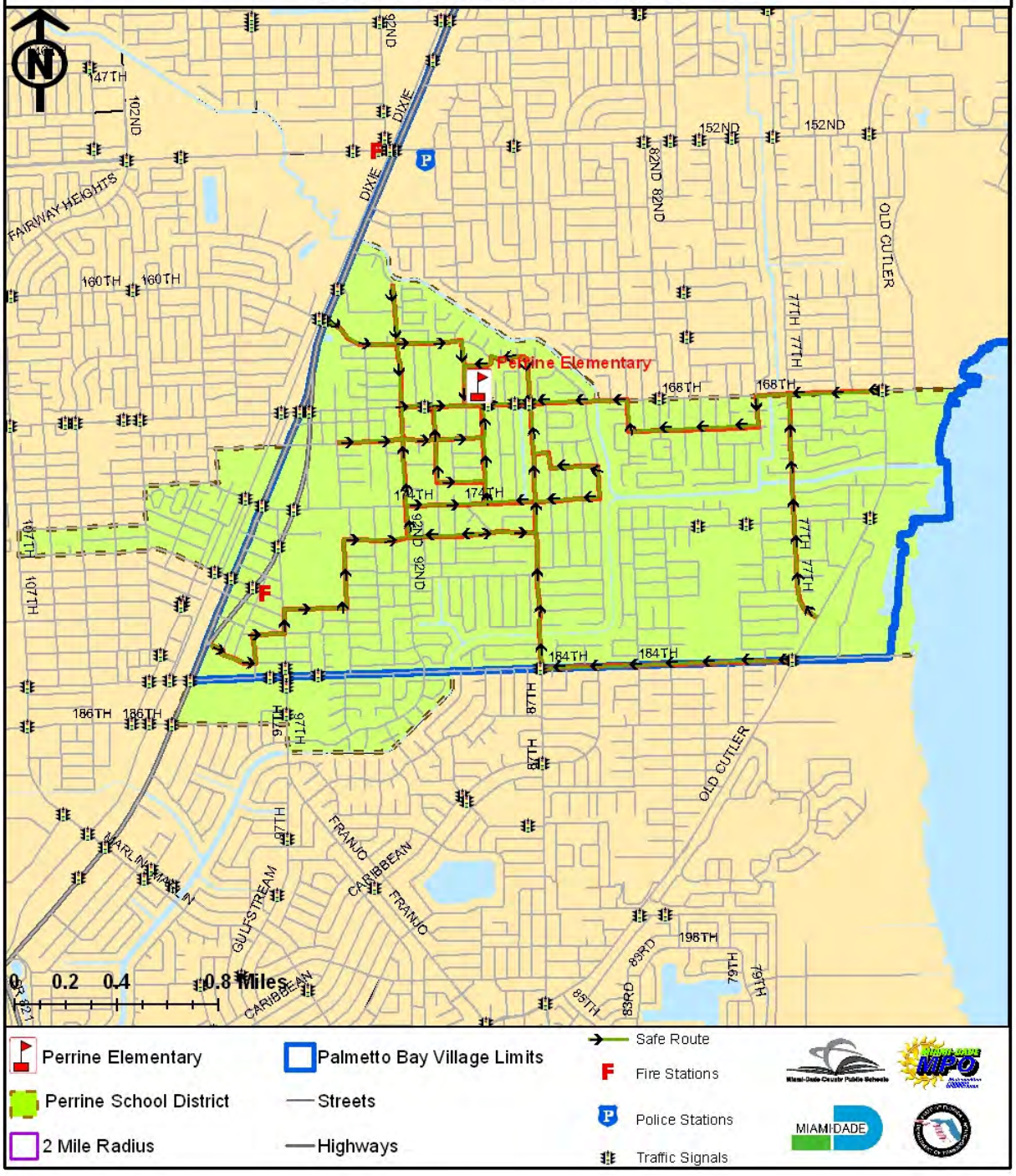
8.0 SAFE ROUTES MAP

Priority was given to providing route densities close to the schools, within the ½ mile radius, which is most conducive to walking. Route density decreases as distance from the school increases. Routes central to residential areas were preferred, as were those that were major corridors connecting residential areas and the school. Routes are shown to cover a 2 mile radius in each direction for bike routes. Distances greater than ½ mile are not as conducive to walking, however this is still considered a reasonable distance for a child to bike.

Perrine Elementary School

8851 SW 168th Street - Palmetto Bay, FL 33157

SAFE ROUTES MAP



9.0 APPLICATION