Safe Routes to School Program

Berkeley Elementary School Travel Plan

47 Berkeley Ave. Westwood, NJ 07675

Prepared By:

Meadowlands Transportation Brokerage Corporation
d/b/a Meadowlink or EZ Ride
144 Park Place East
Wood-Ridge, NJ 07075
(201) 939-4242
www.ezride.org

February 6, 2017

DISCLAIMER

This publication was prepared with funding from the New Jersey Department of Transportation (NJDOT) and the Federal Highway Administration (FHWA). This document is disseminated under the sponsorship of NJDOT and FHWA in the interest of information exchange. NJDOT and FHWA assume no liability for its contents or use thereof.

NEW JERSEY Safe Routes to School

U.S.Department of Transportation
Federal Highway Administration

Table of Contents

Executive Summary

A Safe Routes to School (SRTS) Travel Plan is a resource to encourage and increase the number of students walking or bicycling to school. It provides directions for schools, students, families and the city to build a safer walking and biking environment for residents.

School Travel Plans are site specific and describe the needs of each particular school being studied. The plan includes observations, ideas and an action plan to address issues and problem areas. The Plan covers five aspects of the Safe Routes to School program – Education, Encouragement, Enforcement, Evaluation, and Engineering.

The School Travel Plan outlines the timeframe and funding priorities to support a coordinated schedule of streetscape improvements. In fact, the New Jersey Safe Routes to School (SRTS) infrastructure funding program requires applicants to have an approved School Travel Plan in order to apply for a grant.

1. Goals

The goals of the Berkeley Elementary School Travel Plan are:

a. Identify any issues that impact safety on the key travel routes used by students
b. Provide a list of suggestions to improve the school travel environment (improve safety, reduce congestion) to encourage more students to walk and bike to school
c. Categorize the suggestions in terms of cost and time needed to make repair
d. Implement solutions to encourage more students to walk and bike to school

2. Task Force

This School Travel Plan is the product of a productive partnership. The Berkeley Elementary School SRTS Task Force came together out of a request from the borough to create a safe path for students and residents to be able to travel through the local and County Park to get to school in a safer manner. The involvement of local stakeholders is an important part of ensuring the sustainability of the SRTS initiative and the enactment of the Action Plan.

3. Community Barriers to Health

As per the Community Health Needs Assessment Survey done in 2013 by the Christian Health Care Center, Englewood Hospital and Medical Center, Hackensack University Medical Center, Holy Name Medical Center, and The Valley Hospital, Bergen County's population is much older relative to NJ and the US. Residents are generally well-educated, less likely to be unemployed and more likely to have access to healthy foods and recreation. However, there are still areas with low income and minority populations that face significant health disparities and inequities. Obesity, Fitness, Nutrition and Chronic Disease was identified as the top priority area to focus on for community health.

4. School Travel Data

In December 2016, the Berkeley Elementary School teachers conducted a School Travel Tally to determine how students travel to and from school. 17 percent of students walk in the morning and 23 percent walk in the afternoon as opposed to 71 percent who are driven to school in the morning and 66 percent driven in the afternoon. Additionally, 12 percent reported they carpool in the morning and 11 percent, almost the same figure, carpool in the afternoon after dismissal.

5. Barriers and Opportunities Identified for Safer Walking & Biking

The Safe Routes to School Task Force, and Community Partners from the Borough of Westwood conducted a walkability assessment of the road conditions along Harrington Avenue, Sand Road and through Westvale Park on December 5th. The major intersections near Berkeley Elementary School which students use include:

1. Berkeley Avenue & Harrington Avenue
2. Harrington Avenue & Sand Road

Key opportunities for street improvement include: installing a high visibility crosswalk to help children cross the intersection into the Park, installing traffic signals with pedestrian heads to help children walk safely, installing a sidewalk to connect the local playground to the school, adding a high visibility crosswalk in front of school, adding a lighted paved path and stairs to allow students to travel into and through Westvale park, and adding traffic calming measures such as bike lanes on Harrington Avenue or SLOW SCHOOL ZONE pavement markings and signs.

6. Action Plan

The Safe Routes to School program categorizes the Action Plan into the "Five E's:" Education, Encouragement, Enforcement, Evaluation and Engineering. This is a useful tool because it helps the school prioritize next steps. In a particular community, some of the E's may be more urgently needed than others, so the school can execute the recommendations in any order they choose. This School Travel Plan recommends a number of improvements that can be made to encourage safe walking and biking. The action plan can be used to support SRTS and other Federal or State grant applications to fund municipal roadway improvements.

<u>Key Actions/Recommendations in Action Plan include:</u>

- Install high visibility crosswalk at the intersection of Sand Rd. and Harrington Ave.
- Extend curb at Harrington & Sand to slow turning cars and shorten crossing distance.
- Install sidewalk on Harrington Ave. from Sand Rd. heading towards Pascack Brook Bridge
- Install paved, lighted path into Westvale Park for students to travel to school.
- Install a pedestrian traffic signal at Berkeley Ave. and Harrington Ave. to assist students.
- Encourage students/parents to walk & bike versus driving to reduce congestion/traffic Develop an organized drop-off/pickup and parking plan and communicate it to parents.
- Install a sidewalk on Sand Rd for students and parents to walk to Sand Rd. playground.
- Add painted bike lanes with bollards or sharrow symbols to promote safe biking and alert cars they need to share the road with cyclists.

1. Walking and Cycling to Health

1.1 The Challenge

Over the past few decades, a number of societal and environmental changes have limited children's access to safe places where they can walk, bike and play. For example, increased traffic, neighborhoods that lack sidewalks and urban sprawl have contributed to a sharp decline in the number of students who walk or bike to school. Nationally, while 42 percent of children walked or biked to school in 1969, only 13 percent of children did so in 2001. Additionally, the popularity of television and video games as a means to entertain children has contributed to a more sedentary lifestyle. As a result, children and adolescents are less physically active than they were several generations ago.

The decrease in walking and biking to school and less physical forms of play has resulted in an alarming increase in childhood obesity. During the past four decades, the obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 17 percent), and the obesity rate for adolescents ages 12 to 19 has more than tripled (from 4.6 to 17.6 percent) in the United States.

Developing policies and practices to address these environmental and social barriers to daily physical activity are critical to reducing and preventing obesity among children. Supporting "active transport" (walking and bicycling) to school presents an excellent opportunity to increase daily physical activity among youth.[1]

1.2. The Program

Safe Routes to School (SRTS) is a federal program that encourages, teaches and enables children to safely bicycle and walk to school. The program aims to help children be more physically active with the intent to reduce chronic disease and prevent and reduce obesity. SRTS focuses on increasing the number of children walking and bicycling to school by building and repairing infrastructure such as sidewalks, crosswalks, and bicycle lanes. The program also encourages changes in travel behavior, supports increased enforcement of traffic laws around schools, and educates communities on the benefits and safety aspects of active transport. This report summarizes research on active transport to school, physical activity levels and health outcomes. It also explores the factors that influence walking and biking to school, including the impact of SRTS programs.

The SRTS Program is a collaborative effort of multiple stakeholders that include community members, elected officials, city planners, and police departments. SRTS brings a community closer together by implementing programs such as walking school buses, walkability assessments, bicycle rodeos and pedestrian safety presentations. The benefits of SRTS extend far beyond the schools into the community as a whole.

[1] Walking and Biking to School, Physical Activities and Health Outcomes, Robert Wood Johnson Foundation

In addition to keeping residents physically active and healthy, community spaces that promote walking can draw people together safely and provide more opportunities for people of all ages and abilities to stay socially connected and engaged. Local areas with good pedestrian networks can also have substantial economic and environmental benefits to a local area.

Towns and cities that develop recreational programming that encourages the use of pedestrian networks, infrastructure, trails, or walkable facilities can help revitalize a downtown, increase private investment, increase property values, promote tourism, and support the development of a good business climate. A growing body of research connects higher property values and economically sound communities to better walkability and closer proximity among certain neighborhood destinations, including houses, parks, schools, businesses, services, and social venues. Main streets can benefit economically from good sidewalks and the ability to easily and safely peruse shops, restaurants, and local services.

An SRTS Walkability Assessment and School Travel Plan "maps out" specific ways to improve pedestrian and bicycle travel to increase the number of students who walk and bike to school and to improve safety. A School Travel Plan is a report about the Walkability Assessment and identifies the following:

- Where students currently walk and bike?
- Where students would walk and bike if they could?
- What changes need to be made so that students can and will walk and bike to school?

The School Travel Plan identifies short term solutions for immediate action and implementation as well as long term solutions that may require planning and additional funds. Benefits of developing a School Travel Plan include:

- Creating partnerships between the school and surrounding community
- Generating ideas and actions so walking and bicycling is safer
- Building community excitement and support
- Making an application for a SRTS grant more competitive by demonstrating a connection between goals, actions and targets.

1.3. The Team

The New Jersey Department of Transportation (NJDOT) funds and administers the SRTS program in New Jersey, and the Voorhees Transportation Center (VTC) at Rutgers' University provides technical and administrative support.

The actual implementation of the SRTS walkability audit around Berkeley Elementary School was undertaken by a group of organizations: the Regional SRTS Coordinator at EZ Ride, Borough of Westwood administrators, VTC, the Berkeley School Principal, DPW, and Traffic Police.

Meadowlink/EZ Ride

In New Jersey, Transportation Management Associations (TMAs) have taken the lead in coordinating the implementation of the SRTS programs. TMAs are non-profit organizations whose mission is to implement transportation programs and services like carpools, vanpools, shuttles, biking and walking that reduce congestion and improve air quality. Meadowlink/EZ Ride is one of eight Transportation Management Associations (TMAs) in New Jersey and primarily serves Bergen, Essex, Monmouth, Passaic and Union counties.

Background to the Walkability Assessment at Berkeley Elementary School

The effort to improve walking and biking safety at Berkeley Elementary School was initiated by the Mayor and Borough Grant Writer of Westwood in October 2016 who setup a meeting with EZ Ride's SRTS Coordinator. Their objective was to apply for an SRTS infrastructure grant to improve an unpaved path in Westvale Park and the crosswalk/intersection near the school. The goal is to provide a lighted, contiguous and safe way for students who live across town to walk or bike to school through Westvale Park and Pascack Brook County Park to avoid traffic-heavy local streets.

As well, Superintendent Ray Gonzalez, who was previously the Principal of Berkeley Elementary School, noted that crossing guard, Cyril Kearney, was struck by a car at the intersection of Berkeley Avenue and Harrington Avenue in 2015 and that the school community feels it is a priority to improve the safety of that intersection.

The SRTS Coordinator at EZ Ride offered to do a walkability and bikeability assessment and assist the City to write a School Travel Plan to identify problems and an action plan which could be submitted with grant applications. The Mayor connected the SRTS team at EZ Ride with the District Superintendent who committed his support of the program and the City's goals. The team plans to seek the SRTS Gold Recognition award for the two elementary schools in Westwood: Berkeley School and Brookside School.

School Travel Tallies were done in December 2016 to provide a baseline measure of how students travel to school. A report was generated by Voorhees Transportation Center on December 14, 2016 and sent to EZ Ride.

A key element of the SRTS program is to engage community groups and local stakeholders to support and sustain the SRTS program after the travel plan is completed. Their role is to implement the School Travel Plan within the community. A team was gathered from the key stakeholders within the Borough and School District to work on improving pedestrian safety for students.

On Monday December 5th, a walkability team composed of the Principal, Mayor, City Administrator, Traffic Police Officer, DPW Chief, Borough Grant Writer, the SRTS Coordinator and a VTC representative from the Bloustein School met to review a presentation on how to conduct a walk audit and what to look for to make it safer for pedestrians and bicyclists. After the final bell rang, the team moved outdoors to conduct an assessment and departed with students at dismissal. The team walked from behind the school along Harrington Avenue. The group crossed the intersection of Harrington Avenue and Sand Road and used a footpath to get into Westvale Park. We walked the planned path and exited the park at another entrance onto Sand Road next to a small playground. We assessed Sand Road and returned towards the school on Harrington Avenue.
The area in front of the school on Berkeley Ave was assessed and the intersection observed immediately after dismissal.

On Friday January 13th, a Pedestrian Safety Presentation was delivered by the SRTS team to all 300 K-5th grade students at the Berkeley School and a SRTS walking safety poster contest was held to remind students what they learned and to help the school qualify for the SRTS Recognition award program in 2017.

A list of the Task Force who gave input into the Walkability Assessment and who are crucial to the implementation of the project are included in the following table.

Berkeley Elementary School Travel Plan Task Force

Organization	Role/Responsibility	Contact
Berkeley Elementary School	Program Activity and Implementation	Michael Fiorello Principal Berkeley School 471 Berkeley Avenue Westwood, NJ 07675 201-664-7660 Michael.fiorello@wwrsd.org
Borough of Westwood	Mayor	John Birkner Mayor 101 Washington Avenue Westwood, NJ 07675 201-664-7100 x106 jbirkner@westwoodnj.gov
Borough of Westwood	Borough Grant Writer	Fred Rella Grant Writer 914-552-0146 Fjrella@aol.com
Westwood School District	Superintendent	Raymond Gonzalez Superintendent

		701 Ridgewood Road Washington, NJ 07676 201-664-0880 ray.gonzalez@wwrsd.org
Borough of Westwood	Borough Administration	Ben Kezmarsky Borough Administrator 101 Washington Avenue Westwood, NJ 07675 201-664-7100, ext. 150 Fax: 201-664-5340 bkezmarsky@westwoodnj.gov
Borough of Westwood	Department of Public Works	Rick Woods Public Works Superintendent 235 Harrington Avenue Westwood, NJ 07675 201-664-2349 Fax: 201-722-0427 DPW@westwoodnj.gov
Borough of Westwood	Enforcement	Sergeant Richard Antonacci Police Department 101 Westwood Avenue Westwood, NJ 07675 201-664-7000 ex 158 Rantonacci@WestwoodNJ.Gov
Meadowlink - Transportation Management Association	SRTS Program Assistance, Community Resource, Safety Education	Lisa Lee *EZ Ride SRTS Coordinator* 144 Park Place East Wood-Ridge, NJ 07075 201-939-4242, x 123 llee@ezride.org
Alan M. Voorhees Transportation Center Edward J. Bloustein School of Planning and Public Policy	Project Coordinator Web- based resources, Technical Assistance, SRTS Recognition Program, Helpdesk assistance, SRTS Tools, Tips and Training	Trish Sanchez Project Coordinator Alan M. Voorhees Transportation Center Bloustein School-Planning & Public Policy Rutgers, The State University of New Jersey 33 Livingston Ave. New Brunswick, NJ 08901 848-932-2376 trishsanchez@ejb.rutgers.edu
NJ DOT	Grant Funding, State SRTS Resource. SRTS Best Practices	Elise Bremer-Nei, AICP/PP *SRTS State Program Coordinator* NJ Department of Transportation P.O. Box 600 Trenton, NJ 08625-0600

2. Community Profile

2.1. Westwood and Bergen County Health Profile – Bergen County Community Health Assessment

According to the US Census 2015 American Community Survey, in Westwood, 7.1% of those under age 18 and 11.8% of those over age 65 are living below the poverty line. Total annual household earnings are generally high with 14.3% earning less than $25 K, 13.1% earning $25 to 50K, and 72.6 % earning over $50K. Of these annual earnings, 31.7% include Social Security, 2.5% received SNAP, and 0.4% received cash public assistance. Race and ethnicity in Westwood is 4.3% Black/African American, 11.6% Hispanic, 75.6% White, and 1.1% Multi-race.

Bergen County is ranked 4th in NJ for Health Outcomes according to the County Health Rankings & Roadmaps. The data shows that Bergen County has more primary care physicians, mental health providers, and dentists per capita than is typical of New Jersey. Additionally, there is a higher rate of diabetic monitoring which may indicate a higher incidence of disease. As per the 2016 Community Health Needs Assessment (CHNA) for Bergen County, Two-fifths of Bergen County adults (40.7%) report some type of difficulty or delay in obtaining healthcare services in the past year.

The CHNA also revealed that 61.2 % of Bergen County adults are overweight and 23.4 % of adults report no leisure –time physical activity in the past month.

In 2013 , representatives from Christian Health Care Center, Englewood Hospital and Medical Center , Hackensack University Medical Center , Holy Name Medical Center, the Valley Hospital ,Bergen County Department of Health Services(BCDHS), the Community Health Improvement Partnership of Bergen County worked collaboratively to conduct a Community Health Needs Assessment and Improvement Plan for Bergen County. Marla Klein, Partnership Coordinator at BCDHS and Coordinator of the CHIP managed the project and was the main liaison between the advisory committee and John Snow INC, the consulting company hired to assist with the assessment.

Discussion groups identified the following themes affecting the communities within Bergen County where they live or work:

- Cost of living is high in Bergen County. According to a report from NorthJersey.com, in 2011, a family of four with two school-age children needed $76,956 to cover housing, health care, food, transportation to work, taxes and clothing. For a single adult, the income needed to meet basic needs came to $35,426. Both figures are well above the statewide averages of $64,238 for a family of four and $28,593 for a single adult.

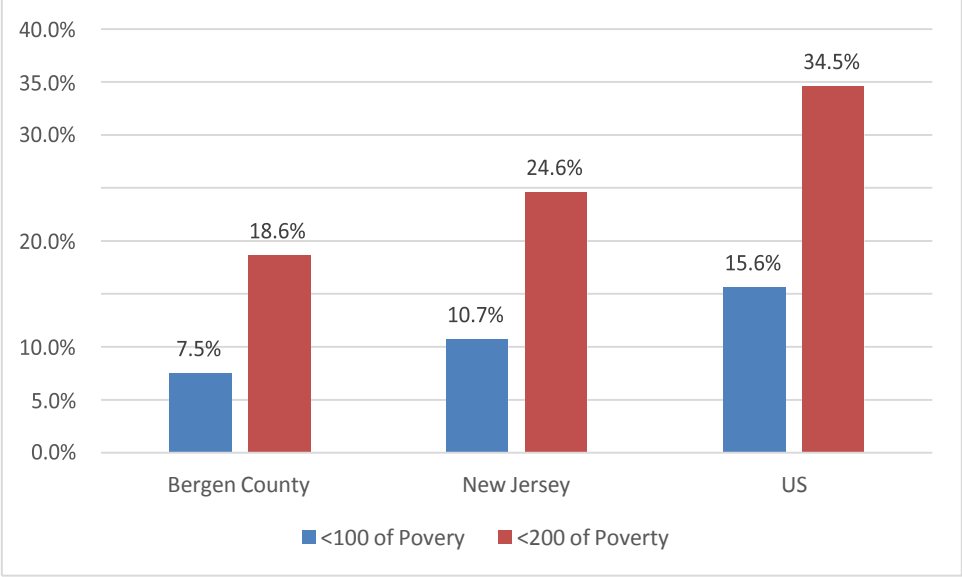
- Some families struggle with paying for food, housing, caring for parents and lack of affordable insurance. For affluent communities in the county, access to healthcare is much more available and convenient. In socioeconomically- disadvantaged communities, health care may not be accessible or available and is therefore viewed as less important as people may not be aware they have health issues.
- Community should provide the proper environment and promote policies that encourage health behaviors.
- Physical fitness is limited for kids (limited access to fitness activities, overuse of TV and electronics).

Understanding Social Determinants of Health

Conditions in the places where people live, learn, work, and play affect a wide range of health risks and outcomes. These conditions are known as social determinants of health. We know that poverty may limit healthy food access and coincide with unsafe neighborhoods and that more education is a predictor of better health. We also know that differences in health are striking in communities with poor social determinants of health such as unstable housing, low income, unsafe neighborhoods, or substandard education. By applying what we know about social determinants of health, we can not only improve individual and population health but also advance health equity.

Centers for Disease Control and Prevention

Chart 1.Percentage of Populations Living Below 100% and Below 200% of the Poverty Level; 2010-2014)

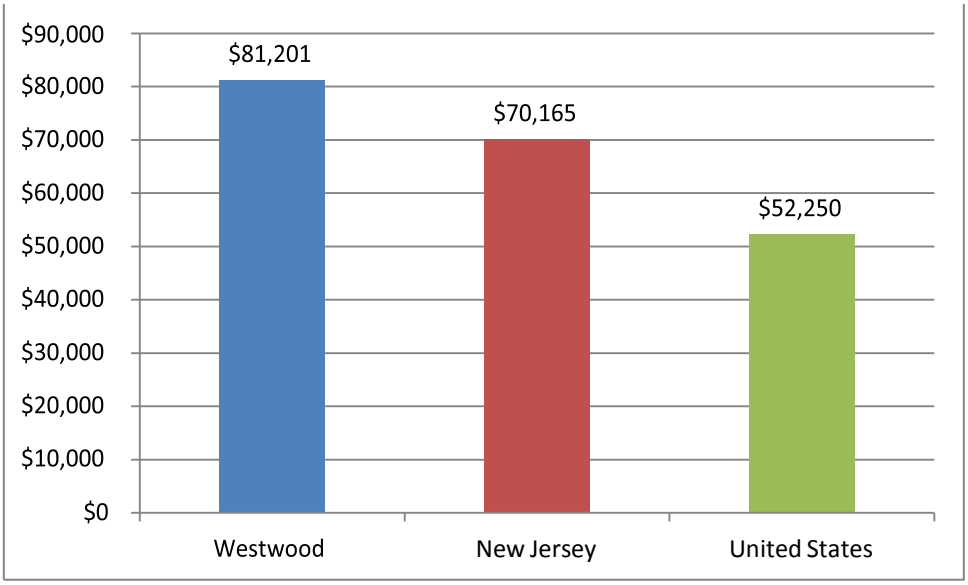


US Census Bureau American Community Survey 5-year estimates. Retrieved April 2016 from Community Commons at http://www.chna.org

- The latest census estimate shows 7.5% of Bergen County population living below the federal poverty level.

- Lower than state and national percentages
- In all, 18.6% of Bergen County residents (an estimated 169,353 individuals) live below 200% of the federal poverty level.

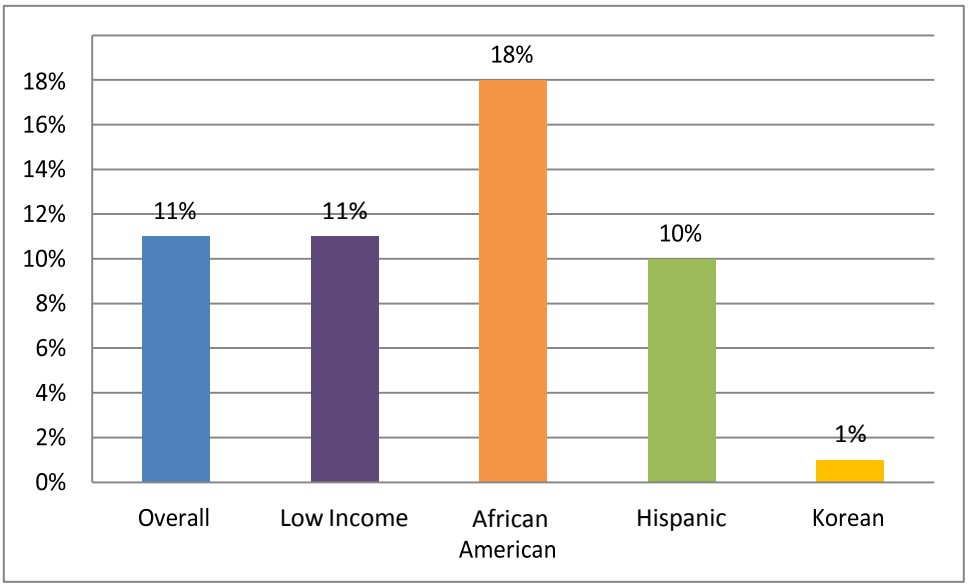
Chart 2. Estimated Median Household Income - Westwood, NJ



City-Data.com, 2013

- Data suggests that Westwood families earned more than 30k than the average American Household in 2013.

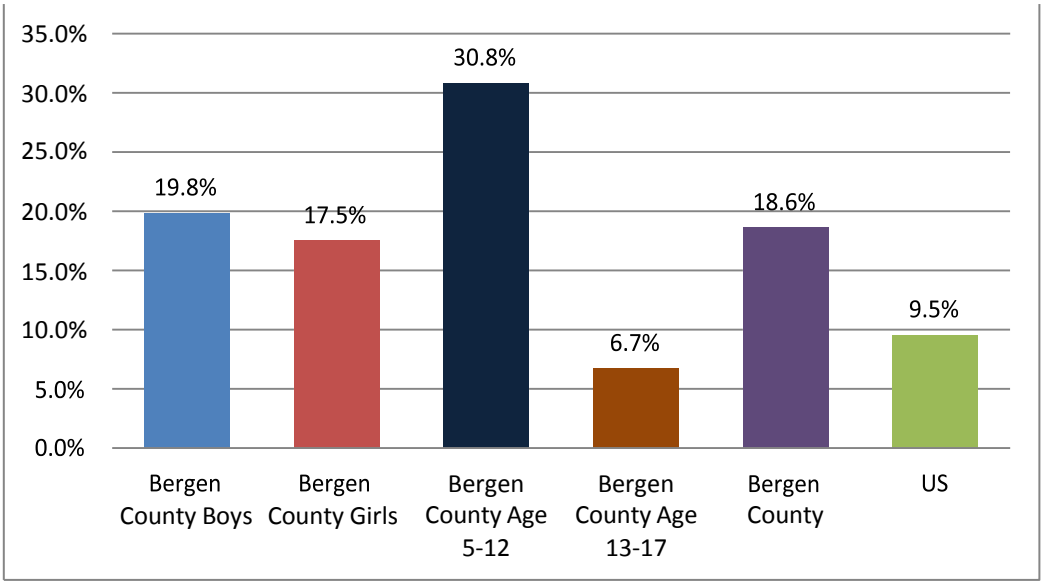
Chart 3: Percent of Those Surveyed Who Have Ever Been told They Have Asthma



2013 Community Health Needs Assessment

- As of 2013, 11 percent of Bergen County residents have ever been told by their doctors that they have asthma which is comparable to the state rate of 13%. African Americans are nearly twice as likely as Bergen County residents overall to report being told by their doctor that they have asthma.

Chart 4. Child Obesity Prevalence
(Children 5-17 Who are Obese; BMI in 95th Percentile of Higher)



2016 Community Health Needs Assessment

- Nearly twice the national percentage
- Statistically similar by child's gender
- More prevalent among children age 5 to 12 than teenagers

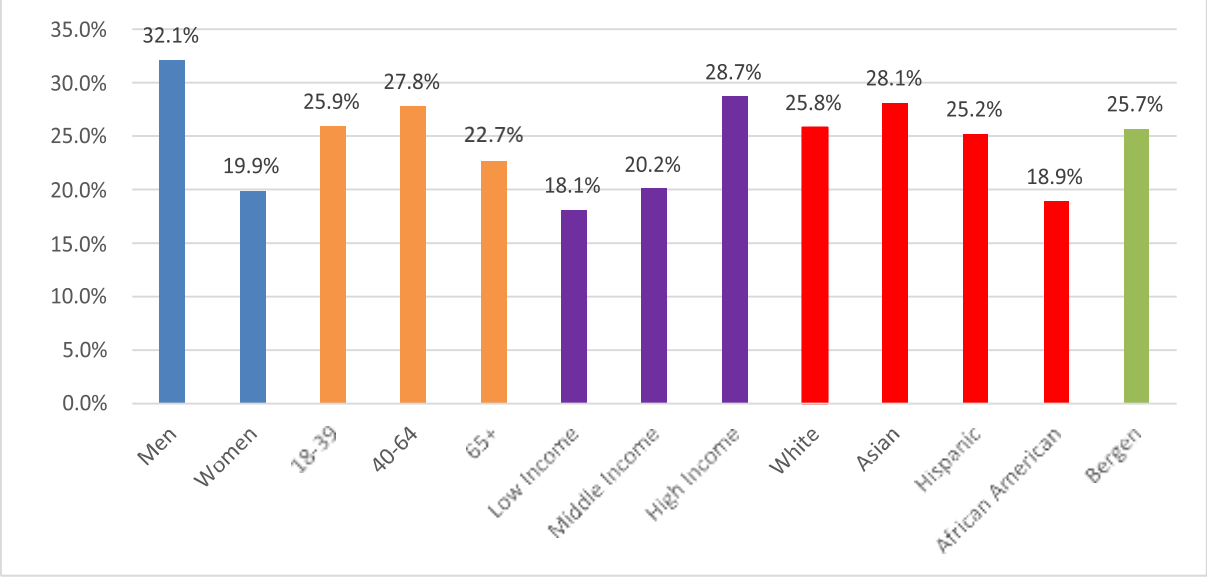
Media Viewing Habits

The American Academy of Pediatrics recommends that children spend a maximum of two hours per day on entertainment media like television, computers, and video games.

Exercise

The HHS 2008 Physical Activity Guidelines for Americans recommend that adults get at least thirty minutes of moderate to vigorous activity daily and that children get at least sixty minutes of moderate to vigorous physical activity daily. Chart 5 below indicates the percentage of Bergen County residents that meet physical activity recommendations.

Chart 5. Percentage of Population that Meets Physical Activity Recommendations



2016 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 174] US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective PA-4]

Those less likely to meet physical activity requirements include:

- Women
- Low and middle-income residents(positive correlation with income)

2.2 District and School Profile

Westwood School District

The Westwood Regional School District serves the Borough of Westwood (population 10,400) and the Township of Washington (population 9,800). These two communities are located approximately fifteen miles northwest of midtown Manhattan. Such proximity provides incomparable educational, cultural, and recreational opportunities, while preserving the charm and lifestyle of a small suburban town. The majority of parents are engaged in professional and managerial occupations with incomes in the middle and upper-middle brackets.

Westwood Regional School District serves approximately 2,800 students and includes four K-5 neighborhood elementary schools, a 6-7 middle school, and an 8-12 Jr./Sr. High School. Student demographics are shown in Table 1 below. The different ethnicities of students provide a diverse educational experience for Kindergarten to secondary school students

Table 1. Westwood District – Student Demographics

Ethnicity	
Caucasian	2,098
Hispanic	309
African-American	96
Asian/Pacific Islander	191
American Indian	2
Two or more races	29
Gender	
Male	1403
Female	1,322
Grade Level	
Elementary (Kindergarten – Grade 5)	1,194
Middle School (Grade 6-7)	431
Junior/ Senior High School (Grade 8-12)	1,037
Special Needs Students	63

Academic Performance

The Westwood School District has been classified by the NJ Department of Education as District Factor Group "GH."

A District Factor Group (DFG) is an indicator of the socioeconomic status of citizens in school districts of New Jersey. DFGs were first developed by the New Jersey Department of Education in 1975 for the purpose of comparing student performance on statewide

assessments across demographically similar school districts. This rating is based on neighborhood criteria such as poverty rate, incidence of crime and violence, and limited municipal resources due to low tax revenues. NJDOT has directed that SRTS programs in disadvantaged communities should be given high priority.

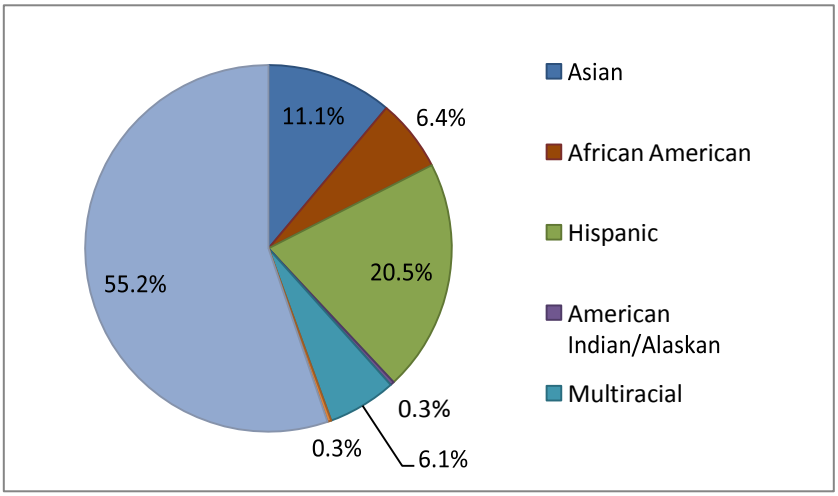
School Profile

According to the mission statement of the Berkeley Elementary School, they educate about 300 students from kindergarten through fifth grade. They envision Berkeley School as a focal point for students, families, and the community. Their school motto is "Reaching for the Stars" and they encourage all members to strive to do their best academically, socially, and emotionally.

As written on the school website, Berkeley School provides students with a quality educational program and solid foundation that will serve them as they become leaders of the twenty-first century. From the earliest grades they progress along the academic continuum mastering age and grade appropriate skills. Students are encouraged to look beyond the obvious and apply critical thinking skills to solve problems in unique ways. Technology is a virtual tool and they have wireless capability that allows for learning experiences to take place anywhere and anytime in the building as well as Smartboard technology and all things Google. Teachers provide opportunities for children to integrate learning from multiple disciplines. Students are afforded opportunities to demonstrate their knowledge through both traditional and progressive assessments.

The Parent School Organization (PSO) plays an active part in the school's success story. Parents are a vital partner in the continual improvement of the school.
Berkeley Elementary School is a public elementary school located in Westwood, NJ. It enrolls 297 students in grades K through 5.

Chart 6. Student Ethnicity-2016



As shown in Table 2 below, English is the predominant language spoken at home by 70 percent of the students. Spanish is the dominant second language spoken at home among students with almost 20 percent being fluent.

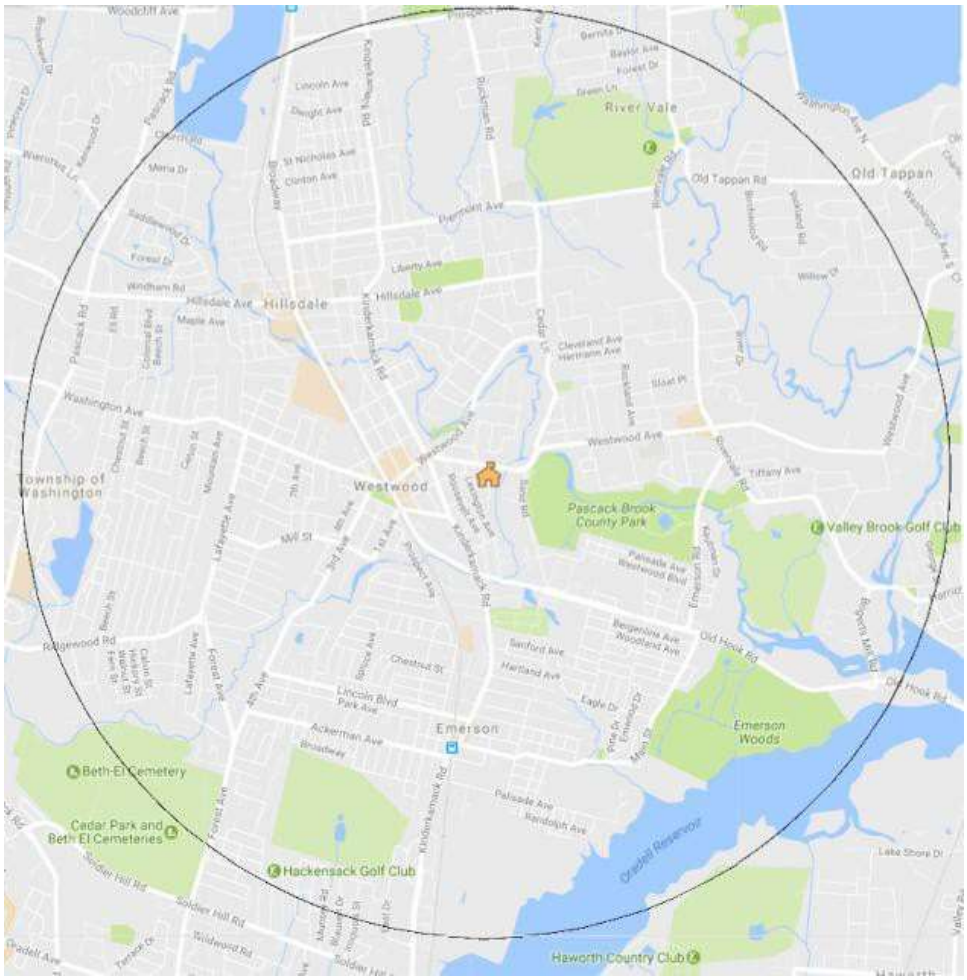
Table 2. Student Language Diversity (2013-14)

Language Diversity	
Percent of students who speak the following languages at home	
English	70%
Spanish	19.3%
Telugu	3.3%
Albanian	2%
Tagalong	2%
Russian	1%
Malayalam	.6%
Chinese	.6%
Polish	.3%
Bengali	.3%
Hindi	.3%
Kannada	.3%

3. Journey to School

In the 1960s, about 50 percent of children in the United States walked or bicycled to school. Over the last few decades, concerns about vehicle traffic, safety for the children, and longer commutes have forced more and more parents to drive their children to school. This results in more traffic on the road and less children who walk to school. Today, on average only about 15 percent of children walk or bike to school. Map 1 provides a two mile area of the residential area surrounding Berkeley Elementary School.

Map 1: Two Mile Area Surrounding Berkeley Elementary School



Berkeley Elementary School

3.1. Current Student Travel Environment

School Hours

The school day for students starts at 8:45 am and ends at 3:15 pm Monday through Friday. The breakfast program begins at 8:15 am. The YWCA offers before and after care hours: 7:00 AM-8:30 AM and 3:15PM-7:00PM.

Drop-off/Pick up Procedure

There are no school busses that service the families of Berkeley Elementary School. Families who use personal vehicles or carpools must drop off students on Berkeley Avenue.

Crossing Guards

There is one crossing guard assigned to Berkeley Elementary School. He is stationed at the corner of Berkeley Avenue and Harrington Avenue. He is available in the mornings from 7:45 AM-9:00 AM and in the afternoons from 3:00 PM-4:00PM.

Student Travel Mode

In December 2016, the teachers at Berkeley Elementary School conducted a Travel Tally to document how the children in their classes get to and from school. Tallies were taken by teachers three times during one week in 14 classrooms. A total of 1701 trips were documented and the data was analyzed by the NJ Safe Routes to School Resource Center at the Voorhees Transportation Center, Rutgers University.

As shown in Table 3, the analysis showed that, on average, about 17 percent of the children walk to school and 23 percent walk from school. The study shows approximately 71 percent of the trips were in personal cars and about 12 percent carpool to school. No students take public transit, the school bus or ride bikes to school.

Table 3. Current Commute Mode

Mode	Arrival	Dismissal
Walk	17 percent	23 percent
School Bus	0 percent	0 percent
Driven in personal car	71 percent	66 percent
Public Transit	0 percent	0 percent
Carpool	12 percent	11 percent
Bike	0 percent	0 percent




No bicycling trips were reported and this could be attributed to the lack of bike parking, lanes, and/or signage. It is also possible that the children did not have access to a bicycle or to adequate bicycle education.

3.2 Pedestrian Safety

Meadowlink conducted an analysis of the pedestrian-related accidents within a one-mile radius of the school over a 10-year period from 2003 to 2015 based on police incident reports. The reported incidents were plotted on Map 2. Clearly, road conditions need improvement as students travel on many of the roads that have a high incidence of pedestrian crashes especially Kinderkamack Road and Westwood Avenue.

Map 2: Pedestrian Crashes within 1 Mile of Berkeley Elementary School, 2005-15

Berkeley Elementary School

Table 4. Pedestrian Crashes by Age, Westwood (2005-2015)

Age	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	Percent
0-9	0	0	0	1	1	0	0	0	0	0	0	2	3.12%
10-17	0	1	0	1	0	0	0	0	0	0	0	2	3.12%
18-35	0	1	0	2	3	0	0	1	0	2	3	12	18.75%
36-60	2	2	0	2	2	2	0	2	2	5	6	25	39.06%
60+	5	3	0	4	0	3	3	0	2	1	2	23	35.93%
Total	7	7	0	10	6	5	3	3	4	8	11	64	

For Westwood, there were 64 pedestrian crashes between the years 2005 - 2015. On average there were approximately 6 pedestrian crashes per year. While the majority of the crashes (approximately 39 percent) involved pedestrians aged 36-60, approximately 6 percent (4) of the total incidents involved children in the 0-17 age group.

3.3 Walkability Assessment

The SRTS Task Force conducted a walkability assessment of one route around Berkeley Elementary School on December 5th, 2016. The route was assessed the Principal, Mayor, Borough Administrator, Borough Grant Writer, Police, Department of Public Works, SRTS Coordinator, and VTC.

A Walkability Assessment evaluates the sidewalks, roads, crosswalks, lighting, signs, signals, and conditions of the homes, buildings and environment along the walking route. A walkability assessment identifies road improvements that can be made and notes what is currently done well. The SRTS Task Force took photos of areas on the route. Comments and recommendations are listed with each photo and are summarized in the Action Plan at the end.

Map 1 shows the walking route which was assessed.

Map 1: Route 1 Start on Berkeley Avenue. Turn Right on Harrington Avenue, walk straight and turn right through Westvale Park. Proceed to cross onto Sand Road.

Route 1 Walkability Assessment

Photo 1: Student Dismissal

Observations

1. Parents observed waiting for students at back of school
2. Children are dismissed from different exits
3. School can consider to stagger arrival and dismissal times to lessen the amount of traffic congestion occurring as large numbers of parents all arriving at the same time
4. Students were dismissed through the playground where parents waited for them making it safer

Photo 2: Harrington Avenue and Berkeley Avenue

Observations

1. School Crossing Guard present at corner of Berkeley Ave. and Harrington Ave.
2. Sidewalk is in good shape

Photo 3: Harrington Avenue

Observations

1. SRTS Taskforce conducting audit
2. Walking from school towards Westvale Park on Harrington Ave.
3. At dismissal, there is a lot of traffic and parking is at a premium as many parents drive to school at pickup
4. Sidewalk is in good shape
5. No bike lanes are present – some students are biking on the sidewalk

Photo 4: Harrington Avenue
Intersection of Berkeley Ave. & Harrington Ave. in Background

Observations

1. Cyclists share sidewalk with pedestrians as no bike lanes available
2. Recommend to add painted bike lanes or sharrow symbols on road so drivers know cyclists may be sharing the road
3. Sidewalk is in good condition
4. Traffic is backed up on Harrington during dismissal
5. Single crossing guard trying to manage traffic coming from multiple directions and help students cross - recommendation to install a pedestrian traffic signal to help protect students and manage traffic
6. Many parents are driving to school to pickup kids and there is a lack of parking

Photo 5 : Harrington Avenue

Obeservations

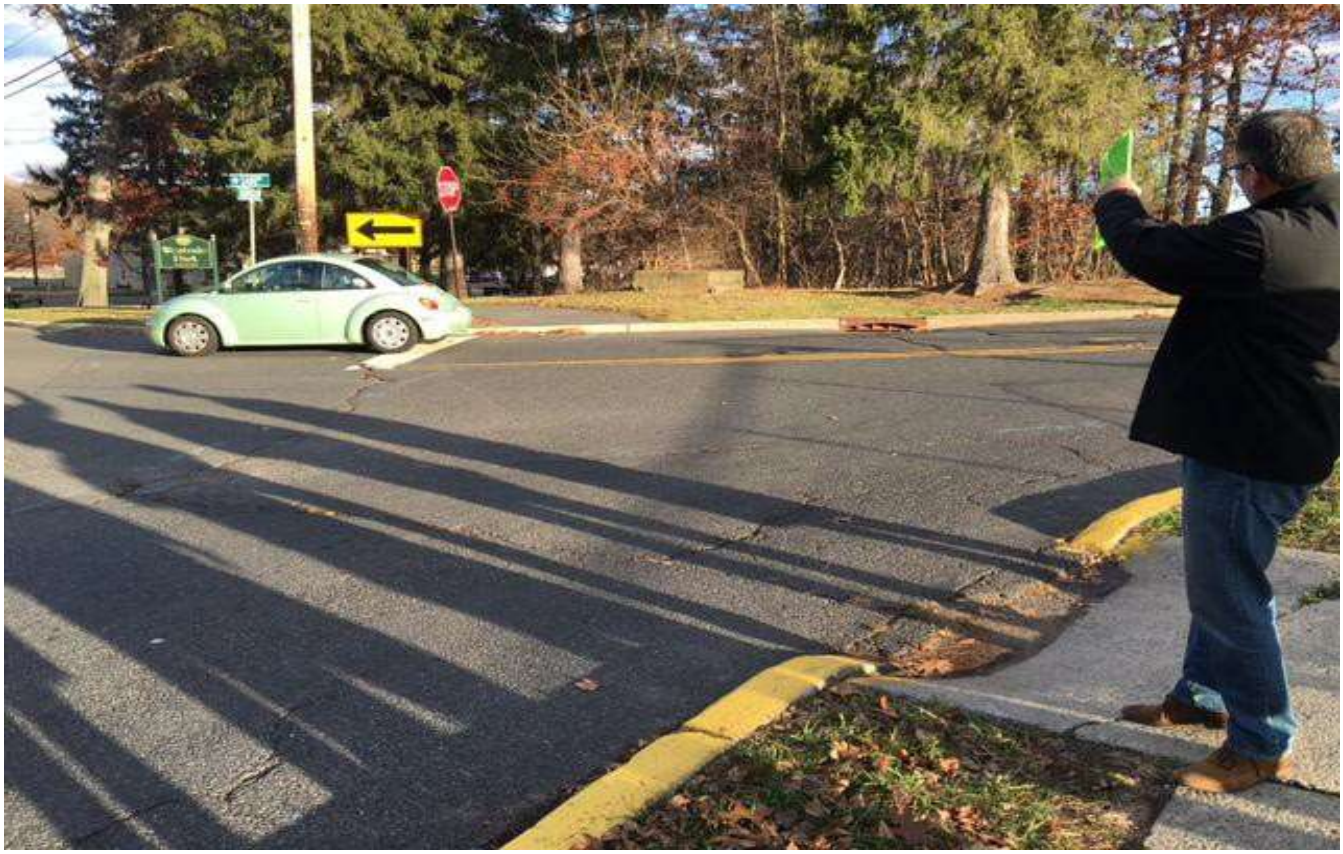
1. Speed limit sign clearly posted
2. School Zone signs present

Photo 6: Harrington Avenue

Observations:

1. Car parked on curb in no parking zone
2. Parents parking illegally on road during dismissal time

Photo 7: Intersection of Harrington Avenue and Sand Road



Observations:

1. No crosswalk present at intersection of Harrington Avenue and Sand Road leading to the park and baseball fields
2. Mayor pointing out path into park that can be improved so that students can walk or bike to other side of town where they live
3. No sidewalk for pedestrians on Harrington Ave to connect towards Pascack Brook Bridge

Photo 8: Intersection of Harrington Avenue and Sand Road

Observations

1. Mayor wants to extend the curb to slow traffic turning right onto Sand Road
2. No trucated dome pads on curb ramp
3. Missing crosswalk at this intersection prevents safe crossing for pedestrians and students

Photo 9: Intersection of Harrington Avenue and Sand Road

Observations

1. Lack of crosswalk for students and parents walking home from school
2. Car turning and not yielding to pedestrians crossing
3. The width of Sand Road is considerable so curb can be extended to decrease turning radii and slow traffic

Photo 10: Sand Road

Observations:

1. Drain is not bike wheel friendly and needs to be updated
2. Sidewalk ends on Sand Road. Cyclists and pedestrians must ride in the street
3. Recommend to continue sidewalk on one side of the road for students walking home nd for other pedestrians
4. Fencing should be removed to allow students to walk and bike through the park to get to and from school

Photo 11: Intersection of Berkeley Avenue and Sand Road

Observations

1. Students and parents walking home on Sand Road in the road because there are no sidewalks on either side of the street

Photo 12: Intersection of Harrington Avenue and Sand Road

Observations

1. Parent and children are going down a path created by continued pedestrian usage into the park to walk home

Photo 13: Westvale Park

Observations

1. Recommend installation of paved and lighted path with room for bikes and stairs for pedestrians to enter park

Photo 14: Westvale Park

Observations

1. Recommend installation of paved and lighted path with room for cyclists and pedestrians to enter park

Photo 15: Westvale Park

Observations

1. Recommend installation of a lighted and paved bike path into the park here

Photo 16: Westvale Park

Observations

1. Leaves and tree roots obstruct commonly used entry path into park

Photo 17: Westvale Park

Observations

1. Path will need lighting and handrail for pedestrians and cyclists
2. Path becomes quite steep so may need to be graded or may need to design ramps for pedestrians, bikes and conform to ADA requirements.

Photo 18: Westvale Park – Planned path for pedestrians and cyclists

Observations

1. Police sergeant walks in direction of path planned for residents and pedestrians along border of parking lot

Photo 19: Westvale Park

Observations

1. Paved and lighted path will go around parking lot and along fence next to baseball fields to avoid pedestrians walking in the parking lot
2. Add lighting for safety and visibility

Photo 20: Westvale Park

Observations

1. Path will turn and continue along rain runoff area and connect to paved park pathway for pedestrians and cyclists.

Photo 21 : Westvale Park

Observations

1. Observed paved park road which the City wants to connect to the path leading to Harrington Avenue entrance so that students and residents can walk and bike to Berkeley School through Pascack Brook County Park and Westvale Park.

Photo 22: Sand Road

Observations

1. Exited Westvale Park onto Sand Road near playground
2. Protected sidewalk is obstructed by leaves and not visible
3. Sidewalk ends at end of park and no sidewalks on either side of Sand Road
4. Recommend to extend sidewalk to Harrington Avenue for pedestrians.

Photo 23: Sand Road

Observations

1. Protected sidewalk ends at edge of park property and puts pedestrians back onto Sand Road
2. Sand Road is very narrow at this point

Photo 24: Sand Road

Observations

1. Sand Road is not wide enough for a bike lane but a sharrow symbol is recommended for cyclists
2. Trees at end of road prevent the road from being widened

Photo 25: Sand Road

Observations

1. Former road barrier could be removed and space used for a sidewalk as a fence has been installed to prevent cars and children from steep hill that goes into Westvale Park

Photo 26: Sand Road

Observations

1. Sidewalks are lacking on Sand Road
2. Recommend installing sharrow symbols for cyclists and drivers
3. Recommend SLOW Children pavement marking as you approach park entrances on Sand Road to alert drivers to be careful

Photo 27: Entrance to Park looking back along Harrington Ave towards school

Observations

1. There are no crosswalks at this intersection in the school zone to promote safe crossing for students
2. Missing curb ramp at corner of Westvale Park (where photo is being taken)
3. No truncated domes mean curb ramp is not ADA compliant
4. Recommend adding high visibility striped crosswalk and truncated dome pads
5. Stop Bar can be repainted

Photo 28: Harrington Ave – walking back to School

Observations

1. Vehicles are driving fairly fast on Harrington Avenue as it is a main road through town
2. Recommend "SLOW SCHOOL ZONE" pavement markings as school is only a block away
3. Consider adding painted bike lanes with bollards to protect children or sharrow symbols on road to alert drivers that cyclists are sharing the road

Photo 29: Berkeley Ave looking at intersection of Berkeley Ave and Harrington Ave

Observations

1. Leaves in road blocking parking area
2. Lighting could be helpful for students walking home after afterschool programs
3. Recommend installation of traffic signal at this corner to help with congestion at school arrival and dismissal times

Photo 30: Berkeley Avenue

Observations

1. Lighting recommended here
2. Signal with pedestrian heads recommended at this intersection to assist students walking
3. High visibility crosswalks are in good condition
4. Recommend to consider bike lanes or sharrow to encourage cycling

4. Action Plan & Recommendations

The Safe Routes to School Action Plan is categorizes into the "Five E's": Education, Encouragement, Enforcement, Engineering and Evaluation. Additionally, each element of the Action Plan considers two parameters – time and cost as shown below. Together, they comprise a set of directions to help the community prioritize their action steps to increase safety for students. The tables below identify preliminary recommendations specific to the Berkeley Elementary School and its immediate area. To realize the full benefit of the SRTS program, it is suggested that this School Travel Plan be used to apply for SRTS grant funds to fully implement all the action steps.

Timeframe Definition	Cost Definition
Short-term = less than 3 months	**Low** = Less than $2,000
Mid-term = between 3 to 6 months	**Medium** = between $2,000 and $10,000
Long-term = longer than 6 months	**High** = more than $10,000

1. **Education**: Programs to educate students, parents and the public about safe walking and biking

Education Actions	Responsibility	Time Frame	Cost
Invite EZ Ride to provide SRTS Bicycle and pedestrian SAFETY Presentations annually	School, EZ Ride	Short-term, Mid-term, Long-term	No cost
Create and update Family Handbook that defines arrival and dismissal procedures with map and text that defines drop-off/pick-up areas, the rules and speed limit for driving along local streets within school zone	School, School Liaison,	Long-term	Low
Conduct "Drive Slow and Safe on Harrington Avenue" Campaign twice a year. Notify parents/guardians and school staff by publishing information/updates in the Parent/Family Handbook, School Newsletters and on the school website	School, Boro, Police	Short-term, Mid-term, Long-term	Low
Ask Police Department to give a talk re driving safety tip cards to parents at Back to School Night or PTO meetings	Police, School, PTO	Short-term, Mid-term, Long-term	Low
Integrate walking and safety education (wear helmets, use crosswalks) into classroom	School	Short-term, Mid-term, Long-term	Low
Leverage Social Media to spread awareness of school zone and enforcement activities	School/District Webmaster PTO, Boro, Police	Short-term, Mid-term, Long-term	Low

2. **Encouragement:** Programs to encourage or promote walking and biking

Encouragement Actions	Responsibility	Time Frame	Cost
Hold a student poster contest on Safe Walking and Biking to school	School, EZ Ride	Short-term	Low
Circulate School Travel Plan Report via School and City website and PTO meetings	School, PTO, Boro	Short-term	Low
Host Bike/Walk to School/Work Days throughout the year	School Health Council, PTO, Boro	Short-term, Mid-term, Long-term	Low
Participate in International Walk to School Day in October and National Bike to School Day in May, as well as NJ Walk and Bike to School Day in Spring	School Health Council, District Parent Center, PTO, EZ Ride	Short-term, Mid-term, Long-term	Low
Utilize the school website to advance Safe Routes to School safety messages	School Tech Coordinator	Mid-term, Long-term	Low

3. **Enforcement:** Activities to improve safety and security for those walking and biking to school

Enforcement Actions	Responsibility	Time Frame	Cost
Conduct bicycle registration at Back to School night	School, Police	Short-term, Mid-term, Long-term	Low
Investigate training parent volunteers to do Walking School Bus	School Liaison, PTO, Police, Boro	Mid-term, Long-term	Low
Ask County/City to conduct speed and traffic study on Harrington Avenue	County/City traffic, Police	Short-term, Long-term	Medium
Ask police to set up electric signs that post drivers speeds and remind people to not speed as its school zone – do this 2x a year	Police Department, School Safety Liaison	Short-term, Long-term	Low
Ask town to post police on Harrington Avenue to give tickets to speeding cars quarterly to deter speeding	Police, School, Boro	Short term Mid term Long Term	Low
Enforce parking laws on Harrington Avenue at dismissal and drop off	Police, Boro	Short term Mid term Long Term	Low

4. **Engineering:** Infrastructure upgrades that improve walking and biking environment

Engineering Actions	Responsibility	Time Frame	Cost
Install bike racks and skateboard racks near school entrance	School	Mid-term,	Low
Post "School Zone" signs and paint "SLOW SCHOOL ZONE " on roadways surrounding school	County, Boro, DPW	Short-term Mid-term, Long-term	Low
Install a pedestrian traffic signal at intersection of Berkeley Ave. and Harrington Ave.	County, Boro, Engineering	Short-term Mid-term, Long-term	Medium
Paint High Visibility Crosswalks at major intersections at Sand Road and Harrington Avenue	County and Boro, DPW, Engineering, Police	Short-term, Mid-term, Long-term	Low
Implement traffic calming measures on Harrington Avenue such as flashing SLOW sign or painted bike lanes	County and Boro Engineering, Police	Mid-term, Long-term	Low
Post signs and paint area on roads to define any designated Bus and Car drop off zones	School and Boro DPW/Engineering, Police	Short-term, Mid-term, Long-term	Low
Investigate and ensure ADA compliancy of crosswalks and curb ramps	County and Boro Engineering, Police	Mid-term, Long-term	Medium
Investigate traffic speeds around the school and post more 25 mph speed limit signs	County Engineering, Boro Engineering, Police	Short-term, Mid-term, Long-term	Medium
Investigate installation of light fixtures around key intersections and crosswalks	County and Boro Engineering, Police	Mid-term, Long-term	Medium
Install sharrow markings on Sand Avenue	County and Boro Engineering, Police	Mid-term, Long-term	Medium -High
Install lighted paved path in Westvale Park	County and Boro Engineering, Police	Mid-term, Long-term	High
Extend curb at intersection of Sand Rd. and Harrington Ave. and narrow turn radius to slow turning vehicles	County and Boro Engineering, Police	Mid-term, Long-term	Medium -High
Install sidewalk on Harrington Avenue extending from Sand Rd. heading west towards Pascack Brook Bridge.	County and Boro Engineering, Police	Mid-term, Long-term	High
Install sidewalk along one side of Sand Rd. to connect Harrington Ave. sidewalk to playground on Sand Rd.	County and Boro Engineering, Police	Mid-term, Long-term	High

5. Evaluation: Efforts to monitor and evaluate progress towards the achievement of SRTS goals

Evaluation Actions	Responsibility	Time Frame	Cost
Continue to conduct student travel tallies every year to measure how effective the SRTS program has been to increase the number of students walking, biking or carpooling	School, EZ Ride,	Mid-term, Long-term	Low
Improve communications between school officials and families establishing a convenient mechanism to share information and get feedback	School Administrators, PTO, Parent Center Webmasters, District leaders and newsletter	Short-term, Mid-term, Long-term	Low
Conduct regular speed and traffic studies in area	Boro, Police	Short-term, Mid-term, Long-term	Low

Conclusion

Community priorities around Berkeley Elementary School are safety for students, reducing the speed of traffic in the school zone along Harrington Avenue, and encouraging students to walk and bike more for their health. Education, encouragement, enforcement, and evaluation efforts should be pursued as recommended. Key engineering recommendations include adding a pedestrian traffic signal at Berkeley Avenue and Harrington Avenue, adding a high visibility striped crosswalk at Sand Road and Harrington Avenue, extending the curb at the corner of Harrington Venue and Sand Road, adding a paved and lighted foot/bicycle path into Westvale Park, installing sidewalk along Harrington Avenue to connect to the Pascack Brook Bridge, installing a sidewalk along one side of Sand Road to connect Harrington Avenue to the playground on Sand Road, and adding school zone signs and pavement marking, bike lanes or sharrow markings along Harrington Avenue. Adding a striped crosswalk is a necessity and needs to be done as soon as possible as students are crossing this intersection and cars are turning and not yielding to them. The school zone can be better marked to slow traffic at dismissal and arrival and there is a lot of congestion and chaos at pickup. The Borough's plan to collaborate with the District to help protect students, provide a safe path for students to get home through Westvale Park, and encourage safer walking and bicycling is admirable and deserves support.

EZ Ride/Meadowlink is proud to work with the community to improve safety and bring SRTS programs to the schools. EZ Ride/Meadowlink's Safe Routes to School team has provided safety education and incentives for students to walk to school. This is the first School Travel Plan prepared for Berkeley Elementary School and the Borough of Westwood and it is hoped the school will schedule additional SRTS safety programs for students in the coming years. This report should be used by the District or Borough to apply for SRTS infrastructure grants to make the sidewalks and neighborhood safer for students to walk and bike to the Berkeley Elementary School, to get to the local park and playgrounds, and to travel to community afterschool programs safely.

5. Appendix

Typical Opportunities for Improvements

LONG CROSSING DISTANCES

Long crossing distances prolong the exposure time of pedestrians to motorists and make it difficult to see the pedestrian signal head on the other side of the road.

PEDESTRIAN OBSTRUCTIONS

Obstructions in the pedestrian right-of-way impede pedestrian movement and safety.

LACK OF CURB CUTS

Sidewalks without curb cuts are an obstacle to parents with baby carriages as well as people with disabilities.

POOR MAINTENANCE

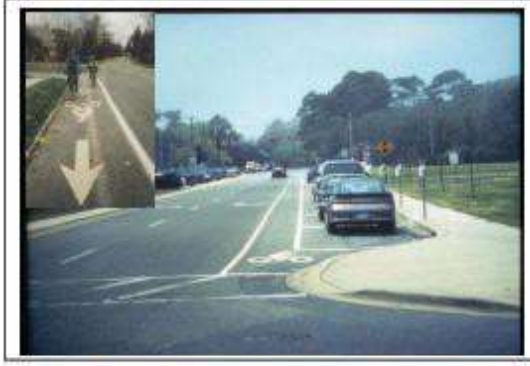
Without maintenance pedestrians can trip, it can be a liability issue, and people with disabilities can have trouble negotiating the area.

Typical Bicycle/Pedestrian Treatments

SHARED-USE ROADWAY

Can be a safe for bicyclists when:

- Width is sufficient
- Speeds are low
- Traffic volumes are low



BICYCLE LANE

- Provides a safe and comfortable environment for bicyclists
- An area that is delineated, but not separated from the roadway
- Typically 4' wide with a bicycle stencil

SHARED USE PATH (TRAIL)

- Offers connections and opportunities not provided in the roadway system
- Can provide valuable connections and recreational opportunities
- Typically 8'-10' wide

OTHER FACILITIES

- Bicycle Lockers
- Bicycle Racks on Transit
- Bicycle Racks
- Bicycle Safety Programs

Typical Bicycle/Pedestrian Treatments

SIDEWALKS

- A portion of the road ROW for the preferential or exclusive use of pedestrians
- Typically at least 5' wide
- Should be free of obstructions along its width and 80" high

CROSSWALKS

- Provides a designated crossing point
- Helps provide more predictable pedestrian movements
- Alerts drivers to pedestrian areas

SIGNAGE AND STRIPING

- Can help define pedestrian realm
- Provide visual cues for pedestrians and motorists
- Can augment other facilities

AMENITIES AND AESTHETICS

- Lets pedestrians know area was designed for their use
- Helps provide a safe and comfortable environment
- Helps provide sense of "place"

Typical Bicycle/Pedestrian Treatments

CURB EXTENSION

- Reduces Vehicle Speeds
- Reduces Pedestrian Crossing Distance
- Increases Pedestrian Visibility
- Protects Parking Area & Prevents Parking Close to Intersection

FULL CLOSURE

- Can be used to eliminate neighborhood cut-throughs
- Eliminates vehicular access
- Allows pedestrian and bicycle access and egress

MID-BLOCK CROSSING

- Reduces Vehicle Speeds
- Increases Pedestrians Visibility
- Reduces Pedestrian Crossing Distance
- Connects Pedestrian Generators

RAISED MEDIAN GATEWAY

- Provides Defined Entry
- Provides Cue to a Transition Area
- Aesthetically Pleasing
- Provides Pedestrian Refuge
- Reduction in Vehicle Speeds

Typical Traffic Calming Devices

GATEWAY
- Provides Defined Entry
- Provides Cue to a Transition Area
- Aesthetically Pleasing

CURB EXTENSION
REDUCED TURNING
- Reduces Vehicle Speeds
- Reduces Pedestrian Crossing Distance
- Increases Pedestrian Visibility
- Protects Parking Area & Prevents Parking Close to Intersection

RAISED
- Reduces Vehicle Speeds
- Increases Pedestrians Visibility
- Reduces Pedestrian Crossing Distance
- Provides Pedestrian Refuge

BIKELANE
- Reduces Vehicle Speeds
- Produces Designated Lane for Bicyclists
- Provides Additional Buffer for Pedestrians

Typical Traffic Calming Devices

CURB EXTENSION
- Reduces Vehicle Speeds
- Reduces Pedestrian Crossing Distance
- Increases Pedestrian Visibility
- Protects Parking Area & Prevents Parking Close to Intersection

MEDIAN REFUGE
- Reduces Vehicle Speeds
- Reduces Pedestrian- Vehicle Conflict
- Reduces Pedestrian Crossing Distance
- Improves Aesthetics if well-maintained

MID-BLOCK CROSSING
- Reduces Vehicle Speeds
- Increases Pedestrians Visibility
- Reduces Pedestrian Crossing Distance
- Connects Pedestrian Generators

Sidewalks and Access
- Simplifies Crossing Movement
- Reinforces pedestrian priority
- Improves visibility
- Provides safe accessibility