



“Roads were not built for cars. Roads were not built for bicycles... Roads were not built for horses. Roads were built for pedestrians.”

*Westfield MA:
A City for Walking and Biking
June 2015*



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This report was prepared for the City of Westfield Bicycle and Pedestrian Planning Advisory Committee by the students of GARP 219 Land Use and Resource Planning, spring 2015, under the guidance of Associate Professor Marijoan Bull, PhD, AICP. Student members include: Caleb N. Alvord, Kyle E. Barna, Scott I. Birmingham, Michele A. Brooks, Patrick J. Burns, Seth A. Carne, Michelle R. Coombs, Troy A. Durr, Jared A. Genzabella, Jacob P. Kowal, Jacob E. Lehan, Meghan J. Mcnamara, Joshua J. Minardi, Connor R. Murphy, David R. Nolan Jr., Joshua M. Perry, Brian C. Raymond, Alexa L. Repko, and Daniel R. Sabetti.

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*The **Westfield Bicycle and Pedestrian Planning Advisory Committee** plans for a community in which the quality of life, and the overall vitality, is supported with wider mobility choices- specifically **SAFE, CONVENIENT, and HIGHLY CONNECTED** options for biking and walking.*

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Introduction and Walking and Biking Facts & Figures

The many benefits of walkability and bikeability are becoming well known and more Americans are seeking to integrate these activities into their daily lives.¹

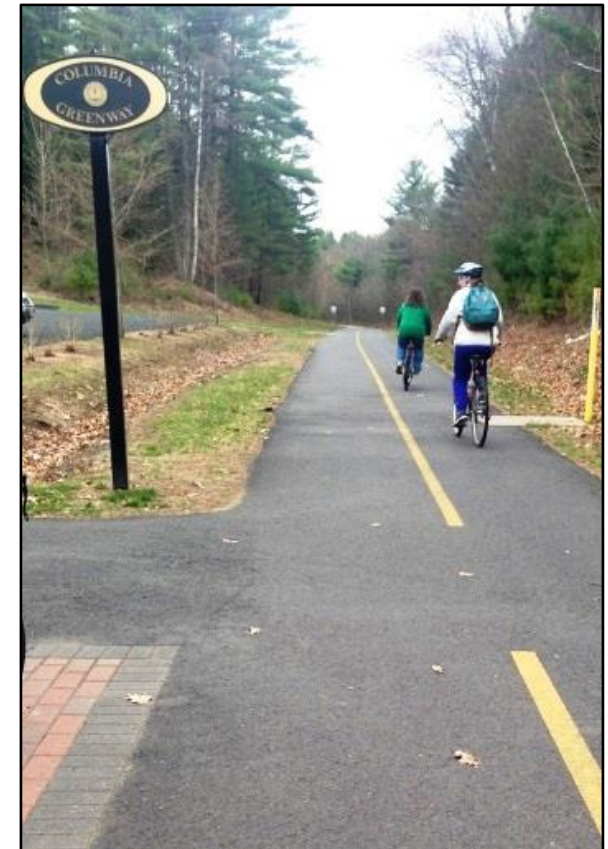
As Table One indicates, walking and biking provide physical, social, environmental, and economic benefits to residents and communities. We are all healthier when exercise is integrated into our daily living—walking to school or the post office, biking to work or the library—these daily trips can improve our physical well-being. In addition, such activity adds to our mental well-being. According to the *Physical Activity Guidelines for Americans*, walking and biking can contribute to weight management and less chronic disease, with low incidence of injury. They can also provide opportunities for social interaction.²

Add to this how these modes of transportation don't add to air pollution or carbon emissions, and designing our communities with the option for safe biking and walking makes a lot of sense. Biking and walking activity can also support retail establishments in our communities, while increasing property values.

¹ *Bicycling and Walking in the United States 2014*, Alliance for Biking and Walking, Washington D.C., p.12.
² *Physical Activity Guidelines for Americans*, 2008, U.S. Department of Health and Human Services, www.health.gov/paguidelines, pp.8,21.

| Table One: Benefits of Biking and Walking |
|--|
| Physical |
| <i>Heart Health</i> ¹ |
| <i>Healthy Weight Maintenance</i> ^{1,3} |
| <i>General Fitness, Stamina, and Strength</i> ^{1,2,3,7} |
| <i>Fewer Accidents</i> ^{5,6,7} |
| Social |
| <i>Inclusivity</i> ^{4,5} |
| <i>Interactions/Less Isolation</i> ⁵ |
| <i>General Mental Well-Being</i> ^{1,6} |
| Environmental |
| <i>Cleaner Air (Less miles and Reduced Congestion)</i> ^{2,6,7} |
| <i>Fewer Short Trips</i> ² |
| <i>Less Pavement/More Green</i> ⁶ |
| Economic |
| <i>Retail Sales</i> ^{6,8} |
| <i>Reduced Health Costs</i> ^{1,2} |
| <i>Property Values</i> ^{7,8} |
| Sources: |
| <ol style="list-style-type: none"> 1. "Health and Fitness Benefits," American Health Association http://www.heart.org/HEARTORG/GettingHealthy/PhysicalActivity/FitnessBasics/Physical-activity-improves-quality-of-life_UCM_307977_Article.jsp. 2. <i>Increasing Physical Activity Through Community Design A Guide for Public Health Practitioners and Livable Community Advocates</i>, 2010, National Center for Bicycling & Walking, p.7. 3. <i>Physical Activity Guidelines for Americans</i>, 2008, U.S. Department of Health and Human Services, www.health.gov/paguidelines, pp.8, 21, 26. 4. <i>A Resident's Guide for Creating Safer Communities for Walking and Biking 2015</i>, US Department of Transportation, Federal Highway Administration, FHWA-SA-14-099. 5. Lynott, Jana and Sandt, Laura, Libby Thomas, Kristen Langford, and Dan Nabors, 2009, <i>Planning Complete Streets for an Aging America</i>, RP Public Policy Institute, p.12. 6. "Benefits of Complete Streets," National Complete Streets Coalition, Smart Growth America, www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets. 7. <i>Complete Streets in Delaware: A Guide for Local Governments</i>, 2011, University of Delaware Institute for Public Administration (IPA), www.bikedel.org/2012/02/28/new-complete-streets-in-delaware-a-guide-for-local-governments/#sthash.zdtPMDI7.dpuf, pp 19-27. 8. <i>The Economic Benefits of Walkable Communities</i>, n.d., Local Government Commission Center for Livable Communities, California, http://www.lgc.org/walk-to-money, pp 1-2. |

Finally, it is important to realize not everyone can use automobiles for traveling. The elderly, young, disabled, and low income may find their mobility restricted if our communities rely solely on automobiles for travel. And while mass transit is available in some places, it may not align with the needs of users in terms of travel times or particular routes.



Ultimately communities improve the quality of life for all residents when they develop safe, convenient, and multi-modal options for

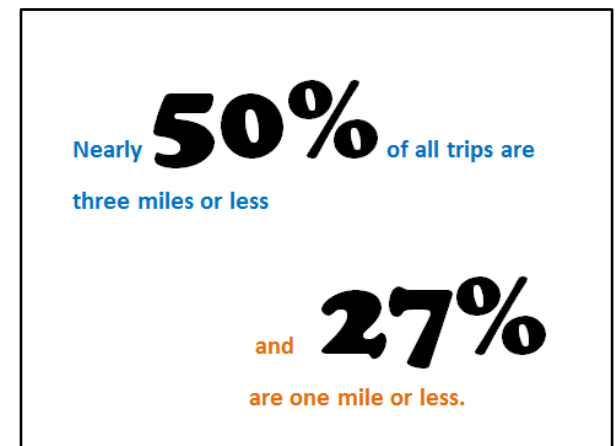
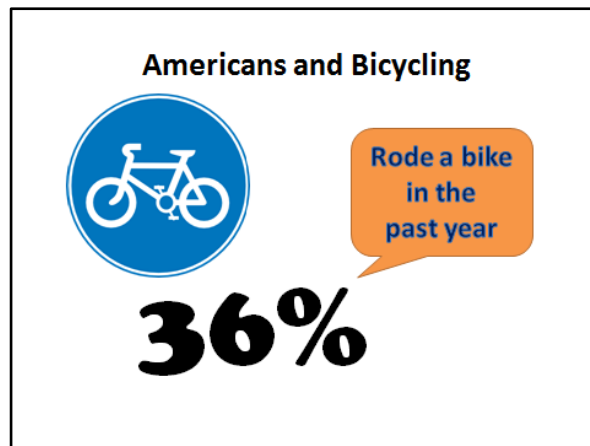
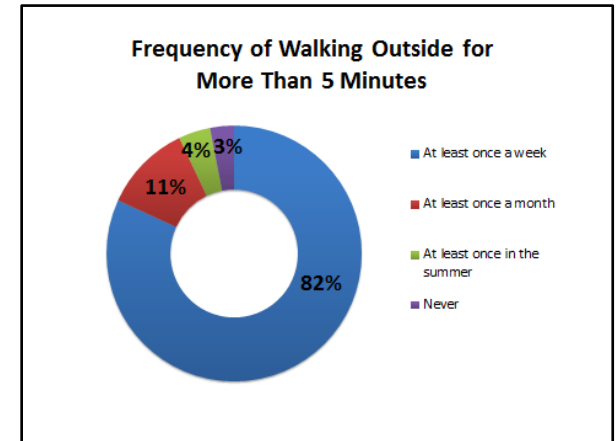
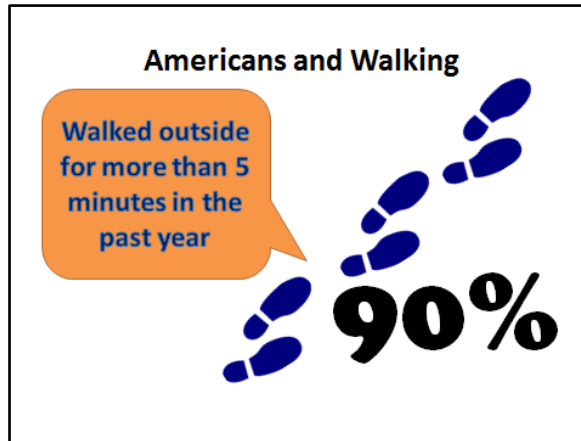
accessibility and mobility. There are many ways the built environment can be shaped and improved to support non-motorized travel, for all the types of trips people make – commuting, appointments, errands, visiting, and recreation.

Planning for and implementing improvements to encourage walking and biking can be data-driven. Several recent national surveys have gathered extensive information on Americans’ behaviors and attitudes toward these physical activities and community design.

The 2012 *National Survey of Pedestrian and Bicyclist Attitudes and Behaviors* conducted by the National Highway Traffic Safety Administration, is a statistically valid sampling of over 7,500 Americans through phone interviews. *The Bicycling and Walking in the United States 2014 Benchmarking Report* by the Alliance for Biking and Walking, combines several sources to provide longitudinal data on trend lines, and summaries on policy and education initiatives. And, the 2015, *U.S. Bicycling Participation Benchmarking Study Report* by Breakaway Research Group surveyed over 16,000 American adults.

Finally, a recent study (2014) of protected bike lanes, *Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S.*, completed by the National Institute for Transportation and Communities at Portland State University, provides up to date data on these relatively new infrastructure additions.

From these documents we learn 36% of Americans rode a bike in the past year (and 22% in the last month), while 90% were outside for at least a 5



Source: 2012 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, National Highway Traffic Safety Administration.

minute walk.³ Of those that walked last year, a full 81% walked at least once a week. The major

³ 2012 *National Survey of Pedestrian and Bicyclist Attitudes and Behaviors*, National Highway Traffic Safety Administration, Vol.2, <http://www.nhtsa.gov/nti/811841>, pp. 6, 76, 20, 83, 95, 101.

(Among Walked within the Past Year; n =6,542)
 Top Source: 2012 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, National Highway Traffic Safety Administration. Lower: Source: National Household Travel Survey quoted in *Bicycling and Walking in the United States 2014 Benchmarking Report*, p.23.

reason for walking outside was for health and exercise, indicated by 39% of those responding, followed by 17% walking for a personal errand, and 15% for recreation.

Of those who felt unsafe walking, 67% reported that feeling was related to the behavior of motorists, while for bicyclists, motorists were the reason for feeling unsafe for 81% of respondents.

In the Bicycling Benchmark Study, 46% of adults indicated they would be more likely to ride a bike if bicycles are physically separated from cars. In this same survey, only 31% are satisfied with the bike lanes, paths, and trails available to them.⁴

| 2012 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors | | |
|--|-----------------|-------------------|
| Reasons for Travel | Walking Percent | Bicycling Percent |
| Recreation | 15 | 33 |
| Exercise or health | 39 | 28 |
| Personal errands | 17 | 17 |
| Visit a friend or relative | 7 | 8 |
| Commuting to/from work | 5 | 7 |
| Commuting to/from school | 3 | 4 |

n = 7,509 telephone respondents completed the interview. Schroeder, P. & Wilbur, M. (2013, October). 2012 National survey of bicyclist and pedestrian attitudes and behavior, volume 2: Findings report. (Report No. DOT HS 811 841 B). Washington, DC: National Highway Traffic Safety Administration.

⁴ U.S. Bicycling Participation Benchmarking Study Report by Breakaway Research Group, 2015, p.13.

Protected cycling facilities are relatively new in the United States, yet hold promise for supporting an increase in bicycling. The in-depth report on five case studies (including surveys of riders, video interpretations, and surveys of neighbors) found a measured increase in ridership on all facilities. The protected cycling facilities saw increases in riders ranging from +21% to +171%. This supports the Benchmark Survey results—given safe alternatives, more ride their bikes.

“Survey data indicates that 10% of current riders switched from other modes, and 24% shifted from other bicycle routes and...over a quarter of riders indicated they are riding more in general because of the protected bike lanes.”⁵

Area residents, including non-riders, expressed support for the protected lanes. “Three in four residents (75%) said they would support building more protected bike lanes at other locations” and 43% of residents believed the facilities had enhanced the neighborhood, with another 43% seeing no change.⁶

The importance of safe walking facilities should also not be underestimated. Todd Litman, a leader transportation planner, notes that every trip includes a walking portion.⁷ Even if one drives to a destination, there will be the need to walk, and thus assessing safety and walking accessibility should be a priority. Pedestrian accommodations

⁵ Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S., 2014, p.i.

⁶ Ibid, pp.12, 13.

⁷ Quoted at contextsensitivesolutions.org

"If, instead of asking, 'What portion of trips involve only walking?' we ask, 'What portion of trips involve some walking?' most trips would be counted and walking would be recognized as a common and important mode."

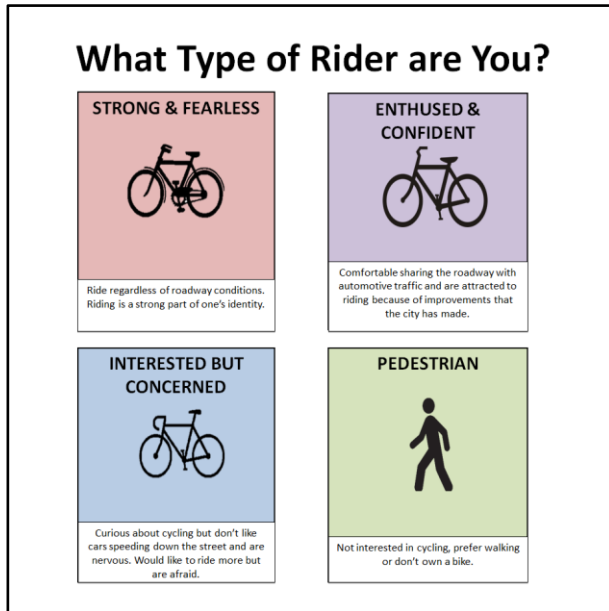
-- Todd A. Litman,
Victoria Transportation Institute

should be considered from parking areas, and from transit stops.

Finally, a general rule of thumb used for transportation planning, is that most Americans will walk ½ mile and ride a bicycle up to 3 miles, to conduct business. The Federal Transit Authority uses these as standards for planning access to transit locations.⁸ Ped-Sheds or Walk Sheds of ½ mile and Bike-Sheds of 3 miles are used to assess likely walking/biking areas around specific uses or residences. This can also be fine-tuned with on-the-ground checks looking at obstacles and mapping walk-sheds and bike-sheds in terms of time. This report uses the simple ½ mile walking standard to assess Ped-Sheds in the City of Westfield.

⁸ Referenced in *First Last Mile Strategic Plan* 2014, Los Angeles County Metropolitan Transportation Authority, Southern California Association of Governments, http://www.scag.ca.gov/Documents/atp031615_MetroFirstLastMileStrategicPlan.pdf, p.18.

The poster “What Type of Rider Are You?” indicates types of riders (and pedestrians), as devised by Portland Oregon Bicycling Planning. These categories are useful in understanding the range of comfort bicyclists, and potential bicyclists, have with prevailing conditions.



Portland, OR estimates (for the purpose of transportation not recreation) the following breakdown between these categories : <1% Strong and Fearless; 7% Enthused and Confident; 60% Interested but Concerned; and 33% No Way, No How.⁹ It is the very large – Interested but Concerned group of riders that can become more frequent two-wheelers with safe, strategically located infrastructure.

⁹ See: <http://www.portlandoregon.gov/transportation/article/158497>

Needs of Special Populations

The Elderly

Generally speaking, the elderly population moves at a slower pace than the average young American (under the age of 65) when traveling by foot, bicycle, or automobile, due to the physical and cognitive changes experienced during the natural aging process. A study conducted by the AARP Public Policy Institute, “Planning Complete Streets for an Aging America,” identifies four common physical limitations on mobility faced by the elderly population: declining vision, decreased physical fitness and flexibility, decreased ability to focus attention, and increased reaction time.¹⁰

Declining vision makes it challenging for elderly drivers to see curbs, barriers, pedestrians, even other drivers. It is also difficult for them to read traffic signs and pavement markings. Decreased physical fitness and flexibility makes it hard for them to turn their heads quickly in order to look both ways at an intersection, or to look over their shoulder to change lanes or backup. As pedestrians, many older people feel that the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) recommendation of walking 1.2 meters per second at a crosswalk is not enough time for them to safely cross.

¹⁰ Lynott, Jana and Sandt, Laura, Libby Thomas, Kristen Langford, and Dan Nabors, 2009, Planning Complete Streets for an Aging America, AARP Public Policy Institute, pp.14-15.

A decreased ability to focus causes many older drivers to struggle with prioritizing signals, signage, and pavement markings, a skill that is necessary to drive safely. This becomes especially problematic in traffic control zones or unfamiliar areas. Older drivers are also typically slower at responding to traffic control devices, and to unexpected changes to roadway conditions.¹¹

When designing the layout of a community, it is important to consider the specific transportation needs for residents of all ages. However, today most streets in America are designed “primarily for the motorist, with the goal of enabling vehicles to navigate as efficiently as possible.”¹² This makes it difficult for non-drivers of all ages and abilities to travel. A poll conducted for the AARP’s study found that “40 percent of adults age 50 and older reported inadequate sidewalks in their neighborhoods.”¹³ It also found that nearly 50 percent reported that they cannot safely cross main roads by their homes. Of the participants who reported these problems, half said they would walk, ride a bicycle, or take a bus more if they could.

The 2010 Census calculated there are 5,589 residents of Westfield over the age of 65, out of a total population of 41,094 or 13.6%. Table Two provides a breakdown of this population by the 8 Census Tracts of the City of Westfield. The map, Over 65 Population of Westfield per Census Tract, indicates the distribution of these elderly by noting

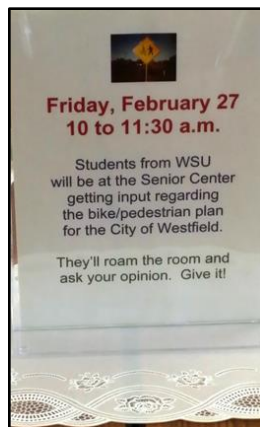
¹¹ Lynott et al, 2009, pp. 14-15.

¹² Lynott, et al 2009, p. 3.

¹³ Lynott et al, 2009, p. 3.

both the percentage of residents in the Census Tract over 65 years and the actual number. Also important to note is the projected increase in the elderly population as the Baby Boomers age in place. According to a UMASS Donahue Institute population projection, the elderly population for Massachusetts is anticipated to grow from the 13.8% of the total population to 21.2% by 2030.¹⁴

The map Senior Meal Sites and Housing in Westfield, provides a view of the geographic distribution of elderly housing (under the management of the Westfield Housing Authority¹⁵) and the two existing (and future) senior meal site locations. The map also provides a ½ mile buffer zone around these uses – indicating the likely walking radius. This map shows a concentration of uses in the downtown area.



In order to get input from the elderly, students attended the Main Street Westfield Senior Center and the South Middle School Senior Meal Site, during lunch to listen to their transportation concerns.

¹⁴ Renski, Henry et al, 2013, *Long-term Population Projections for Massachusetts Regions and Municipalities*, UMass Donahue Institute, p.10.

¹⁵ Elderly households can also be living other subsidized housing. These restricted housing developments, managed by the Housing Authority, indicate a concentration of elderly households.

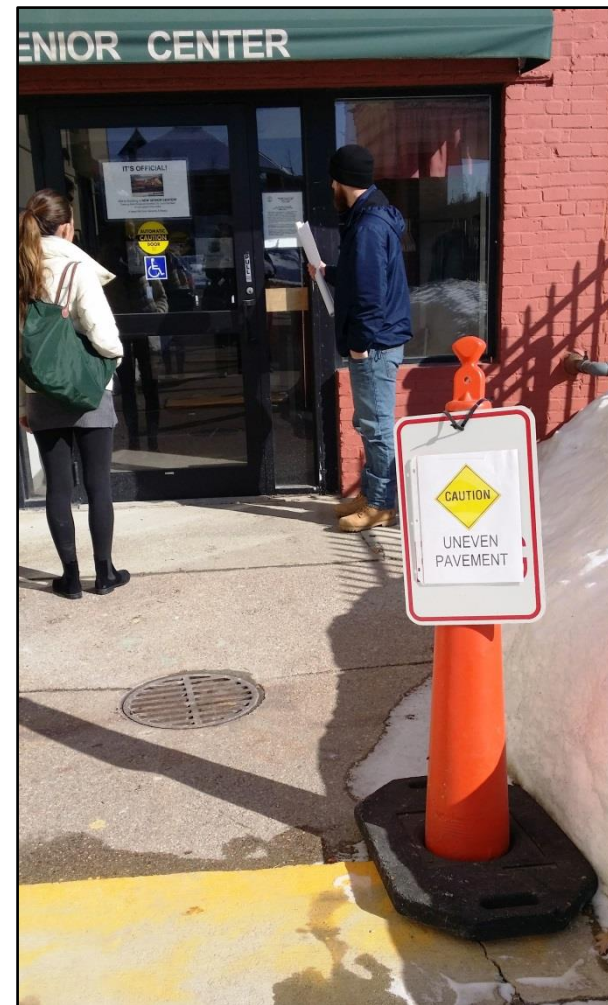
While, not surprisingly, only one elderly citizen reported riding a bicycle, many indicated they do enjoy walking. The senior center has a walking club which meets once a week and its members walk for about an hour. The club gathers at the Main Street site, and walks in the downtown area. The senior citizens we spoke with stated that they feel the crosswalks in Westfield do not permit enough time for them to safely cross. This information coincides with the results of the poll conducted by the AARP.

The seniors also expressed concerns regarding the condition of the sidewalks in Westfield. They feel there is a need for more curb cuts on the sidewalks because this would allow more access for those who are in wheelchairs to travel through the city. Although they mentioned no specific sidewalks that need curb cuts, this could be something for a specific inventory.

Another issue mentioned was that the sidewalks are not always plowed/shoveled during the winter. Sidewalks covered in slippery snow and ice are not safe for anyone to use, but are especially dangerous for the elderly. Many of the senior citizens said that if the conditions of the sidewalks, bike lanes, and recreational paths were better they would be more inclined to walk and/or bike.

A final thought spoken by the seniors was that there are not enough signs indicating where the beginning and ending of existing walk/bike paths are in the city. They also do not like that there are no public restrooms along the Greenway. One individual explained that many elderly are on medications or have conditions that may require

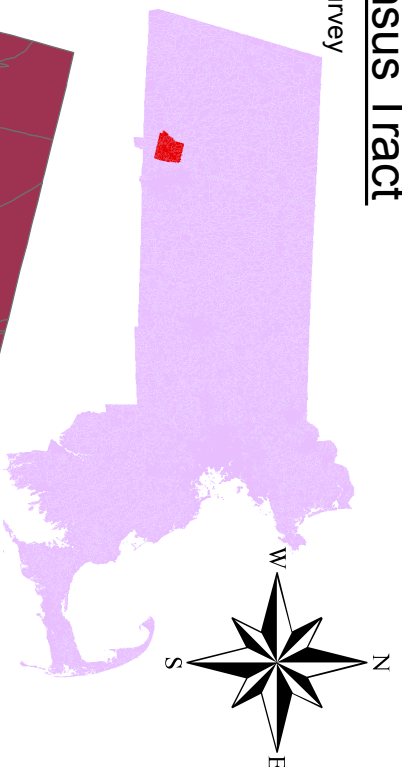
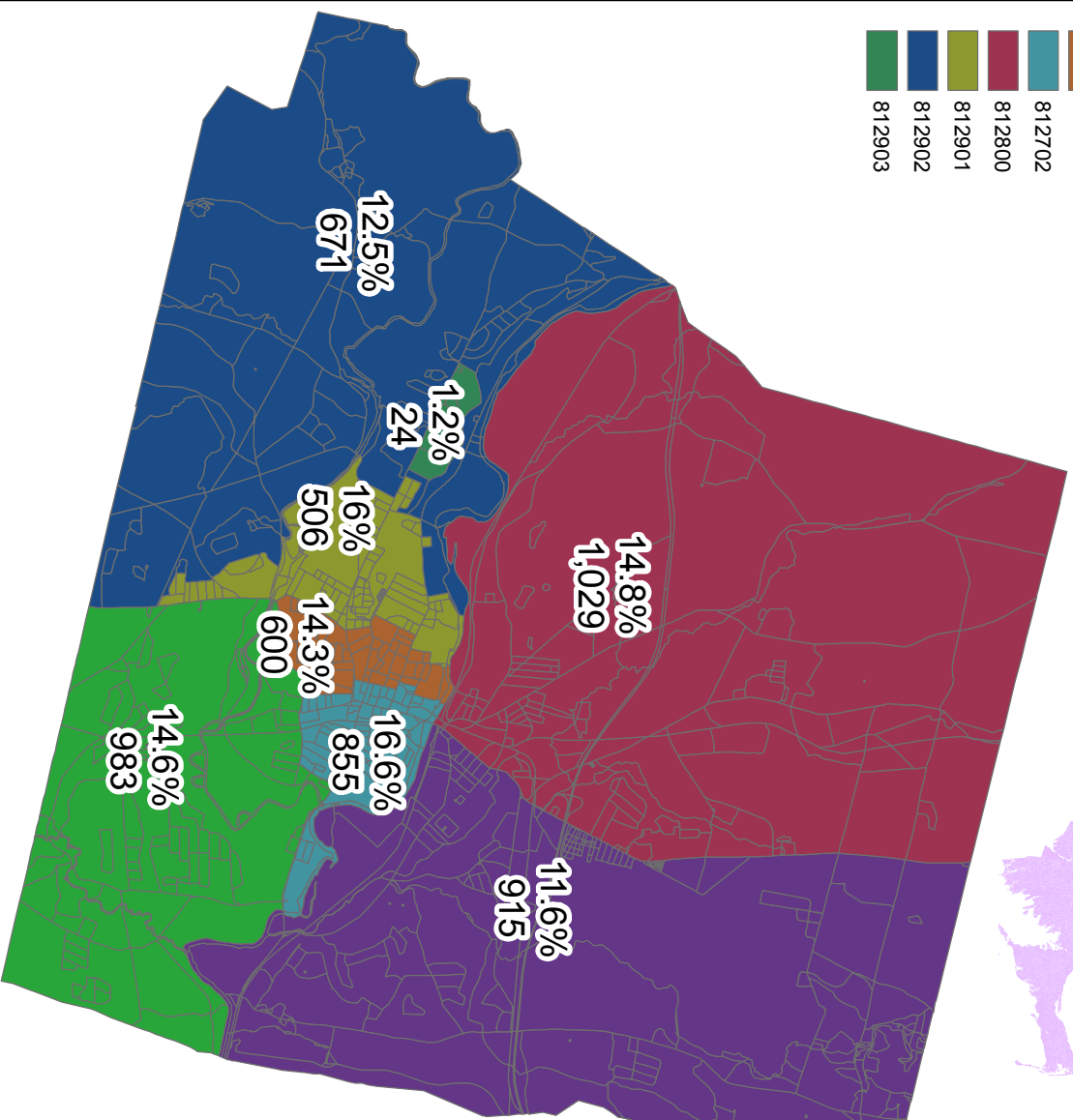
the accommodation of more frequent restroom trips. While walking would be good for many of these same conditions, walking without access to restrooms is not possible.



Over 65 Population of Westfield per Census Tract

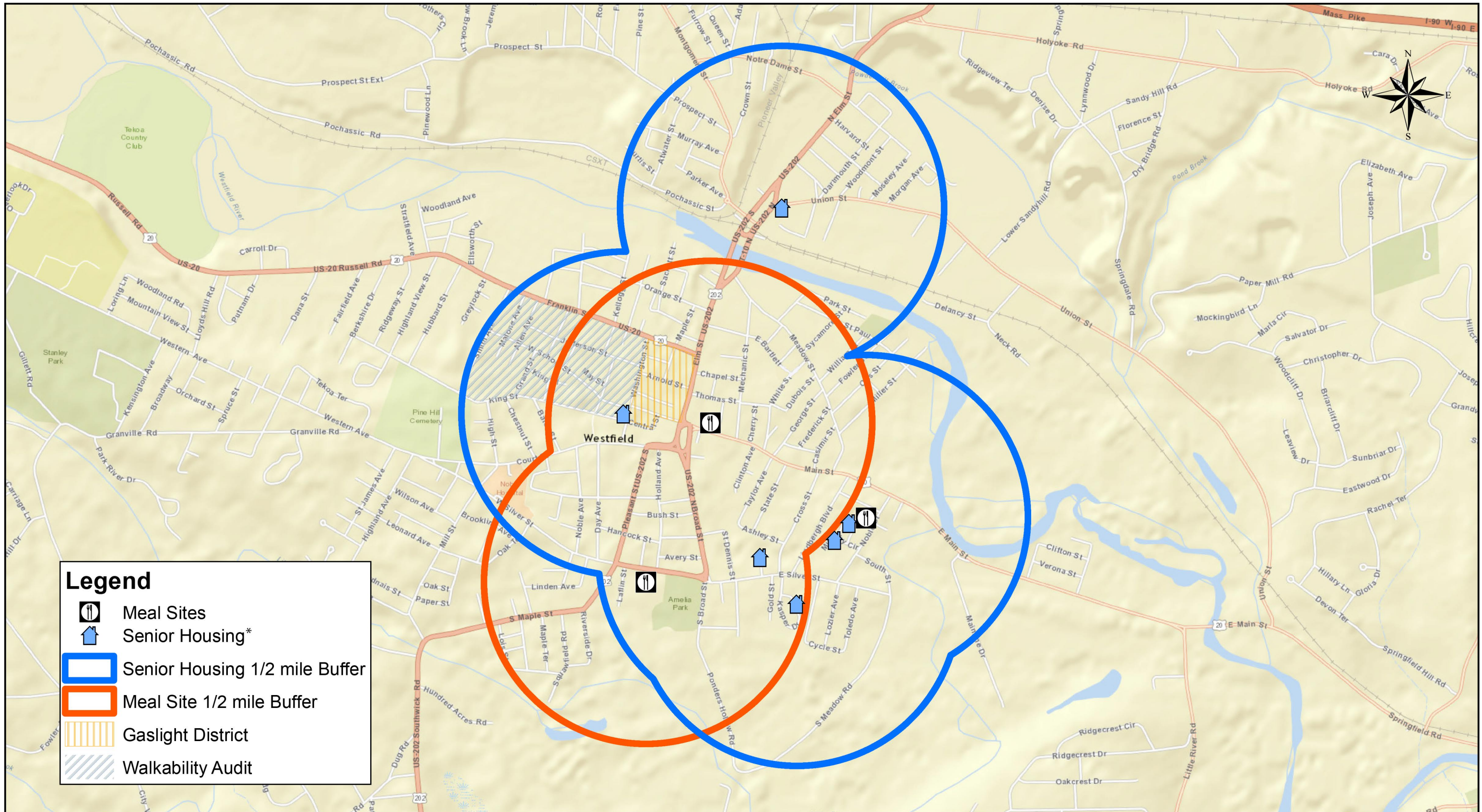
2009-2013 American Community Survey
S0101

Westfield Census Tracts



Data Source: MassGIS and US Census
Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001

Senior Meal Sites and Housing in Westfield, MA



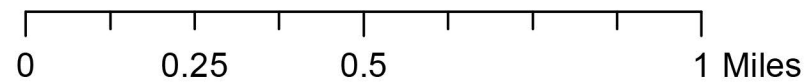
Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001

Data Source: MassGIS and Google Maps

*Westfield Housing Authority



Founded 1838



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The ability of the elderly to get out is important to their maintaining mental well-being and for their ability to socialize. Seniors who can walk (or bike) to places have greater opportunities to interact and improved health.

The Advisory Committee's recommendations should address the physical limitations of the elderly, as well as residents of all other ages and abilities.

An important factor to consider in the plan is the assumed walking speed for pedestrian crosswalks. In their report, the AARP suggests that "regardless of the width of the intersection, designers should set the walk signal time for a crossing speed of 3.5'/second plus 7 seconds to leave the curb."¹⁶ In their report, the AARP references research conducted by the ITE (Institute of Transportation Engineers) claiming that in most cases, this amount of time would not affect traffic.

All crosswalks should include a visual and audible countdown signal. For those with visual impairments it is helpful to have the timed crosswalk signal give off audio with each second as opposed to watching them on the screen which might be difficult. Also for those senior citizens who experience diminished hearing it is necessary for traffic signs to be bold and clear. It is crucial for sidewalks and crosswalks to be smoothly paved and free of obstacles as well.

Because the elderly also tend to become tired and need to stop to rest more frequently than younger walkers or bikers do, it is recommended that the

¹⁶Lynott et al, 2009, p. 45.

city invest in median refuges for wide and/or multi-lane streets. These refuges provide a safe spot for pedestrians and cyclists to rest at, or wait at while vehicular traffic is in motion. Some popular destinations for the elderly include the senior center, library, grocery stores, and doctor's offices. Therefore, streets along the route to these places should be prioritized for refuge islands.

Disabled Citizens

Some of the disabled citizens of a community also experience physical limitations on mobility, such as those who have a visual or cognitive impairment, or those who require the use of a wheelchair, walker, or arm crutches. According to a report produced by the United States Department of Transportation the disabled are affected by irregularities in the pavement of a road, changes in elevation, a lack of handicap accessible curb ramps, or sidewalk width restrictions.¹⁷ Therefore, many of the same transportation requirements for the elderly also apply for the disabled population. This includes an appropriate amount of time for crossing at crosswalks, wider sidewalks for handicap accessibility, curb cuts where necessary, smoothly paved sidewalks, audible signals, and legible traffic signs.

The students of Westfield State University attended a meeting for the Westfield Commission for Citizens with Disabilities. We asked for input given the Advisory Commission's Mission

¹⁷Sandt et al, 2015, "A Resident's Guide for Creating Safer Communities for Walking and Biking," http://safety.fhwa.dot.gov/ped_bike/ped_cmunity/ped_walkguide/residents_guide2014_final.pdf, p. 84.

Statement. The Commission had no major concerns and stated that three years ago they obtained a list of locations in the city that were in need of curb cuts, as well as the addresses of citizens who needed accessible sidewalks and crossings in their neighborhoods, or outside their homes. This spreadsheet was given to the Department of Public Works, and all of the necessary construction was completed in the fall of 2013 (see list in Appendix). The Commission did suggest that it would be nice if all of the trails in Stanley Park were handicap accessible, but this is a private facility.

Table Two includes Census data on the population over 5 years who report having an Ambulatory Disability – defined as answering yes to the question, Does this person have serious difficulty walking or climbing stairs?¹⁸ For the City as a whole, 2,605 people are in this category.

Low Income Residents

Another population with specific transportation and mobility needs is households of low income. Many low-income residents cannot afford to drive a car and must resort to less expensive means of transportation. AAA estimates the annual average cost of driving a car for 2015 at \$8,698.¹⁹ (Forty-two percent of this is in depreciation, so not a direct costs and it also assumes financing of the automobile.)

¹⁸ www.disabilitystatistics.org/glossary.cfm?g_id=272&view=true.

¹⁹ <http://exchange.aaa.com/automobiles-travel/automobiles/driving-costs/>

Walking and biking are the most cost effective ways to travel. A fact sheet published by the Sierra Club states that the average annual operating cost of a bicycle is \$308, versus the over \$8,000 dollars for the average car.²⁰ It also says that the average American household spends 16 percent of their budget on transportation. This is more than what is spent on food or healthcare! For low-income families, up to 55 percent of their budget can be for transportation.

Riding a bicycle is becoming a more popular method of transportation among Americans because it reduces these costs, as does walking. Equitable transportation requires using public funds for options other than automobiles, so safe bike lanes, sidewalks, and crosswalks are infrastructure investments that improve the transportation system's ability to meet the mobility needs of all residents.

The PVTA service is an additional mobility choice, but as noted earlier, the routes and schedules do not always align with users' needs.

Table Two indicates the median household income by Census Tract in Westfield. Three Census Tracts have median household incomes below the City median – CT 8125, 8127.01 and 8127.02. The map, Households with No Vehicle by Census Tract, provides additional relevant information. This Census data reflects a concentration of such households in the downtown area, specifically CT 8127.01 and 8127.02. The lack of an automobile

²⁰ "Pedaling to Prosperity," http://vault.sierraclub.org/pressroom/downloads/Bike_Month_Factsheet_0512.pdf.

may be due to the high cost, the physical limitations of residents, or represent a choice.

The map, Low Income Housing in Westfield, indicates the location of subsidized housing in Westfield – both that managed by the Housing Authority and housing managed by the housing nonprofit, DOMUS. The ½ mile radius indicates a comfortable walking distance for most people, and an area to assess for walkability.

Youth

Without safe sidewalks and biking options, those not old enough to drive are dependent on drivers for transportation to school, playgrounds, recreation events, the store, and more. The national Safe Routes to School program has championed many ways of improving the mobility options of youth, with the intent of gaining the benefits noted earlier of improved physical and mental well-being. Recommended actions include: walking school-buses; infrastructure investments in sidewalks, bike lanes, and bike trails; and safety training.²¹

In 2009 Westfield had a Safe Routes to School Assessment completed for Paper Mill Elementary School. Additional assessments should be undertaken in order to prioritize infrastructure investments and raise awareness about the role of physical activity in overall health and the need for safe routes. Two maps follow indicating the location of Westfield public schools, and showing the radius within which students are expected to get to school without transportation (1.5 miles for

²¹ See <http://www.saferoutesinfo.org/>

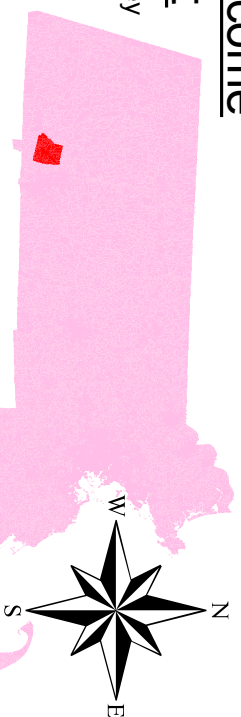
elementary schools and 2 miles for middle and high schools²²). One map shows the city as a whole, and the other focuses in on the downtown area.



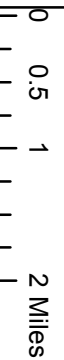
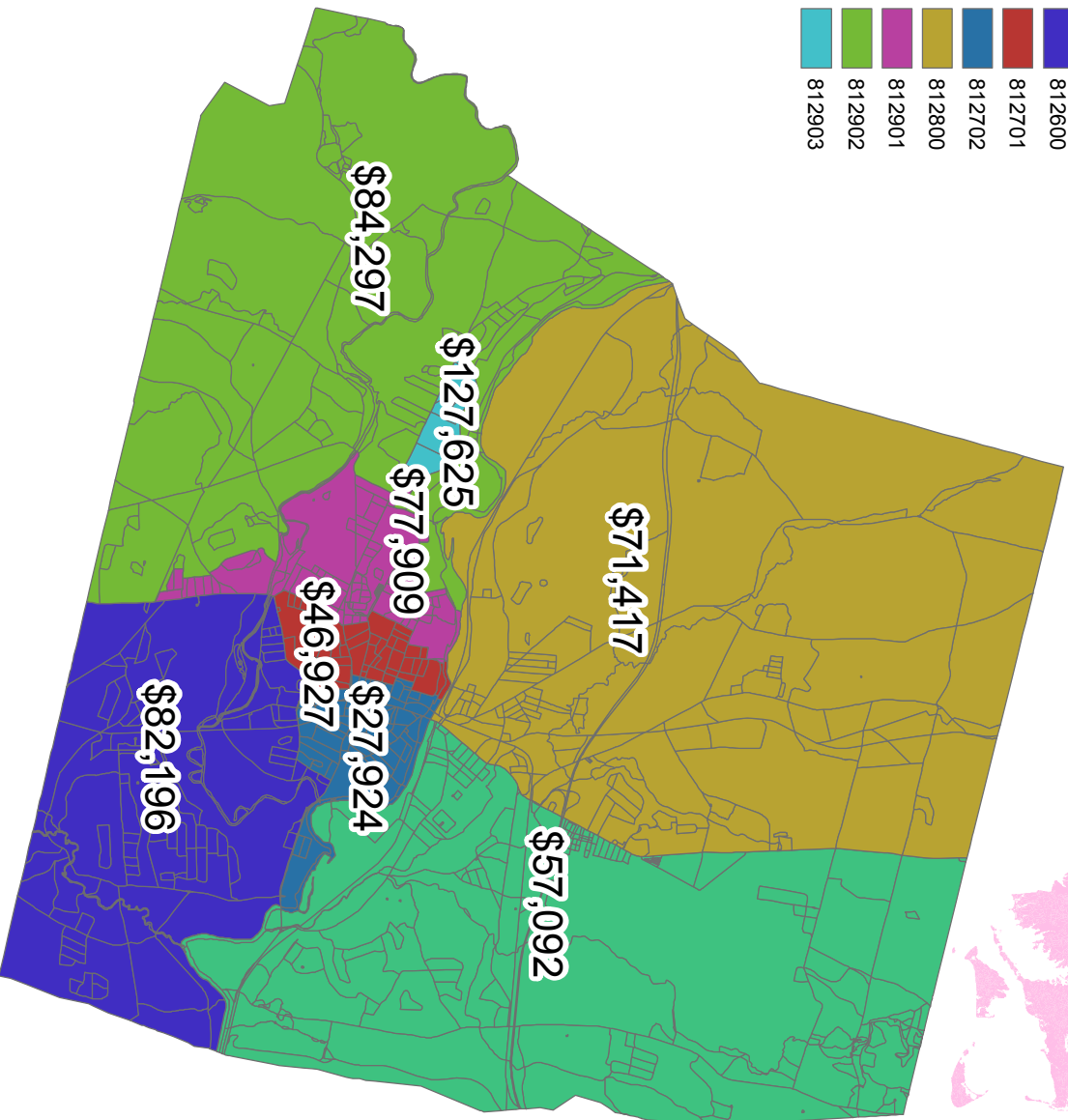
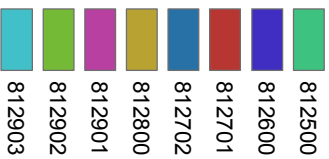
²² See <http://www.schoolsofwestfield.org/parents/transportation/distance/>

Median Household Income by Census Tract

2009-2013 American Community Survey
S1903



Westfield Census Tracts

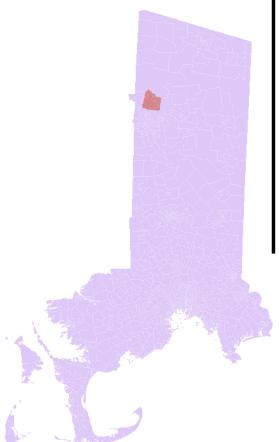
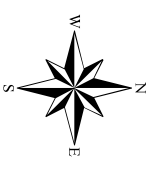


Data Source: MassGIS and US Census
Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001

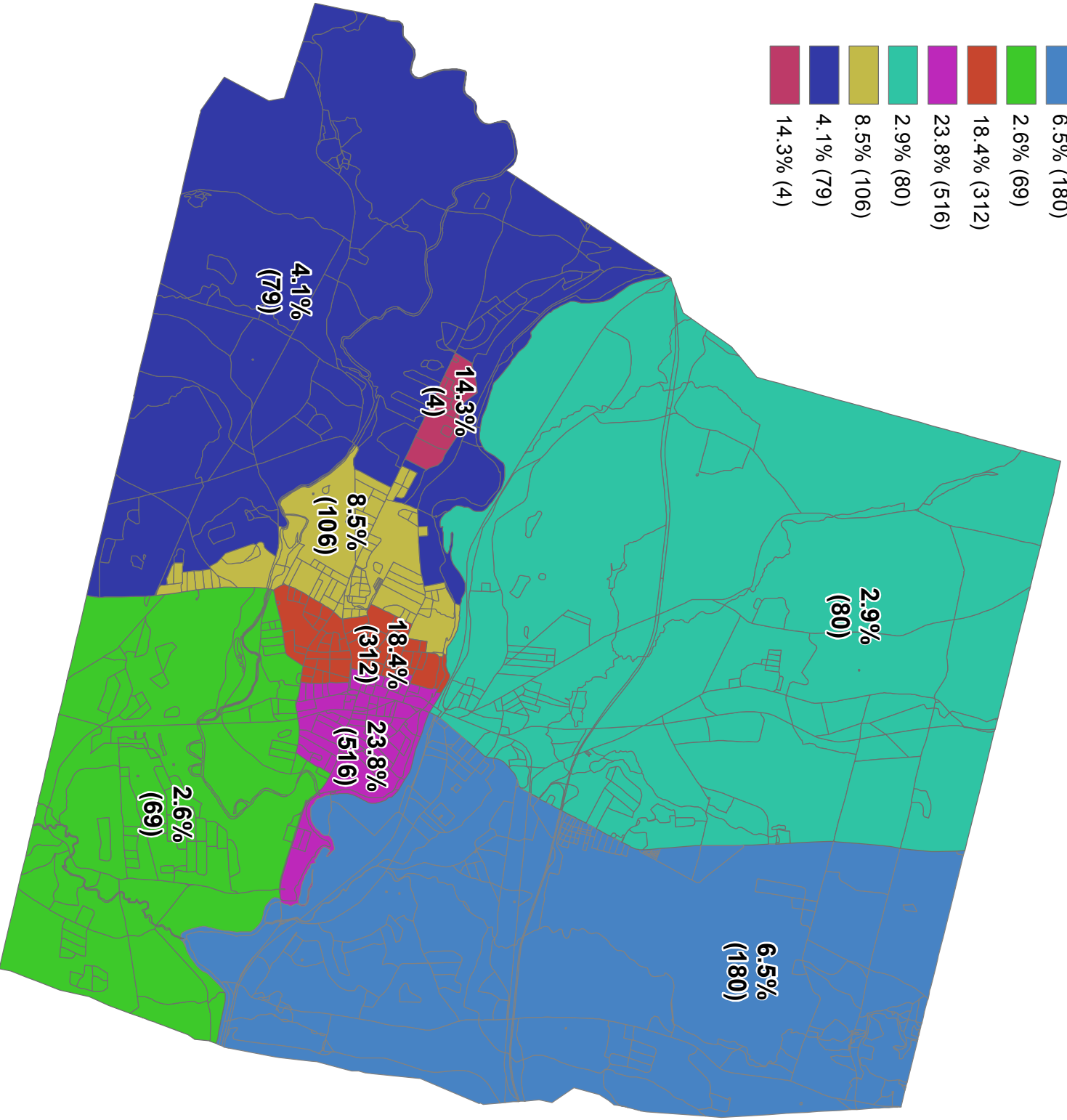
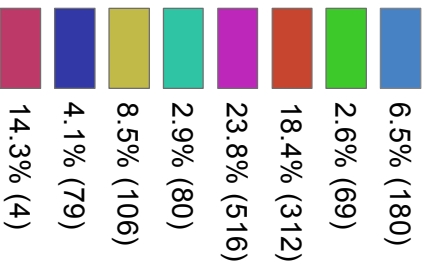
Households with No Vehicle by Census Tract

2008-2012 American Community Survey

BP04



Legend



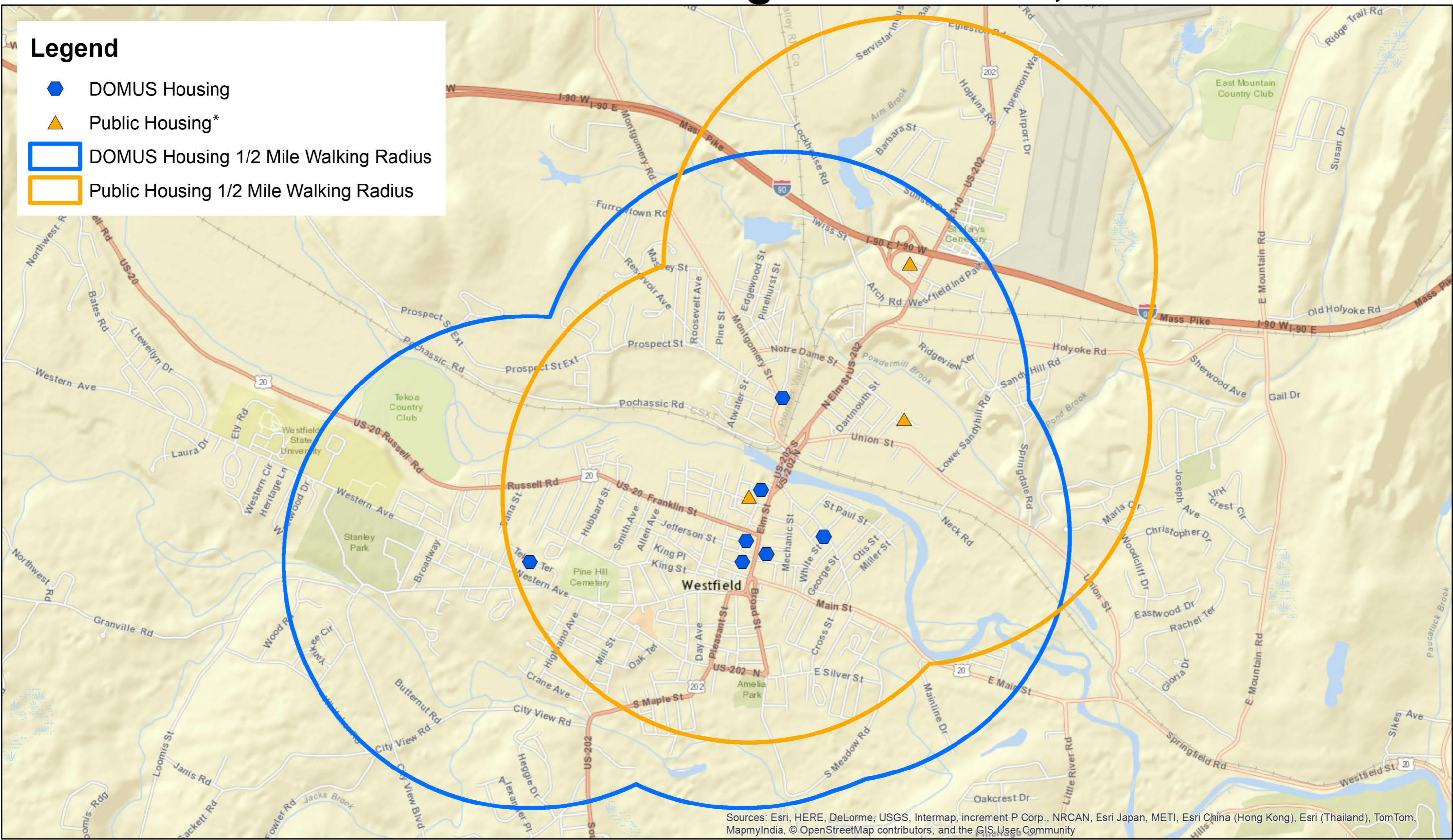
Data Source: MassGIS and US Census

Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001

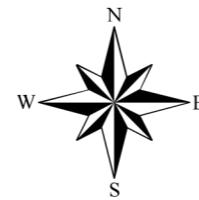
Low Income Housing in Westfield, MA

Legend

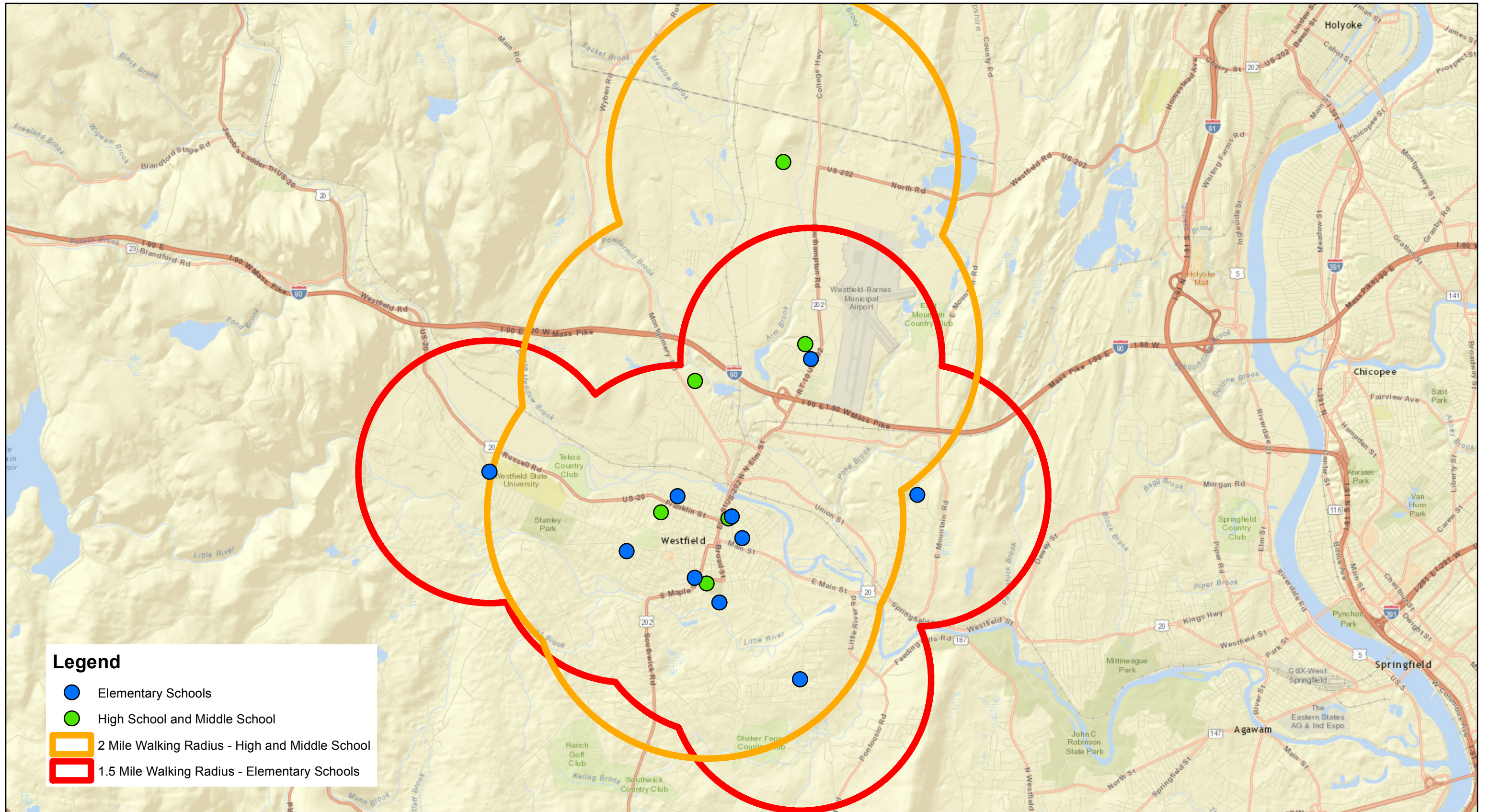
- ◆ DOMUS Housing
- ▲ Public Housing*
- DOMUS Housing 1/2 Mile Walking Radius
- Public Housing 1/2 Mile Walking Radius



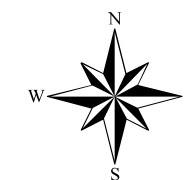
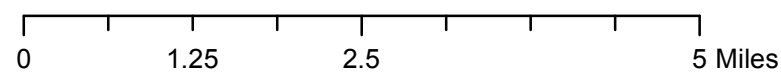
Sources: Esri, HERE, DeLorme; USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



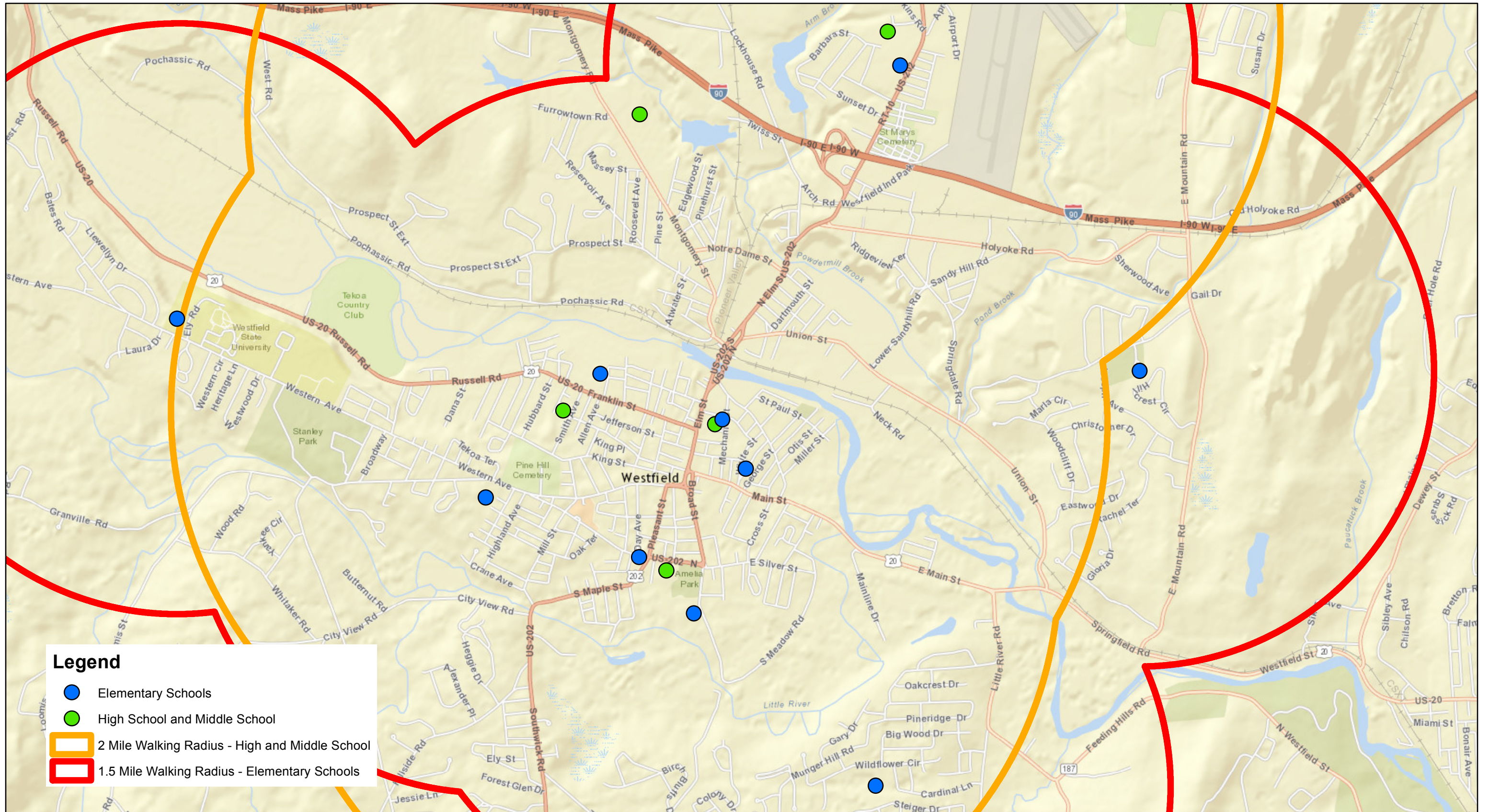
Walking Radius to Schools for Westfield, MA



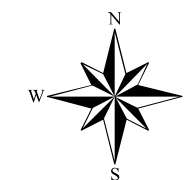
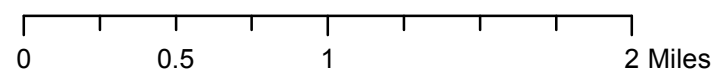
Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984
Data Source: MassGIS



Walking Radius to Schools for Westfield, MA



Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984
Data Source: MassGIS



| Table Two: Westfield, MA Census Figures of Interest to Biking and Walking | | | | | | | | | |
|--|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------------|-----------------|
| Census Tract | 8125 | 8126 | 8127.01 | 8127.02 | 8128 | 8129.01 | 8129.02 | 8129.03 ²³ | City Total |
| Total Occupied Housing Units²⁴ | 2,767 | 2,635 | 1,699 | 2,172 | 2,756 | 1,250 | 1,930 | 28 | 15,237 |
| # Households/ Without Vehicles²⁵ | 180 6.5 % | 69 2.6 % | 312 18.4 % | 516 23.8 % | 80 2.9 % | 106 8.5 % | 79 4.1 % | 4 14.3 % | 1,346 8.8 % |
| # Households/ With one Vehicle²⁶ | 884 31.9 % | 931 35.3 % | 641 37.7 % | 1,008 46.4 % | 1,069 38.8% | 330 26.4 % | 549 28.4 % | 3 10.7% | 5,415 35.5 % |
| Total Population²⁷ | 7,894 | 6,464 | 4,201 | 5,152 | 6,954 | 3,168 | 5,372 | 2,004 | 41,209 |
| # Persons/ Over 65 years²⁸ | 915 11.6 % | 943 14.6 % | 600 14.3 % | 855 16.6 % | 1,029 14.8 % | 506 16.0 % | 671 12.5 % | 24 1.2 % | 5,543 13.5 % |
| Median Household Income²⁹ | \$57,092 | \$82,196 | \$46,927 | \$27,924 | \$71,417 | \$77,909 | \$84,297 | \$127,625 | \$59,581 |
| Population over 5 years with Ambulatory Disability/ of total population over 5 years³⁰ | 658 9.0% | 313 5.0% | 354 8.9% | 611 12.5% | 350 5.3% | 158 5.2% | 153 3.0% | 8 .4 % | 2,605 6.6% |
| Source: See Notes below. | | | | | | | | | |

²³ Note: CT 8129.03 is predominately Westfield State University dormitories.

²⁴ 2008-2012 American Community Survey 5-Year Estimates, DP04

²⁵ 2008-2012 American Community Survey 5-Year Estimates, DP04

²⁶ 2008-2012 American Community Survey 5-Year Estimates, DP04

²⁷ 2009-2013 American Community Survey 5 Year Estimates, S0101: Age and Sex.

²⁸ 2009-2013 American Community Survey 5 Year Estimates, S0101: Age and Sex.

²⁹ 2009-2013 American Community Survey 5 Year Estimates, S1903: Median Income in the Past 12 Months

³⁰ The definition of Ambulatory Disability: This disability type is based on the question (asked of persons ages 5 or older): Does this person have serious difficulty walking or climbing stairs? Retrieved from http://www.disabilitystatistics.org/glossary.cfm?g_id=272&view=true.

³¹ 2009-2013 American Community Survey 5-Year Estimates, S0101: Age and Sex.

Pop-Up Overview

To support the work of the Bicycle and Pedestrian Advisory Committee, a group of students developed a “Pop-Up” booth. The Pop-Up was designed to provide information to, and gather information/opinions from, Westfield residents on walking and biking in the City of Westfield.

We used a simple survey tool to gather information about how people feel about conditions in Westfield (see Appendix). The survey asked questions such as age and gender, and then started to get into questions on the safety of Westfield as a place to ride a bike or walk around. The survey was not on safety with regards to crime, but of how comfortable people feel walking alongside the city’s traffic on either the side of the road or sidewalks, where available, or biking. It should be noted the survey does not represent a statistically valid measure of people’s opinions, but rather some anecdotal information. We did not seek a randomized, full sample size, but used the form as a way to structure our interactions with those that chose to stop and speak with us.

Locations

It was decided that to get a better representation of Westfield’s population as a whole, the Pop-Up booth would be held at four different locations: Westfield State University (in front of Ely Campus Center), Stop and Shop in downtown Westfield, along the Columbia Greenway at the Shaker Farms stop, and in front of the library in downtown Westfield.

Pop Up Booth

The Pop-Up booth consisted of a few parts. Two maps of Westfield showed people new and future plans of the Columbia Greenway Rail Trail and allowed them to show us areas of concern, in terms of safety and conditions. One of the maps showed Westfield as a whole while the other focused mainly on the downtown area. We set up a table at each location that provided additional



materials from the Friends of the Columbia Greenway. In addition to the two maps, a large board was used for participants to express their thoughts about Westfield in writing. For example, at Westfield State University pop up, participants were asked “What would you like to see in downtown Westfield?” and they wrote their answers in sharpie marker on the board. A tri-board at each location also included Bike-Ped Facts, a large format statement of the Westfield Bicycle and Pedestrian Advisory Committee mission statement, and “Types of Rider” information. Additional flyers, brochures, and business cards from the Friends of the Columbia Greenway Rail Trail were also available for those who wanted more information or to stay informed.

Ely Campus Center- Westfield State University Location

Our first pop-up location, which was conducted in front of the Ely Campus Center on the Westfield State University campus proved to be the survey that gave us the most feedback. We set-up the Pop-Up booth on Thursday, April 16th between 2PM and 4PM. It was a nice sunny day where a large amount of students and faculty were out and about enjoying the weather. Compared to the other locations it seemed like there were a higher percentage of people that were willing to stop and take our survey or at least talk to us. We thought that it was important to set up on campus one day because although the student population is only here for a small portion of the year, the money students bring to the City is very important, and all those traveling to campus add to the traffic.

Pop-Up Booth Days, Times, and Locations

Thursday April 16th 2-4PM
WSU Campus Ely Campus Center

Friday April 17th 1-3PM
Stop & Shop Main Street Westfield

Sunday April 26th 11AM-2PM
Shaker Farms Parking Area Columbia Greenway

Friday May 1st 1-3:15PM
Westfield Athenaeum, Elm Street Westfield

One of the important things that we took from our time spent on campus was that although most students know how to ride a bike, and enjoy riding,

they did not want to be “that person with a bike on campus.” Most students expressed their feelings about how they enjoy riding bikes and that they would if they were available without having to bring their own. A bike-sharing program could potentially be utilized by the student population at WSU.

Another thing that we took note of was that most of the students and staff felt riding or biking along Western Avenue was unsafe. It was a shared belief among many that if there was a safer way to walk or bike into downtown they may do so more often. By providing a safer route into the center of Westfield, the downtown center and businesses could see an increase of bikers and WSU based residents may connect to the recreational opportunities of the Columbia Greenway and more.

Stop and Shop Location

For the second date, we set up in front of the Westfield Stop and Shop on Friday April 17th between 1PM and 3PM. After reminding a manager that we would be outside holding the survey, we set up outside the entrance/exit of the left side of the store. The store was not extremely busy, but there was a constant flow of people coming in and out. Not every shopper was interested in communicating with us, as there were some who gave little to no eye contact when passing by. Nonetheless, there were still people willing to give us attention and speak a little bit to us about the conditions and views of bikeability and pedestrian safety in the City. Of those who spoke to us, most expressed an interest in biking, if not definitely walking in the City. However, a major

concern was that there were not always sidewalks and that downtown was very congested.

On our large piece of paper we asked the question, “What would you like to see in Downtown



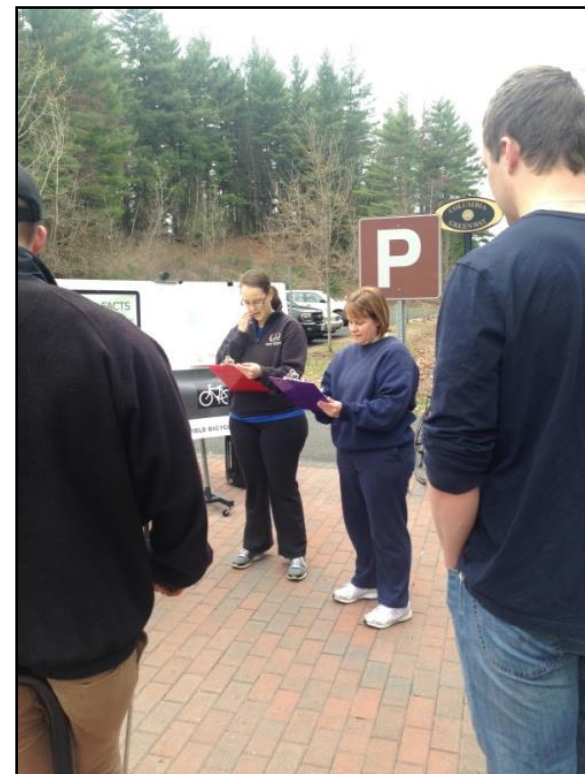
Westfield?” Common answers included more stores and coffee shops. Many expressed that the downtown did not provide many reasons to visit, but stores and cafes would influence them. All of these people agreed that traffic conditions and sidewalks were not conducive to walking and definitely biking through the center was dangerous. Bike lanes were a common hope among survey participants which they said would increase their ridership.

There were a total of eleven (11) surveys taken during this location in addition to vocal feedback about pedestrian and bike safety. Some were avid bikers, occasional bikers, and others were solely walkers. Most knew about the Columbia Greenway and thought that it was a positive addition to the community; especially its extension to downtown Westfield, right by Stop & Shop. In all, participants

were interested in what we were doing, and those that engaged fully supported efforts to increase pedestrian and bicycle safety.

Columbia Greenway Location

Our third meeting took place on Sunday April 26th at the Shaker Farms stop along the Columbia Greenway between 11 AM and 2 PM. We were very lucky to plan a day for our Pop-Up with beautiful weather where a large amount of people were out running, walking, and biking along the Greenway. In total at this location, nine (9) people completed the survey and provided us with useful feedback. Many passing the Pop-Up were speeding



by on bikes and may have glanced over, however continued to ride. Others were walking or biking casually, and showed great interest in what we were doing. Due to the fact that the Columbia Greenway connects to the south beyond Westfield, many who stopped by were not from Westfield and were not asked to complete the survey.

The many people that took the time to stop at the Pop-Up this day showed great concern and provided beneficial feedback to the group. Every person said that the Columbia Greenway was a great addition to the area, and the only negative feedback was the occasional group walking/biking across the entire bike lane and leaving no space for others to pass by. One couple that stopped by on their bikes informed us that they frequently spend time in the downtown Westfield area, and could definitely see an increase in presence if the area was more bike-friendly.

Downtown Westfield (Library) Location

On Friday May 1st between 1PM and 3:15PM our group conducted a Pop-Up in front of the Athenaeum in downtown Westfield. We were lucky enough to get another day that was sunny and fair-weathered when a lot of people were out and about walking around. We are not sure why, but the library was closed Friday when we were there. This could potentially be a bad thing as it may have stopped some people from heading to the library, but the people that were unaware of the library being closed had some extra time to talk to us.

One of the people that stopped to talk to us lives in the downtown Westfield area and was deaf. He enjoyed walking and biking, especially on the Columbia Greenway and was concerned about the lack of information users are exposed to about people with his disability. One thing he would really like to see is some sort of educational aspect to the trail to inform people of the possibility of another user having a disability. To him, he thought it was very important that deaf riders wear something, such as a shirt that warns other users coming from behind that they will not hear the approach. He talked about how it can be dangerous to be passed by another user of the trail, especially while on a bike when they think that he could hear their warning, but he was unaware.

Another person we talked to was a female citizen of Westfield that listed herself as 51+ years of age, and expressed her concerns about the lack of sidewalks in her neighborhood. She gave her address as Union Street, and described the area as a low income neighborhood where a lot of the people do not have a car. She felt very disconnected from the center of the City as even when she did use to try to walk or bike into the downtown area, she felt very unsafe doing so. She described herself as someone who loves to walk and ride her bike whenever she can, but let us know that she feels unsafe on a lot of the roads that she must ride on to get into downtown.

Information Collected

At each of the four locations, the group asked volunteers to participate in a 17 question survey with an added portion to provide any comments

for the Westfield Bicycle and Pedestrian Advisory Committee. The survey's focus was on the safety of Westfield's biking and walking, so only those who are familiar or live in the Westfield area were



asked to complete the survey. In total, fifty-seven (57) people completed the survey.

We found 67% of those who completed the survey *strongly* support the Committee's Mission and overall goal of creating a bicycle/pedestrian network in the city and another 32% support it—for a total of 99% in support (one person did not answer). When asked how safe participants found Westfield is to BIKE, 37% said the city was safe and 47% said the city was unsafe. Seventy-five percent (75%) of participants said that Westfield is safe to

WALK around and 9% said the city was unsafe. Additionally, 84% said they would be more inclined to bike places within the city if Westfield had designated bicycle lanes, and 93% said they would walk more if they had access to safe trails or continuous sidewalks in the city of Westfield. This is consistent with the national statistically significant findings discussed above.

Survey Comments

“So needed! Western Ave is super unsafe! Something needs to be done before more people are killed.” -Stop & Shop Survey, Female, Age 51-60

“I was raised in Westfield and am here several days a week. I now live in a community with a bike path. It is a great asset.” -Stop & Shop Survey, 61 and over

“I don’t feel as a pedestrian that I have the right of way. Even with the new crosswalks, drivers still do not yield to pedestrians. It would be wonderful to encourage more foot traffic downtown!” -Stop & Shop Survey, Female, 51-60

“I enjoy riding my bike and would be interested in riding in Westfield if there were safe places for bicycles.” -Columbia Greenway Survey, Female, 31-40

“I believe safer walking and biking paths would benefit all residents by promoting a safer public environment as well as the reduction in pollution by using alternate (and healthier) means of transportation.” -WSU Campus Survey, Female, 19-30

“Connect the campus to the new bike trail.” -WSU Campus Survey, Male, 19-30

“If there was a nice bike path from WSU to downtown it would be great!” -WSU Campus Survey, Male, 19-30

“I believe that it would benefit Westfield if there were paths and trails for bikes and pedestrians.” -Downtown Survey, 31-40

“Have a bike ramp near a place/store that is open 24 hours” -Downtown Survey, Male, 41-50

“Biking and road conditions in downtown Westfield < ---- > ...Only issue is people not staying to one side and being in the way. Otherwise enjoy the Greenway.” - Columbia Greenway Survey, N/A

“I would have brought my bike to WSU but none of my roommates did – Make biking cool!” - WSU Campus Survey, N/A, 19-30

“It would be nice to see more bike paths!” – WSU Campus Survey, Male, 18 and under

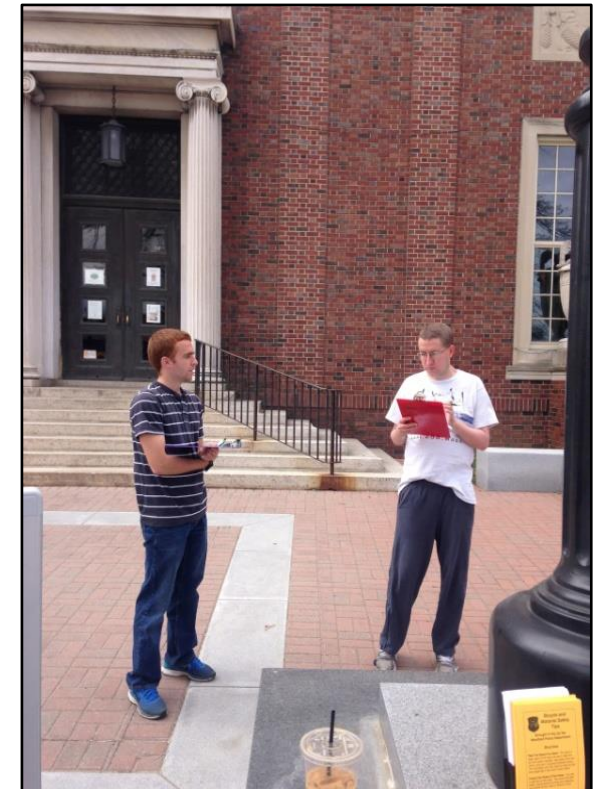
“It is good to see activism towards people biking and walking in Westfield.” –WSU Campus Survey, Male, 31-40

“Didn’t know there was a Greenway...” –WSU Campus Survey, Male, 19-30

“The potholes are brutal!” – WSU Campus Survey, Female, 19-30

“Great project for the City of Westfield!” – Columbia Greenway Survey, Female, 41-50

“Good luck! Great Work.” – Columbia Greenway Survey, Male, 19-30



Walkability Audit

The city of Westfield has been actively engaged in planning for, and implementing, improvements in the downtown area. The new bridge, Elm Street changes, and Park Square reconstruction, have all addressed access and mobility issues. The Gaslight District plan will extend improvements (including new sidewalks) and support both the Urban Renewal and Riverfront Development plans.

In order to add value to this ongoing work, the Advisory Committee asked the class to conduct a Walkability Audit in an area immediately adjacent to the Gas Light District, identified here as the Allen Park area (see the map, West of Westfield Center Roads).

Methodology

The Walkability Audit was conducted over a five-week period between March 27, 2015 and May 1, 2015. We began by reviewing walkability resources and example audits. As a group, we then determined which of the audits to model ours after and created a hybrid audit that best addressed the needs of our study area. The components of our audit were based primarily on the New Jersey Community Walkability Audit (http://bikeped.rutgers.edu/ImageFolio43_files/gallery/Pedestrians_and_Walking/Documents/TPI_2002_NJ_Community_Walkability_Audit.pdf) and The Government of Western Australia Department of Transport Walkability Audit Tool (http://www.transport.wa.gov.au/mediaFiles/active-transport/AT_WALK_P_Walkability_Audit_Tool.pdf).

Our final audit had four general categories with five elements to consider within each category:

1. Infrastructure
2. Aesthetics
3. Traffic and Street Crossing
4. Safety and Security

We separated each category into population types to consider how walkable this neighborhood was according to different types of people. Our populations consisted of General Population (G), Children/Elderly (C/E), and Handicapped (H). Then, we devised a rating system to assess these twenty neighborhood qualities based on population type. Points ranging from 1 to 5, with 1 being “very poor” and 5 being “very good” were used to rank each element within each category. All the points from each population type of each category were then totaled and averaged to determine a final score of walkability: LOW (5-36 points), MEDIUM (37-68 points), and HIGH (69-100 points). A blank copy of this audit is included in the end of this document.

Once our audit was drafted, groups of two students walked each side of each block in different areas of the neighborhood and compiled their results on a walkability audit sheet. One audit was completed for each block, assembling the results of both students into one form. Some students also photographed sidewalk conditions for additional evidence.

Following the end of the data collection, we gathered back in the classroom and each group assessed their data for their area of the neighborhood by summing and averaging the

results of the survey. The data were compiled into one master audit sheet and transferred into a GIS map for a visual representation of our findings (see Map XX).

We identified some method limitations that are important to acknowledge. The survey was completed only during the late afternoon (4-6 PM) on a weekday (Tuesday) during the month of April. Therefore, some conditions might change for different times of the day and during the winter months and less desirable weather conditions (*i.e.* rain), but these conditions were not assessed during this survey. Furthermore, subjectivity was high, for young college students not handicapped conducted the assessment and the rating represented this. The scores varied by student and were influenced by his/her individual opinion, which changed overtime once they observed the full range of conditions.

Findings

Table 1 shows the results of the walkability audit of the Allen Park neighborhood. It presents the total score for each block surveyed and the category that they fall under. Of the 34 blocks surveyed, about 65% were in the MEDIUM WALKABILITY category, and the other 35% were in the HIGH WALKABILITY category; there were no blocks categorized as LOW WALKABILITY. Table 2 displays the rating system used to categorize each block based on its score.

One portion of our walkability audit included Washington Street, Franklin Street, Smith Avenue, and King Street. During our walk, we noticed that overall, most of the sidewalks were good, but we

found several problem spots throughout our walk. We started on Washington Street and headed north towards Franklin Street. While on Washington Street we noticed that there were several car bumpers hanging over the sidewalk from an adjacent parking lot, which made that area difficult to walk through because there was little room to get around the vehicles. Additionally, some of the lines that were in the road for crosswalks were very faded and may have been hard for handicapped and elderly to see. Overall, we concluded that Washington Street was slightly above average with an average score of 69, based on our scoring of each block along the street, but clearly safety could be improved with some upgrades.

Franklin Street had a few problems too. From Washington to Madison, we saw a lot of room for improvement. On the north side of the street the sidewalk occasionally turned into a parking lot in front of buildings, making it unsafe for people to walk on. We noticed there was a car even parked where the sidewalk would be within the parking lot. The south side in this area was a very cracked and bumpy sidewalk, which would be unsafe for children, elderly, and handicapped. The crosswalks in this area were also poorly placed and painted. As we moved further down Franklin Street and passed Madison Street, the sidewalk became much nicer and safer to walk on. For Franklin Street, the average score was 64, which was categorized as MEDIUM WALKABILITY.

Along Smith Avenue, the sidewalk was in good quality. It was only on one side of the street but it felt like a very safe street and the sidewalk itself was in perfect repair. As we moved down Smith

Avenue, the sidewalk changed to the opposite side of the street, with a clearly marked crosswalk in front of the Vocational High School. On the opposite side was a cobblestone sidewalk that seemed very unsafe for children, elderly, and handicapped. However, there was a very easy way to cross the street and to stay on the sidewalk. Overall, Smith Street had a HIGH average score of 84.

On King Street, we noticed there was very little lighting on the sidewalks, which could make people feel unsafe walking there at night. The sidewalks had some bumps and cracks in them but for the most part, they were walkable for most all people. We identified a problem area when trying to cross High Street, for there was a 6-inch curb separating the street from the sidewalk and it would be hard for a handicapped person to navigate. If someone in a wheelchair needed to get across, they would have to go into someone's driveway on High Street. Therefore, we categorized King Street as MEDIUM, with an average score of 68.

Another portion of our walkability audit consisted of the northwest section of the neighborhood, including West School Street, Malone Avenue, Allen Avenue, and Charles Street. Sidewalks were available on both sides of the street on all streets, and the overall quality of the sidewalks and the environment was adequate for most population types. Walking along West School Street, we concluded that it was adequately walkable for the general population, for the few cracks in the sidewalks, slightly uneven terrain, and somewhat elevated curbs would be easy to navigate for this population type. However, there were few ramps available to step up onto the sidewalk from the

street, so this could pose a problem for the elderly and handicapped. If someone were in a wheelchair, they would have to navigate around the curb and into the street to get up on the sidewalk, particularly on the corner of King Street and West School Street. Additionally, the cracks in the sidewalks might be difficult for someone with a walker or crutches to walk over. Nonetheless, the atmosphere was welcoming; the lack of litter and graffiti made for a pleasant walk, as did the low traffic volume. This made the neighborhood quiet and welcoming for parents walking with their dogs and children, and bicyclists. Also, the narrow width of the streets themselves, along with the low traffic volume, would make it easy to cross the street for all population types. There seemed to be adequate lighting as well, but since we conducted this audit during the day, we could not determine the effectiveness of the lights present. One problem area we encountered was walking from Malone to Allen Avenues, along West School Street there were no sidewalks on either side of the street and no streetlights. Although this was a short length of street, the street itself was already very narrow, so pedestrians and bicyclists navigating this part of the street might have difficulty since they would then be walking in the street. Overall, the score was slightly above average (with an average score of 73) on West School Street.

Malone Avenue and Allen Avenue were practically identical in street infrastructure and walking environment. Since they are both side streets, traffic volume was low and the atmosphere was quiet, and generally free of litter and graffiti. We could hear children playing in their backyards as we walked, and the abundance of trees for shade

and the curb appeal of the houses made for a pleasant walk. Overall, we determined that both streets appeared secure, given the large amount of small family homes. The sidewalks were in better quality than on West School Street, although we did encounter a few trouble spots with deep cracks and paving over large tree roots, which could pose a problem for those who have trouble walking and are in wheelchairs. The curbs here did have ramps onto the sidewalk to make it easy for the elderly and handicapped to enter the sidewalk from the street, as opposed to on West School Street. Both ends of both streets had crosswalks painted across the streets. Furthermore, it might be difficult to cross the street elsewhere, given the fact that many cars were parked on the road, so a pedestrian's line of sight would be obscured in those areas, and could pose some risks. Thus, Malone and Allen Avenues both had average scores of 83, which put it in the HIGH category.

Along Charles Street, the walking environment and street infrastructure changed very little in comparison to West School Street. The sidewalk infrastructure was in adequate repair for most population types, and the route appeared pleasant, welcoming, and secure, based on the general "feel" of the neighborhood. One major difference we found on Charles Street was that there were yellow Pedestrian Detection Pads on the corners of many of the crosswalks. We determined that the reasoning behind this was because Jefferson Street seemed like a very difficult street to cross, given the high traffic volume there. These pads would be useful for drivers to see the pedestrians waiting to cross, as well as for the visually impaired; they could feel the change in terrain and know they are on a busy

street corner. Therefore, Charles Street received an average score of 83, putting it in the HIGH category.

Another section of the neighborhood was assessed, including May Street, Jefferson Avenue, Hampden Street, King Avenue, King Place, Jefferson Street, and Green Avenue. When we were walking along this area, there were a lot of people outside and kids playing in their yards. The atmosphere felt safe and welcoming. Most of the streets were walkable for everyone especially for the general population, but the handicap and elderly might have some problems on some of the sidewalks. Moreover, some of the sidewalks were not level, which could be dangerous for them. The streets also had adequate shading from trees and have an attractive section of grass between the sidewalk and street. However, one element that we noticed was that there was a considerable amount of trash and litter along the sidewalks. For the most part, the area appeared to be a friendly community to walk around. Furthermore, we found that May Street was a dead end with a terrible road and no sidewalks, so that we identified this as a problem area that needs repairs to make it more walkable. For this reason, May Street received a score of 45, which in the low MEDIUM category. Overall, all of the streets, besides the section of May Street, had sidewalks on both sides.

Recommendations

The Allen Park neighborhood has many elements that make it a fine part of Westfield: its proximity to the Gas Light District, Allen Park and the Westfield Vocational Technical High School make for a convenient commute to popular Westfield

destinations, and its friendly and welcoming atmosphere provide a safe and secure area for families and children.

However, there are some ways of improving the walkability of the study area and further enhancing its strengths. Thus, we provide here some recommendations for improving the neighborhood, which are separated by the categories addressed in the audit form.

Infrastructure

While most streets within the study area are accompanied with sidewalks, the conditions of many of those sidewalks are not fit to serve the elderly or the handicapped. Most of the sidewalks are uneven, have dangerous cracks, and some parts are paved over large tree roots, making them not level. **Much improvement is needed for sidewalk conditions, including the repaving and leveling of many of the sidewalks.** The GIS map included in this document can be useful in locating these areas where improvement is most needed. In areas where there are no sidewalks, like May Street and the block between Malone and Allen Streets along West School Street, the installation of sidewalks is crucial to ensure the safety of all pedestrians.

Aesthetics

Generally, the atmosphere and walking environment was welcoming and pleasant within the study area, and the proximity to Allen Park offers the opportunity to experience nature and the outdoors. However, we did observe areas where trash seemed to impact the appearance of

the neighborhood. Therefore, **more enforcement of litter control would improve the appearance of the neighborhood.**

Traffic and Street Crossing

Many of the crosswalks in the study area look faded and not easily visible to those who have difficulty seeing. Therefore, **the crosswalks should be repainted to accommodate the visually impaired and provide for an overall safer street crossing.** Additionally, many of the curbs within the study area do not have ramps connecting the street and the sidewalk, making it difficult for the handicapped to get up onto the sidewalk. So, **the installation of curb ramps is needed to ensure the safety of handicapped pedestrians.**

Another problem we saw was that there lacked a buffer zone between some sidewalks and parking lots, and parked cars were spilling onto the sidewalk, posing a problem for some pedestrians. **Curbing or bumpers are needed to mark a clear separation of these areas.** Also, **the addition of yellow pedestrian detection pads throughout the street intersections of the neighborhood would be useful** for an increased level of safety when crossing streets. Lastly, in areas where the traffic density is high, like on Franklin Street and Jefferson Street, we noticed a lack of pedestrian activated crossing signals. **The installation of crossing signals might make crossing those busy streets easier, less intimidating and potentially dangerous** for pedestrians.

Safety and Security

While we did not survey the area when lighting would be operational, we recommend that **more light posts be installed**, for we noticed that the number of light posts was small for the size of the neighborhood.

Photos of Existing Conditions

Included on the following pages are photo-documentation of the sidewalk conditions, walking environment, and some pedestrians that were navigating the area while we were assessing the neighborhood.

West of Westfield Center Roads

Washington/Franklin/Smith/King Street Area



- May Street
- Hampden Street
- King Ave
- King Place
- Jefferson Street
- Green Ave
- West School Street
- Grand Street
- Madison Street
- Charles Street
- Malone Ave
- Allen Ave
- King Street
- Washington Street
- Franklin Street
- Smith Ave

Road Ranking

- Good
- Average
- Poor

Photo Spots

- Figure 1
- Figure 2
- Figure 3
- Figure 4 & 6
- Figure 5
- Figure 7
- Figure 8

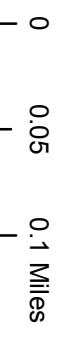




Figure 6: A highly cracked and unlevel sidewalk on Charles Street



Figure 2: An elderly pair, including one who is handicapped, walking the sidewalk on King Street and Washington Street

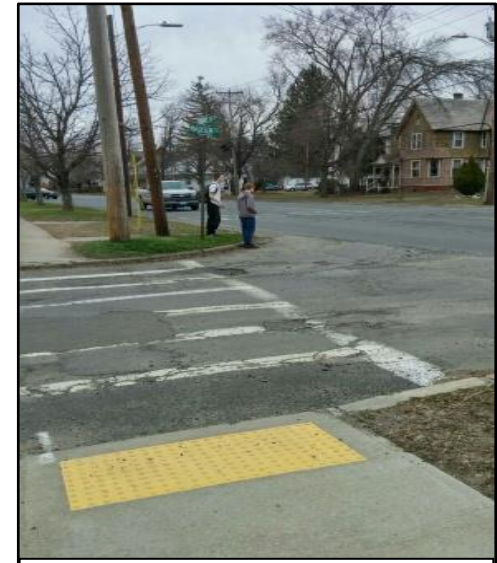


Figure 5: Young adults neglecting to use the crosswalk to cross the street on Madison Street



Figure 5: An intersection with well-painted crosswalks and pedestrian detection pads on the corner of Charles Street and Jefferson Street



Figure 1: A poorly painted crosswalk with no buffer separating the parking lot on Washington Street



Figure 6: Parked cars spilling onto a sidewalk on Washington Street



Figure 8: An example of a highly walkable sidewalk on Smith Avenue



Figure 7: A severely torn up sidewalk along King Street

Existing Conditions

To support the work of the Advisory Committee, additional data on existing conditions was gathered. Below indicates a summary of information on types of bike and pedestrian safety education and training that have occurred in, and are planned for, Westfield.

In addition, the Westfield Police Department provided a listing of accidents involving bicycles and pedestrians during 2014. This data, a total of seventeen (17) incidents, appears on the following map Bicycle and Pedestrian Accident Locations. The locations are centered in the downtown area.

The map, Traffic in Westfield, indicates available data on amounts of traffic on major thoroughfares. The main east/west roadways have heavy traffic – in part due to the fact that there are few options for through travel in these directions. Bicyclists and pedestrians are using these routes for the same reason as those in cars, buses, and trucks – these thoroughfares provide access to ultimate destinations. The Annual Average Daily Traffic (AADT) counts noted on the map highlight areas with high amounts of vehicles—places likely to need adapted infrastructure to provide the level of safety and comfort walkers and bikers need.

The following map, Existing and Proposed Bike Infrastructure, highlights the location of the Columbia Greenway Rail Trail (existing and future portions and access locations), the proposed bike lane along a reconstructed Western Avenue, and connections to the riverfront levees. Also noted is a potential trail of some type, along Little River—

Biking and Walking Safety, Outreach, and Enforcement Programs

Kiwanis Club

Third Grade Bike Helmet Give Away, 2014

Westfield School Department

Chris Rogers, Principle of Abner Gibbs Elementary school, is working closely with the Westfield Police Department and Community Resource Officers to bring awareness of bicycle and pedestrian safety, seat belt safety, stranger awareness, and other general emergencies to the Westfield Schools. Assemblies and presentations will first begin at the southern Westfield Schools such as Abner Gibbs, Franklin Street, South Middle, and Highland Elementary Schools. They hope to expand the safety awareness presentations to the northern Westfield schools soon as well.

Westfield Police Department

Work with the schools and, as funded, Ice Cream Coupons for Helmet Wearing

Bicycle Patrol Downtown and along the Greenway

Periodic Enforcement in Downtown and at Grade Crossings

Friends of the Columbia Greenway

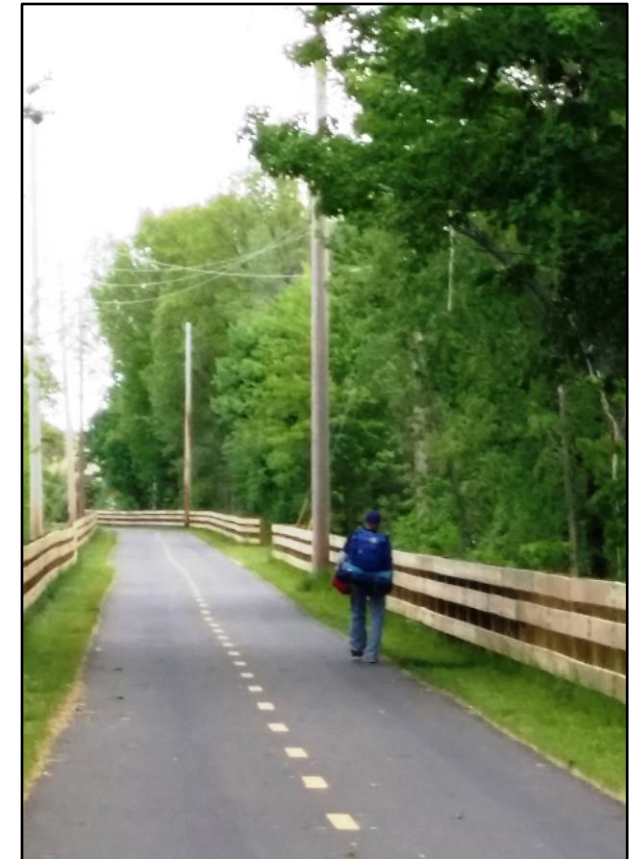
Spring Social on the Trail, Safety and Fun

City of Westfield

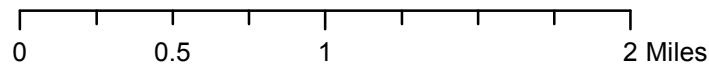
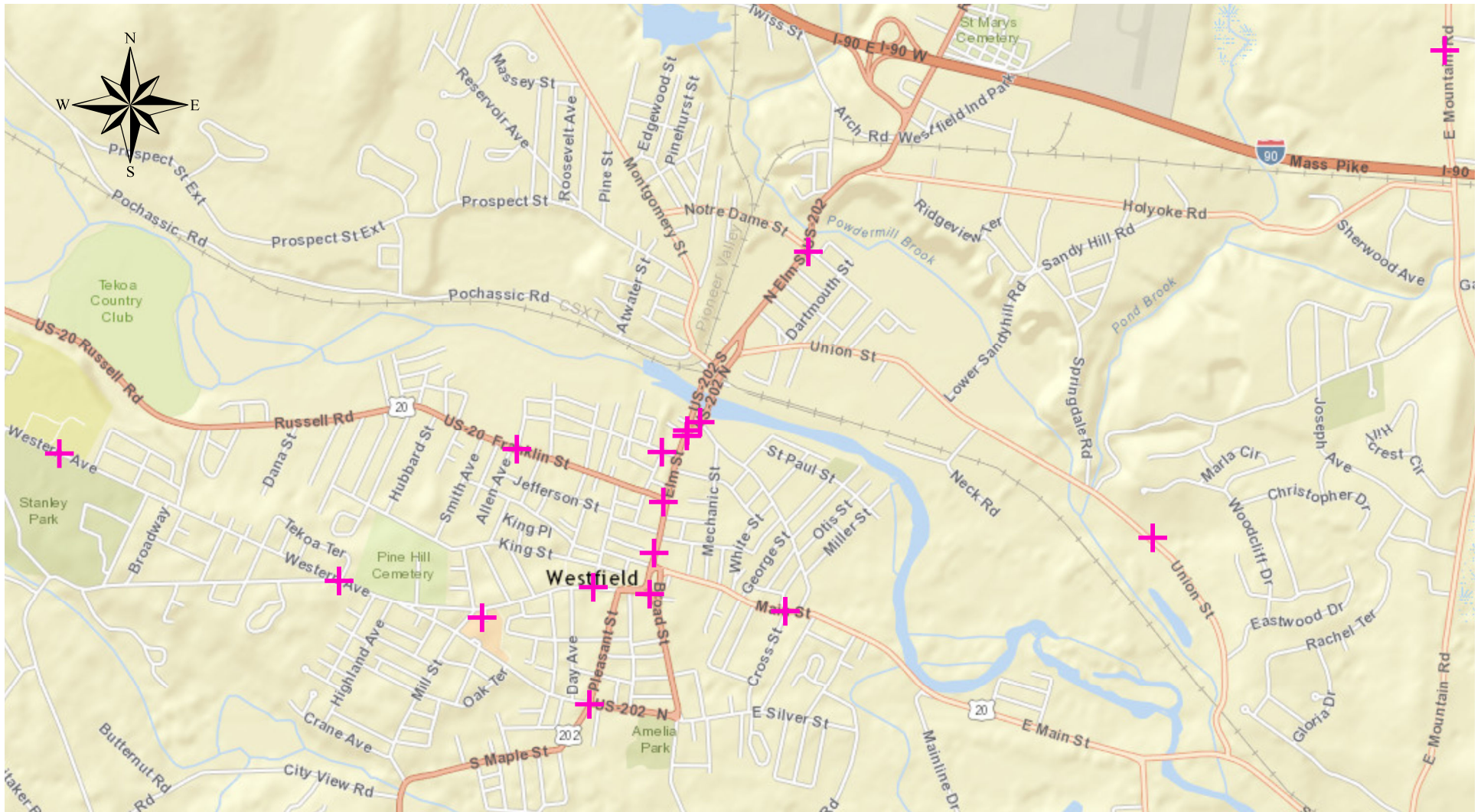
Bike to Work Day Activities

this is included as a very preliminary concept and is not a developed proposal at this point. This map focuses on the downtown area and includes both east-west and north-south routes. The yellow buffer indicates all of the area within the City that lies within a ½ mile of an access to the Columbia Greenway. Much of the downtown falls within this walkable distance.

Finally, the map Current and Proposed Bike Rack Locations, indicates an April 2015 inventory of bike racks in the Central Business District (CBD) of Westfield. Also noted are proposed locations for new racks to be installed. These locations are recommended based on the destinations identified, and its location in an area with access to the Columbia Greenway Rail Trail. Also included are some photos of bikes and racks in the CBD.



Bicycle and Pedestrian Accident Locations 2014

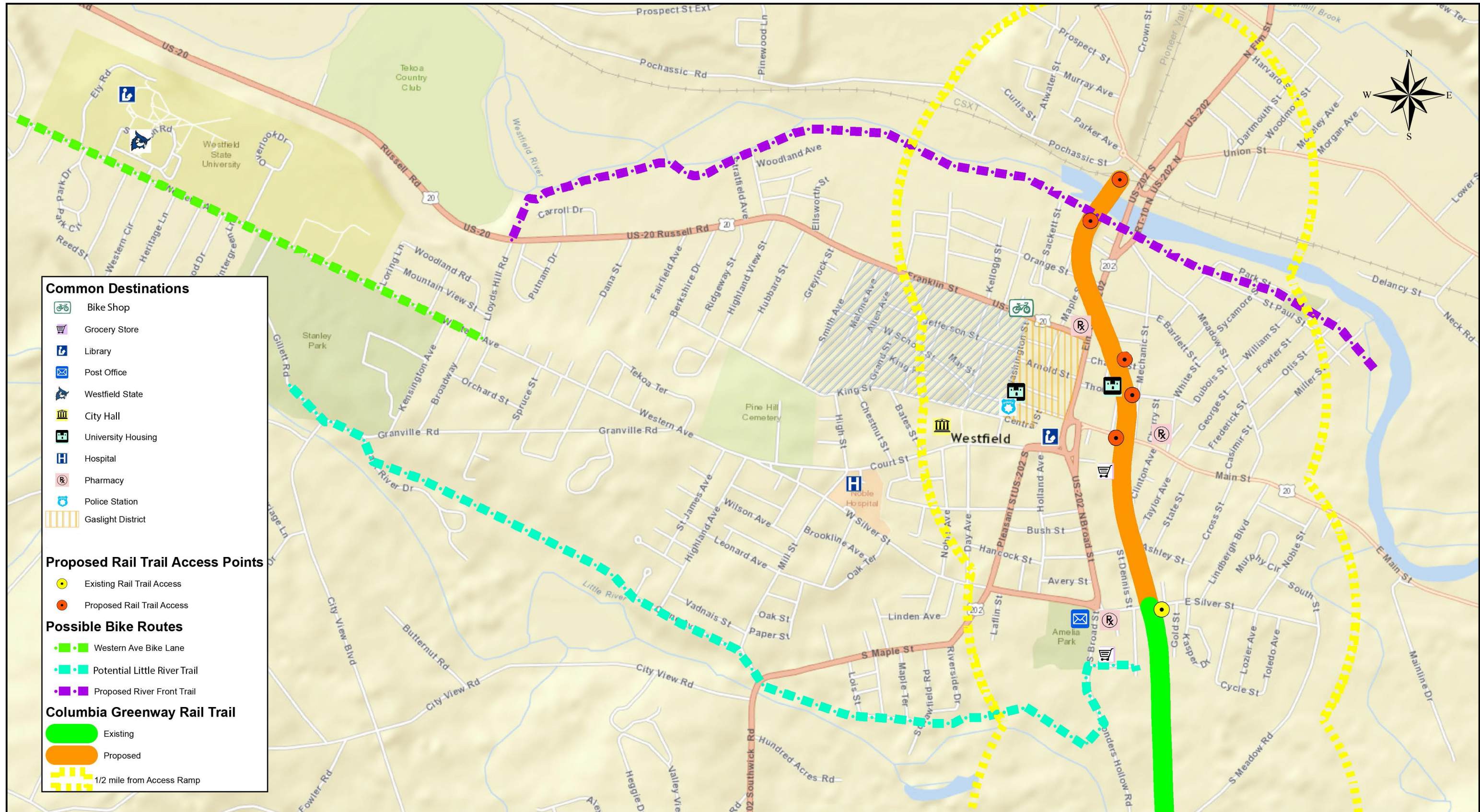


Legend
+ 2014 Accident Locations

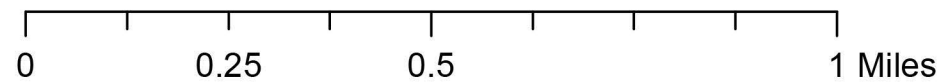


Created by: Joshua Perry, 2015
 Source: ESRI, Westfield Police Department
 Projection: MassStatePlane - Mainland

Existing and Proposed Bike Infrastructure in Westfield, MA

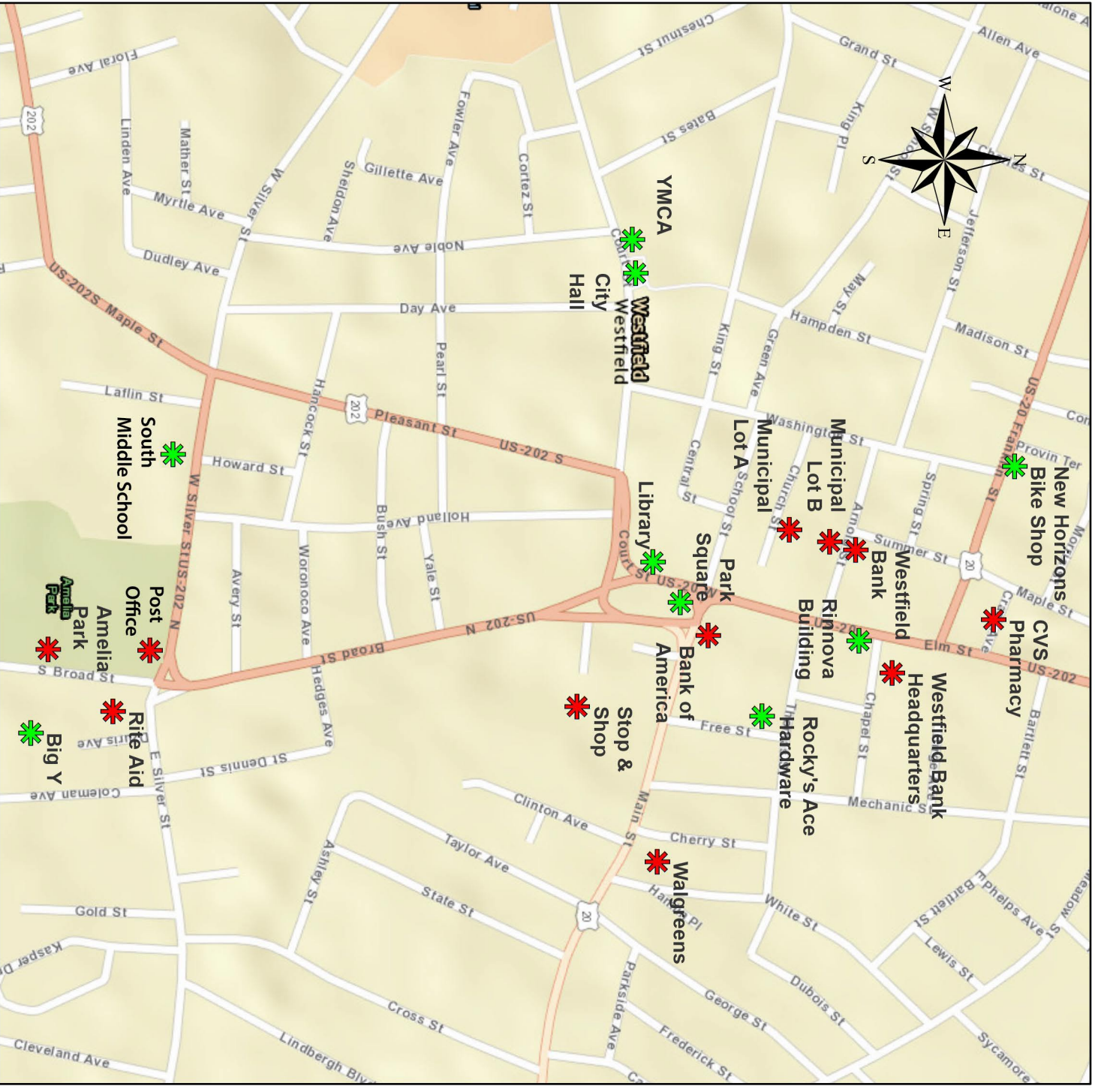


Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001
 Data Source: MassGIS and Google Maps



Created April 2015, by Jake Lehan
 Mr. Lehan makes no warranty, representation, or guarantee as to the content, sequence, accuracy, or completeness of any of the information provided herein.

Current & Potential Bike Rack Locations in Westfield, MA



Legend

- Suitable Locations for Additional Bike Racks
- Bike Rack Locations

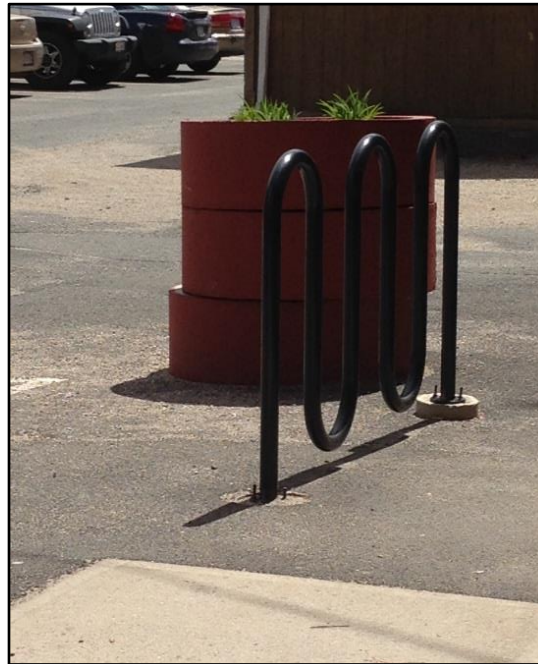
Westfield
STATE UNIVERSITY
Founded 1838



Created by: Josh Perry, 2015
Source: ESRI
Projection: MassStatePlane- Mainland



Bike Rack at Public Library



Bike Rack at Rinnova Building



Bikes tied up to pylons in a parking lot with no bike rack



Light Post main st at park square being used as bike rack



New bike rack at Park Square near gazebo



Bike Rack located at Rocky's Ace Hardware



Bike Rack located at Rocky's Ace Hardware



Bike rack at back entrance to library in full use



Bench on Main Street. being used as a bike rack



Railing at Stop & Shop being used as bike rack



Billboard at WSU being used as Bike Rack

Conclusions

The data, interactions, and evaluations contained here lead to the following conclusions:

- Interest in walking and biking is increasing, and **Westfield residents indicate support for the mission of the Advisory Committee.**
- For several reasons, the **public right-of-way of downtown Westfield should be a priority focus area for achieving safe, convenient accommodation of biking and walking.** This area has the most accidents involving walkers and bikers; provides access to the Columbia Greenway; overlaps with the high concentration of households without vehicles; contains major destinations such as the library and City Hall; falls within the non-transportation area for many of the public schools; and is the location a Senior Walking Club.
- **Extending adequate and safe sidewalks from the downtown out is important.** The Walkability audit included here indicates locations for improvements, and such an evaluation should be undertaken for the other neighborhoods within the greater CBD.
- Westfield is home to sizeable populations with special mobility needs including the elderly, youth, disabled, and low income

households. **Investments in infrastructure beyond those focused on vehicular travel options, is necessary for providing equity in mobility.**

- **Investments in walking and biking infrastructure will reap the benefit of additional users.** This is borne out by national attitude surveys, national counts, and local attitudes.
- Most bikers ride for recreation; most walkers for health and fitness. **Meeting the need for safe facilities for these uses can build confidence for residents to integrate non-motorized travel for other types of trips.**
- The use of the Columbia Greenway Rail Trail can be supported by considering locations of public restrooms (including port-johns) and bike racks in CBD locations (see map in report). In addition, better signage and getting the word out will make people aware of this public asset.
- The City of Westfield has been gradually undertaking improvements to make the downtown more walkable. The Commission for Citizens with Disabilities has a good working relationship with the DPW, identifying needed improvements and communicating them. **This relationship is a positive force for addressing needed upgrades.**

- Expanded education and safety programming should be supported. The plan for the Westfield School Department to institutionalize such efforts is a good step forward.

Appendix

Pop-Up Survey Results

List of Intersections prepared by the Westfield
Commission for Citizens with Disabilities

Walkability Audit Street Ratings & Assessment
Sheet

Complete Survey Results April – May 2015

| | |
|----------------------------|-----------------|
| Westfield State Results | 30 Participants |
| Stop & Shop Results | 11 Participants |
| Columbia Greenway Results | 9 Participants |
| Downtown Westfield Results | 7 Participants |
| Total | 57 Participants |

Gender:

| | | | | | |
|-----------|----|---|---|---|----|
| Male | 21 | 5 | 2 | 3 | 31 |
| Female | 5 | 5 | 5 | 3 | 18 |
| No Answer | 4 | 1 | 2 | 1 | 8 |

Age:

| | | | | | |
|-------------|----|---|---|---|----|
| 19-30 | 27 | 5 | 4 | 1 | 37 |
| 31-40 | 2 | 0 | 2 | 1 | 5 |
| 41-50 | 0 | 1 | 1 | 2 | 4 |
| 51-60 | 1 | 3 | 0 | 2 | 6 |
| 61 and over | 0 | 2 | 2 | 1 | 5 |

Are you aware that there is a Westfield Bicycle and Pedestrian Committee?

| | | | | | |
|-----------|----|---|---|---|----|
| Yes | 6 | 7 | 1 | 0 | 14 |
| No | 22 | 3 | 6 | 7 | 38 |
| No Answer | 2 | 1 | 2 | 0 | 5 |

Overall level of support for the Committee's Mission and overall goal of creating a bicycle/pedestrian network in the City:

| | | | | | |
|------------------|----|---|---|---|----|
| Strongly Support | 17 | 9 | 7 | 5 | 38 |
| Support | 13 | 1 | 2 | 2 | 18 |
| Oppose | 0 | 0 | 0 | 0 | 0 |
| Strongly Oppose | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|-----------|---|---|---|---|---|
| No Answer | 0 | 1 | 0 | 0 | 1 |
|-----------|---|---|---|---|---|

How safe do you find Westfield is to BIKE?

| | | | | | |
|-------------|----|---|---|---|----|
| Very Safe | 2 | 0 | 1 | 1 | 4 |
| Safe | 11 | 3 | 5 | 2 | 21 |
| Unsafe | 15 | 6 | 3 | 4 | 28 |
| Very Unsafe | 2 | 2 | 0 | 0 | 4 |

How safe do you find Westfield is to WALK?

| | | | | | |
|-------------|----|---|---|---|----|
| Very Safe | 2 | 2 | 0 | 1 | 5 |
| Safe | 27 | 5 | 8 | 3 | 43 |
| Unsafe | 1 | 4 | 1 | 2 | 8 |
| Very Unsafe | 0 | 0 | 0 | 1 | 1 |

Do you feel that the community could benefit from promoting the use of bicycles and walking?

| | | | | | |
|-----|----|----|---|---|----|
| Yes | 29 | 11 | 9 | 7 | 56 |
| No | 1 | 0 | 0 | 0 | 1 |

Is there adequate bike access between where you live, and the rest of Westfield?

| | | | | | |
|-----|----|---|---|---|----|
| Yes | 11 | 3 | 2 | 3 | 19 |
| No | 19 | 8 | 7 | 4 | 38 |

If Westfield had designated bicycle lanes, would you be more inclined to bike places within the City?

| | | | | | |
|-----|----|---|---|---|----|
| Yes | 25 | 9 | 7 | 7 | 48 |
| No | 5 | 2 | 2 | 0 | 9 |

Have you used the Columbia River Greenway in Westfield (i.e. walked, jogged, bicycled, rollerblade)?

| | | | | | |
|-----|----|---|---|---|----|
| Yes | 5 | 3 | 9 | 4 | 21 |
| No | 25 | 8 | 0 | 3 | 36 |

Would you be more apt to ride on a bicycle trail if there were places to use the bathroom/get refreshments?

| | | | | | |
|-----|----|----|---|---|----|
| Yes | 29 | 10 | 9 | 7 | 55 |
| No | 1 | 1 | 0 | 0 | 2 |

If Westfield implemented a bike-share program, would you use it?

| | | | | | |
|-----------|----|---|---|---|----|
| Yes | 25 | 7 | 5 | 5 | 42 |
| No | 4 | 3 | 4 | 2 | 13 |
| No Answer | 1 | 1 | 0 | 0 | 2 |

When you ride your bike, do you mostly ride in groups of people?

| | | | | | |
|-----------|----|---|---|---|----|
| Yes | 14 | 2 | 5 | 2 | 23 |
| No | 15 | 7 | 4 | 5 | 31 |
| No Answer | 1 | 2 | 0 | 0 | 3 |

If you do ride your bike, do you wear a helmet?

| | | | | | |
|-----------|----|---|---|---|----|
| Yes | 9 | 4 | 4 | 4 | 21 |
| No | 20 | 5 | 5 | 3 | 33 |
| No Answer | 1 | 2 | 0 | 0 | 3 |

What type of bicyclist best describes you?

| | | | | | |
|-------------------|---|---|---|---|----|
| Strong & Fearless | 8 | 2 | 0 | 0 | 10 |
|-------------------|---|---|---|---|----|

| | | | | | |
|---------------------------|----|---|---|---|----|
| Enthusied & Confident | 9 | 1 | 3 | 3 | 16 |
| Interested, but Concerned | 10 | 6 | 5 | 4 | 25 |
| No Interest | 3 | 2 | 1 | 0 | 6 |

Do you walk in Westfield- for recreation, errands, or other reasons?

| | | | | | |
|-----------|----|---|---|---|----|
| Yes | 21 | 9 | 6 | 6 | 42 |
| No | 8 | 1 | 3 | 1 | 13 |
| No Answer | 1 | 1 | 0 | 0 | 2 |

Would you walk more if you had access to a safe trail or continuous sidewalks?

| | | | | | |
|-----------|----|----|---|---|----|
| Yes | 27 | 10 | 9 | 7 | 53 |
| No | 2 | 0 | 0 | 0 | 2 |
| No Answer | 1 | 1 | 0 | 0 | 2 |

| | | | | | |
|--|-----------------|-------------|------------------|------------------|--------------|
| <u>FY2014 REQUEST FOR SIDEWALKS AND CURB CUT OUTS FOR ACCESSIBILITY</u> | | | | | |
| <u>Date: October 18, 2012</u> | | | | | |
| Revised March 21, 2013 (formerly Free Cash Request) | | | | | |
| LAST REVISED Feb. 16, 2014 (In DPW FY14 Budget) | | | | | |
| BY COUNCILORS AGMA SWEENEY, ANN CALLAHAN AND CITIZENS WITH DISABILITIES COMMISSION | | | | | |
| TO MAYOR DANIEL KNAPIK, MEMBERS OF CITY COUNCIL AND JIM MULVENNA, DIRECTOR DPW | | | | | |
| | | | DATE | COST | BEGIN |
| CURB CUTOUTS | LOCATION | DONE | COMPLETED | ESTIMATES | WORK |
| Corner of Holland and Woronoco | Both | | Fall 2013 | | |
| Corner of Holland and Avery | Both | | Fall 2013 | | |
| Corner of Holland and Yale | Both | | Fall 2013 | | |
| Corner of Jefferson and Madison | Both | | Fall 2013 | | |
| Corner of Jefferson and Hampden | Both | | Fall 2013 | | |
| Corner of Jefferson and Charles | 4 corners | | Fall 2013 | | |
| Corner of Jefferson and Allen | Both | | Fall 2013 | | |
| Corner of Hampden and King | Both | | Fall 2013 | | |
| Cross streets off Franklin going South | | | Fall 2013 | | |
| Corner of Prospect St. and Parker Ave. | | | Fall 2013 | | |
| Corner of N. Elm St. and Harvard | | | Fall 2013 | | |
| Corner of N. Elm St. and Westminster | | | Fall 2013 | | |
| Corner of N. Elm St. and Princeton | | | Fall 2013 | | |
| Corner of N. Elm St. and Columbia | | | Fall 2013 | | |
| Corner of Kittridge and Sunset | | | Fall 2013 | | |
| Corner of Kittridge and Barbara | | | Fall 2013 | | |
| Corner of Pine and Prospect | | | Fall 2013 | | |
| Corner of Chestnut and Court | | | Fall 2013 | | |

| | | | | | |
|---|------------|--|-----------|--|--|
| | | | | | |
| SIDEWALKS | | | | | |
| | | | | | |
| Pleasant street from Court to Peal sts.* | East | | Fall 2013 | | |
| Pleasant Street from Bush to Hancock * | East | | Fall 2013 | | |
| OR | | | | | |
| Pleasant Street from Pearl to Bush * | East | | Fall 2013 | | |
| Howard Street | Both sides | | Fall 2013 | | |
| Jefferson Street | Both sides | | Fall 2013 | | |
| | | | | | |
| * Pleasant Street, Asphalt repair on both | | | | | |
| sides of the sidewalk from Court to Silver Sts. | | | | | |

TABLE 1: Walkability Audit-Downtown Neighborhood Adjacent to Gaslight District Study Area

| Street Name | Block | Score | Category |
|--------------------|-----------------------------|--------------|-----------------|
| Washington | 1.Franklin/Jefferson | 66 | MEDIUM |
| | 2.Jefferson/Green | 68 | MEDIUM |
| | 3.Green/King | 75 | HIGH |
| Hampden | 1.Jefferson/May | 77 | HIGH |
| | 2.May/West School | | |
| | 3.West School/King | | |
| Madison | 1.Franklin/Jefferson St. | 64 | MEDIUM |
| Charles | 1.Franklin/Jefferson St. | 83 | HIGH |
| | 2.Jefferson St./West School | | |
| King Ave | 1.King Place/King St. | 83 | HIGH |
| Grand | 1.West School/King Place | 68 | MEDIUM |
| | 2.King Place/King St. | | |
| Allen Ave | 1.Franklin/Jefferson St. | 80 | HIGH |
| | 2.Jefferson St/West School | 86 | HIGH |
| | 3.West School/End | 86 | HIGH |
| Malone Ave | 1.Franklin/West School | 80 | HIGH |
| | 2.West School/End | 86 | HIGH |

| | | | |
|-------------|-------------------------|----|--------|
| Smith Ave | 1.Franklin/West School | 83 | HIGH |
| | 2.West School/King | 85 | HIGH |
| King | 1.Smith/Grand | 62 | MEDIUM |
| | 2.Grand/King Ave | 65 | MEDIUM |
| | 3.King Ave/Hampden | 74 | HIGH |
| | 4.Hampden/Washington | 74 | HIGH |
| King Pl | 1.Grand/King Ave | 65 | MEDIUM |
| | 2.King Ave/End | | |
| West School | 1.Smith/Malone | 85 | HIGH |
| | 2.Malone/Allen | 51 | MEDIUM |
| | 3.Allen/Charles | 75 | HIGH |
| | 4.Charles/Jefferson | 86 | HIGH |
| | 5.Jefferson/Hampden | 69 | HIGH |
| Green Ave | 1.Hampden/Washington | 61 | MEDIUM |
| May | 1.Hampden/End | 45 | MEDIUM |
| Jefferson | 1.Allen/Charles | 70 | HIGH |
| | 2.Charles/Jefferson Ave | | |
| | 3.Jefferson Ave/Madison | | |
| | 4.Madison/Hampden | | |
| | 5.Hampden/Washington | | |

| | | | |
|--|----------------------|----|--------|
| Franklin | 1.Smith/Malone | 69 | HIGH |
| | 2.Malone/Allen | 70 | HIGH |
| | 3.Allen/Charles | 69 | HIGH |
| | 4.Charles/Madison | 72 | HIGH |
| | 5.Madison/Littles | 53 | MEDIUM |
| | 6.Littles/Washington | 53 | MEDIUM |
| Scores based on the Walkability Audit conducted by WSU student in April 2015 | | | |

| Table 2: Walkability Rating System | |
|------------------------------------|--|
| Score | Description |
| Low (5-36) | Not Walkable -sidewalk conditions and environment make it unsafe for walking |
| Medium (37-68) | Somewhat Walkable -sidewalk conditions and environment make navigating adequate |
| High (69-100) | Very Walkable -sidewalk conditions and environment making navigating easy |

| Westfield Walkability Audit | |
|-----------------------------|--------------------------------|
| Date and Day of the Week: | Block from: _____ to: _____ |
| Time of Day: | Weather Conditions: |
| Completed By: | |

The chart below displays some considerations to keep in mind when rating based on population:

| Category | Difficulties | Consideration |
|--------------------------------------|---|---|
| Children | Inability to understand consequences, lack of cognitive ability | <ul style="list-style-type: none"> ▪ Require supervision ▪ Safe routes to school |
| Pedestrians with disabilities | Mobility (wheel chairs), vision impaired | <ul style="list-style-type: none"> ▪ Require access to all pedestrian areas ▪ Need additional infrastructure to provide guidance ▪ Continuity of treatment |
| Aged pedestrians | Mobility (low speed, walking frames, wheel chairs), reduced vision, loss of confidence and more easily confused | <ul style="list-style-type: none"> ▪ Low incline routes ▪ Access to public transport ▪ Personal safety |

Source: Austroads (2009b).

Three columns labeled “G” (General Population), “C/E” (Children/Elderly), “H” (Handicapped) allow for ratings with different populations in mind.

Rank each category for each population based on the following scale and then find the sum for each category:

- 1=Very Poor.
- 2=Poor.
- 3=Average.
- 4=Good.
- 5=Very Good.

| Infrastructure | G | C/E | H |
|---|----------|------------|----------|
| Sidewalks on both sides of street | | | |
| Sidewalks are wide enough for 2-way traffic | | | |
| Sidewalks are in adequate repair | | | |
| Topography is even and level | | | |
| Curbs are easily accessible | | | |
| Total Score | | | |
| Comments: | | | |

| Aesthetics | G | C/E | H |
|--|----------|------------|----------|
| Walking environment is clean | | | |
| There are trees, flowers, etc. along route | | | |
| There are trees, awnings, etc. for shade | | | |
| Absence of litter or graffiti | | | |
| Walking environment is pleasant | | | |
| Total Score | | | |
| Comments: | | | |

| Safety and Security | G | C/E | H |
|---|----------------|----------------|----------------|
| Traffic signs/devices are visible and useable | | | |
| Adequate lighting along route | | | |
| Activity level of people | | | |
| Social activity doesn't dictate route | | | |
| The route appears secure | | | |
| Total Score | | | |
| Comments: | | | |
| | G | C/E | H |
| Total Points | | | |
| Circle Overall Rating | Low (5-36) | Low (5-36) | Low (5-36) |
| | Medium (37-68) | Medium (37-68) | Medium (37-68) |
| | High (69-100) | High (69-100) | High (69-100) |

| Traffic and Street Crossing | G | C/E | H |
|---|----------|------------|----------|
| Traffic speeds compatible for pedestrians. | | | |
| Traffic volume is doesn't make walking difficult | | | |
| Streets are easy to cross | | | |
| Crosswalks visible and properly placed | | | |
| Pedestrian view of street/traffic is unobstructed | | | |
| Total Score | | | |
| Comments: | | | |

