

# Image: Second strict Travel Plan NJ Safe Routes to School April 2016 Image: Second strict Travel Plan Plainfield School District Travel Plan



#### **ABOUT THE STUDIO**

This studio will support the statewide SRTS program by enhancing the School Travel Plan element of the program. A School Travel Plan not only describes current conditions, but "maps out" specific issues and potential solutions that will improve pedestrian and bike travel to and from school for the purpose of increasing the number of students and parents who walk and bike to school while improving safety. There are six elements necessary for a School Travel Plan to be considered complete. These elements are 1) school description; 2) working group and partnerships; 3) walk/bike barriers and opportunities; 4) map of the school neighborhood; 5) goals and actions; and 6) program evaluation and monitoring.

The clients for this studio are the NJ Department of Transportation's Office of Bicycle and Pedestrian Programs, Plainfield Public School District, and City of Plainfield Planning Division. Our studio will develop a districtwide school travel plan that will serve as a model and guide to aid with conducting districtwide school travel plans throughout New Jersey.

#### **ADVISORS**

Leigh Ann Von Hagen, AICP/PP and Sean Meehan, Alan M. Voorhees Transporation Center Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey.

#### AUTHORS

Nan Chen, Yupo Chiu, Karan Gandhi, Ziye Guo, Ganlin Huang, Chao Lyu, Chihuangji Wang Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey.

#### ACKNOWLEDGEMENTS

The studio would like to express its gratitude for the assistance provided by the following groups and individuals, who volunteered their time and effort to support this studio and its products.

- Edward J. Bloustein School of Planning and Public Policy at Rutgers University
- Alan M. Voorhees Transportation Center
- EZ Ride
- Federal Highway Administration, U.S. Department of Transportation
- New Jersey Department of Transportation
- Plainfield Board of Education
- Plainfield Police Division
- City of Plainfield
- HNTB Corporation
  - Andy Kaplan
  - André Luboff
  - Steven Alpert







### SECTION 1: INTRODUCTION & BACKGROUND

8

What is Safe Route to School?

What is a District School Travel Plan?

About this Project/Methodology

#### SECTION 2: SUMMARY OF CITY AND SCHOOL CHARACTERISTICS 12

Plainfield City History & Characteristics

Plainfield City Demographics

School District Transportation & Existing SRTS programs

Working Group Members

Existing Policies (Municipal & School)

Public School Characteristics /Description

Crash Data

#### SECTION 3: SCHOOL SELECTION 24

¢ ¢

School Selection Methodology

Population

Demographics

Crossing Guards

Selected Schools



SECTION 4: SCHOOL NEIGHBORHOOD CHARACTERISTICS	
School Student Travel Mode Tally Summary	
School Walkability Route Maps	
Photo Inventory/Common Problems	
Potential Solutions	
SECTION 5: PUBLIC INPUT AND COMMUNITY PRIORITIES ••••••••••••••••64	
Public Meeting Description	
Summary of Concerns	
SECTION 6: ACTION PLAN 66	
Education	
Encouragement Enforcement	
Engineering	
Evaluation	
SECTION 7: POLICY AND FUNDING OPPORTUNITIES 74	
Municipality Policy Adoption	
School District Policy Adoption	
Funding Opportunities	
ALL COO	

NJ Safe Routes to School | 🎊 🚴 支

Figure 1: Location of City of Plainfield, NJ Figure 2: Population Change in City of Plainfield, NJ from 1870 to 2010 Figure 3: Population Density in City of Plainfield, NJ Figure 4: 2010 Population by Age and Sex- City of Plainfield, NJ Figure 5: Hispanic or Latino (of any race) Population Percentage of City of Plainfield, NJ Figure 6: Black Alone (not Hispanic or Latino) Population Percentage of City of Plainfield, NJ Figure 7: White Alone (not Hispanic or Latino) Population Percentage of City of Plainfield Figure 8: Crash Severity (2003-2015), City of Plainfield, NJ Figure 9: Crash Data Trend for Cyclists and Pedestrians, 2010-2014 Figure 10: Cyclist and Pedestrian Crash Map, 2010-2014 Figure 11: Crash Severity for Cyclists and Pedestrians, 2010-2014 Figure 12: Crash Time in All Types from 2010-2014 Figure 13: Crossing Guard Location with Crshes Map, 2010-2014 Figure 14: Cyclist, Pedestrian Crash and School Catchment Area, 2010-2014 Figure 15: Crash Type and Crossing Guard Map, 2016 Figure 16: Student Travel Mode by percentage

Figure 17: School Walkability Route Map

| NJ Safe Routes to School



Table 1: Population of Race in City of Plainfield, NJ Table 2: Population of Ethnicity in City of Plainfield, NJ Table 3: Schools Information in City of Plainfield, NJ Table 4: Crash Severity of All Types from 2010 to 2014 Table 5: Number of Crashes Involving Cyclists and Pedestrians (2010-2014) Table 6: Crash Type, 2010-2014 Table 7: Number of Crashes Involving Cyclists and Pedestrians, 2010-2014 Table 8: Crash Severity of All Types from 2010 to 2014 Table 9: Crash Severity for Cyclists and Pedestrians, 2010-2014 Table 10: Morning In-class Student Travel Tally Results by School Table 11: Afternoon In-class Student Travel Tally Results by School Table 12: Typical Students Travel Mode by Percentage Table 13: Definition of Action Timeframe and Cost Table 14: Education Action Plan Table 15: Encouragement Action Plan Table 16: Enforcement Action Plan Table 17: Engineering Action Plan Table 18: Evaluation Action Plan



# SECTION 1 INTRODUCTION & BACKGROUND

SPEED

25

a

CRESSING VILM

## 01 | INTRODUCTION AND BACKGROUND

#### What is Safe Routes to School?

Safe Routes to School (SRTS) is an international, federal, state and local effort to create safe, convenient and fun opportunities that encourage children to walk and bicycle to and from school. In 2005, Congress passed legislation that established a National Safe Routes to School program dedicating funds administered through the Federal Highway Administration, and requiring each state to have a Safe Routes to School Coordinator as a central point of contact for the state.

New Jersey Safe Routes to School (NJ SRTS) is New Jersey's statewide initiative led by NJDOT to enable and encourage students to safely walk and bicycle to school through education, training and research efforts. The mission of NJ SRTS is to empower and assist communities with identifying issues, creating partnerships and implementing projects and programs to encourage walking and biking to and from school as a safe, daily activity. Safe Routes to School projects can involve physical improvements to the environment as well as encouragement programs to promote more walking and bicycling to and from school. The vision of NJ SRTS is to develop a culture and environment where walking and bicycling to school is safer, more appealing and a part of daily life for students of all abilities throughout New Jersey.

The New Jersey Safe Routes to School Resource Center assists public officials, transportation and health professionals, and the general public in creating a safer and more accessible walking and bicycling environment through primary research, education and dissemination of information about best practices in policy and design.

In partnership with the New Jersey Safe Routes to School Resource Center, Regional Coordinators at the state's eight Transportation Management Associations offer advice and assistance in getting programs off the ground in communities in all 21 counties. The NJ SRTS Resource Center supports the TMA Regional Coordinators through training and outreach to help maximize the effectiveness of the NJ SRTS program.

The SRTS Resource Center is supported by the New Jersey Department of Transportation through funds provided by the Federal Highway Administration. The SRTS Resource Center is managed by the Alan M. Voorhees Transportation Center within the Edward J. Bloustein School of Planning and Public Policy at Rutgers, The State University of New Jersey.

#### What is a District School Travel Plan?

A SRTS School Travel Plan "maps out" how to improve pedestrian and bicycle travel to and from school to increase the number of students who walk and bike to school and to improve safety. A School Travel Plan identifies the following:

- Where students currently walk and bike.
- Where to make safety improvements to the pedestrian and bicycle environment.
- What changes need to be made so that students to encourage more walking and bicycling to school.

The School Travel Plan will identify short term solutions for immediate action and implementation, as well as long term ones that may require further planning.

While the NJ SRTS Resource Center has previously developed a successful and effective model for developing a School Travel Plan for a single school, large school districts with numerous schools present new and additional challenges. A School Travel Plan requires detailed information, which is often difficult to provide for a School Travel Plan that addresses multiple schools. A School Travel Plan also requires public input, which can be very difficult to coordinate on a district-wide scale. A District focused School Travel Plan process streamlines the information gathering and public input process, using this data to help communities to complete a detailed prioritization of districtwide barriers and countermeasures. In the case of large school districts, priority information is necessary due to the potential for a large number of countermeasures and the community's need to determine which countermeasures to prioritize.

#### About this project / Methodology

The Plainfield School District Travel Plan is the first travel plan prepared for the Plainfield Public School District and is the result of a partnership with the New Jersey Department of Transportation, Rutgers University, EZ Ride, and the City of Plainfield. The purpose of this project is to develop a districtwide travel plan that will ultimately make it safer and easier for students to walk and bicycle to and from school. Implementation of this plan aims to improve the health of students and reduce traffic congestion within school zones. As the first of its kind in the State of New Jersey, this district plan will serve as a model for future plans in districts across the State of New Jersey as well providing Plainfield Public Schools and the City of Plainfield with a list of actions that will help to encourage safe and active options to travel to and from schools throughout the City.

The Plainfield Public School District includes 15 public schools whose catchment areas comprise the entire City. To help understand the issues and concerns of such a large spatial area, a comprehensive methodology was designed to select representative schools. Information including city history, demographics, transportation data, as well as walking and bicycling related policies from both the City and the Schools, were gathered and analyzed. A student arrival and departure travel mode tally survey was distributed to each of the Plainfield Public School District's 15 public schools. Returned tally data was used to understand the actual travel patterns of students throughout Plainfield. Additionally, a principal survey was conducted to understand transportation concerns at each school and to allow our team to identify some common issues.

Based on the analysis of the information collected throughout this city-wide and district-wide effort, five school neighborhoods were selected as the representative schools where specific concerns and issues could be observed and identified by the project team. The five school neighborhoods selected included the catchment areas of a total of seven schools. Walkability assessments and observations were conducted around each of the seven school locations as school existing conditions were identified and common areas of concern were noted. A public meeting was held to raise public interest, gather public input and identify community priorities. This comprehensive document including action plans, policy strategies and potential funding opportunities for the Plainfield Public School District and City of Plainfield is the final result of the project.







### SECTION 2

# SUMMARY OF CITY AND SCHOOL CHARACTERISTICS

### 02 | SUMMARY OF CITY AND SCHOOL CHARACTERISTICS

#### **Plainfield City History & Characteristics**

The City of Plainfield is located in the Central New Jersey on the southwestern edge of Union County, bordering Somerset and Middlesex Counties and nine municipalities. In Middlesex County, Scotch Plains borders to the north and east, Fanwood to the northeast, South Plainfield and Piscataway to the South, Dunellen to the southwest, and to the southeast, Edison. In Somerset County, Green Brook Township lies to the northwest, North Plainfield lies to the north and Watchung borders to the northwest. Plainfield is in the Raritan Valley, a line of cities in central New Jersey, and lies on the east side of the Raritan Valley along with Edison.

Plainfield, nicknamed "The Queen City", originally developed as a bedroom suburb of the New York metropolitan area, before becoming a regional urban center with diversified industries including printing and the manufacture of chemicals, clothing, electronic equipment, and vehicular parts. With two NJ Transit rail stations on the Raritan Valley Line, Plainfield station in the downtown and the smaller Netherwood station east of downtown, Plainfield remains a well-connected regional hub and a great place to live and do business in Central New Jersey. In 2014, Plainfield became one of 31 designated Transit Villages by demonstrating a commitment to revitalizing and redeveloping the area around their transit facilities into compact, mixed-use neighborhoods. Plainfield is a certified Urban Enterprise Zone (UEZ) which offers incentives like lower sales tax to foster an economic climate by encouraging businesses to develop.



#### **Plainfield City Demographics**

#### Population

In general, the population of the City of Plainfield has increased fairly consistently since the 1930s. Based on data collected through the American Community Survey, the City of Plainfield's population saw an increase to 50,423 residents in 2014. With a total area of 6.034 square miles, Plainfield's population density is 8,270.1 per square mile, placing the city with a rank of 45th most dense of New Jersey's 566 municipalities.

There are ten census tracts located in the City of Plainfield. In Figure 3, the darker colors show areas with greater population density based on 2014 data. The central part of the City, the Central Business District, is the most densely populated section of Plainfield. That area also contains many transportation options as it is crossed by State Route 28 and served by both NJ Transit train and bus service. The eastern part of the City, adjacent to Edison Township and Scotch Plains Township, shows the lowest density.





Figure 3: Population Density in City of Plainfield, NJ

#### Age by Sex

Plainfield's population of males is 25,801, while the population of females is 24,622. Figure 4 illustrates Plainfield as a developing city, with a larger population of young adults. The largest cohorts are from 0-10 and 25-59 years old.

#### Race and Ethnicity

As Table 1 shows, the largest portion of Plainfield's

population identifies as "Black or African American" at 42.6%, and at 38.4%, the second largest segment of the population identifies as "some other race."

Nearly 40% of Plainfield's population identified as "Hispanic or Latino" as shown in Table 2. The following three maps show the distribution of each race or ethnicity in every census tract. People who identify as "Hispanic" seem more concentrated along the Route 28 corridor. Those who identify as "Black or African American" or "White" seem more concentrated in tracts near Edison Township and Scotch Plains Township.



Race	Population	%				
Black or African American	21,465	42.6%				
Some other race	19,3 <b>8</b> 6	38.4%				
Asian	894	18%				
White	7,812	15.5%				
Two or more races 866 1.7%						
Total	50,423	100%				
Table 1: Population of Race in City of Plainfield, NJ						

Ethnicity	Population	%				
Not Hispanic or Latino	30,799	61_1%				
Hispanic or Latino	19,624	38.9%				
Total 50, 423 100%						
Table 2: Population of Ethnicity in City of Plainfield, NJ						



### School District Transportation & Existing SRTS Programs

In the City of Plainfield, EZ Ride has an established history of working with groups to implement Safe Routes to School projects and events. EZ Ride, a non-profit public-private partnership, has the mission to implement transportation programs and services to enhance quality of life, mobility, and economic opportunity for people in our service area, while reducing traffic congestion and improving air quality. EZ Ride serves Bergen, Essex, Monmouth, Passaic and Union County from offices in Wood-Ridge, Newark and Eatontown. In 2015, EZ Ride became a partner in two Bicycle Giveaway events in cooperation with The Salvation Army Plainfield Corps, Plainfield Police Department, The Union County Police Department: Traffic Safety Program, AAA Northeast NJ Division, The Plainfield Unit of the Union County Boys & Girls Club and the Plainfield Dairy Queen. All the bicycleswhich were previously owned—were repaired and restored by Rich and Donna Albanese- DeMair of the Plainfield Dairy Queen. To date, the popular bike giveaway which is held twice-yearly both in summer and winter, has provided the children of Plainfield with over 1,000 new bicycles. At both annual events, EZ Ride was present to ensure that the children who received their new bicycles know how to ride their new bikes safely. At each event, EZ Ride organized a bicycle rodeo to teach the children about pre-ride safety checks; bike sizing and helmet fitting; bicycle handling and safety drills; and tips on how to ride safely in traffic.

Following their success with the Bike Giveaway

events, EZ Ride focused their efforts on working with the Plainfield Public School District. A presentation by EZ Ride made to the Board of Education on September 15, 2015 has been instrumental in gaining district support for walking and bicycling programs and participation in a District School Travel Plan. On November 4, 2015 a team of coordinators from the New Jersey Department of Transportation, the Voorhees Transportation Center and EZ Ride received approval from representatives from Plainfield Public Schools and the City of Plainfield to move forward with developing a District Walkability Assessment and School Travel Plan.

In addition to its work increasing support for physical activity and safety through Safe Routes to School events, EZ Ride is also working to improve community health and nutrition in Plainfield by securing a New Jersey Healthy Communities Network grant. In collaboration with the Plainfield Department of Health and the Union County Health Department, EZ Ride will be reaching out to local bodega owners to encourage them to sell more fresh produce and healthier foods to their customers. This initiative aims to make it convenient for children to find healthy snacks in the corner stores and bodegas nearby their schools.

#### **Working Group Members**

This program aims to engage active local organizations and community groups who will support the SRTS program.

Organization	Responsibility	Contact
Public Schools of Plainfield	Interim Assistant Superintendent	S. Johnson-Tucker
Public Schools of Plainfield	Community Engagement	Gloria Mentealegre
Public Schools of Plainfield	Director, Planning Research & Evaluations	Yvonne Breauzsaus
Public Schools of Plainfield	Director, School Safety & Security	Truy A. Edwards
City of Plainfield	Deputy City Administrator for Economic Development	Carlos N. Sanchez
City of Plainfield	Director of Planning	Bill Nierstedt.
City of Plainfield	Director, Department of Public Safety & Police Division	Carl N. Riley
City of Plainfield	Captain, Plainfield Police Division	David M. Guarino
City of Plainfield	Executive Assistant to the Director of Public Safety for the City of Plainfield	Deinine Martin
City of Plainfield	Zoning Officer -Planning Division, City of Plainfield	Kanald Johnson
City of Plainfield	Plainfield Police Division	Michael Auricchio
NUDOT	Safe Routes to School Coordinator	Elise Bremer-Nei
NUDOT	Office of Bicycle and Pedestrian Programs	William Riviere
EZ Ride	Safe Routes To School Coordinator & Manager, Bloe & Pedestrian Programs	lis Lee
EZ Ride	Safe Routes to School Assistant Coordinator	Christopher Gonda
Voorhees Transportation Center, Ratgers University	Senior Research Specialist	Leigh Ann Von Hagen
Voorhees Transportation Center, Ratgers University	Project Manager	Sean Meehan

#### **Existing Policies (Municipal & School)**

There are no policies about walking and bicycling in the City of Plainfield or the Public School District. However, some language on school websites was found which have some effect on students' walking and bicycling activities. These practices are presented as follows:

#### Schools

• Schools encourage parents to pick up students promptly from school and wait outside for student dismissal to make sure students can exit the building safely. In walk audits, many parents were observed waiting in idling cars outside school building prior to dismissal time.

• Some schools ask parents to follow assigned traffic patterns and not to break traffic laws. While conducting walk audits, there were often many vehicles observed that parked in no parking zones.

#### Municipality

• In the Master Plan and Re-examination Report of the City of Plainfield, the City proposed policies to promote alternate means of transportation and safe streets. Some strategies mentioned include a pedestrian circulation plan, bicycle circulation plan, street lighting study, installation of bicycle facilities and grant opportunities. It is also mentioned that transportation circulation issue should be synthesized in various city policies, such as the Land Use Ordinance, Capital Investment Plan and Master Plan.

• In the Homeowner's Handbook of the City of Plainfield and Residential Front Yard Guidelines, the maintenance of the public sidewalk is identified as the responsibility of homeowners and plantings in front yards cannot impede pedestrian activities. Under certain conditions, homeowners can go to the Department of Public Works and the Engineering Division for support.

• Snow removal will be conducted by the City within 12-24 hours of the start of a storm.

• In the Plainfield Charter, homeowners are asked to keep potentially dangerous dogs within a fence of at least six feet in height separated by at least three feet from the confined area.

### Public School Characteristics / Description

The City of Plainfield is home to 19 schools, 15 of which are under the jurisdiction of the Plainfield Public School District with the remaining four schools operating as Charter schools. The School District is one of 31 School Development Authority (SDA) districts (former Abbott districts) and receives special compensation from the state to cover costs for school building and renovation projects. District wide, 57-95% the students receive free and reduced meals. The City of Plainfield employs about 47 crossing guards each school year to cover 43 school crossing guard locations throughout the City. Crossing guards are on duty on school days between 7:30-8:30 am and 2:30-3:30 pm.

#### **Principal Survey Results Summary**

As part of our data collection, an online questionnaire was distributed to each school principal at the schools under the jurisdiction of the Plainfield Public School District to better understand transportation issues at each school and to determine each school's interest in Safe Route to School activities. Thanks to the support of the Plainfield Board of Education, responses were received from principals at 14 of Plainfield's Schools. With 11 out of 14 respondents indicating that the concerns were "very important," School principals reported that their the top concerns related to walking and biking were speeding cars, availability of crossing guards, the amount of traffic on roads, and the availability of sidewalks. Principals were much less concerned with bicycling and bike infrastructure. Four out of 14 principals reported that bike parking is "unimportant," while half of the principals reported that bike paths or trails are unimportant factors as they relate to walking or bicycling to and from their school.

When asked about the SRTS activities and strategies their school is currently implementing or would be interested in implementing, many principals indicated that a variety of SRTS activities are currently being implemented in their schools. Pedestrian and bicycle education, walking school bus programs and encouragement contests were reported to already be in place at some Plainfield schools. While interest in walking programs was apparent at most schools, attitudes towards bicycling programs were less favorable. Principals in 11 of 14 schools reported that they had not implemented, or were not interested in bike education; and 8 out of 14 schools were "not interested" in bike trains. This attitude may stem from a lack of experience with bicycling programs. With improved infrastructure and a stronger bicycling culture within Plainfield, bicycling may prove to be considered less problematic, and bicycling events may be more acceptable to principals in the future.

Educational Institutions	Total Students	Grades	Free and Reduced Lunch Eligible %	Arrival Time	Dismissal Time
1 Barlow Elementary School	397-408	K-5	95.7%	8:00 AM	2:35 PM
2 Cedarbrook K-8 Center	641-659	K-8	78.5%	8:05 AM	2:35 PM
Clinton Elementary School	390-412	K-5	90.0%	8:05 AM	2:35 PM
4 Cook K-7 Center	192-222	K-7	63.1%	8:00 AM	2:35 PM
5 Emerson Community School	502-512	K-5	89.0%	8:05 AM	2:35 PM
6 Evergreen Elementary School	606-619	K-5	94.9%	8:05 AM	2:35 PM
7 Jefferson Elementary School	450-460	K-5	92.3%	8:05 AM	2:35 PM
8 Stillman Elementary School	316-327	K-5	96.0%	8:05 AM	2:35 PM
9 Washington Community School	639-664	K-5	95.3%	8:05 AM	2:35 PM
0 Woodland Elementary School	254-271	K-6	55.5%	8:05 AM	2:35 PM
1 Maxson Middle School	589-683	6-8	87.6%	8:15 AM	2:57 PM
2 Hubbard Middle School	561-593	6-8	94.3%	8:10 AM	2:50 PM
Barack Obama Academy of Academic & Civil Development	84-98	9 - 12	81.4%	7:20 AM	3:53 PM
4 Plainfield High School	1559-1692	9 - 12	86.8%	7:50 AM	2:15 PM
Plainfield Academy of Arts and Advanced Studies	392-396	7-12	70.6%	8:00 AM	2:50 PM
6 Queen City Academy Charter School	250	K – 8	79.6%	8:00 AM	3:30 PM
17 Union County Team Charter School	320	K – 12	57.5%	NA	NA
8 College Achieve Charter School	NA	K – 7	NA	NA	NA
9 Barack Obama Green Charter School	204	9-12	70.6%	7:45 AM	2:45 PM

#### **Principal Survey Results Summary**

As part of our data collection, an online questionnaire was distributed to each school principal at the schools under the jurisdiction of the Plainfield Public School District to better understand transportation issues at each school and to determine each school's interest in Safe Route to School activities. Thanks to the support of the Plainfield Board of Education, responses were received from principals at 14 of Plainfield's Schools. With 11 out of 14 respondents indicating that the concerns were "very important," School principals reported that their the top concerns related to walking and biking were speeding cars, availability of crossing guards, the amount of traffic on roads, and the availability of sidewalks. Principals were much less concerned with bicycling and bike infrastructure. Four out of 14 principals reported that bike parking is "unimportant," while half of the principals reported that bike paths or trails are unimportant factors as they relate to walking or bicycling to and from their school.

When asked about the SRTS activities and strategies their school is currently implementing or would be interested in implementing, many principals indicated that a variety of SRTS activities are currently being implemented in their schools. Pedestrian and bicycle education, walking school bus programs and encouragement contests were reported to already be in place at some Plainfield schools. While interest in walking programs was apparent at most schools, attitudes towards bicycling programs were less favorable. Principals in 11 of 14 schools reported that they had not implemented, or were not interested in bike education; and 8 out of 14 schools were "not interested" in bike trains. This attitude may stem from a lack of experience with bicycling programs. With improved infrastructure and a stronger bicycling culture within Plainfield, bicycling may prove to be considered less problematic, and bicycling events may be more acceptable to principals in the future.

#### **Crash Data**

#### Overview

From 2003 to 2015, there were 17,728 total crashes in the City of Plainfield. Figure 8 shows the location and severity of these crashes.

We focused our analysis on the crash data recorded in Plainfield during the years 2010 to 2014. Although we could not confirm, due to low overall numbers the 2014 crash data may not be complete. The crash locations from the five-year period are shown in Figure 8 along with the severity of each crash.

There were 6,155 total crashes in the five-year period. The number of crashes has generally decreased from 2010 to 2014. Table 4 shows the number of crashes in each year from 2010 to 2014.

#### Crash Type

Among the 6,155 crashes in the City of Plainfield, the combined total crashes involving cyclists and pedestrians is 312 or 5.2%. Table 5, Figure 8 show the crash types from 2010 to 2014.



Other.

94.9%

Table 6: Crash Type, 2010-2014



5,843

6,155

Table 5: Number of Crashes Involving Cyclists and Pedestrians

Other

Total

94.9%

100.0%

Table 7 and Figure 9 show that from 2010 to 2014 the total number of pedestrian and bicycle crashes has stayed relatively constant despite the general downward trend in total motor vehicle crashes. It is unknown if the number of pedestrian and bicycle crashes has truly decreased in 2014. Data from 2014 may be incomplete.

Cyclist and pedestrian crash locations were mainly concentrated in the downtown area, which is close to the train station, and is generally the most accessible and walkable area in the City of Plainfield.

Figure 10 shows the location of pedestrian and bicycle crashes in Plainfield from 2010 to 2014. The crash hot spots are primarily located along Route 28, West Front Street, 7th Street, Park Avenue, and West 4th Street. This map shows that many of these crash locations are within close proximity to some of the City's schools.

		2010	2011	2012	2013	2014	Total
Crash	Pedestrian	51	45	54	45	30	225
Data	Cyclist	16	17	21	23	10	87
Data	Total	67	62	75	68	40	312
Table 7: Number of Crashes Involving Cyclists and Pedestrians, 2010- 2014							





#### **Crash Severity**

Among the total 6,155 crashes in the City of Plainfield from 2010 to 2014, more than threequarters were limited to property damage, while 24.3% of crashes involved injuries. There were three crashes (0.1%) involving fatalities. (Table 8)

Crash Severity	Number	%
Fatal	3	0.1%
Injary	1 <b>,499</b>	24.3%
Property Damage Only	4,653	75.6%
Total	6,155	100.0%

Table 8: Crash Severity of All Types from 2010 to 2014 Although there have been no pedestrian or bicycle fatalities reported in the 2010-2014 time period, 257 (82.4%) injuries were reported. (Table 9) The injury percentage for cyclists and pedestrian is four times higher than for all other crash types. This demonstrates that cyclist and pedestrian injuries should remain a concern for the City and School District.

Crash Severity	Number	%
Fatal	0	0.0%
Injury	257	82.4%
Property Damage Only	55	17.6%
Total	312	100.0%
Table 9: Crash Severity for Cyc	clists and Pedes	trians, 2010-
2014		

#### **Crash Time**

Figure 12 shows the times when crashes have occurred. The research team categorized the data by half hour periods and found that most crashes occur between 7-8am and 2-7pm. School arrival time is typically from 8-8:30am, and dismissal time is typically from 2:30-3:30pm; meaning that most crashes have occurred during the times when students are traveling to and from school.

Figure 13 combines pedestrian and bicycle crashes with crossing guard locations. There appear to be fewer pedestrian and bicycle crashes where crossing guards are located.



Crash Time in All Types from 2010-2014 2,127, 34.6% 300 250 635, 10.3% 200 150 100 82 50 2:00-6:00 7:00 9:00 0:00 1:00 2:00 1:00 3:00 4:00 5:00-6:00-7:00 8:00 4:00 5:00 8:00 0:00 0:00 00 2:00 3:00 1:00 0:00 Figure 12: Crash Time in All Types from 2010-2014





# SECTION 3

6

2-4

11

SCHOOL SELECTION

B13:CBH

### **03** | SCHOOL SELECTION

#### **School Selection Methodology**

Due to the physical size of the district and the number of schools covered by this plan, it was impossible for the research team to conduct detailed walkability assessments in the neighborhood of all of Plainfield's schools. To choose representative school neighborhoods that would serve as the locations for detailed analysis the study team developed a methodology for school selection. The study team considered several factors when making school selections including school population, demographic information, proximity to high crash locations, and school crossing guard locations.

#### Population

Plainfield High School has the largest student population within the City of Plainfield. Evergreen Elementary is one of the larger elementary schools in the City. Due to their close proximity these schools were chosen as assessment sites. Similarly, the large population of Maxson Middle School and its close proximity to Woodland Elementary School made these ideal assessment sites.

#### Demographics

We also wanted to be sure that we were targeting schools neighborhoods that reflected the demographic makeup of the city. Based upon the our analysis of the population density and racial distribution of the City of Plainfield that has already been discussed, we included Stillman Elementary which pulls students from an area with a high concentration of residents identifying as "Hispanic," and Emerson Elementary which pulls from an area with a concentration of residents identifying as "African American." Figure 14 shows the pedestrian and bicycle crashes occurring in Plainfield from 2010-2014, overlapping with the elementary school catchment areas. The crash hot spots were primarily located in downtown Plainfield, within the catchment area of Stillman Elementary School. Following Stillman, Evergreen and Washington Elementary Schools had the second and third most crash-dense catchment areas.



#### **Crossing Guards**

School crossing guards tend to be located in areas that are likely to have a high volume of child pedestrians or in areas with difficult or dangerous crossings. The number of crossing guards placed along Cushing Road in the area of Emerson Elementary and within the densely populated catchment areas of Washington and Stillman Schools indicated areas that warranted a closer look.

#### **Selected Locations**

Based on the principles discussed above, seven schools in five school neighborhoods were selected for walkability assessments:

(1) Evergreen Elementary School and Plainfield

High School

- (2) Washington Community School
- (3) Stillman Elementary School
- (4) Emerson Community School
- (5) Woodland Elementary School and Maxson Middle School



