

Walkable Community Workshop

Pedestrian Safety and Accessibility in Orange, NJ



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FINAL REPORT, 11/7/16

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Background

Walkable communities are essential for addressing public health, advancing multi-modal networks, fostering economic development, and improving air quality through a reduction in greenhouse gas emissions produced by vehicles. The North Jersey Transportation Planning Authority (NJTPA), the Metropolitan Planning Organization for the 13 counties of northern and central New Jersey, conducts half-day Walkable Community and Senior Mobility Workshops with counties and municipalities to foster stakeholder involvement, identify barriers to walking, and improve pedestrian safety. For each workshop, NJTPA staff coordinates with local representatives to include a broad range of stakeholders including local leaders, planners, engineers, and residents.

Each workshop consists of four parts: 1) an introduction of local stakeholders; 2) a presentation by an NJTPA facilitator on best practices in a walkable community; 3) a guided walking audit of a study area identified by the local hosts; and 4) small group sessions where recommendations for improvements are discussed and prioritized. The objective is to identify and prioritize recommendations that will increase pedestrian safety and accessibility. The workshop also serves as a catalyst for local communities and county representatives to implement the improvements and/or to further refine the recommendations for implementation by other agencies. In addition to addressing safety, the workshop promotes the New Jersey Department of Transportation's (NJDOT) Complete Streets Policy, which seeks to accommodate roadway users of all ages and abilities including bicyclists, pedestrians and transit riders. The City of Orange adopted a Complete Streets Policy in 2011.



Figure 1: Location of Walkable Communities Workshop

The Orange Walkable Community Workshop was held at HANDS, Inc., adjacent to the workshop site, in the City of Orange on March 9th, 2016 (Figure 1). The walkability workshop was initiated by the Urban Essex Coalition, a group that was created as a result of planning work undertaken by the Together North Jersey consortium.

Figure 2: Aerial of the Workshop Neighborhood



Walking Audit Location

The workshop area, outlined in yellow in Figure 2, focused on Essex Avenue in front of an incoming preschool as well as northwards to Main Street and southwards to Freeway Drive West and Main Street. The site also included Main Street from Essex Avenue to Cleveland Avenue, an area that includes the Orange Public Library and the Rosa Parks Central Community School.

The neighborhood to the north and east of the NJ TRANSIT Orange Train Station is predominately commercial and within walking distance of several schools, including the Rosa Parks Elementary School and the incoming preschool at 50 Essex Avenue. It is located north of Freeway Drive and I-280, and offers transit access to a variety of destinations, via the 21, 41, 71, 73, and 79 bus routes and the Morris & Essex and Gladstone Branch rail lines at Orange Station.

The Freeway Drive West intersection is a busy, 3-lane, oneway road. Immediately west of Essex Avenue, it splits into the more residential Crane Street to the north and a singlelane on-ramp to I-280 southwards. The speed limit along Freeway Drive West is 35 MPH. No traffic counts were available for Freeway Drive West.

Main Street, on the northern end of the study corridor, can

be described as a primarily commercial stretch. A 2014 traffic count 6 blocks east of Essex Avenue along Main Street indicated that the AADT was 12,181.

Orange residents walk and take public transit for work trips at a higher percentage than commuters statewide. In terms of mode split, walking accounts for over 5% of work trips, slightly higher than the state average. Public transit, which often includes walking to the transit location, accounted for 22% of work trips in the City of Orange, which is over double the percentage of work trips made via public transit statewide. Furthermore, 20% of adults in Orange do not have access to a vehicle, necessitating that alternative forms of transit be used.¹



Source: 2009 American Community Survey, Table B08301, Orange has 3-year estimates (2007-2009), New Jersey has 1-year estimates

The City of Orange also differs from the statewide demographics, especially in terms of race, income, and linguistic isolation (defined as households in which all family members 14 years old and over have at least some difficulty with English²). While the race "White alone" accounts for 70% of the population statewide, in Orange, "Black or African American alone" accounts for 70% of the population. The mean household income is \$40,000 less than the state average and the median income is about \$27,000 less. In terms of linguistic isolation, when compared to statewide averages, there are nearly double the percentage of households in Orange where all individuals aged 14 and over have difficulty speaking English. Further details on demographics are listed in Figure 3, with the most available municipal-level US Census Bureau information being from 2009.

Characteristic	City of Orange	New Jersey	
Population*	30,999	8,707,740	
Median Age*	33.9	38.7	
Less than 18*	24.8%	23.5%	
Older than 65*	10.0%	13.4%	
Mean Household Income**	\$52,888	\$91,907	
Median Household Income**	\$41,695	\$68,342	
Linguistically isolcated***	12.6%	7.2%	
Race White alone Black or African American alone American Indian and Alaska Native alone Asian alone Native Hawaiian and Other Pacific Islander alone Some other race alone Two or more races	0% 1% 1%	0% 2% 0% 8% 14% 71%	
Total population, 2007-2009 American Community Survey	71%		

Figure 3: Comparing Demographics (2009) in Orange and New Jersey

*Age and Sex, 2007-2009 American Community Survey 3-Year Estimates (S0101)

(B02001), Accessed 6/15/16

**Income in the Past 12 Months (In 2009 Inflation-Adjusted Dollars), 2007-2009 American Community Survey 3-Year Estimates (S1901)

***Linguistic Isolation, 2007-2009 American Community Survey 3-Year Estimates (S1602)

For all datasets, Orange uses 3-year estimates, New Jersey uses 1-year estimates

² "Language Use," Frequently Asked Questions, United States Census Bureau. <u>www.census.gov</u> 4 – FINAL REPORT

Pedestrian Crash Data

Figure 3: Pedestrian Crash Map



An analysis of crash data from 2010-2014 using the Plan4Safety data analysis tool found that there were 17 pedestrian crashes resulting in injury within the workshop study area. Figures 3 and 4 below show the location and discuss the characteristics of the crashes.

Figure 4: Pedestrian Crash Characteristics	(2010-2014)
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Location	Ped. Age	Ped. Gender	Date	Day	Time	Severity	At Inter- section?	Crash Type	Lighting
Cleveland St & Main St	22	Female	2/11/11	Fri	9:42 PM	Injury	Yes	Ped.	Dark (Street Lights On/ continuous)
Cleveland St & Main St	70	?	5/11/12	Fri	3:57 PM	Injury	Yes	Ped.	Daylight
Cleveland St & Main St	21	Male	1/28/12	Sat	2:49 PM	Injury	No	Cyclist	Daylight
Cleveland St & Main St	29	Male	2/23/14	Sun	1:51 PM	Injury	Yes	Ped.	Daylight
Cleveland St & Main St	42	Female	6/14/12	Thur	12:21 PM	Injury	Yes	Ped.	Daylight
Cleveland St & Main St	7	Female	10/18/11	Tue	7:35 AM	Injury	No	Ped.	Dawn
Freeway Dr W & Essex Ave	57	Male	11/10/14	Mon	6:12 PM	Injury	Yes	Ped.	Dark (Street Lights Off)
Freeway Dr W & Essex Ave	37	Female	10/16/11	Sun	7:25 AM	Injury	Yes	Ped.	Daylight
Freeway Dr W & Essex Ave	35	Male	1/8/12	Sun	6:45 PM	Property Damage	Yes	Cyclist	Dark (Street Lights On/ continuous)
Freeway Dr W & Essex Ave	26, 26	2 Males	7/21/13	Sun	4:42 AM	Fatal	Yes	Ped.	Dark (Street Lights On/ continuous)
Freeway Dr W & Essex Ave	?	?	8/25/13	Sun	12:18 AM	Injury	Yes	Ped.	Dark (Street Lights On/ continuous)
Freeway Dr W & Essex Ave	?	Male	8/8/12	Wed	6:04 PM	Property Damage	Yes	Cyclist	Unknown
Main St & Essex Ave	98	Male	4/2/10	Fri	3:59 PM	Injury	No	Ped.	Daylight
Main St & Essex Ave	14	Male	9/29/14	Mon	6:44 PM	Injury	Yes	Ped.	Daylight
Main St & Essex Ave	13	Male	11/26/11	Sat	4:26 PM	Injury	Yes	Ped.	Dusk

Location	Ped. Age	Ped. Gender	Date	Day	Time	Severity	At Inter- section?	Crash Type	Lighting
Main St & Essex Ave	75, ?	2 Males	1/10/12	Tue	10:00 AM	Property Damage	No	Ped.	Dark (Street Lights On/ continuous)
Main St & Essex Ave	40	Female	10/21/14	Tue	3:06 PM	Injury	No	Ped.	Daylight

Workshop Methodology

The Orange Walkable Community Workshop kicked off with participant introductions and a brief presentation. Workshop participants included staff from the EZ Ride Transportation Management Association (TMA), the Orange Planning Department, the Urban Essex Coalition, and local individuals. The workshop agenda and participant list is provided on pages 14-15.

NJTPA staff facilitated a discussion of workshop goals, the benefits of improving walkability, and traffic calming techniques that might be employed to improve pedestrian access to transit or other services in the vicinity of Orange Station. The presentation discussed potential design improvements sensitive to the context of the walking audit area and the need to accommodate pedestrians of all ages and abilities. Improvements such as lead pedestrian intervals (LPI), pedestrian countdown signals, curb ramps, crosswalks, and traffic calming signage were discussed as well as compliance with the Americans with Disabilities Act (ADA). The discussion also included the public health rationale for increasing physical activity and the relationship between walkability and improved quality-of-life.

Following the presentation, participants did a walking audit of the area. During the audit, participants were asked to identify barriers to walkability and how these barriers might be addressed through a variety of measures. Attention was paid to the ease with which pedestrians of all ages were able to cross the street, the quality of the walking experience, driver behavior, ADA compliance (with a sensitivity to strollers and wheelchairs), and connectivity between destinations. Local representatives provided invaluable feedback along the walking route.

The final segment of the Workshop was devoted to generating recommendations for neighborhood walkability prompted by the walking audit. Participants gathered around street maps of the study area to pinpoint the location of specific walkability problems and to offer potential solutions. Recommendations were discussed and priorities identified as noted in the **Workshop Findings and Recommendations** section on pages 6-12.

Workshop Findings and Recommendations

Making recommendations to improve pedestrian safety is a primary goal of a Walkable Community Workshop. Participants are also encouraged to suggest improvements that will address aesthetics and sidewalk conditions, important determinants in the decision of whether or not to walk in a given area. Roadway design that accommodates pedestrians (including those with limited mobility) and provides access over short distances encourages more trips by foot and bicycle. Additionally, improving the walking environment implements the City of Orange's Complete Streets policy and will benefit all roadway users and result in a more vibrant community.

During the walking audit, specific attention was paid to the following:

- The condition of sidewalks and crosswalks
- The ability for pedestrians to cross safely at all intersections
- Motorist travel patterns and speeds in relation to observed pedestrian access patterns
- Bus stop amenities

Workshop participants identified the following issues in the study area. Below is a listing and illustration of common study area issues found in this area of the City of Orange. In the subsequent pages, more specific design recommendations are outlined.

- Faded/broken crosswalks
- Faded or nonexistent centerline
- Wide travel lanes along Main Street
- Angled parking requires cars to back out into live travel lane
- Broken sidewalks, sometimes with tripping hazards
- Wide turning radii near the Railroad Avenue intersections

MAIN STREET: CLEVELAND STREET TO ESSEX AVENUE





ESSEX AVENUE: RAILROAD AVENUE TO FREEWAY DRIVE WEST



Tripping hazard in crosswalk

Broken curb and sidewalk near bus stop. No curb cut on the east comers of the Railroad Avenue intersec tion.



Exposed light bulb.

Faded STOP sign. Wide tuming radius may allow for vehicles to make faster turns and makes for a longer pedestrian crossing distance.

Downward hill may encourage vehicles to speed on the descent.





Wide driveway near intersection may conflict with pedestrian use.



Potential tripping hazards in crosswalk.

Poor sight visibility at southeast comer where the northbound lane intersections with Freeway Drive.





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FREEWAY DRIVE WEST

Install Crosswalks, Curb Cuts, & Pedestrian Signals

- Provide high visibility crosswalks and ADA compliant curb ramps to improve pedestrian visibility and access. Note that installing crosswalks too near the NJ TRANSIT bridge may encourage pedestrian crossing in an area with limited visibility for motorists.
- Install pedestrian countdown signal heads at the intersection of Essex Avenue and Main Street. Countdown signal heads let pedestrians know how much time they have to cross and provide a visual cue to drivers making turning movements to stop (as mandated by law for pedestrians in the crosswalk.) Consider automating the countdown signals.



There are no curb cuts on the eastern corners of the Railroad Avenue intersection. Nor

are there marked crosswalks across Essex Avenue immediatley south or north of the NJ TRANSIT Bridge or across Railroad Avenue.



There are no curb cuts on the south corners of the Freeway Drive intersection.



Missing truncated domes at Essex Avenue & Main Street intersection; severely faded crosswalk markings.







Example of pedestrian countdown timer



See left and above for examples of high visibility crosswalks, ADA-compliant curb cuts and pedestrian countdown timers. If appropriate, it may be beneficial to automate pedestrian signals since pedestrians are not always guaranteed to activate the buttons. The locations for the recommendations are suggested in the map to the left.

MAP LEGEND

- Install, repair or repaint crosswalk
- * Install, repair or update curb cut
- Install pedestrian countdown timer

Implement Traffic Calming Measures to Address Roadway Geometry Issues

- Install edge striping along Main Street to delineate vehicular lane from the parking area and as a traffic calming technique to reduce motorist travel speeds. Consider using excess lane width to install bicycle lanes. Further analysis would need to be conducted to assess whether bicycle lanes are appropriate.
- Consider installing centerline striping along Essex Avenue and restriping the Main Street centerline.
- Consider decreasing the roadway turning radius or adding bulb-outs at the Essex Avenue intersections adjacent to the train station to slow turning vehicles and minimize pedestrian crossing distances.
- Consider installing a raised crosswalk or an entire raised intersection near the preschool entrance.
- Consider adding bollards near the intersections to prevent vehicles from illegally parking too near the cross street—therefore "daylighting" (increasing visibility) the intersection.



The one-way lane exiting the station area near the 15-minute parking has a large turning radius on the northwest corner and measures 55-feet wide at the pedestrian crossing point.



The southwest corner has a large radius and the pedestrian crossing distance is 63 feet. Longer crossings expose pedestrians to more vehicular conflicts and a wider radius facilitates faster turning movements.



Missing truncated domes at Essex Avenue & Main Street intersection; severely faded crosswalk markings.









The group discussed the many different forms of curb extensions, from the low-cost, quick fix extensions with texturized paint and bollards to poured concrete extensions such as those immediately above.

MAP LEGEND

- Install or repaint centerline
- Install edgeline
- Install curb extension
- Raised intersection
- Install bollards to daylight intersections

Address Maintenance Issues

- Upgrade and repair sidewalks that are currently in poor condition as illustrated below.
- Remove tripping hazards on sidewalk and in crosswalks.
- Repair broken street lights.
- Update faded signage and add additional signage near parking lot exits east of the Essex Avenue and Railroad Avenue intersection.



The images above show a sampling of the maintenance issues throughout the corridor and correspond to locations on the map below.





The vehicle above was noted to be traveling contrary to the direction of traffic, potentially because the motorist did not see the one-way signage when exiting the parking lot.

MAP LEGEND * Remove tripping hazard Repair broken sidewalk or curb

Other recommendations

- Consider installing fencing under the NJ TRANSIT bridge to deter pedestrians from crossing in a limited visibility area.
- Consider altering the parking area along Main Street between Essex Avenue and Cleveland Street to facilitate reverse angle parking, which allows the motorist better visibility when leaving the parking space since the vehicle enters head first into the travel lane upon exit.
- Paint a right turn arrow at the garage exit of 50 Essex Avenue to alert motorists of the prohibited left-turn.
- Consider taking advantage of the extra pavement (due to the 2-way to 1-way conversion) on Essex Avenue and Cleveland Street north of Main Street to add in bike lanes.
- Update bus stop amenities to include benches and shelters.



Though the current reverse angle parking confirguration allows for an easy parking space entrance, it requires that vehicles exiting the parking space back up into a live travel lane.



Essex Avenue north of Main Street measures about 28' across and Cleveland Avenue measures 35', both of which may allow for the placement of bike lanes.



Other recommendations (continued)

In addition to physical design improvements (engineering), city and neighborhood officials and residents should identify opportunities to address pedestrian safety through enforcement and education. Leveraging the three "E's" (engineering, education and enforcement) is essential for making gains in traffic safety. While physical improvements will enhance comfort, safety, convenience, and accessibility for all roadway users, coupling the design recommendations outlined in this report with enforcement and education ensures a more successful walking environment, since motorist and pedestrian behaviors directly impact a community's walkability.

Safety education programs focusing on both pedestrians and motorists are a priority in New Jersey because the state has been designated a "Pedestrian Safety Focus State" by the Federal Highway Administration (FHWA) due to its high number of pedestrian injuries and fatalities. Various government and private-sector organizations are taking an active role in addressing pedestrian safety at the community level, while the New Jersey Division of Highway Traffic Safety (NJDHTS) provides enforcement grants and educational materials focusing on pedestrian safety. Information on NJDHTS' grant opportunities and resources can be found at http://www.nj.gov/oag/hts/index.html and pages 18-19 of this report.

The NJTPA is currently in the second round of its pedestrian safety campaign, Street Smart NJ. Participating communities work to raise awareness of pedestrian safety laws by hosting events, handing out information, and through social media and advertisements. Local police step up enforcement during the campaign to ensure motorists and pedestrians are obeying the laws. All communities are urged to participate. More information can be found online at http://bestreetsmartnj.org/. The NJTPA website also provides links to a number of resources offering both a national and local perspectives on pedestrian and traffic safety. Information may be found at http://www.nitpa.org/planning/regional-studies/safety. Additional information on pedestrian safety, including effective countermeasures, can also be found on the FHWA website at http://safety.fhwa.dot.gov/ped_bike/. The City of Orange is encouraged to leverage these and other resources to implement pedestrian safety education and enforcement initiatives targeted at residents, employees and others who drive into and through the community.

Conclusion

Based on the feedback obtained during the workshop walking audit, the neighborhood north and east of the Orange train station is in need of numerous pedestrian upgrades including sidewalk repair.

Workshop participants recommended that high visibility crosswalks be installed at each of the study intersections. They also made a number of other suggestions including upgrading signals, installing pedestrian countdown signal heads, adding bulb-outs to increase curb radii, installing bicycle lanes, and edge striping (as a traffic calming technique). All of the recommendations outlined in this report would enhance the safety for of neighborhood residents, promote a friendlier walking environment and improve destination access especially those accessing the incoming preschool at 50 Essex Avenue and children traveling to the Rosa Parks Elementary School.

In addition to the engineering recommendations outlined in this report, employing enforcement and education tactics to reduce the incident of pedestrian crashes resulting in injuries is essential. City, neighborhood and school officials are encouraged to work with the local TMA to expand Orange's Safe Routes to School program to Rosa Park Elementary School as well as take advantage of education and enforcement grant opportunities provided by the New Jersey Division of Highway Traffic Safety and to conduct a Street Smart NJ campaign. Pursuing partnerships and identifying champions within the community who will promote pedestrian safety as a shared responsibility between all roadway users is highly recommended.

The design recommendations outlined in this Walkable Community Workshop report seek to improve the walking environment in the neighborhood adjacent to Orange Station while supporting the City of Orange's and NJDOT's Complete Streets Policy. The report is a valuable tool that public, law enforcement and community officials as well as citizens are encouraged to leverage to improve the safety and mobility of all who live and work in the neighborhood as well as other neighborhoods throughout the City of Orange.

Appendices

Workshop Attendees

Name	Organization
Donald Meisel	Planner, City of Orange
Tom Schulze	Urban Essex Coalition
Drew Posner	C & C Managers
Jake Pine	L & M Development
Lisa Lee	Meadowlink
Mateusz Pitrus	Meadowlink
Aimee Jefferson	NJTPA
Blythe Eaman	NJTPA
Melissa Hayes	NJTPA

Orange

Walkability Communities Workshop Agenda 4 th Floor Conference Room, Orange City Hall, 29 North Day Street, Orange, NJ 1:30 - 4:30 pm March 9 th , 2016
Welcome
Walkable Community Presentation1:40
Complete Streets PolicyWalking Environment
Walking Audit
• In field assessment
Design Solutions (Breakout Session)
 Small team working groups Presentation of recommendations Priorities and action plan Next steps, questions, and wrap-up
Adjourn 4:30



Area Transit Maps



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NORTH

Educational flyers

The following materials and others are online and available for printing at <u>www.bestreetsmart.org</u>



Additional pedestrian enforcement and education materials are available through the New Jersey Division of Highway and Traffic Safety at <u>http://www.nj.gov/oag/hts/pedestrian.html</u>.

Potential Funding Sources

• Local Aid

The State Aid Program is one method by which the New Jersey Department of Transportation (NJDOT) can work with county and municipal governments to improve the efficiency and effectiveness of the state's transportation system. The Transportation Trust Fund (TTF) has provided the opportunity for State assistance to local governments for road, bridge, and other transportation projects. (http://www.state.nj.us/transportation/business/localaid/stateaid.shtm)

State funded programs administered by Local Aid:

	-
Program	Website
Municipal Aid	http://www.state.nj.us/transportation/business/localaid/municaid.shtm
County Aid	http://www.state.nj.us/transportation/business/localaid/countyaid.shtm
Local Aid Infrastructure Fund (Discretionary Funding)	http://www.state.nj.us/transportation/business/localaid/descrfunding.shtm
Bikeways	http://www.state.nj.us/transportation/business/localaid/bikewaysf.shtm
Safe Streets to Transit	http://www.state.nj.us/transportation/business/localaid/safe.shtm
Transit Village	http://www.state.nj.us/transportation/business/localaid/transitvillagef.shtm
Local Bridges Future Needs	http://www.state.nj.us/transportation/business/localaid/localbridges.shtm

The New Jersey Department of Transportation (NJDOT), Division of Local Aid and Economic Development, and/or the Metropolitan Planning Organizations currently administers these Federal Aid Programs:

Program	Website
Local Lead Program	http://www.state.nj.us/transportation/business/localaid/lead.shtm
Transportation Enhancements Program	http://www.state.nj.us/transportation/business/localaid/enhancements.shtm
Safe Routes to School	http://www.state.nj.us/transportation/business/localaid/srts.shtm
Emergency Relief	http://www.state.nj.us/transportation/business/localaid/er.shtm
Transportation Alternatives	http://www.state.nj.us/transportation/business/localaid/alternatives.shtm
Local Safety/High Risk Rural Roads Programs	http://www.state.nj.us/transportation/business/localaid/localsafety.shtm

• New Jersey Department of Community Affairs – Neighborhood Programs

The Office administers a variety of other federal and state-funded programs, such as the Community Development Block Grants (CDBG) which provide funding to municipalities to help with economic development, housing rehabilitation and neighborhood revitalization. The Neighborhood Stabilization Program (NSP I & III), a federal grant/loan program that is designed to acquire, rehabilitate and sell foreclosed/vacant properties in targeted neighborhoods. The Neighborhood Revitalization Tax Credit (NRTC) is designed to improve distressed neighborhoods via partnership with non-profit organizations and contributing companies. (http://www.state.nj.us/dca/divisions/dhcr/offices/neighborhood.html)

Neighborhood Programs:

Program	Website
Community Development Block Grant (CDBG)	http://www.nj.gov/dca/divisions/dhcr/offices/cdbg.html
Neighborhood Stabilization Program (NSP)	http://www.nj.gov/dca/divisions/dhcr/offices/nspguide.html
Neighborhood Revitalization Tax Credit (NRTC)	http://www.nj.gov/dca/divisions/dhcr/offices/nrtc.html

• Resources Available Through NJTPA:

Program	Website
Congestion Management and Air Quality (CMAQ) - Local Mobility Initiatives Program	http://njtpa.org/project-programs/mobility-programs/cmaq-local- mobility.aspx
Local Concept Development (LCD) Phase	http://www.njtpa.org/project-programs/project-development/local- capital-project-delivery-process/local-concept-development
Local Safety Program	http://www.njtpa.org/local-safety