

Orange, NJ



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Executive Summary

Street Smart NJ is a public awareness and behavioral change pedestrian safety campaign. Since its creation in 2013, 235 communities have participated in Street Smart NJ. The campaign is coordinated by the North Jersey Transportation Planning Authority (NJTPA) and is supported by federal and state funds, with additional funding/in-kind contributions from local partners, including the state's eight Transportation Management Associations (TMA).

The Street Smart NJ campaign aims to raise public awareness, educate drivers and pedestrians about safe travel, and change unsafe behavior through collaboration between public, private, and non-profit organizations.

EZ Ride worked with NJTPA, the NJ Division of Highway Traffic Safety, the Orange Police Department, and the City of Orange to conduct a Street Smart NJ campaign starting in the fall of 2022 to raise awareness of pedestrian safety. Orange police worked with City and County officials, EZ Ride, and the school district to educate students, employees, and residents about safe driving and walking practices and to enforce driver and pedestrian-related laws. Street Smart activities began with pre-campaign intersection observations at the intersection of Main Street and North Day Street on September 8, 2022. The City of Orange selected this intersection because of its crash history, proximity to schools, and for the number of pedestrians the area attracts. In addition to the intersection observations, NJTPA and EZ Ride developed a brief online survey which was translated into Spanish and Haitian Creole.

The survey included questions about driving and walking conditions in Orange, driving and pedestrian behavior, and knowledge of traffic laws. The survey was advertised via social media by community leaders in the City of Orange and electronically sent out to other members of the community.

The Street Smart campaign kicked off on September 27, 2022, with a press conference at the Orange Public Library. Speakers were Mayor Dwayne Warren, Superintendent Dr. Gerald Fitzhugh, III, Orange Police Captain Isaac Eason, Orange Fire Department Chief Derrick Brown, and EZ Ride Director of Bike and Pedestrian Programs Lisa Lee.

EZ Ride partnered with the Orange Public School District to schedule bike and pedestrian safety presentations for schools during the school year. Fourteen Pedestrian Safety Presentations, 10 Bike Safety Presentations, and seven Walk & Roll to School Day events were conducted during October and November at the following schools: Central Elementary School, Heywood Elementary School, Forest Street Elementary School, Lincoln Elementary School, Oakwood Elementary School, Park Avenue Elementary School, and Rosa Parks Elementary School. We also conducted a pedestrian and driving safety talk on April 20, 2023, at the New Community Orange Senior Center.

During the duration of the campaign, outdoor signs, posters, tip cards, and other educational materials were distributed throughout the community. In addition, 13 stores on or in the proximity of Main Street supported the campaign by displaying Street Smart posters in their storefront windows.

Following the educational and enforcement activities, an observation team from EZ Ride returned to the selected intersection to complete post-campaign observations on Thursday, March 30, 2023.

The program was evaluated through pre- and post-campaign intersection observations and surveys. While not statistically significant, these quantitative measures provide an indication of the short-term impact of the campaign. Analysis revealed:

- Almost 13 percent more post-campaign respondents saw Street Smart messaging during the campaign compared with pre-campaign respondents.
- The percentage of respondents who saw the police issuing tickets/warnings to drivers
 for not stopping for pedestrians in crosswalks increased by five percent. There was also a
 reduction in the responses of those who never saw the police enforcing pedestrian laws
 by seven percent. This shows the more police enforce traffic laws, the more awareness
 increases.
- Surveys showed that pre-campaign respondents recalled messages about speeding and aggressive driving, distracted driving, and bicycle safety. The data shows that postcampaign respondents remembered and were most aware of messages about drowsy driving, seatbelt use, and DUI of alcohol.
- There was a significant reduction in drivers holding phones in hand while driving based on our pre- and post-campaign observations at the intersection.

It can be concluded the campaign was successful in changing some illegal and unsafe behavior of drivers. Infrastructure recommendations EZ Ride suggests repainting the crosswalks and stop bars as they are faded in the intersection.

1. Street Smart Overview

Street Smart NJ is a public awareness and behavioral change pedestrian safety campaign. Street Smart NJ emphasizes educating drivers, pedestrians, and bicyclists through community outreach and targeted enforcement. Police officers focus on engaging and educating rather than simply issuing citations. Street Smart NJ complements, but doesn't replace, other state and local efforts to build safer streets and sidewalks, enforce laws, and train better roadway users. In 2019, Street Smart NJ revamped its campaign, updating posters and making the key educational messages and visuals simpler to read and understand.

While total traffic fatalities in the US declined by 0.2 percent in the first nine months of 2022 compared with the same period in 2021, fatalities in the NJ, CT, NY, and PA regions increased by four percent as per NHTSA and NJ was among the top 10 states with increased traffic fatalities. New Jersey's pedestrian fatality rate in the first half of 2022 (January-June) was 23rd among all states, according to the Governors Highway Safety Association (GHSA). However, pedestrians comprised 28 percent of all people killed in fatal NJ crashes, while the national average is only 17 percent. According to police reports compiled by the NJ State Police, there were 383 drivers, 102 passengers, 192 pedestrians, and 17 bicyclists who died in fatal crashes in New Jersey, which is a four percent decline from 2021 but a 19 percent increase from 2020.

The Street Smart NJ Campaign has four goals:

- Change pedestrian and motorist behavior to reduce the incidence of pedestrian injuries and fatalities in New Jersey
- Educate motorists and pedestrians about their roles and responsibilities to safely share the road
- Increase police enforcement of pedestrian safety laws and roadway users' awareness of that effort
- Develop and evaluate a program that can be implemented statewide

The Street Smart NJ program was piloted in five communities — Newark, Jersey City, Woodbridge, Hackettstown, and Long Beach Island —in 2013 and 2014. These communities were selected to incorporate the state's diverse landscape of urban, suburban, rural, and shore regions. The program has since expanded to 235 communities throughout the state, including Orange, in 2022-23.

1.1 EZ Ride's Street Smart Program

The NJTPA has partnered with the eight Transportation Management Associations (TMAs) to expand the number of Street Smart NJ campaigns across the state. A TMA is an organization that provides transportation solutions to reduce traffic congestion and air pollution. Each TMA was invited to assist with the program implementation by providing information, conducting intersection observations, and building relationships with municipalities to further partnerships and generate local support.

As shown in the gray areas of the map of New Jersey, EZ Ride delivers transportation solution services in Passaic, Essex, Union, Monmouth, and Bergen Counties. Besides Orange, EZ Ride has initiated full Street Smart NJ campaigns in Asbury Park, Bloomfield, Cranford, Elizabeth, Garwood, Highlands, Hackensack, Linden, Newark, Paterson, Plainfield, Rutherford, Teaneck, and West Orange. Community outreach was also supported by handing out tip cards at schools and in cities such as Bloomfield, Elizabeth, Garfield, Long Branch, Newark, Teaneck, and Westwood.

1.2 Orange, Essex County, New Jersey

The City of Orange is a township located in Essex County and bordered by East Orange, Montclair, South Orange, and West Orange. Orange is approximately 2.22 square miles with a population of 34,447 and a population density of 15,566 people per square mile. Orange was initially part of Newark but was originally known as Newark Mountains; the city adopted the name Orange in 1780, seceded from Newark in 1806. The first government was elected in April 1806 and the city was reincorporated in 1860. Now deindustrialized, Orange became an industrial city early in its history with industries such as tanning, hat-making, brewing, and radium, with notable companies such as Stetson, Monroe Calculating Company, and United States Radium Corporation. Fifty-five percent of residents travel to work by car, eight and a half percent use carpool, and 21.2 percent use public transportation. With such a high number of residents and employees commuting to and from Orange by car, there are many crashes due to the high amount of traffic in a densely populated urban area. The major traffic routes in the area are Route 280 and the GSP. Running east to west, Route 280 bisects Orange. The Garden State Parkway (GSP) lies just about one mile east of the city's limit. As a consequence, when the highways become congested, many commuters cut through the city to avoid traffic.

1.3 Orange Crash Analysis

EZ Ride used NJ Safety Voyager, the NJ Department of Transportation's crash analysis program, to examine crash data for this report. In Orange, there were 221 pedestrians and cyclists involved in motor vehicle crashes from 2015-2020. Breaking down the data even further, 46 crashes involved youth 0-19 years of age, with seven crashes occurring when walking to/from school.

The following charts were created using NJ Safety Voyager's report generator. This tool helps break down details about crashes in a specific area that NJ Police report. The data collected can be used to inform future education and safety campaigns in Orange.

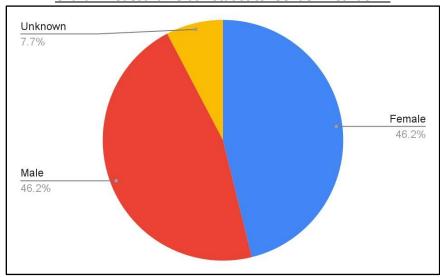


Chart 1: Pedestrian Crash Statistics: Gender Breakdown

Source: NJ Safety Voyager (2015-2020)

According to Safety Voyager's Orange Report, the percentage of crashes between the years of 2015-2020 involving male and female pedestrians was 46 percent for each, and almost eight percent were of unknown gender. This information is useful for outreach/campaign purposes.

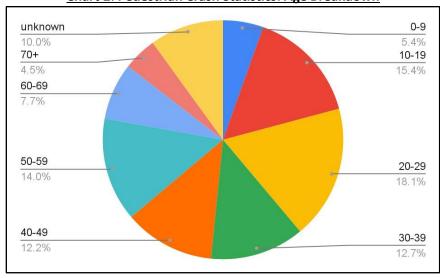
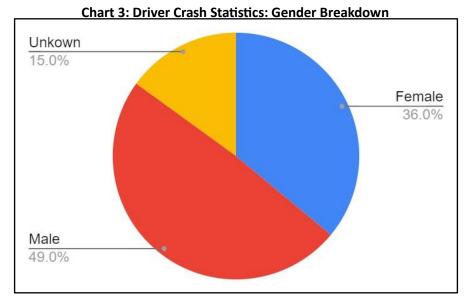


Chart 2: Pedestrian Crash Statistics: Age Breakdown

Source: NJ Safety Voyager (2015-2020)

According to Safety Voyager, while 10 percent of cases did not report the age of victims, the most reported pedestrian crash cases involved pedestrians who were in the age bracket of 20-29, followed by those ages 10-19. However, age brackets 50-59, 30-39, and 40-49 also reported a high amount of cases. Although age distribution is fairly even, this information may be useful for outreach/campaign purposes.



Source: NJDHTS Numetric (2011-2021)

According to NJDHTS Numetric's Orange Report, 49 percent of crashes between the years 2011-2021 involved male drivers, 36 percent involved female drivers, and 15 percent of unknown/unreported genders. This information is useful for outreach/campaign purposes.

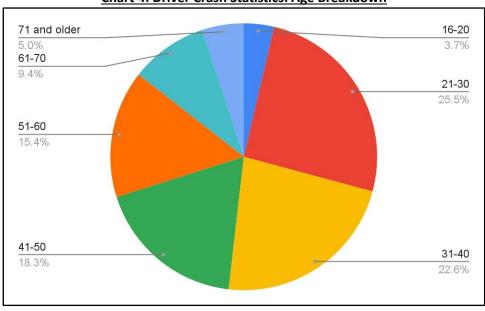
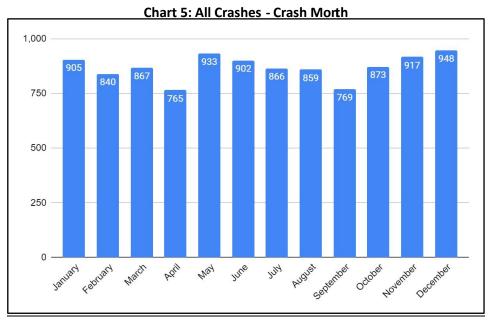


Chart 4: Driver Crash Statistics: Age Breakdown

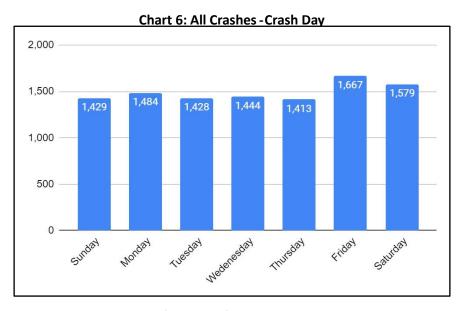
Source: NJDHTS Numetric (2011-2021)

Crashes occurred most frequently for drivers between the ages of 21-30. However, the 31-40 age bracket also reported a high amount of cases. This information is useful for outreach/campaign purposes.



Source: NJDHTS Numetric (2011-2021)

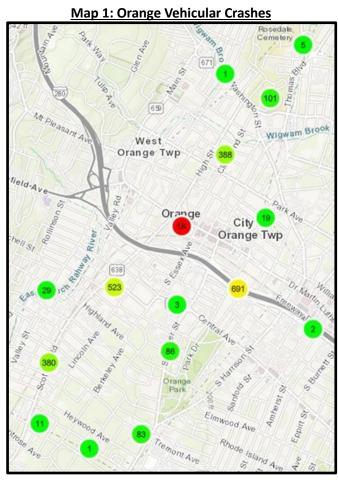
According to NJDHTS Numetric, December, May, November, and January were the months with the most crashes. There may have been more crashes due to heavier holiday traffic, worse sun glare after trees lose their foliage, and because it gets darker earlier once the time changes due to daylight savings.



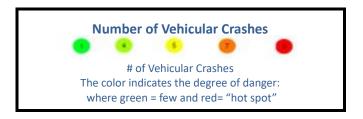
Source: NJDHTS Numetric (2011-2021)

According to NJDHTS Numetric, crashes are the highest on Fridays and Saturdays, then split fairly evenly amongst the remaining five days.

Maps 1, 2, and 3 were generated with the NJDOT Safety Voyager crash analysis tool. Safety Voyager uses a color-coded system to display "hot spot" areas where multiple crashes occur. The actual number of crashes at each location is labeled on each colored circle. A green dot indicates fewer crashes; a yellow, orange, or red dot indicates higher numbers of crashes.



Source: NJ Safety Voyager, 2015 -2021

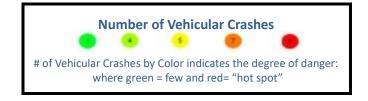


As shown in Map 1, the number of crashes involving cars ranges from one to 1,000+ depending on the area and intersections from January 1, 2015 - December 31, 2021.

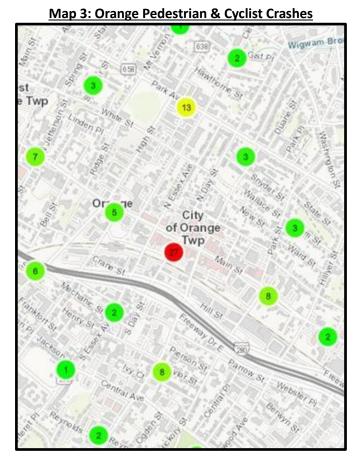


Map 2: Orange Vehicular Crashes at Target Intersection

Source: NJ Safety Voyager, 2015 - 2021



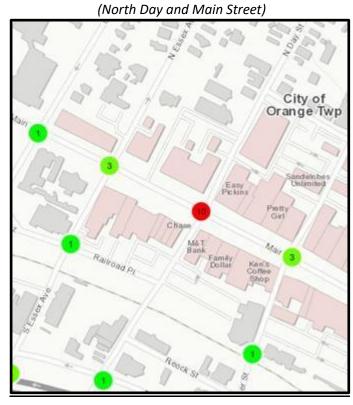
Map 2 shows 60 vehicle crashes that occurred at the target intersection between 2015-21. Maps 3-4 display **pedestrian and cyclist** crashes in Orange, NJ, from 2015 to 2021. These maps were also generated with Safety Voyager.



Source: Safety Voyager, 2015 – 2021



Map 3, clearly, shows that the highest numbers of crashes were near the target intersection of North Day and Main Street (the location of the red hot spot).



Map 4: Orange Pedestrian and Cyclist Crashes at Selected Intersection

Source: NJ Safety Voyager, 2015 – 2021



Map 4 shows that there were 10 bike or pedestrian crashes near the target intersection. This intersection is the highest in the city.

2. Campaign Overview

Table 1: Campaign Schedule

Pre-Campaign Observations	Thursday, September 8, 2022
Pre-Campaign Surveys	August 27 - September 27, 2022
Campaign Kick-Off	Tuesday, September 27, 2022
Education Period	October 20, 2022 - June 10, 2023
Enforcement Period	September 15, 2022 - October 31, 2022
Post-Campaign Observations	Thursday, March 30, 2023
Post-Campaign Surveys	April 12 - May 16, 2023
Report Development	February 2023 to May 2023
Report Submission to NJTPA	August 14, 2023
NJTPA Review	August 15 - 30, 2023
Final Report Submission	September 13, 2023

^{**} A typical Street Smart Campaign includes a two-week Enforcement Period.

2.1 Campaign Selected Intersection

The focus intersection for the campaign, North Day and Main Street was selected by the police due to the high volume of pedestrian traffic and the history of pedestrian-vehicle crashes. Preand post-campaign observations were conducted at this intersection, along with public education and police enforcement.

North Day and Main Street

The intersection of North Day and Main Street is located one block away from the City of Orange Township Municipal Building and several businesses along Main Street. These businesses include Chase Bank, Orange Podiatrists, Dunkin Donuts, Family Dollar, T-Mobile, UPS Store, Rainbow, Bobby's, Value Mart, Main Street Meat Market, Fabco Shoes, Sassy Pickins, and 99 Cent Dreams. In addition, there are also two NJ Transit bus stops located at this intersection; one in front of Chase Bank and the other in front of Fabco Shoes. These bus stops, along with each storefront, have frequent foot traffic and bring a high number of vehicles and pedestrians to this intersection.

Main Street has two lanes of traffic traveling in each location, with Day Street having one lane in each direction. Another bus stop is located approximately 50 yards beyond the intersection in front of Delta Gas and just before the Municipal Building. Both North Day and Main Street have sidewalks on each side, and all are in good condition. There are four crosswalks at this intersection, and the only one that does not need repainting is crossing North Day in between Fabco Shoes and Sassy Pickins. Each corner has pedestrian lighting and a push-button

pedestrian signal that is infrequently used. There are no bicycle lanes on either side of either street. Cars are able to make right and left turns, but there are no dedicated turn lanes or turn signals. Cars are not permitted to turn right on red. Many cars continued beyond the stop bars.



Fig. 1. Intersection of North Day Street and Main Street

Source: Google Maps

2.2 Pre-Campaign Survey

The pre-campaign survey was sent out as a study being conducted by the city of Orange and EZ Ride in partnership with the NJTPA. The survey included questions about driving and walking conditions, driving and pedestrian behavior, and knowledge of traffic laws in Orange. The pre-campaign survey was used to assess respondents' knowledge of traffic laws, understanding of pedestrian signals, awareness of safety messages, and general demographic information. The online survey link was sent out via email to City and County employees and other members of the community. A total of 1,726 participants completed the pre-campaign survey. The pre-campaign survey was provided in English (1,609), Spanish (115), and Creole (2). Results can be found in section 3.2 of the report.

2.3 Pre-Campaign Intersection Observations

Pre-Campaign observations were conducted at the focus intersection at North Day Street and Main Street on the afternoon of Thursday, September 8, 2022, where the team observed the intersection and pedestrian and driver behavior from 3:30 pm until 5:00 pm.

The team counted the total number of vehicles and crossing pedestrians and observed and counted the number who displayed unsafe behaviors, including:

- vehicles that failed to stop for pedestrians in the crosswalk
- vehicles that failed to stop for pedestrians at red lights before turning
- distracted drivers who held phones in their hands as they drove
- pedestrians who failed to use crosswalks or crossed despite a red signal
- distracted pedestrians who used phones as they crossed

Results can be found in section 3.2 of the report, and examples of observations are shown below.

Fig. 2a and 2b: Pedestrians Not Using Crosswalk





Fig. 3: Car Not Stopping for Pedestrian in Crosswalk



Fig. 4: Pedestrian Crosses While on Phone



Fig. 5a and b: Cars Stopping in Crosswalk





Fig. 6a and b: Pedestrians Crossing on Red Signal





Fig. 7a, b: Pedestrians Crossing on Red in Front of Turning Cars





Fig.8a: Pedestrians Crossing on Red



Fig.8b: Pedestrian Crossing on Red as Car Turns



Fig. 9: Scooter Not Looking and Crossing on Red



2.4 Campaign Kick Off

The City of Orange held a press meeting to officially kick off the Street Smart Campaign on Tuesday, September 27, 2022. Various media outlets wrote articles about the campaign, which are included in the Appendix. There were several speakers at the kick-off who addressed the community about the goals of the campaign. Those speakers included:

- Dwayne D. Warren, Mayor of Orange
- Gerald Fitzhugh, III Superintendent, Orange Public Schools
- Derrick Brown, Chief, Orange Fire Department
- Isaac Eason, Captain, Orange Police
- Lisa Lee Director of Bike and Pedestrian Program, EZ Ride

The kickoff was held for the press to inform the community that pedestrian and driver safety laws are taken seriously by the police department as well as the Mayor's office. The campaign was done to educate residents, enforce the law, and change behavior. The focus was to decrease

the number of pedestrians hit by cars and traffic violations, and to bring awareness to a serious issue in the community.

Fig. 10: Orange Kickoff - Mayor Dwayne Warren



Fig. 11: Street Smart Orange Kickoff



Orange Street Smart Team Photo

Fig. 12: EZ Ride Table



Fig. 13: Orange Kickoff - Lisa Lee, EZ Ride



During the campaign kick-off, EZ Ride had a table to promote safety for the community. We handed out Street Smart material and other safety information to the community: 18 tip cards, four posters, four outdoor Street Smart signs for the school intersection nearby, 10 NJ Safe Passing law cards, 14 "Heads Up, Phones Down" cards, 10 Don't Drive While Intoxicated brochures and 20 GDL Drivers Education brochures.

2.5 Education & Enforcement Campaign

Education Campaign

The education and public outreach campaign began on October 20, 2022, right after the kickoff at the Orange Public Library. EZ Ride staff distributed safety tip cards and "Heads up, Phones down" postcards to pedestrians, cyclists, and drivers at the focus intersection. Local businesses also displayed posters, coasters, and coffee cup sleeves. The goal was to raise awareness of safe driver and pedestrian behaviors. The campaign's key messages were as follows:

<u>Table 2: Messages Displayed on Street Smart Posters</u>

Driver Messages:	Pedestrian Messages:		
Drive Smart: "We Slow Down for Safety"	Walk Smart: "We Look Before Crossing" and "We Wait for the Walk"		
Drive Smart. "We Stop for People in Crosswalks" and "We Stop at Red Lights Before Turning	Walk Smart: "We Use Crosswalks" and "We Cross at Corners"		
Drive Smart: "Heads Up, Phones Down"	Walk Smart: "Heads Up, Phones Down"		

Outdoor Street signs and posters were displayed around the selected intersection, the library, post office, public schools, and municipal offices. The Orange Police Department also distributed 84 tip cards at the community education events listed below:

Table 3: Community Outreach By Orange Police Department

DATES	EVENTS
October 12, 2022	Assisted at Walk & Roll to School Day event at Central Ave. ES
October 12, 2022	Assisted at Walk & Roll to School Day event at Rosa Parks ES
October 17, 2022	Conducted evacuation drills and usage of crosswalks at Oakwood Ave. ES
October 18, 2022	Assisted at the City of Orange Historic Bike Tour 2022
October 21, 2022	Assisted at Walk & Roll to School Day event at Lincoln ES
October 24, 2022	Assisted at Walk & Roll to School Day event at Park Ave. ES
October 27, 2022	Assisted at Walk & Roll to School Day event at Oakwood Ave. ES

November 1, 2022	Assisted at Walk & Roll to School Day event at Forest Street ES
November 2, 2022	Assisted at Walk & Roll to School Day event at Heywood ES
December 1, 2022	Attended Safety Patrol Induction Ceremony at Oakwood Ave. ES
March 26, 2023	Participated at Central ES School Safety Patrol Day
June 10, 2023	Orange PD's Bike Unit will attend the Orange 2023 5K Color Run, Walk and Roll
July 10 – August 4, 2023	Orange Junior Police Academy

In addition, The Orange Police Department worked with several businesses in the target area to give away Street Smart educational materials. They gave out 84 tip cards, five outdoor Street Smart signs, three English posters, and three Spanish posters at My Amor Coffee, Naya Jewelry, Inner City Cafe, and Eterna Primavera. In addition, a dozen local stores in the downtown Main Street area supported the Street Smart campaign by posting 8x10 posters in their storefront windows. All of these businesses are located on or near Main Street, close to the target intersection.

Figures 14a and 14b: Outdoor Signs on Central Ave and Scotland Road





Fig. 15a and 15b: Outdoor Signs on Cleveland Street and White Street



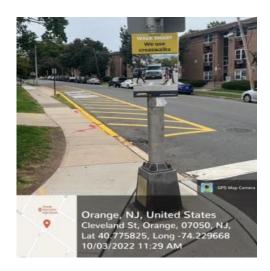


Fig. 15c: Sign on Cleveland St. & White St.

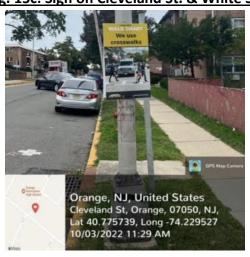


Fig. 16b: Sign on Cleveland St. & Main St.



Fig. 17a, 17b, 17c, 17d: Street Smart Posters in Local Windows



309 Main St.



258 Main St.







305A Main Street

EZ Ride's Safe Routes to School team worked with the schools of Orange during and after the Street Smart campaign. The team conducted 14 Pedestrian Safety Presentations (PSPs), ten Bike Safety Presentations (BSPs), participated in seven Walk & Roll to School events, and offered three poster contests. EZ Ride participated in a Safe Kids Event at the First Fellowship Cathedral and provided 54 helmets to those in need. The team provided one Pedestrian and Drivers Safety presentation for 24 participants at the New Community Senior Center. Finally, the EZ Ride team donated 12 bikes, led a Learn to Ride class for 14 youths, and led a Bike Safe Skills and Presentation class for five youths at the culminating event for OrangeWeek 2023.

Table 4: EZ Ride's Safe Routes to School Activities:

(PSP = Ped. Safety Talk, BSP = Bike Safety Talk, DSP = Driving Safety Talk)

Location	Date	# of Students Activity	
Central Ave. ES	Oct. 12, 2022	100	Walk & Roll to School Day
Rosa Parks ES	Oct. 12, 2022	50	Walk & Roll to School Day
Rosa Parks ES	Oct. 20, 2022	120	2 PSP's 2 BSP's
Lincoln ES	Oct. 21, 2022	45	Walk & Roll to School Day
Lincoln ES	Oct. 21, 2022	640	2 PSP's 2 BSP's
First Fellowship Cathedral	Oct. 21, 2022	54	Safe Kids Event & Helmet Give-Away
Park Ave. ES	Oct. 24, 2022	13	Walk & Roll to School Day

Central Ave. ES	Oct. 25, 2022	690	1 PSP 1 BSP
Oakwood Ave. ES	Oct. 27, 2022	25	Walk & Roll to School Day
Oakwood Ave. ES	Oct. 27, 2022	228	1 PSP 2 BSPs
Forest Street ES	Nov. 1, 2022	45	Walk & Roll to School Day
Forest Street ES	Nov. 1, 2022	509	3 PSPs 1 BSP
Heywood ES	Nov. 2, 2022	25	Walk & Roll to School Day
Heywood ES	Nov. 2, 2022	422	3 PSPs 1 BSP
Park Ave. ES	Nov. 3, 2022	509	2 PSPs 1 BSP
Oakwood Ave. ES	Nov. 12, 2022	28	Poster Contest
Park Ave. ES	Nov. 26, 2022	40	Poster Contest
Lincoln ES	Nov. 30, 2022	8	Safety Advisory Board Meeting
Lincoln ES	Dec. 19, 2022	31	Poster Contest
Virtual	Apr. 17, 2023	5	Planning meeting for Orange Week Event
New Community Senior Center	Apr. 20, 2023	24	1 PSP 1 DSP
Lincoln ES	Apr. 26, 2023	6	Safety Advisory Board Meeting
Virtual	May 10, 2023	4	Planning meeting for Orange Week Event
Monte Irvin Park	June 10, 2023	32	Bike donations, 1 BSP, 1 Learn to Ride, 1 Bike Safe Skills

EZ Ride also did outreach at the focus intersection of North Day Street and Main Street in Orange on October 20, 2022, from 2:45 pm to 4:45 pm. The EZ Ride Bike and Pedestrian team distributed 300 Street Smart Tip Cards and 300 "Heads Up, Phones Down" cards to passersby.

In addition, EZ Ride visited the Orange Senior Center to conduct pedestrian and driver safety presentations on April 20, 2023, with 24 participants and gave out 24 tip cards and 24 "Heads Up" cards.

The City of Orange Township distributed approximately 1,618 educational materials, including posters, outdoor signs, flyers, and tip cards, to local residents and various local businesses. Table 5 documents the quantities of materials distributed.

Table 5: Street Smart Education Materials Distributed

Material	Amount
Tip Cards Given Out By Municipality	559
Tip Cards Given Out by EZ Ride - Bilingual Tip Cards - Heads Up, Phones Down cards	300
Heads Up Cards Given Out by Municipality	900
Cup Sleeves Given Out by Municipality	149
Posters Given Out by Municipality	46
Posters Given Out by EZ Ride	15
Outdoor Hung at Intersections by Municipality	53

Enforcement Campaign

Police departments in most Street Smart Campaigns have typically run the Enforcement Period for two weeks. The Orange Police Department conducted its enforcement efforts from September 15, 2022, to October 31, 2022. During the time of enforcement, officers issued 25 violations and warnings. Table 9 contains a breakdown of the violations and warnings issued.

Table 6: Enforcement Results: September 15, 2022 to October 31, 2022

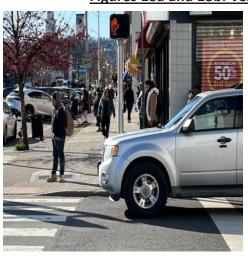
VIOLATIONS TYPE	# Warnings	# Summons	VIOLATIONS TYPE	# Warnings	#Summons
Failure to Stop at a Traffic Light	1	1	No Seatbelt	4	0
Failure to Observe Stop/Yield Sign	2	1	Reckless/Careless Driving	1	1
Passing a Vehicle Stopped for Pedestrian in Crosswalk	0	1	Driver Use of Handheld Cell Phone/Texting	2	0
Failure to Stop for Pedestrian in Crosswalk	0	1	Pedestrian Improper Crossing (On Red, Not Using Crosswalk)	6	0
Failure to Yield to Pedestrian in Crosswalk While Turning	3	0			

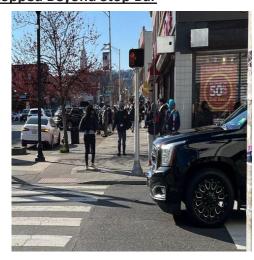
Source: Orange Police Department

2.6 Post-Campaign Intersection Observations

After the education and enforcement portions of the campaign were concluded, the team returned to the intersection to conduct post-campaign observations on Thursday, March 30, 2023, from 3:30 pm until 5:00 pm. The team observed driver and pedestrian behavior and tallied how often each behavior occurred. The team monitored pedestrians and motorists, noting whether vehicles stopped for pedestrians in the crosswalk and before they made right turns, whether pedestrians used the crosswalk or crossed on red, and whether drivers or pedestrians were distracted by hand-held phones.

Figures 18a and 18b: Vehicles Stopped Beyond Stop Bar





Figures 19a, 19b: Pedestrians Distracted by Phones in Crosswalk

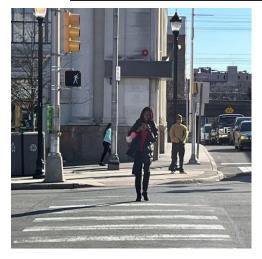






Figure 20: Cyclist on Sidewalk, no Helmet





Figures 21a and 21b: Pedestrians Using Crosswalk



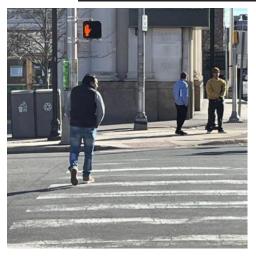


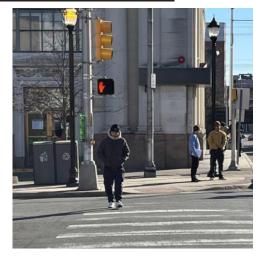
Figures 22a and 22b: Faded Crosswalks





Figures 23a and 23b: Pedestrians Crossing on Red Stop Hand





Figures 24a and 24b: Pedestrians Crossing Mid-Block





2.7 Post-Campaign Survey

The survey was sent as a study being conducted by EZ Ride in partnership with the city of Orange and the NJTPA. The survey was identical to the pre-campaign survey and included questions about signals, safety messages, knowledge of traffic laws, and demographic questions. A total of 765 participants (752 English, 12 Spanish, one Creole) responded to the post-campaign survey. The survey was used to evaluate the effectiveness of the Street Smart NJ Pedestrian safety education campaign program. Results can be found in section 3.2 of the report.

3. Evaluation

3.1 Significance of Intersection Observations

Behavioral observations were tallied, and counts were compared for pre- and post-campaign using an "Observational Study Calculator" provided by NJTPA. The calculator determines whether or not changes in driver, pedestrian, and cyclist behavior post-campaign were statistically significant. P-value is the test that determines the likelihood that an observed difference is attributed to chance. It is not a measure of the strength of the Street Smart program itself. Thus, statistical significance can be interpreted to mean that within our sample of observations, there is reasonable evidence to support that Street Smart interventions played a part in changing behavior.

Table 9: Counts of Com	<u>pliant and Non-Complian</u>	t Behaviors at the Tar	get Intersection

Non-Compliant Behavior Type	Compliant Count	Non-Compliant Count	Rate of Non - Compliance	Change in Rate of Non- Compliance (%) (+:increased) (- :decreased)	Significance Test
Improper Crossing/ Failed to Use	Pre-Count: 975	Pre-Count: 66	Pre-Count: 0.063	-1.10	Statistically Insignificant
Crosswalk	Post-Count: 760	Post-Count: 42	Post-Count: 0.52		3
Pedestrians Crossing Against	Pre-Count: 685	Pre-Count: 356	Pre-Count: 0.342	10.07	Statistically
the Red Signal	Post-Count: 447	Post-Count: 355	Post-Count: 0.443		Insignificant
Distracted Pedestrian (Holding Phone)	Pre-Count: 955	Pre-Count: 86	Pre-Count: 0.083	-1.35	Statistically Insignificant
While Crossing	Post-Count: 754	Post-Count: 56	<u>nt</u> : 56 <u>Post-Count</u> : 0.069		maiginnedit

Distracted Driver (holding	Pre-Count: 1740	Pre-Count: 23	Pre-Count:0.013	-0.57	Statistically
phone) While Driving	Post-Count: 2024	Post-Count: 15	Post-Count: 0.007		Significant
Drivers Failed to Stop for Pedestrians in	<u>Pre-Count:</u> 1735	Pre-Count: 28	Pre-Count: 0.016	-0.46	Statistically Insignificant
Crosswalk	Post-Count: 2016	Post-Count: 23	Post-Count: 0.011		
Turning Drivers Failed to Stop For Peds at Red Signal	Pre-Count: 1759	Pre-Count: 4	Pre-Count: 0.002	-0.13	Statistically
	Post-Count: 2037	Post-Count: 2	Post-Count: 0.001		Insignificant

Based on our observations post-campaign, the only non-compliant behavior that had a significant reduction was:

- Distracted drivers holding phones in hand while driving

There was no noticeable reduction in the following non-compliant behaviors:

- Pedestrians who failed to use the crosswalk
- Pedestrians crossing against a red signal
- Distracted pedestrians holding phones in hand while crossing
- Drivers who failed to stop for pedestrians in the crosswalk
- Turning drivers who didn't stop for pedestrians at red signals

3.2 Pre-Campaign and Post-Campaign Survey Results

In addition to the observational evaluation, people who lived, worked, or regularly frequented the city of Orange were surveyed about their knowledge, behavior, and perceptions of pedestrian safety. The online survey was designed to determine the effectiveness of the Street Smart campaign messaging and activities. A comparison of survey results pre- and post-campaign is illustrated in charts on the following pages. During the pre-campaign period, there were 1,726 survey participants, while post-campaign, there were 765 participants.

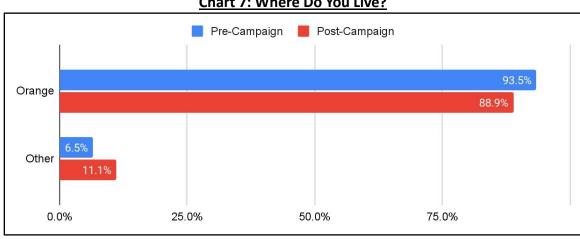


Chart 7: Where Do You Live?

Question one, presented in Chart 7, demonstrates that most participants were from Orange, NJ. Surveys showed that 94 percent of pre-survey participants lived in Orange, and 89 percent of post-campaign participants were Orange residents.

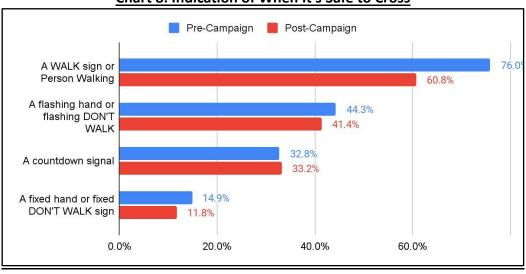


Chart 8: Indication of When It's Safe to Cross

Chart 8 shows participants' understanding of which signals meant it was safe to cross. When comparing pre-campaign and post-campaign data, there was an improvement, with respondents recognizing it is not safe to cross when the flashing hand, flashing Don't Walk, fixed hand, or fixed Don't Walk signals are displayed. Figure 20 shows the specific images of signals that were used in the survey. The most concerning response was that more than 40 percent of respondents, both pre-and post-survey thought it was safe to walk when the flashing red hand or Don't Walk sign is displayed. This indicates education is needed to help pedestrians recognize the meaning and that it is unsafe to start crossing when the flashing hand or flashing Don't Walk sign is displayed as the signal will turn red very soon.

Figures 20a, 20b, 20c, 20d, 20e, and 20f: Pedestrian Signals

Walking Pedestrian Signal



Red Hand Signal



3 Second Countdown Timer



14 Second Countdown Timer



Walk Signal



Don't Walk Signal



Chart 9: Select Actions for Which You Can Receive a Ticket in New Jersey

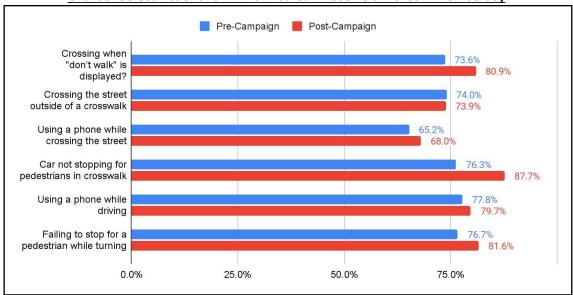


Chart 9 shows participants' understanding of actions for which they can receive a ticket in New Jersey. Results show there was an improvement with post-survey respondents in five of the six categories with realizing when you can receive a ticket in New Jersey. The data shows that the Orange Street Smart Campaign successfully informed survey takers about pedestrian laws.

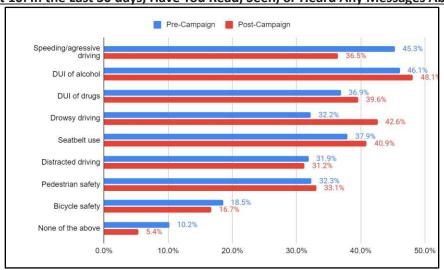


Chart 10: In the Last 30 days, Have You Read, Seen, or Heard Any Messages About:

Chart 10 shows if participants read, saw, or heard any messages regarding driving and pedestrian laws and safety. Pre-campaign respondents recalled messages about speeding and aggressive driving, distracted driving, and bicycle safety. This data shows that post-campaign respondents remembered and were most aware of messages about drowsy driving, seatbelt use, and DUI.

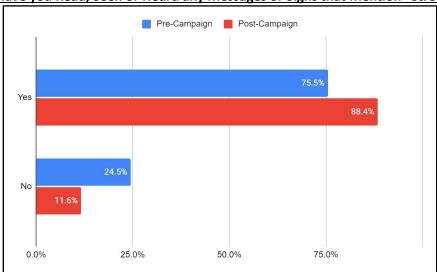
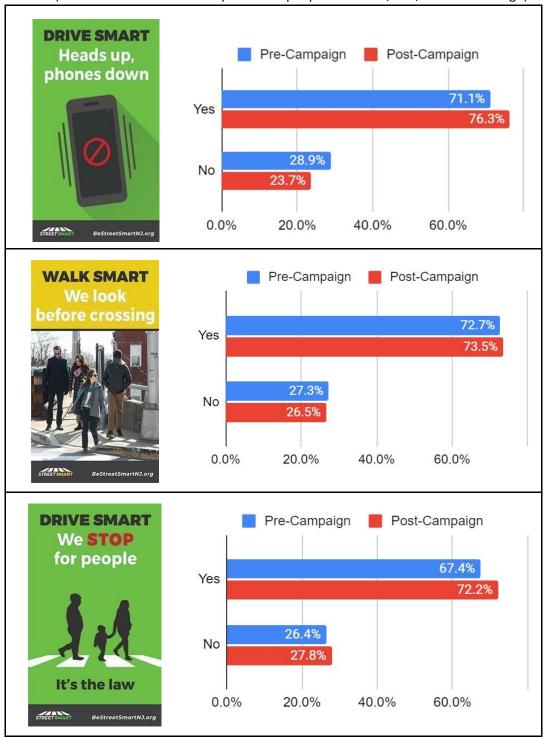


Chart 11: Have you Read, Seen or Heard any Messages or Signs that Mention "Street Smart"?

Chart 11 shows the results when participants were asked if they had read, seen, or heard any messages mentioning Street Smart. As seen in the chart, there was an improvement between pre-campaign and post-campaign answers. Almost thirteen percent more post-campaign respondents saw Street Smart messaging during the campaign compared with pre-campaign respondents.

Chart 12: In the Last 30 days Have You Read, Seen or Heard Any of the Following:

(The bar chart indicates the percent of people who read, saw, or heard the sign)



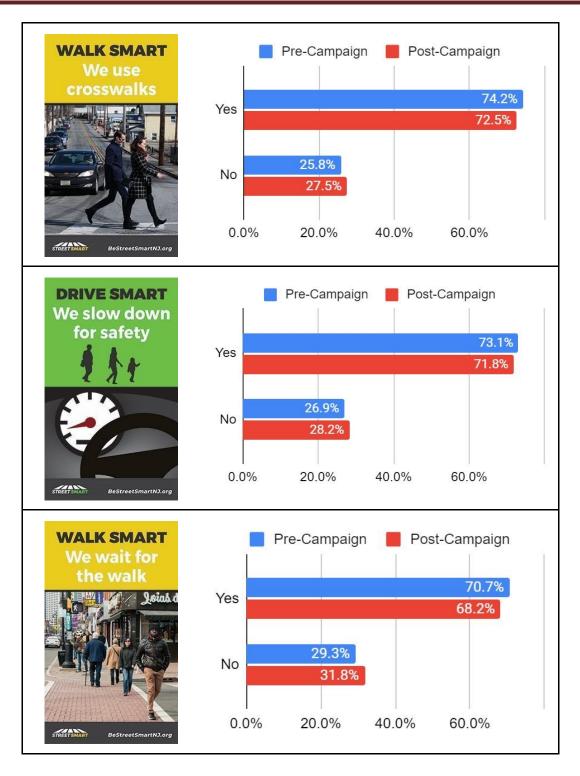


Chart 12 takes a closer look at specific messages used during the Street Smart Campaign.

Results show that the Orange Street Smart Campaign has mixed with messaging over the last 30 days of the campaign. "Drive Smart: Heads Up, Phone Down" and "Drive Smart: We Stop for People" were the only two messages that saw an increase in the number of people who had seen or heard the messages. This data suggests future Street Smart Campaigns should post more of the remaining four signs and stress the importance of each.

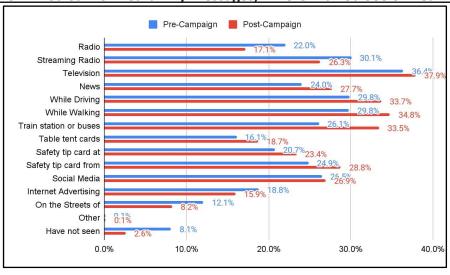


Chart 13: If You Saw or Heard Any Messages, Where Did You See or Hear Them?

Chart 13 shows the results of ways in which participants received messages during the Street Smart Campaign. Data shows that Orange's Street Smart Campaign was best spread using four methods: on posters/outdoor signs at transit stations or buses, on posters/outdoor signs seen while walking, on posters/signs seen while walking, and safety tip cards or fact sheets distributed by police officers/family/friends/community organizations, etc. This information is important for relaying future messages.

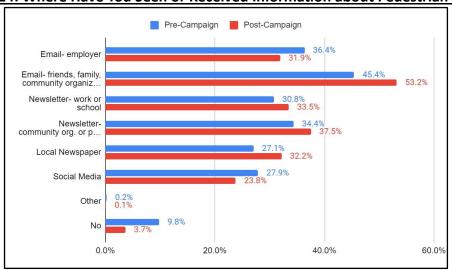


Chart 14: Where Have You Seen or Received Information about Pedestrian Safety

Chart 14 portrays the success of receiving information on the Street Smart Campaign regarding driving/walking safety by using emails from friends/family/community organizations/businesses and from local newspapers.

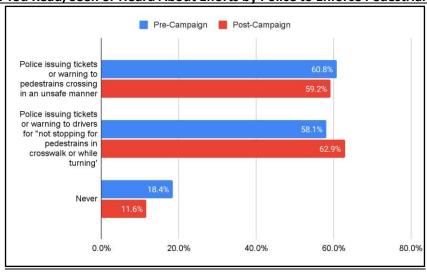


Chart 15: Have You Read, Seen or Heard About Efforts by Police to Enforce Pedestrian Safety Laws?

Survey results in Chart 15 show the impact of the enforcement portion the Street Smart Campaign had on survey results. A greater percentage of post-campaign respondents saw or heard about the police enforcing pedestrian laws. The percentage of respondents who saw the police issuing tickets or warnings to drivers for not stopping for pedestrians in crosswalks increased by 5 percent. There was also a reduction by seven percent in the responses of those who never saw the police enforcing pedestrian laws. This shows the more police enforce traffic laws, the more awareness increases. It's hoped compliance also increases as a consequence.

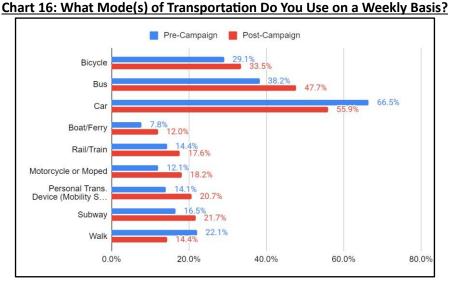
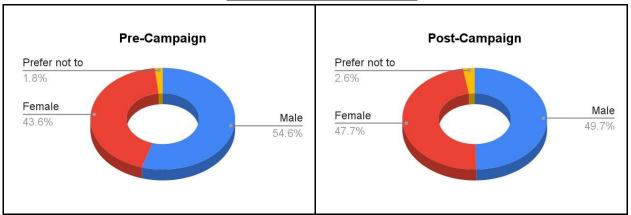


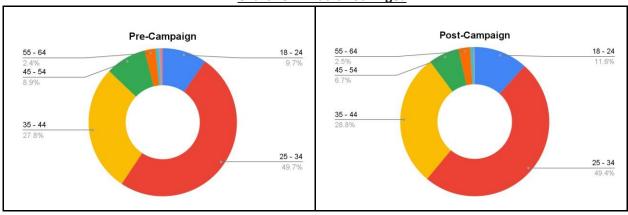
Chart 16 shows what form of transportation participants used on a weekly basis. Survey results indicate the top three modes of transportation for people in Orange are car, bus, and bicycle. These findings show that it's important to ensure that multimodal infrastructure for drivers, transit users, and cyclists are continually improved and well-maintained.

Chart 17: What is Your Gender?

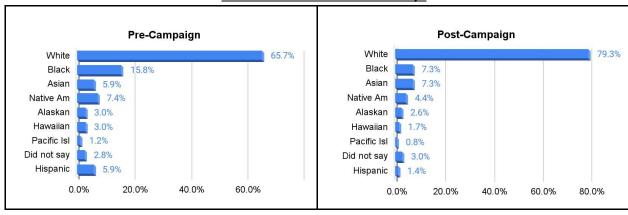


<u>Pre-campaign</u> Chart 17 shows 55 percent of survey participants were male and 44 percent were female. <u>Post-campaign</u> Chart 17 shows 50 percent of survey respondents were male and 47.7 percent were female. According to the 2021 Census Reporter data, males make up 45 percent of the population of Orange, and females make up 55 percent of the population. Our survey results show participants for the pre-campaign survey were 11 percentage points higher for males than females, but the post-campaign survey was closer in equality with a two percentage point difference between males and females. In the future, surveys should be sent to groups that have an equal number of men and women.

Chart 18: What is Your Age?



Our survey results show respondents were primarily adults between the ages of 25 and 44. According to the 2021 Census Reporter data, 15 percent of the population of Orange is between the ages of 0-9, 13 percent of ages 10-19, 13 percent of ages 20-29, 16 percent of ages 30-39, 14 percent of ages 40-49, 11 percent of ages 50-59, 10 percent of ages 60-69, and eight percent of ages 70 and older. The median age is 35 years. For future surveys, it's suggested to survey some of the local high school students and more young adults to capture a more representative sample.



Charts 19: What is Your Ethnicity?

According to the 2021 Census Reporter data, the racial makeup of Orange is 59 percent Black or African-American, 31 percent Hispanic/Latino, 5 percent White, one percent Asian, one percent other races, and two percent from two or more races. However, there may be many other undocumented immigrant groups who live and work in Orange who did not fill out the Census forms. Our survey results did not capture as much of the true ethnic diversity in Orange, and future efforts should try to survey a more diverse and representative sample by surveying those who live and go to school in Orange. Surveying students and their families may be helpful for future campaigns.

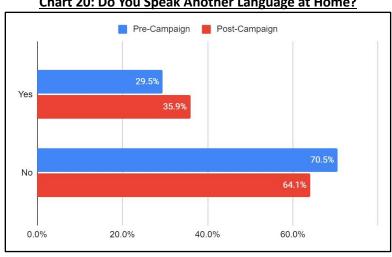
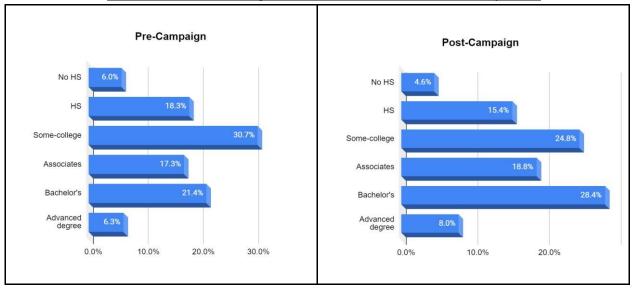


Chart 20: Do You Speak Another Language at Home?

Survey results showed that 30 percent of people pre-survey and 36 percent of people postsurvey speak a language other than English at home. As per the 2021 Census Reporter data, languages spoken in Orange are 54 percent English, 25 percent Spanish, 13 percent other Indo-European languages, one percent Asian & Pacific Islander languages, and six percent other languages. It's suggested to print the campaign messages and surveys in these other languages to help educate and reach more of the population in Orange regarding traffic and pedestrian safety.



Charts 21: What is the Highest Level of Education You Have Completed?

The final survey question asked participants about the highest level of education they had attained. According to the 2020 U.S. Census, 34 percent of Orange residents have a High School or equivalent degree, 19.7 percent have some college education, 14.9 percent have a Bachelor's degree, and six percent have a graduate or professional degree. Chart 21 shows preand post-campaign survey respondents are slightly more educated than Orange demographics based on Census 2020 data, as 25-31 percent responded they had "some college", 21-28 percent responded they had a "Bachelor's degree," and 6-8 percent had an "advanced degree."

4. Summary and Recommendations

The goal of Street Smart NJ is to reduce avoidable pedestrian injuries and fatalities to zero, using a public awareness campaign that aims to improve driver and pedestrian behavior. The campaign focuses on educating the public about traffic laws and signals, raising awareness of safety messages and proper driver/pedestrian behavior, and enforcing the law.

- The data from pre- and post-campaign surveys shows that respondents feel the most serious problems are distractedness and drivers/pedestrians who disobey traffic rules.
- The Street Smart Orange campaign heightened people's awareness that drivers, pedestrians, and cyclists share a responsibility to obey traffic laws.
- The campaign had an impact on those who filled out surveys by increasing awareness of the law and unsafe pedestrian, cyclist, and driver practices
- Results showed many survey respondents have a good understanding of pedestrian signals, but 30 to 40 percent need to learn the meaning of the flashing red hand, Don't Walk, and a fixed red hand.
- The post-campaign survey results showed respondents became more aware that local police are enforcing pedestrian safety laws and holding pedestrians and drivers accountable for unsafe and unlawful behavior.
- The outdoor street signs and posters were the most effective campaign materials.

- The most recognized safety messages were "Drive Smart: We Stop for Pedestrians in Crosswalk" and "Drive Smart: We Slow Down for Safety".
- The "Heads Up, Phones Down" message needs to be promoted more in Orange.
- Based on intersection observations post-campaign, fewer drivers used hand-held phones while driving.

2,022 Street Smart tip cards and other educational materials were distributed to residents and commuters during the community outreach and education campaign. Tip cards, coffee sleeves, store posters, and outdoor street signs were viewed by many people, both walking and driving.

The Orange campaign was successful. The safety messages and enforcement campaign made people reflect on their own and others' behavior. Results of this campaign suggest that increased awareness and enforcement help to encourage safer behavior. Additional pedestrian safety campaigns may improve behavior even further.

More education and enforcement throughout Orange is definitely needed to reinforce safe pedestrian and motorist behavior. Additional community outreach and school safety programs are recommended. Some infrastructure changes might be helpful to make the intersection safer, and these are included in the following recommendation section.

4.1 Suggestions for Consideration

- City/County can setup "Stop for Pedestrians in Crosswalk" signs at the target intersection and other busy intersections to raise awareness
- Intersection crosswalks need to be repainted with high visibility striping
- Stop Bars will be more visible and effective if the word "Stop" is painted before the bar
- Hang "No Right Turns on Red" signs on the traffic signal post arms that hold the green, yellow and red signal - directly in front of drivers
- Ask local bike shops to post signs reminding cyclists to ride on the right side of street
- City can educate residents and motorists about stopping for pedestrians in crosswalks and before they make right turns or left turns in intersection
- County can work with the NJ Motor Vehicle Commission to teach new/renewing drivers and defensive driver course participants to stop for pedestrians in crosswalk
- Consider a mail insert for motorists renewing licenses/registrations
- City/County staff should reinforce that distracted driving is a ticketable offense and that hand-held cell phones/headphones while walking, driving or cycling is unsafe
- Promote crosswalk use at all intersections
- Place Street Smart posters/signs in schools, colleges, trains, transit stations, bus stops to discourage distracted walking and driving
- Increase police enforcement of pedestrian, driver, and cycling laws at other intersections with high crash rates, and issue violations to deter unwanted behavior

- Police can distribute material and post signs advising cyclists to ride with traffic, on right side of street, and to encourage helmet use
- Conduct additional Street Smart campaigns to encourage safe driving and walking

5. Appendix

5.1 Street Smart Educational Materials English

Posters:













Spanish Posters:





Lawn & Outdoor Street Signs:

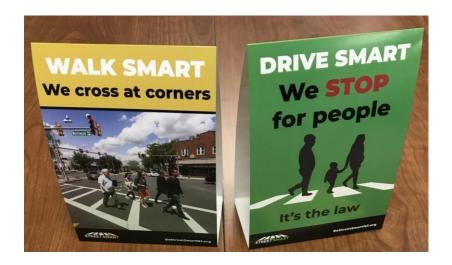








Table Tents:



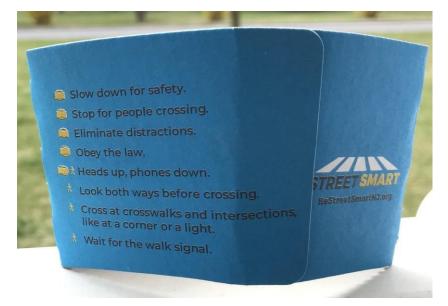
Coasters:





Cup Sleeves:





Banners:









5.2 Media Coverage

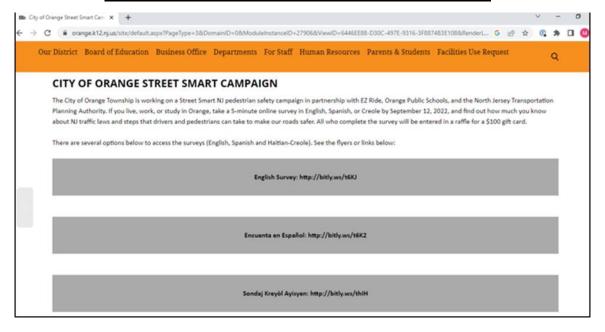
Promotion: Orange NJ - Real Talk Facebook site:



Kickoff Promotion Form



Pre Survey Promotion: Orange Public Schools: Street Smart



Post Survey Promotion: Orange Public Schools



City of Orange Street Smart Campaign Survey

The City of Orange Township is wrapping up its Street Smart NJ pedestrian safety campaign in partnership with EZ Ride, Orange Public Schools, and the North Jersey Transportation Planning Authority. If you live, work, or study in Orange, take a 5-minute online survey in English, Spanish, or Creole by May 19, 2023.

Post Survey Promotion: City of Orange Website



5.3 New Jersey State Laws:

Whether you're driving, walking or cycling, everyone can help make New Jersey's roads safer. By playing our part, we can work toward New Jersey's goal of zero pedestrian fatalities. It's important that everyone knows and follows the laws, and also follows common sense safety measures everyone can follow to help reduce fatalities.

LAWS FOR MOTORISTS AROUND PEDESTRIANS

- Drivers must stop and stay stopped to allow people to cross at marked crosswalks and intersections, including when turning. (39:4-36.a. (1))
- Whenever any vehicle is stopped for someone crossing the road, the driver of any other vehicle approaching from the rear shall not pass the stopped vehicle. (39:4-36.a. (3))
- A person crossing or starting to cross an intersection on a walk or green signal, but who is still within the crosswalk when the signal changes, has the right of way until they finish crossing. (39:4-32.c.)
- A driver shall exercise due care for the safety of any pedestrian upon a roadway. (39:432.g.; 39:4-36.a. (5))

• In the event of a collision between a vehicle and a person crossing at an intersection, there shall be a permissive inference that the driver did not exercise due care for the safety of the pedestrian. (39:4-32.h; 39:4-36.d.)

Violations of the above laws carry a \$200 fine, two motor vehicle points, and up to 15 days of community service. If the violation results in serious bodily injury to a person crossing, drivers can face fines of more than \$500, up to 25 days in jail, and a license suspension of up to six months.

LAWS FOR PEDESTRIANS

- No pedestrian shall leave a curb or other place of safety and walk or run into the path of a vehicle that is so close that it is impossible for the driver to yield or stop. (39:4-32.a; 39:4-36.a. (2))
- Where traffic is not controlled and directed either by a police officer or a traffic control signal, people should cross in a marked crosswalk, or, in the absence of a marked crosswalk, and where not otherwise prohibited, at right angles to the roadway. (39:434)
- No person shall cross a roadway against the stop or red signal at a crosswalk, whether
 marked or unmarked, unless otherwise specifically directed by a police officer or traffic
 control device. (39:4-32.a.)
- Every person upon a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles. (39:4-36.a. (4))

Violation of the above laws carries a \$54 fine.