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## Tigard Walks (A Plan for Walkable Neighborhoods in Tigard)

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# TIGARD WALKS

A Plan for Walkable  
Neighborhoods in Tigard



June  
13<sup>th</sup>  
2014

STEPUP  
Studio

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*Sarah, Brenda, Teresa, Mark, Gary, Jane, Anitra, Jack, Terry, Benjamin, Marcus, Doug, Bridget, Jen and Kris.*

# Executive Summary

## CORE VALUES

The Walkable Neighborhoods Plan for Tigard outlines a set of strategies to help Tigard’s residents, businesses, and leaders build their city into a more walkable place. These five strategies are based on three core values gleaned from StepUP Studio’s outreach efforts to the people living and working in and for the city of Tigard.

### Family Friendly Neighborhoods

- Tigard’s neighborhoods should be safe, vibrant communities, where people of all ages and backgrounds are welcome and encouraged to walk, talk, learn, and play.

### Living Close to Home

- Tigard’s neighborhoods should contain the destinations, facilities, and amenities that meet the needs of their residents.

### Informed and Empowered Citizens

- Tigard’s residents should have the tools, resources, and expertise to help make their communities better.

## STRATEGIES

The five strategies were developed after extensive analysis of the city’s pedestrian network and existing conditions; research on best practices and case studies from other cities; and feedback from Tigard residents, community groups, and city staff. Each strategy responds to one or more of the three core values.

## 2. ACTIVE PARKS AND TRAILS

Parks and trail systems are already the heart of Tigard’s pedestrian network. Providing consistent activities such as walks and runs, community gardens, or summertime movies under the stars gives area residents more opportunities to take advantage of these existing, and mostly walkable neighborhood destinations, and gets people out on their feet in their neighborhoods on a more regular basis.

### Recommendations for Active Parks and Trails

- Engage non-profit entities with the Tigard Parks Department to organize, fund-raise, promote and fulfill activities and events that make parks and trails destinations.

## 1. SAFE ROUTES TO SCHOOL

Safe Routes to School programs have proven successful at increasing neighborhood walkability in a number of comparable cities across the country. Eugene and Portland, Oregon, and Alexandria, Virginia have each developed city-wide or regional SRTS policies that have led to SRTS curriculum and programing at their schools, the development of community resources to promote bicycle and pedestrian safety around schools, and helped secure funding for bike/ped infrastructure projects. Of particular benefit to Tigard, the SRTS Program Manager for the region is eager to work with the City and the school district to get started in Tigard.

### Recommendations for Safe Routes to School

- Create and adopt a Safe Routes to School policy to ensure the successful implementation of a Safe Routes to School strategy for the city.

## 3. NEIGHBORHOOD CENTERS

Small, neighborhood commercial nodes provide a walkable alternative for basic goods and services. These centers, located on arterial or collector roads, house service sector businesses like restaurants, coffee shops, and small grocery markets. Increasing the number of walkable destinations within a low-density residential neighborhood can have a dramatic impact on overall walkability. Tigard’s zoning code allows for this kind of activity through a C-N zone, but it is not currently in use.

### Recommendations for Neighborhood Centers

- Support the development of small neighborhood commercial nodes of restaurants, coffee shops, or neighborhood retail in residential neighborhoods.

**TIGARD WALKS BY THE NUMBERS**

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**6** STEPUP TEAM  
Studio MEMBERS

**23** WEEKS

---

**15** Interviews

**144** Surveys

**15** community events & meetings

---

**109** miles walked in Tigard

**37** Trips to Tigard

---

**41** cups, pints or beverages at downtown Tigard businesses



## 4. SIMPLE SIGNS

Much of the city's existing pedestrian infrastructure, including many cut-throughs and off-street paths, are unknown even to nearby residents. Part of the problem is that neighborhoods often lack adequate signage directed at people on their feet. Simple, visible, and frequent signs for both way-finding and education can go a long way to help walkers feel more confident knowing where they're going and how long their journey will take. There are great examples of citizen-led, and city-assisted pedestrian signage initiatives from Raleigh, North Carolina to nearby SW Portland.

### Recommendations for Simple Signs

- Develop a policy for pedestrian signage, as well as standards and procedures for sign production and installation.
- Add supplemental signage to existing Dead End signs where off-street paths permit through movement of pedestrians.

## 5. TALK THE WALK

With its crisscrossing trails and central downtown, Tigard is already more walkable than many realize. One thing that sets the most walkable cities apart is their commitment to sharing where and how they walk, through a regular column in the local paper, a set of easily available neighborhood walking maps, or even a "walk of the month" club. A set of communication tools for city staff, and a walkable neighborhoods guide with tips for the community should help shape the conversation about walkability in Tigard.

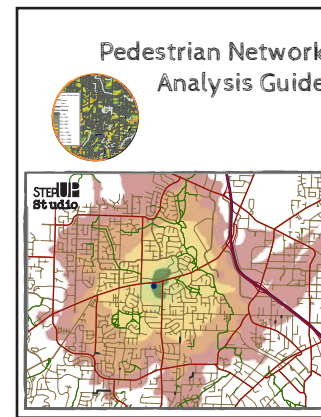
### Recommendations to Talk the Walk

- Create Walking Maps for the areas around Woodward Elementary/ Summerlake, Fowler Middle School, Tigard High School/Durham City Park, Bull Mountain, and others. Consider working within existing neighborhood boundaries and highlighting interesting routes.
- Implement the procedures laid out in *Walkable Tigard: A Communications Plan* to integrate Walkability messaging into the city's communication efforts.
- Make *Walkable Neighborhoods: A Community Toolkit* available for use by Tigard residents by promoting it online, in the CityScape newsletter, and in the press.

## SUPPLEMENTAL TOOLS

In addition to the Walkable Neighborhoods Plan, StepUP Studio is developing a set of tools to support the continued implementation of the five walkability strategies, as well as the City of Tigard's efforts to promote walkability through their ongoing strategic planning process.

### Pedestrian Network Analysis Guidebook



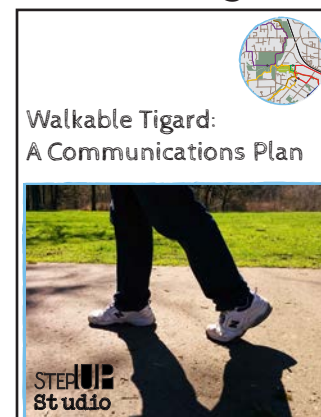
A step-by-step how-to guide for continued use of the Pedestrian Network Analysis ArcGIS tool.

### Walkable Neighborhoods: A Community Toolkit



A simple guide book for community members containing steps they can take to make their city and neighborhoods more walkable.

### Walkable Tigard: A Communications Plan



A basic communications plan to help the city promote walkability.

## ABOUT STEPUP STUDIO

StepUP Studio is a team of urban planning graduate students at Portland State University. The City of Tigard partnered with StepUP Studio to craft outside-the-box strategies that would help make walking in Tigard's neighborhoods a more safe and enjoyable travel alternative.

### Chase Ballew, Planner/Policy Analyst

A lifelong Portlander, Chase earned his bachelor's degree in Community Development, with a minor in Sustainability, at Portland State University in 2010. Pursuing a planning master's degree specializing in transportation, Chase also has a graduate Certificate in Transportation, and has a special interest in how planning policies can better integrate active transportation into our daily lives.



### Mark Bernard, Planner/Project Manager

Pursuing a lifelong interest in geography led Mark to undergraduate and master's degrees in the subject at UC Davis and Oregon State University, respectively. His professional planning experience includes stints as a land use and real estate paralegal, a consultant acting on behalf of vineyard and winery owners and as a land use and transportation planner in Douglas and Lane Counties. He is particularly interested in land use and transportation issues on the urban fringe.



### Jeremy Dalton, Planner/Communications Specialist

Jeremy worked for Portland State University from 2005-2013, most recently as the Director of Communications for Research and Strategic Partnerships. His time at PSU sparked an interest in urban policy and best practices for cities, leading him to pursue a Master's in Urban and Regional Planning. He recently completed 3-month internship in Shenzhen, China with the Urban Planning and Design Institute of Shenzhen.



### Laura Goodrich, Planner/Engagement Specialist

Laura's prior experience includes work in both community development and land use planning across a variety of organizations, including non-profits and government agencies. Laura currently holds a bachelor's degree in Community Development from Portland State University and will be obtaining her master's degree in Urban and Regional Planning this June.



### Szilvia Hosser-Cox, Planner/Research Analyst

Szilvia holds an undergraduate degree in Environmental Science from the University of Minnesota. Before moving to Portland for graduate school, she worked as an Environmental Organizer. Most recently, she completed an internship in Shenzhen, China working on urban design projects.



### Steven McAtee, Planner/Design Specialist

Steven has worked for the City of Portland for 9 years, and held positions in GIS utility mapping, land use review, building plan review, permit center customer service and construction management. Steven has lived in Portland since 1995 with the exception of attending the University of Oregon, where he graduated with a B.S. in Geography.



# Introduction

## What is Walkability?

Definitions of walkability typically describe it as a measure of the effectiveness of urban design to promote walking as an alternative to auto travel.<sup>1</sup> Walkability is also an essential complement to transit use, an important element of urban design that can replace auto trips and an attribute of healthy communities.<sup>2</sup> Urban design, land use diversity and development density all influence decisions to take walking trips.

*Walkability describes the intersection of urban form and ease of pedestrian movement.*

Walkable places within the context of cities are characterized by design elements, like small block sizes with high intersection densities, and diverse residential neighborhoods containing a mix of destinations. More detail about the nature of walkability can be found in **Appendix A: Literature Review**.

Recent planning work in Tigard around walkability is manifested in the findings, goals and policies found in various plans adopted in the past five years. For instance:

- **The Comprehensive Plan** references community values related to pedestrian paths and development of a well-connected network;
- **The Transportation System Plan** states that off-street trail connections will be maintained to provide efficient circulation in and out of residential neighborhoods and access to schools, parks and commercial areas;
- **The Neighborhood Trails Plan** emphasizes walkability through a vision for enhancing access to neighborhood schools, parks, employment centers and shopping destinations; and,
- **The Tigard Greenways Trails Master Plan** pledges to increase opportunities for walking by adding to the existing greenway trail system.

This emphasis on alternative modes of travel, such as walking, speaks to Tigard's commitment to sustainable development, healthy lifestyles and alleviating auto dependency in the community. Tigard Walks builds on these existing plans with a set of strategies to assist in their continued implementation.

<sup>1</sup> Rattan, A., et. al. Modeling Walkability: Automating Analysis so it is Easily Repeated. *ESRI ArcUser*, Winter 2012.

<sup>2</sup> Tal, G., & Handy, S. (2012). Measuring nonmotorized accessibility and connectivity in a robust pedestrian network. *Transportation Research Record: Journal of the Transportation Research Board*, 2299(1), 48-56.

## How Walkable is Tigard?

In many ways Tigard is ahead of its peers as a walkable city. Like most suburban cities across the country, Tigard's mid-20<sup>th</sup> century development patterns resulted in sprawling, low-density clusters of single uses. Oregon's land-use policies somewhat mitigated the sprawl, protecting nearby agricultural land and natural resources. Meanwhile, natural features like Fanno Creek brought coordinated regional efforts to ensure their accessibility by way of multi-use paths. And the City has worked to create convenient and comfortable pedestrian connections over barriers and between disconnected cul-de-sacs.

Yet there is still much more that could be done to make Tigard a truly walkable city. Current zoning throughout the city keeps the majority of residents too far away from any employment, shopping, or entertainment options to make walking a viable alternative (**Appendix B: Existing Conditions**). Many of the aforementioned pedestrian connections are poorly marked and difficult to find. And Tigard currently lacks the comprehensive programming efforts that have been game-changers for some of the country's most walkable cities, such as Safe Routes to School (**Appendix C: Case Studies**).

The five strategies outlined in this plan are intended to make Tigard more walkable on a neighborhood scale. Meanwhile, the City's ongoing comprehensive planning effort should uncover the steps to citywide walkability, including the roles of transit and employment distribution. But any strategy, on any scale, relies on a persistent commitment to walkability by the City and Tigard residents. The values are there (**page 22**), the enthusiasm is there (**page 14: Community Engagement**), and the mandate has been given (**page 41: Existing Plans and Policies**). Let's celebrate Tigard's successes and keep walking the walk.

## WALK ON TIGARD

**11.8 square miles** within Tigard City Limits

**123 miles** of sidewalks

**15 miles** of off-street trails

**190 miles** of streets

**3,200** street intersections

approximately **800 acres** of parks and open spaces

over **30 miles** of streams and rivers

Figure 2: Tigard Walks Plan Development



The strategies contained in this Walkable Neighborhood Plan were developed based on analysis of the city's pedestrian network and existing conditions; research into best practices and case studies from other cities; and feedback from Tigard residents, community groups, and city staff.

# PROCESS

Tigard is to be commended for their dedication and hard work planning for pedestrians over the past decade. Walking was a major priority of a 2007 Comprehensive Plan update and the impetus for the Neighborhood Trails Plan adopted just two years later. Many of the short neighborhood access trails proposed in the plan, particularly on Bull Mountain, have already been built. A 2010 update to the Tigard Transportation System Plan (TSP) further supported walking through policies that improve pedestrian access and neighborhood commercial activity and recommendations for funding specific sidewalk projects. Finally, the 2011 Tigard Greenways Trails Master Plan sought to complete and upgrade the city's trail system, making improvements to existing multi-use trails and enhancing the connectivity of the off-street pedestrian network.

## I. Pedestrian Network Analysis - pg 8

We worked with partners at Portland State University to develop a Pedestrian Network Analysis model using ArcGIS and data from Metro and the City of Tigard. The tool allows us to mimic the existing walking environment, identify critical barriers to pedestrian mobility, and evaluate the impact that potential infrastructure improvements would have for pedestrians.

## II. Best Practices Research - pg 12

We explored walkability efforts and pedestrian improvements in cities around the world to better understand best practices and possible pitfalls most relevant to Tigard. The most successful efforts by other cities can be sorted into the following categories:

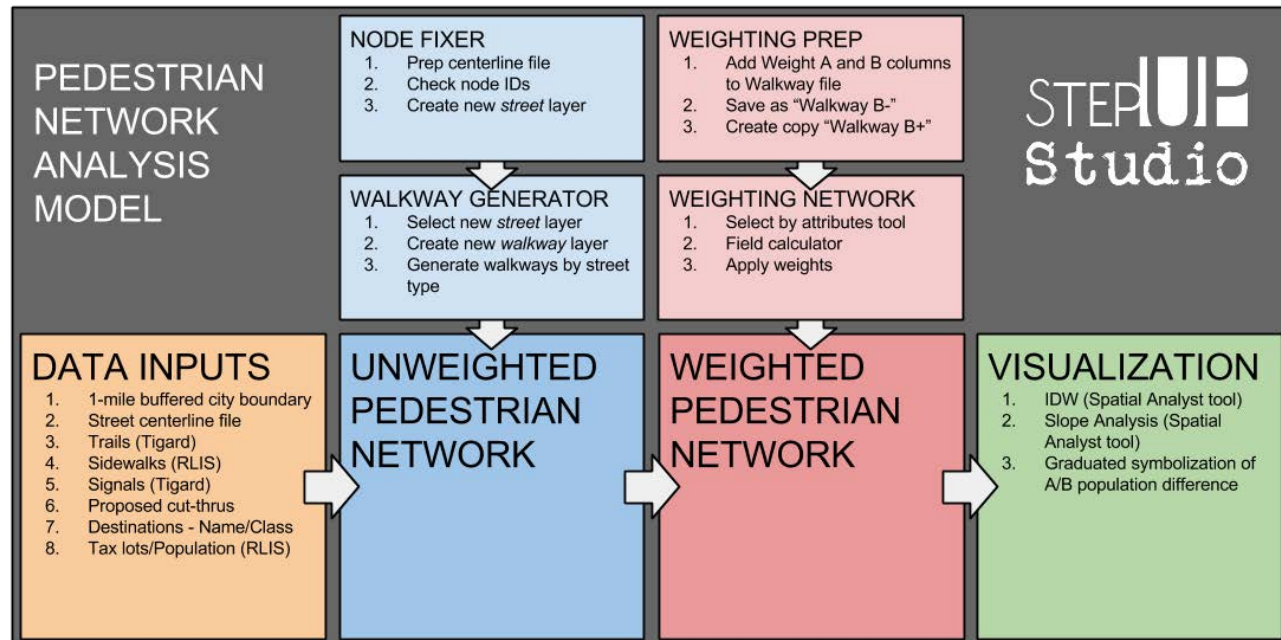
1. Establishing Pedestrian Connections
2. Creating Walkable Facilities and Destinations
3. Building Community Attachment and Investment

## III. Community Engagement - pg 14

We reached out to Tigard residents to learn what they thought about walking in their neighborhoods. Specifically, we wanted to know if walking was important to them, where they did and did not walk (and why), what barriers to walking and opportunities to improve walkability they experienced, and what changes they would like to see. We reached out to the community in the following ways:

1. Online and Intercept Surveys
2. Resident Interviews
3. Interactive Map
4. Open Houses
5. Walking Tours
6. Public Presentations
7. Community Conversations

Figure 3: Network Analysis Model



# I. Pedestrian Network Analysis

To reach their pedestrian connectivity goals, the City of Tigard required a robust and varied analytical approach through which the pedestrian environment could be assessed. StepUP Studio initially envisioned an analytical model that delivered various neighborhood typologies, each with different pedestrian characteristics. However, after exploring several types of geospatial analysis, the typology method was replaced with a more widely useful and applicable network analysis tool that the City could continue to use for future pedestrian infrastructure projects across the city.

Tigard has an active and knowledgeable GIS team with a strong collection of geospatial data. They maintain a series of publicly accessible pages on the City’s website, providing information, tools, and an interactive mapping system to the public. Additionally, the City provided a great deal of raw GIS data, containing feature classes of municipal data including transportation, transit, utility, environmental, boundary, land use and zoning.

Table 1: Select neighborhood typology analysis measures

<b>Washington County</b>	<p>90 Survey Responses</p> <ul style="list-style-type: none"> <li>Land Use : density, proximity to transit, stores, schools, senior housing</li> <li>Street Network: higher scores for lower density of roads and intersections</li> <li>Safety: crash incidence over two years, traffic volume and truck route</li> </ul>	<p>Suitability Analysis map shows combined weighted scoring of land use, street network, safety and social equity evaluation factors. The respondents weighted the factors as follows:</p> <ul style="list-style-type: none"> <li>30% Land Use</li> <li>36% Safety</li> <li>21% Street Network</li> <li>13% Social Equity</li> </ul>
<b>UC Davis ITS</b>	<ul style="list-style-type: none"> <li>Link to Node Ratio (connectivity)</li> <li>“Ped Sheds” (from Origin/Destination)</li> <li>Pedestrian Route Directness</li> <li>(HHs from a specific place)</li> </ul>	<p>Accessibility to destinations within a specified travel distance and is a function of proximity and connectivity</p> <p>Link to Node Ratio: the ratio of road links (segments of a road between two intersections) to the number of nodes (intersections and maybe cul-de-sac ends)</p>
<b>ESRI Model</b>	<ul style="list-style-type: none"> <li>Density (Res. pop density)</li> <li>Diversity (distance to M/U centers)</li> <li>Design (trails per 1K residents SW per 100 residents # of intersections/mile)</li> </ul>	<p>Establishes service areas for various activity centers (DU) such as transit stops, stores and schools.</p> <p>Uses the network analyst tool in ArcMap to identify the service area for each DU</p>
<b>Walk Score</b>	<ul style="list-style-type: none"> <li>Density</li> <li>Block length</li> <li>Intersection density</li> <li>Nearby amenities</li> <li>(Schools, Parks, Shops, Transit)</li> </ul>	<p>Walk Score measures the walkability of any address by analyzing hundreds of walking routes to nearby amenities.</p> <p>Points are awarded based on the distance to amenities in each category. Amenities within a 5 minute walk (.25 miles) are given maximum points.</p> <p>A decay function is used to give points to more distant amenities, with no points given after a 30 minute walk (IDW).</p>

## NEIGHBORHOOD TYPOLOGY ANALYSIS

As presented in **Appendix A: Literature Review**, there exists a variety of documented methods for using GIS technology to view and model pedestrian connectivity. StepUP Studio started its assessment of the pedestrian network by attempting to formulate neighborhood types using GIS data, case study research and public input as guides.

Neighborhood types were initially defined based on distinguishing characteristic variables such as the predominant development period, intersection density, and slope. A similar project conducted in Davis, California, ArcMap product manufacturer ESRI, Walk Score criteria, and background information from the Washington County Transportation System Plan update all uncovered different ways of measuring neighborhood types.

### LINK TO NODE ANALYSIS

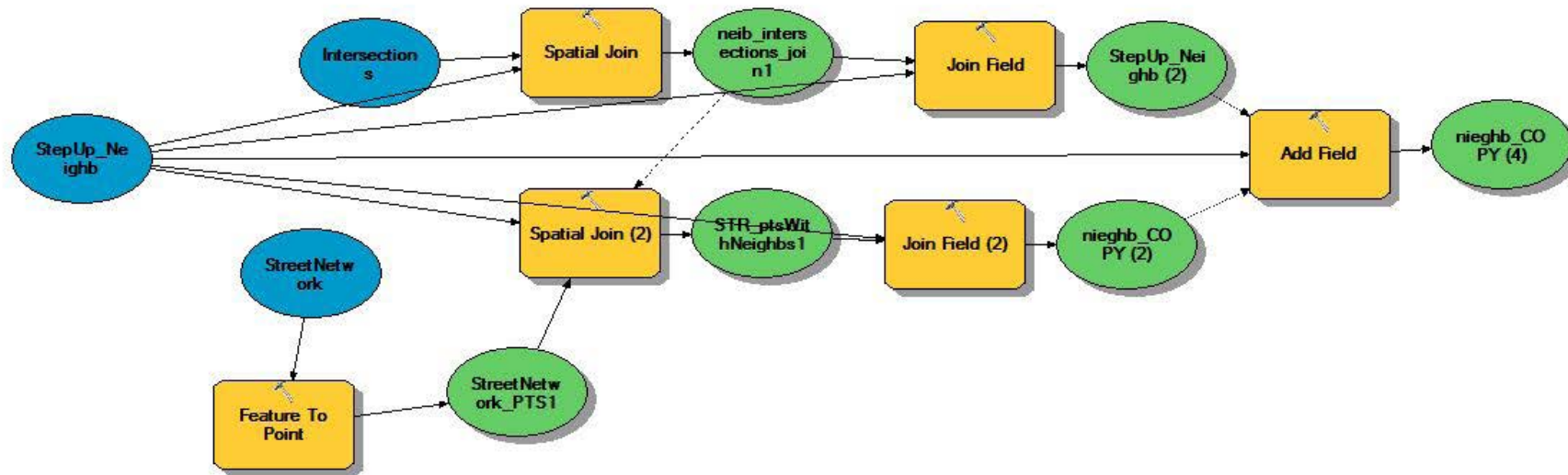
A link to node ratio is a basic measure of connectivity, with a greater number of intersections (nodes) to network segments (links) indicating greater connectivity. The only data requirements are a line feature class of streets and a point feature class of intersections. ESRI’s ArcGIS Model Builder helps to further automate the processes (Figure 4 on opposite page).

There is some variation in the ratio across different existing Tigard neighborhoods (Figure 5 on opposite). However, these boundaries do not follow other spatial criteria (land use density, slope, development age, etc.).

To test the usefulness of this method of analysis to Tigard, three distinct “preliminary neighborhood typologies” were selected based on some of the spatial and built environment characteristics described above. However, these three initial types presented even less variation than the existing neighborhood boundaries (Figure 6 on opposite page).

# Step I: Pedestrian Network Analysis

Figure 4: Link-to-Node Analysis Model



The Link to Node results were inconclusive, showing ratios of **1.31 to 1.38** in the neighborhoods selected using the above criteria overlaid by hexagonal boundaries found in the Metro Context Tool and neighborhood age. With little context to separate neighborhoods based on the assessment of the Link to Node analysis of select residential areas found in Figure 6 above, the group turned a custom ArcGIS utility designed to run with the Network Analyst tool that entertains all facilities in Tigard that are suitable to walking.

Figure 5: Link-to-Node Ratios for Select Tigard Neighborhoods

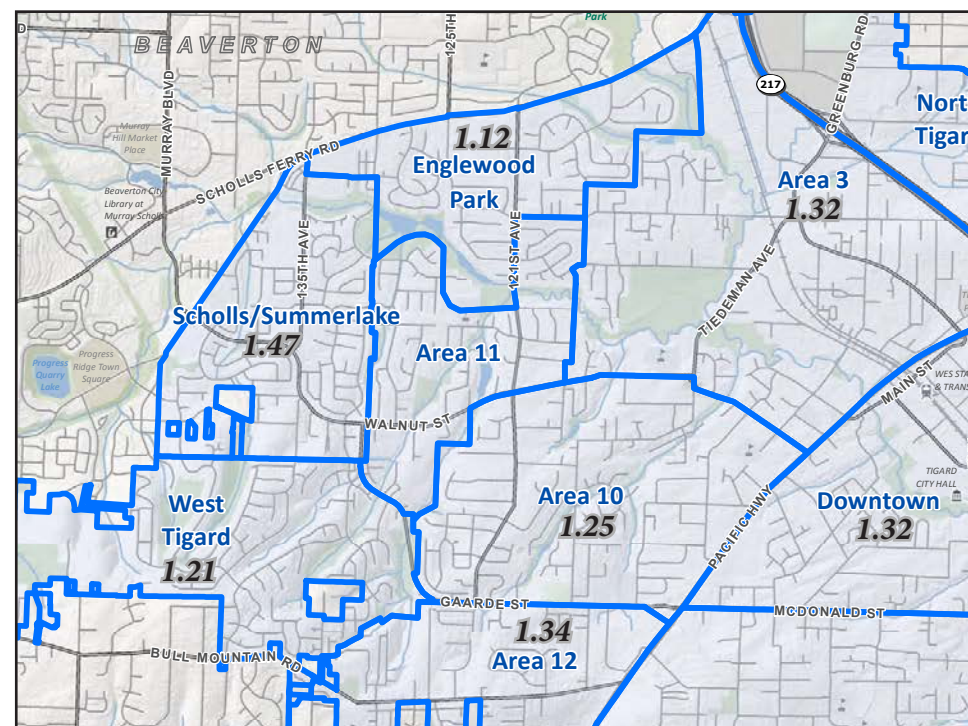
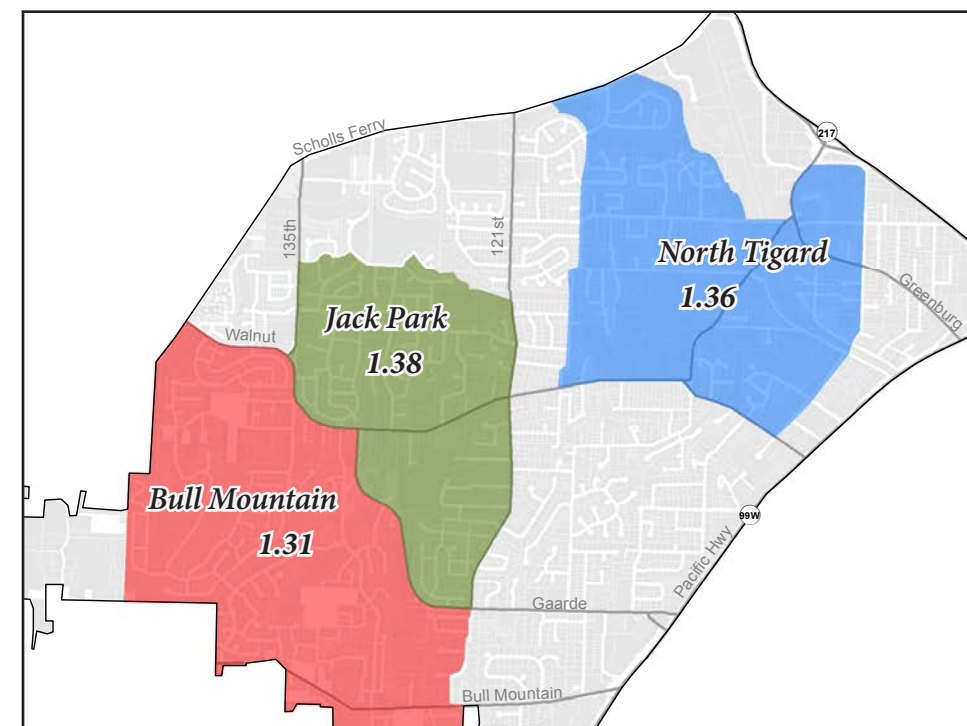


Figure 6: Link-to-Node Ratios for Preliminary Neighborhood Types



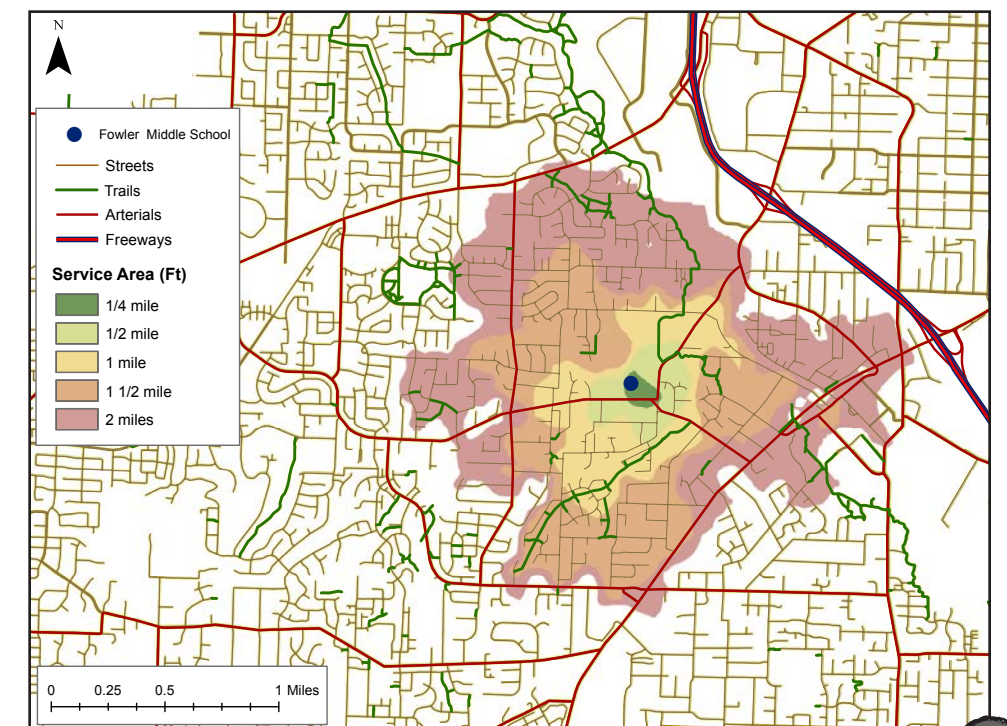
## SERVICE AREAS OR "PED SHEDS"

Another tool StepUP Studio used for assessing the connectivity of Tigard's pedestrian environment is through determining service areas. Service areas, when used for pedestrian connectivity, are often referred to in popular nomenclature as "ped sheds." A ped shed encompasses an area on a network that can be reached by traveling along a route in that network. It is different from a typical GIS buffer geoprocessing analysis in that it is irregularly shaped because the distance is held by the constraints of the network.

A buffer analysis in ArcGIS works by having a radiant distance set, and using that distance equally 'as the crow flies,' protruding out from the defined point with no established impedances. The 'network distance' is bound by and adheres to the barriers, definitions and limitations set up by the user and by the boundaries of the defined network. This service area analysis is used commonly for Internet routing, route directions, and location analysis for businesses. The ped shed allows for defined barriers such as dead-end streets, one-way streets and physical impediments to be factored into the network.

A drawback to this type of pedestrian connectivity analysis is that the ped shed or service area analyses do not account for the number of potential users in an area. An important aspect of assessing pedestrian connectivity is the ability to determine how many people are being impacted by either the network as it currently exists, or by how a proposed project or new development may impact people, and the amount of people it may impact.

Figure 7: Ped Shed for Fowler Middle School via existing streets and trails



## **Building a Better Network**

The quality of the network dataset is the backbone of any analysis carried out, and a better network would thereby provide commensurate results. The network used in these analyses was from the centerline street feature, provided by the City of Tigard, includes important attribute data, such as the presence or absence of sidewalks on any given street segment and other fields covering pedestrian use. However, it is a street dataset used primarily for road maintenance purposes.

The network needed to be rebuilt to connect it with regional trails and other off-street pedestrian facilities. Doing this involved digitally connecting each and every trail segment to the center of the street segment in the digitizing edit environment within ArcGIS. Every trail-to-street and/or sidewalk connection was effectively separated. Joining these two datasets presented a far more true and holistic network that most adequately models the real world.

Included in the City of Tigard transportation feature dataset was a “trail” feature class. This dataset differed from other available trails GIS data in the region, particularly from Metro, in that it was very localized and contained the small cut-through and unofficial trails, often very short in length, that are used by pedestrians in Tigard to connect roads or trails for easier access to their destination.

Synchronizing the two transportation networks built a much better dataset from which to run analyses and could be left alone at that. To create a more accurate representation of real world conditions, StepUP sought to improve the network even further by adding attribute information concerning signalized intersections and the presence of sidewalks on one or both sides of the street. This was done by joining the Metro RLIS sidewalk data to the network dataset with the outcome providing a value of “y” or “n” for the presence of sidewalks. Likewise, signal data from the City of Tigard was added to the network street segments that intersected street signals. The assembled network model is the best predictor of pedestrian movement regionally, and perhaps nationally.

## WALKWAY NETWORK ANALYSIS GIS EXTENSION

StepUP Studio met with Scott Parker from the Portland based GIS Jammers group who had developed a plug-in extension for ArcGIS. Scott was happy to offer his tool to StepUP Studio for our analysis of Tigard’s pedestrian network. It was through his advice that we created such a thorough network that combined auto travel, off-road trails, signals and sidewalks into one dynamic network. His walkway network analysis tool (walkway tool) works by applying weights as the impedances to pedestrian travel.

The walkway tool utilizes a combination of several different tools built in to the ArcGIS plug-in. It consists of a node fixer, walkway generator, weighter and an analysis function.

### **The Node Fixer**

The node fixer works to fix the different data sources that are combined to create the network. For example, Tigard street centerlines, Tigard trails, Metro RLIS sidewalks and Tigard signal data files were all joined or added in the fashion described above, to create a powerful network. The node fixer provides an automated system for checking and editing node and segment IDs for errors and duplicate data.

### **Walkway Generator**

The walkway generator derives its topology from the topology of the network being used as an input. It generates a dataset based on this topology that includes sidewalks, crosswalks, midwalks, streetwalks and connectors. This generated dataset provides the foundation for assigning the weights, in a future step, that allow the model to calculate levels of difficulty for the pedestrian to travel in a real world circumstance.

### **Weighter**

Weighting the walkways allows the model to replicate real world pedestrian actions. The weights are attributed according to the walkway segment’s difficulty level for pedestrian flow. Assigning weights can be considered as a representation of the cost of pedestrian travel. Various costs for pedestrians include length of segment, traffic volume, presence or absence of sidewalks, crosswalks or signals, or the ability to circumnavigate a particular street segment.

The weights serve as a numeric answer to the question, “how far would I be willing to walk out of my way to avoid this particular street obstacle?” The obstacle could be a river or other natural barrier to the pedestrian network, or it could be a freeway, on-ramp, or something as simple as whether or not a given street segment has a sidewalks. This analysis can be altered at any time to represent existing conditions, or to investigate a potentially new piece of infrastructure to see how the rest of the network reacts. Weights can be very high or very low depending on what outcome the user would like to see.

### **Analysis**

After having built the network and assigning the weighting scheme or schemes, the Walkway Network Analysis Tool can be run. It uses the network as an input, as well as a point file of population in a defined area, and produces outputs indicating the number of people that travel through a given intersection to get to a particular destination. The first file created is a point file with graduated circles indicating the varying numbers of people impacted by access to a particular destination. From the point file in this or any particular location, the user can use other GIS tools and techniques to best visualize the analysis results. Spatial interpolation is a valuable tool to take known data and investigate how it will spread over a given geography. On the general basis of things being close together having a stronger relationship than things further apart, spatial interpolation can show how a destination impacts the network in a greater geographic area. Inverse Distance Weighting (IDW) is the spatial interpolation tool used in this analysis to present the data. Each point on the raster surface indicates walking distance from that point to the input destination.

## SUMMARY

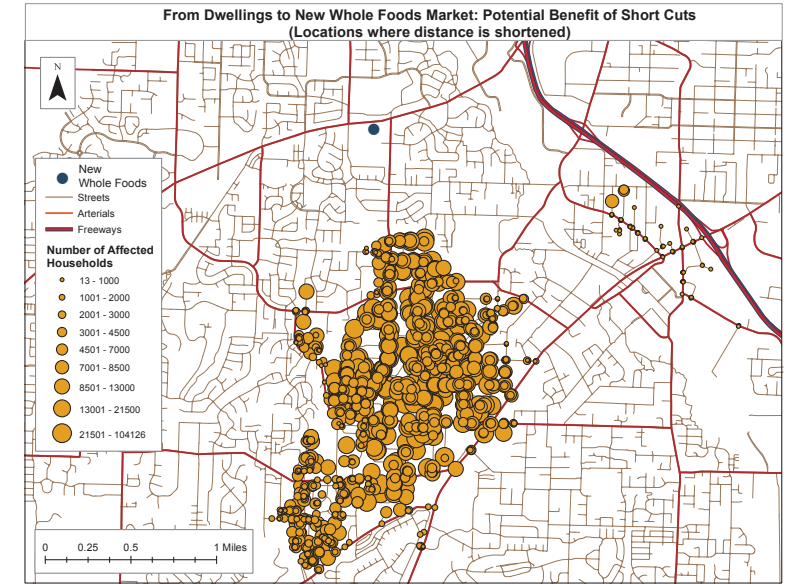
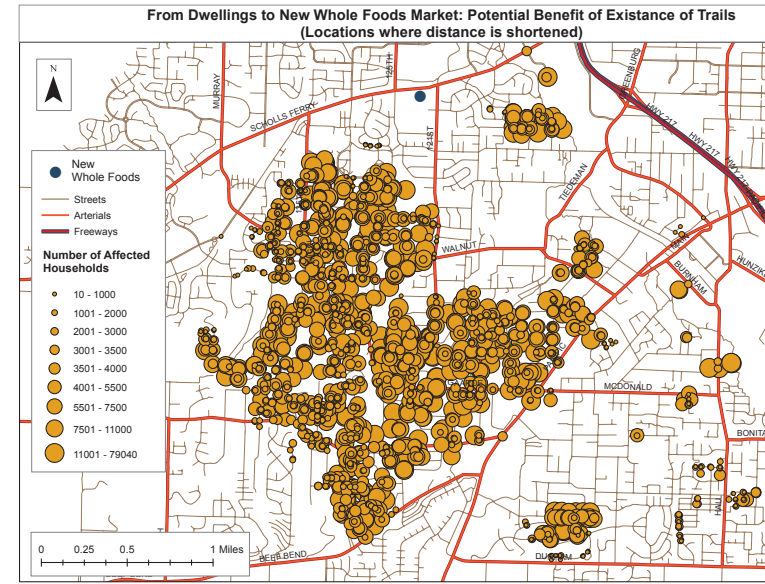
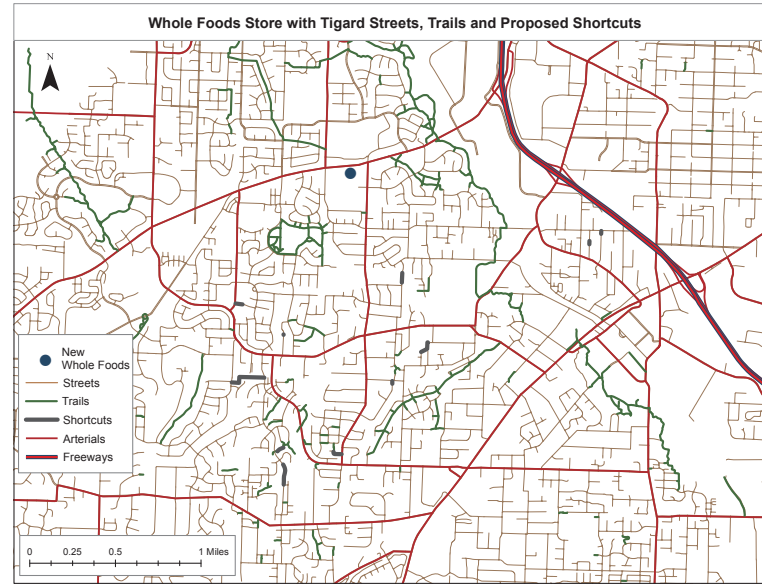
Having used several different geospatial analysis methods to analyze Tigard’s pedestrian network, StepUP Studio is most content with the results provided from the extension built by Scott Parker. Not only did this tool require a much more thorough and complete network to be constructed, the results of this model present the most realistic pedestrian behavior of any of the analyses performed. StepUP Studio plugged in a few destinations and ran the analysis with a weighting scheme based on literature and an understanding of real world pedestrian habits. But one of the most flexible aspects to this tool is that it can be handed over to the City of Tigard and they can use the network StepUP Studio constructed to input any destination and they can create their own unique weighting schemes. It is a very flexible tool, in that respect, and one that can be used for numerous public projects.

# Step I: Pedestrian Network Analysis

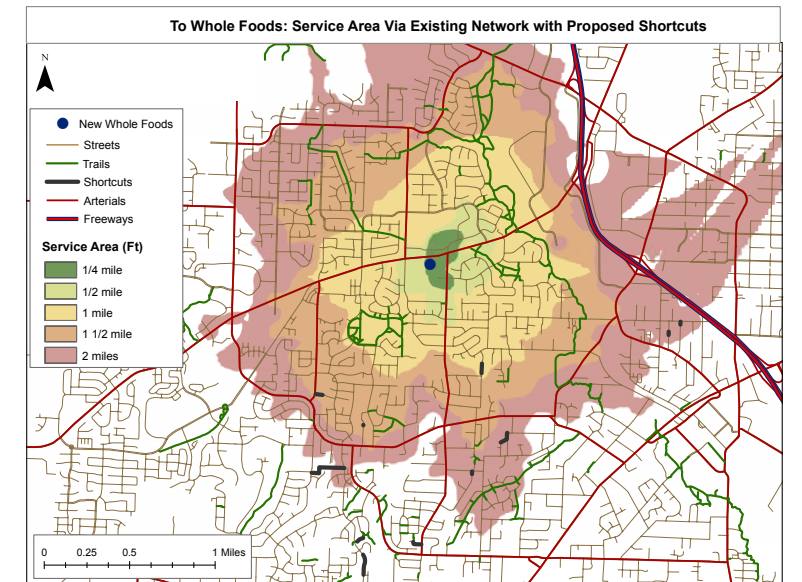
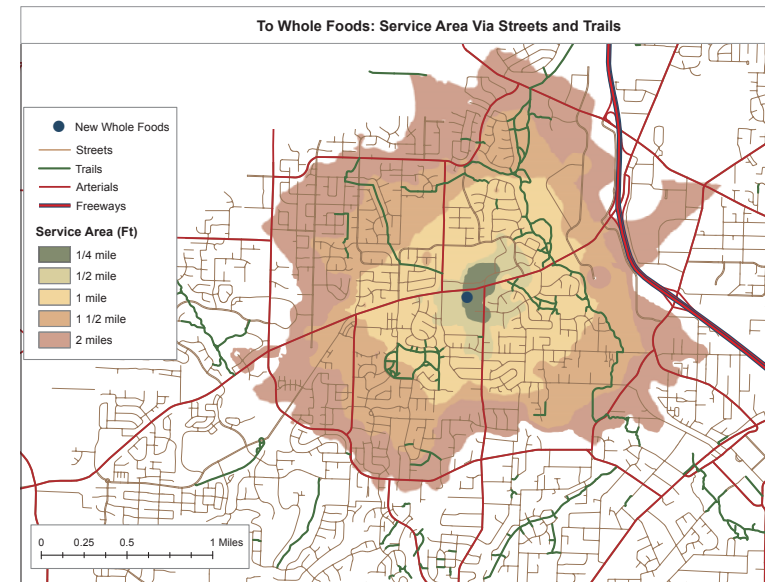
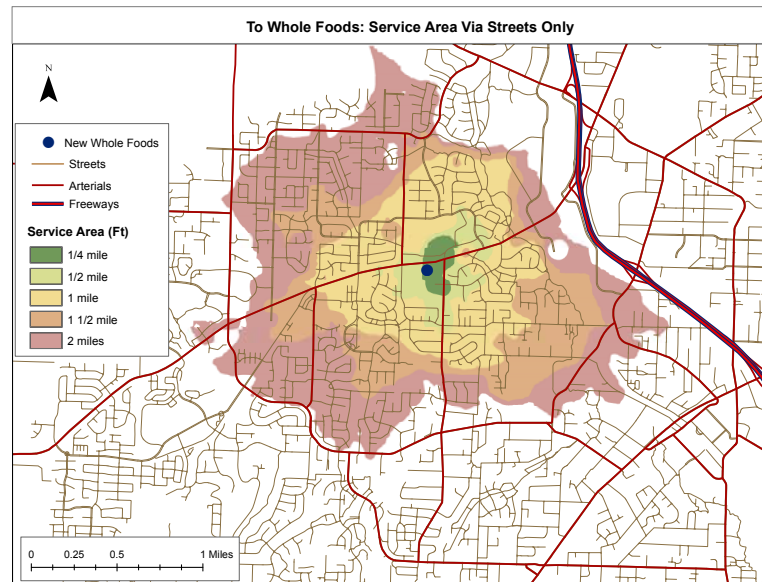
# GIS NETWORK ANALYSIS FOR PEDESTRIAN TRAVEL TO WHOLE FOODS

The results of a network analysis of walking to the new Whole Foods shown in the maps to the right was accomplished using the Network Analyst tool in ArcGIS along with a custom utility developed by Scott Parker. The network data results represent potential pedestrian movement on streets, existing regional and neighborhood trails and eleven proposed new neighborhood trails. Potential walking activity on the three aforementioned pedestrian assets are presented separately.

The first representation of the data shows potential throughput at each node for the network assets used to reach the Whole Foods location.

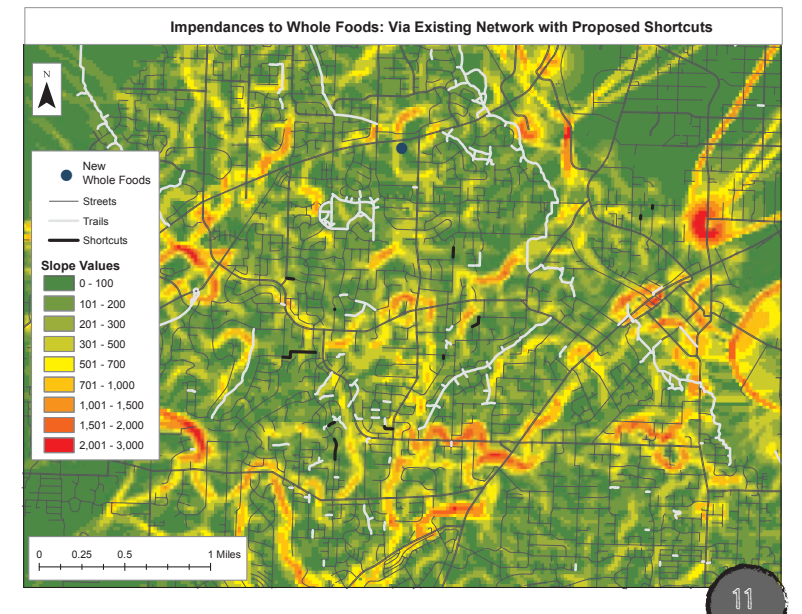
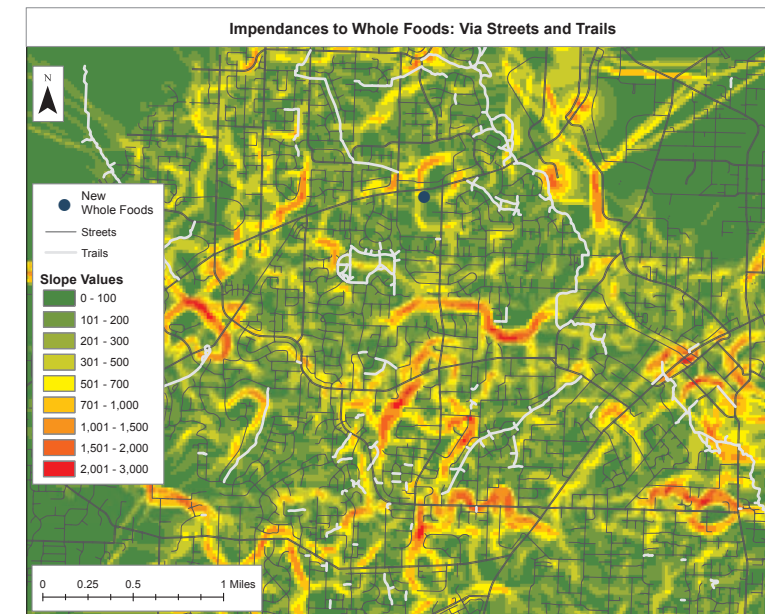
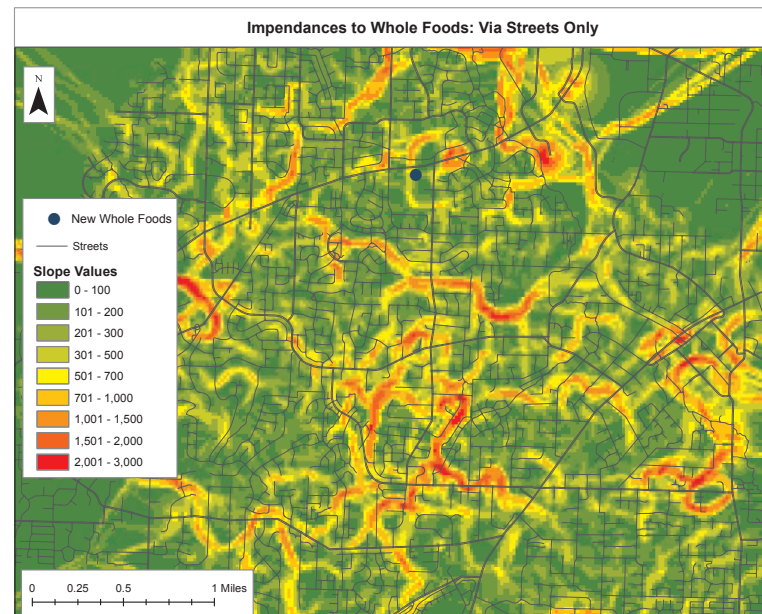


The second representation shows the service area of the selected network assets in quarter mile increments.



The final representation is a slope of the service area that reveals barriers in the network for selected assets, with redder areas showing higher impedance values.

Taken together, the three presentations of selected network assets tell a story about how the street network, existing trails and proposed neighborhood trails affect pedestrian access in western Tigard.



## II. Best Practices

There are good examples of walkability and pedestrian improvements in cities all over the world that provide best practices and possible pitfalls relevant to Tigard. A complete summary of related case studies can be found in *Appendix C: Case Studies*. Broadly speaking, the most successful efforts do one or more of the following:

- Demonstrate how communities establish pedestrian connections
- Create walkable facilities and destinations
- Encourage community values and investment around walking

One of the main ingredients of successful walkability projects is developing policies to help prioritize adequate and safe pedestrian infrastructure. Sidewalks on arterials (on both sides of the street), repair programs, and crossing amenities are the most basic requirements for better walkability. It is also essential to gather data and track achievements: pedestrian and bike counts, surveys, and audits are key to many plans, such as those in **Flagstaff (AZ)**, **Cary (NC)**, and **Charlottesville (VA)**.

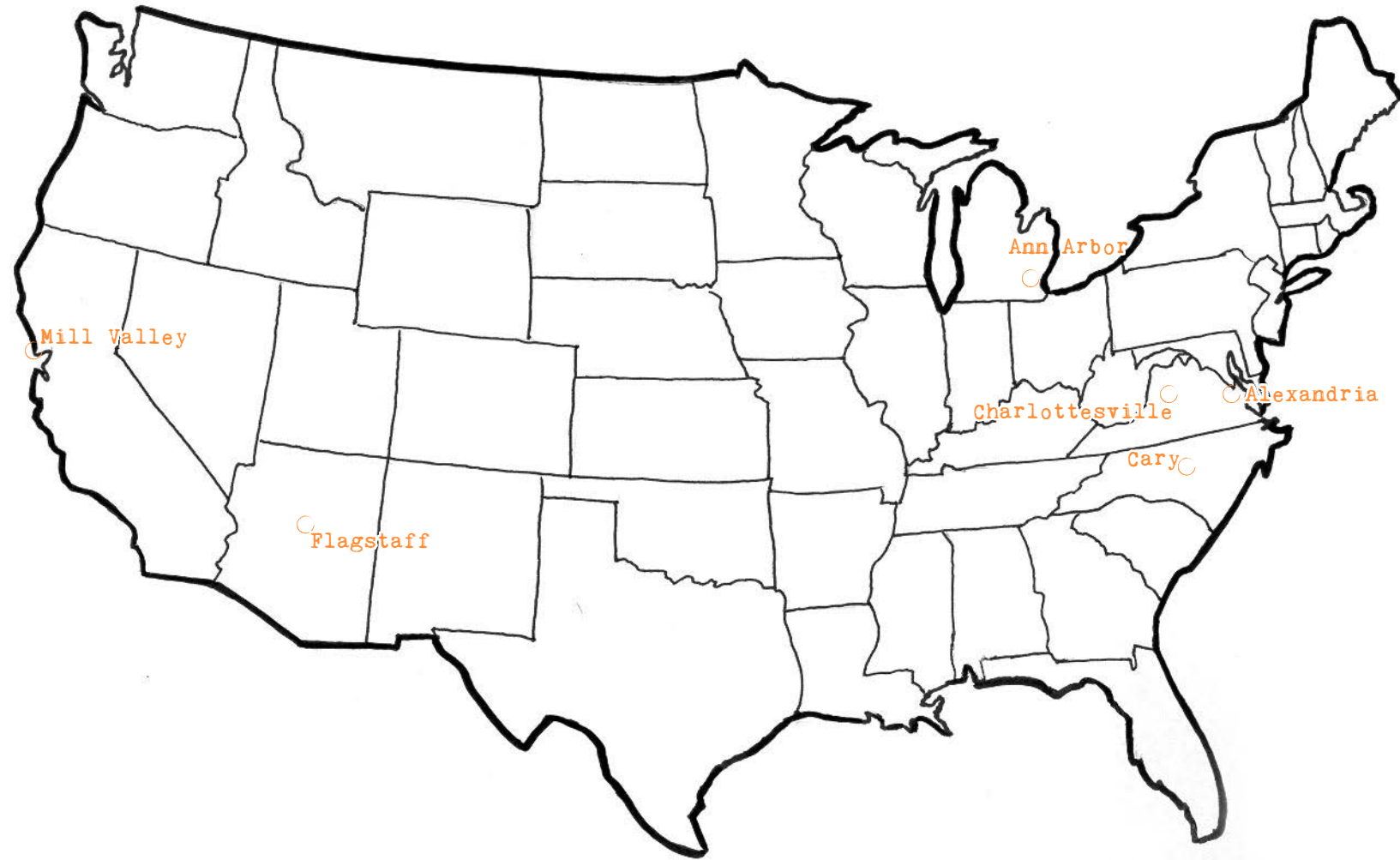
Successful programs also create advocacy and advisory groups. Ann Arbor's Safe Streets and Sidewalks Taskforce leads educational, outreach and enforcement campaigns throughout the city. The most successful cities (big and small) have staff dedicated to pedestrian or non-motorized transportation who create plans, conduct surveys, and engage citizens.

Many cities develop Safe Routes to School programs where the City, school staff, parents and students work together to promote safe walking and biking to school. Enabling mixed-use developments and providing accessible destinations are also common strategies. Connections between these destinations need not only include streets but also greenways, and the public transportation system.

For example, Flagstaff's urban trail system not only provides recreational opportunities, but also connects neighborhoods, open spaces, residential areas, shopping, schools and places of employment. In a very different environment, Mill Valley's 'Steps, Lanes and Paths' program provides another great example of connectivity through terrain that is challenged by steep hills and curvy roads.

Tigard is different than each of these cities in some ways. Some are larger in size, some have different populations and economies (e.g. college towns), or are located in very different settings. But they all have in common is a commitment to walkability across institutions and their communities.

Walkability Case Studies across the country



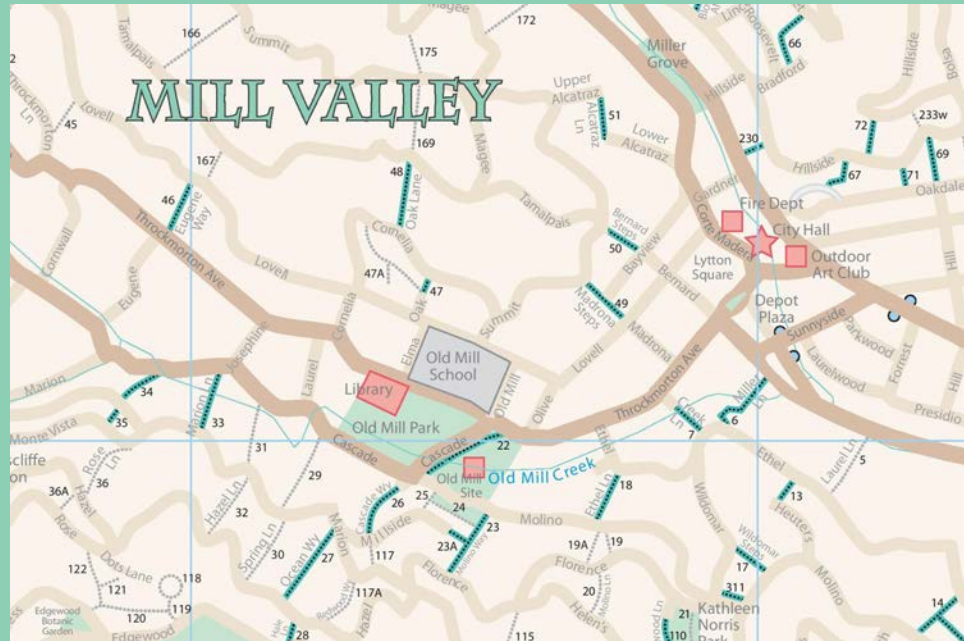
City	Population	Area (sq mi)	Density (per sq mi)	Home Ownership	Median Household Income
Tigard	49,774	11.8	4,066	60.5%	\$62,576
Alexandria, VA	139,966	15.2	9,208	43.9%	\$83,996
Ann Arbor, MI	114,024	27.7	4,116	45.5%	\$53,814
Cary, NC	135,234	55.5	2,438	70.9%	\$91,349
Charlottesville, VA	41,225	10.3	4,002	40.8%	\$44,535
Flagstaff, AZ	63,505	64.0	992	46.8%	\$48,676
Mill Valley, CA	14,159	4.8	2,920	69.0%	\$116,983

~ Source: U.S. Census Bureau 2012 - Social Explorer



## ESTABLISHING PEDESTRIAN CONNECTIONS

The city and residents of Mill Valley, California have built over 175 sections of steps, lanes, and paths to connect walkers with key destinations such as transit, stores, churches, and the library. These little shortcuts are often the difference between a quick neighborhood stroll and an otherwise impossibly long hike along busy arterial streets.

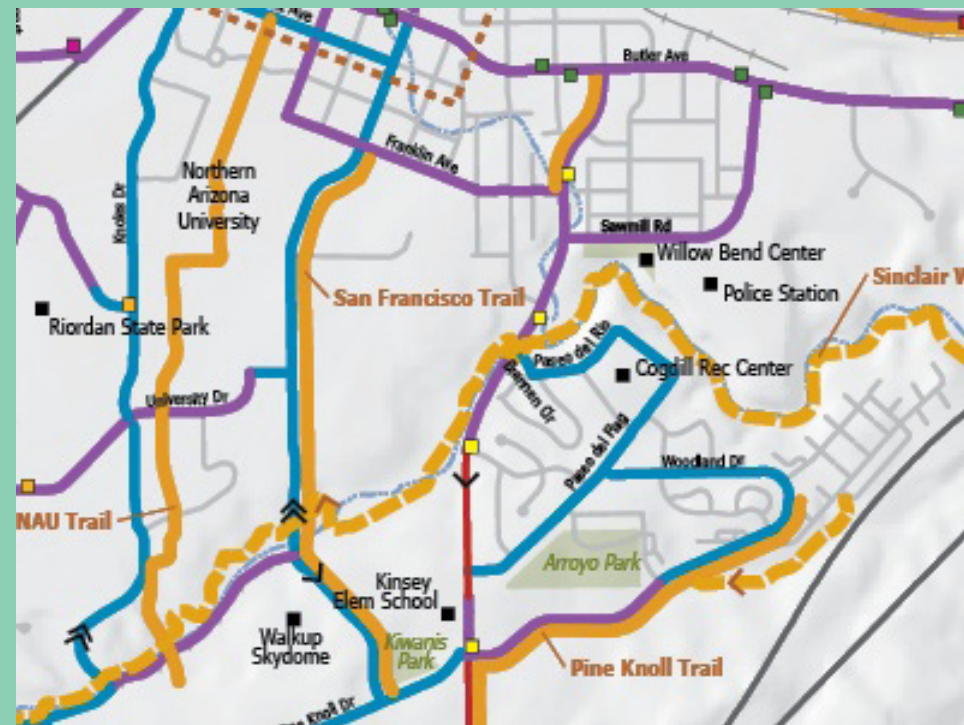


## CREATING WALKABLE FACILITIES AND DESTINATIONS

Flagstaff, Arizona utilizes a place-based approach to city zoning to help promote more walkable neighborhoods featuring a mix of uses. The city believes that different types should be regulated in different ways.

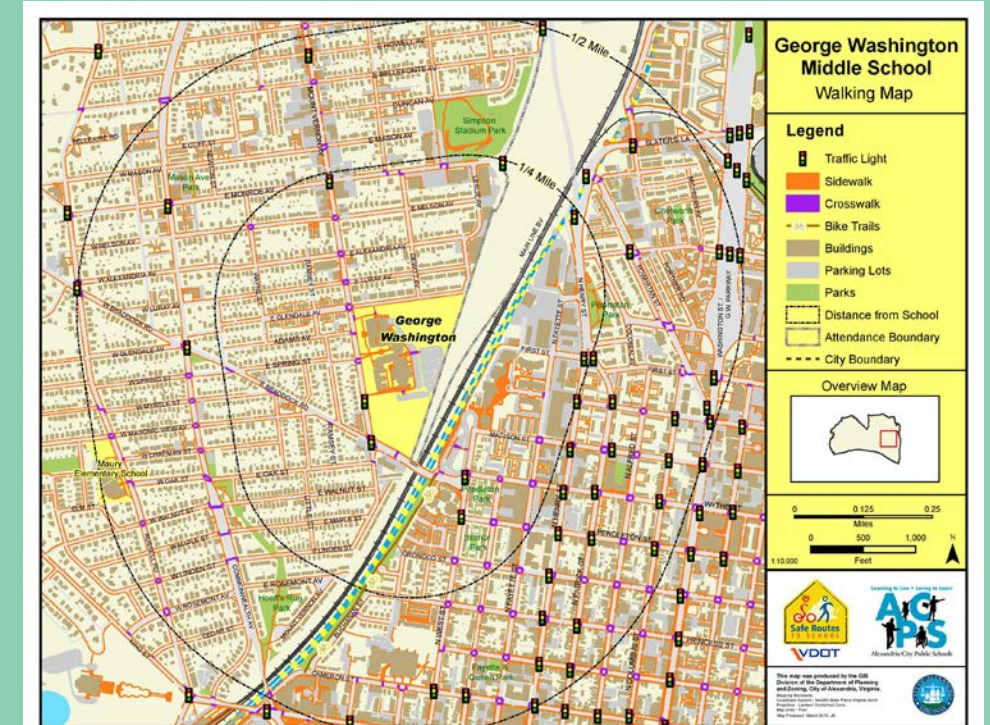


The Flagstaff Urban Trail System (FUTS) also greatly enhances walkability. The urban trails connect the city's neighborhoods with commercial amenities, employment centers, and the surrounding National Forest.



## BUILDING COMMUNITY ATTACHMENT AND INVESTMENT

Alexandria, Virginia has built an extensive Safe Routes to School program that goes well beyond infrastructure improvements and materials. The city, schools, and parents worked together on programs such as "Walking Wednesdays" and parent-led "Walking School Buses" at some schools.



# III. Community Engagement



We used a number of outreach methods to learn what Tigard residents thought about walking in their neighborhoods. Specifically, we wanted to know if walking was important to them, where they did and did not walk (and why), what barriers to walking and opportunities to improve walkability they experienced, and what changes they would like to see. We reached out to the community in the following ways:

## GOALS

- Broad and inclusive community engagement
- Provide the public with accurate, timely, and understandable information and/or access to the information needed to understand the project as it moves forward;
- Provide the public with the opportunity to give informed and meaningful input;
- Ensure adequate time and opportunity for the public to provide input;
- Give full consideration to community input; and
- Assist the public in understanding the project decisionmaking process during project design and delivery and the community's role in that process.

## PROCESS

### Planning

January - February

- City of Tigard Staff & Council Member Consultation
- Stakeholders Identification
- Community Gathering Spaces Identification
- Community Engagement Plan Development

### Awareness

February - March

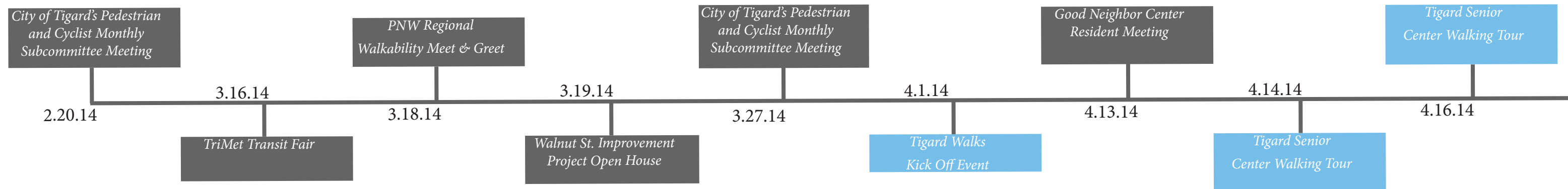
- CityScape Article
- Project Website, Facebook Page, Online Survey and Mapping Tool Development

### Outreach

April - May

- Implement Community Engagement Plan
- Public Presentations
- Open Houses
- Walking Tours
- Community Conversations

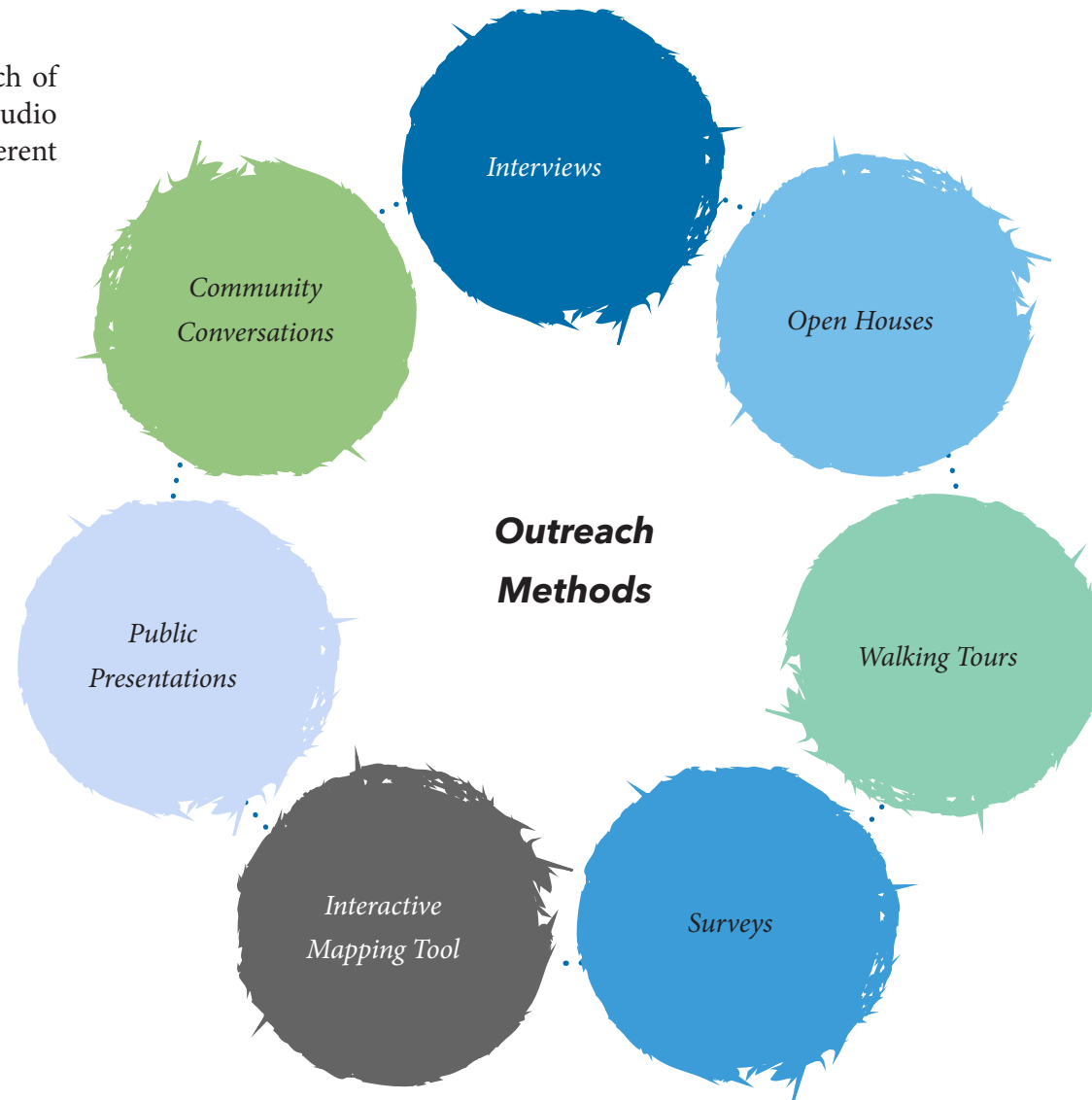
### Timeline of Engagement Events



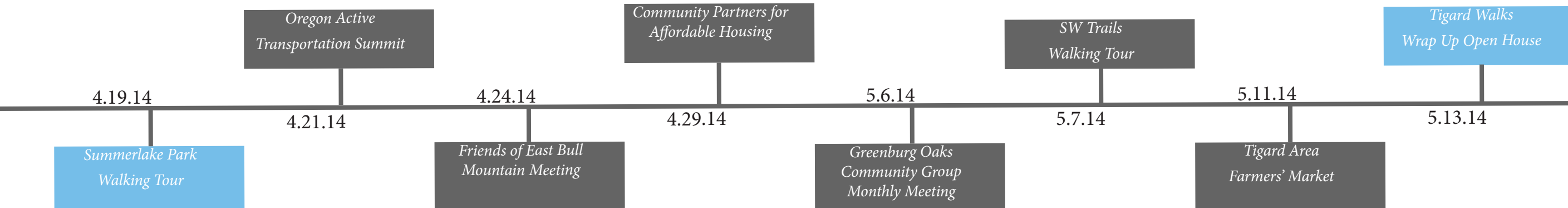
# Step III: Community Engagement

## METHODS

In an effort to connect with as much of the public as possible, StepUP Studio reached out through a variety of different methods, both online and in person.



This map at the April 1<sup>st</sup> Kick Off Event allowed Tigard residents to mark barriers to walking and common destinations in their neighborhoods.

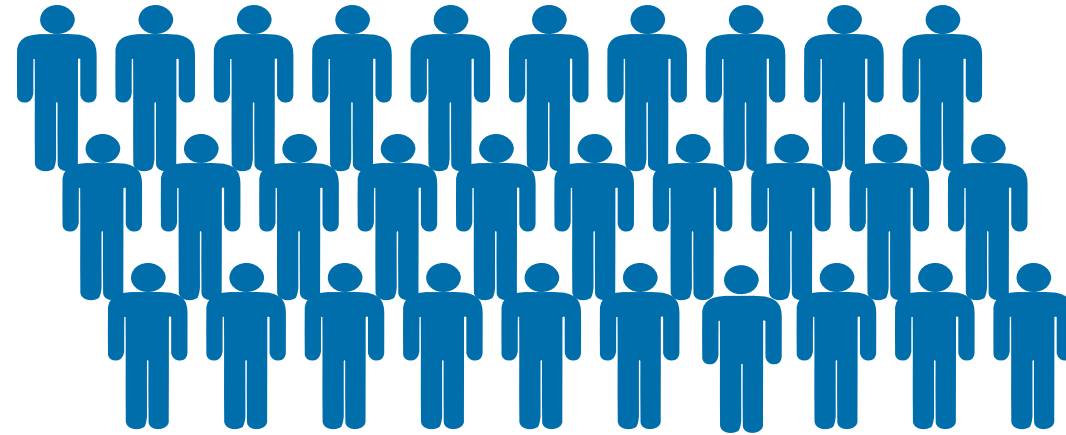


# Step III: Community Engagement

## SURVEY SUMMARY

A survey was issued as part of the community outreach effort in order to collect important information from Tigard residents on walking related matters. The purpose of this report was to:

- Learn how Tigard residents get to everyday destinations
- Identify the amount of time Tigard residents spend walking
- Identify barriers to walking in Tigard, and
- Identify demographic factors that are related to time spent walking



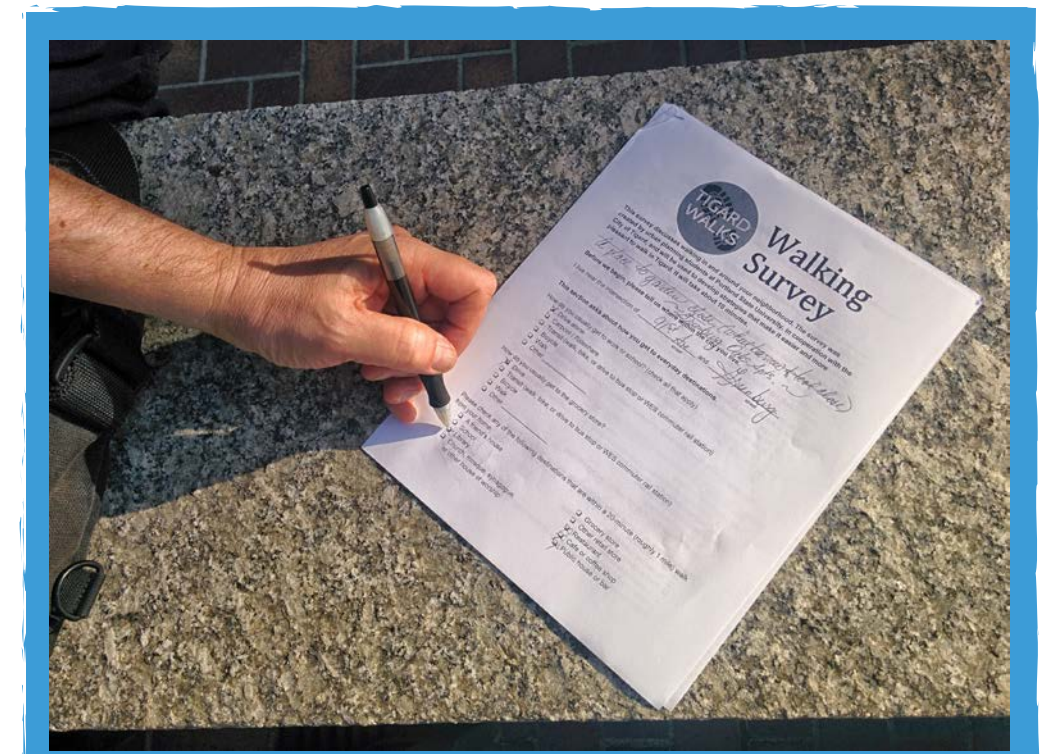
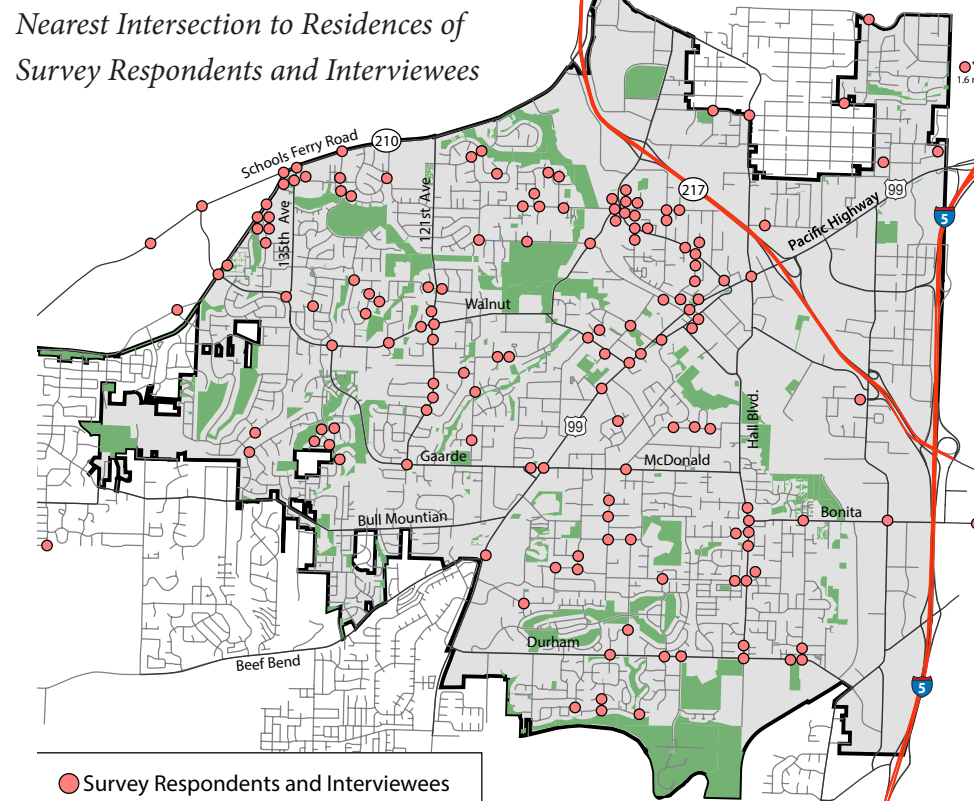
144 Tigard residents responded to the Tigard Walks survey online or in person

### Survey Period



### Key Takeaways

- 73% of survey participants reported walking on a regular basis for exercise or recreation but not utilitarian purposes. Utilitarian trips to work, school, and the grocery store were predominantly made by car.
- When asked which barriers impede walking in Tigard, the highest rated barrier was lack of sidewalks and trail connections and in many instances the lack of connectivity and safe crossing where sidewalks and trails do exist.
- The reported factor that makes walking in Tigard the most difficult or unpleasant is the long distances between destinations (work, school, parks, shopping, etc.).

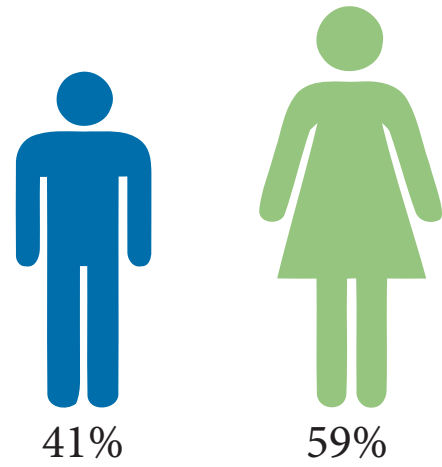


The survey was available online and in person.

# Step III: Community Engagement

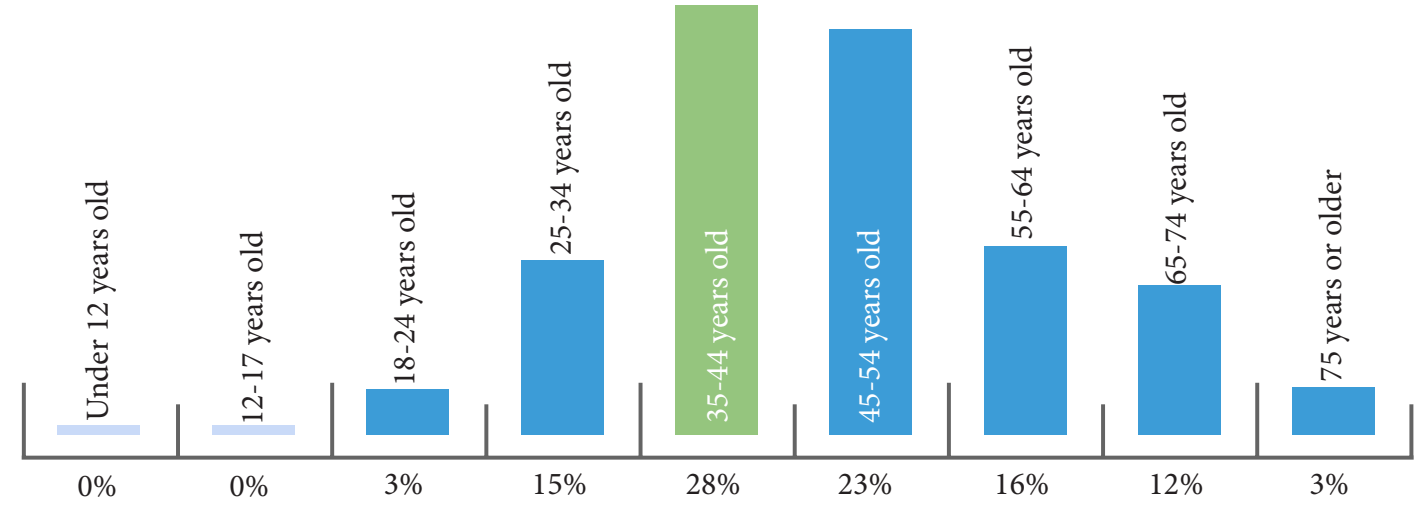
## SURVEY DEMOGRAPHICS

### Gender

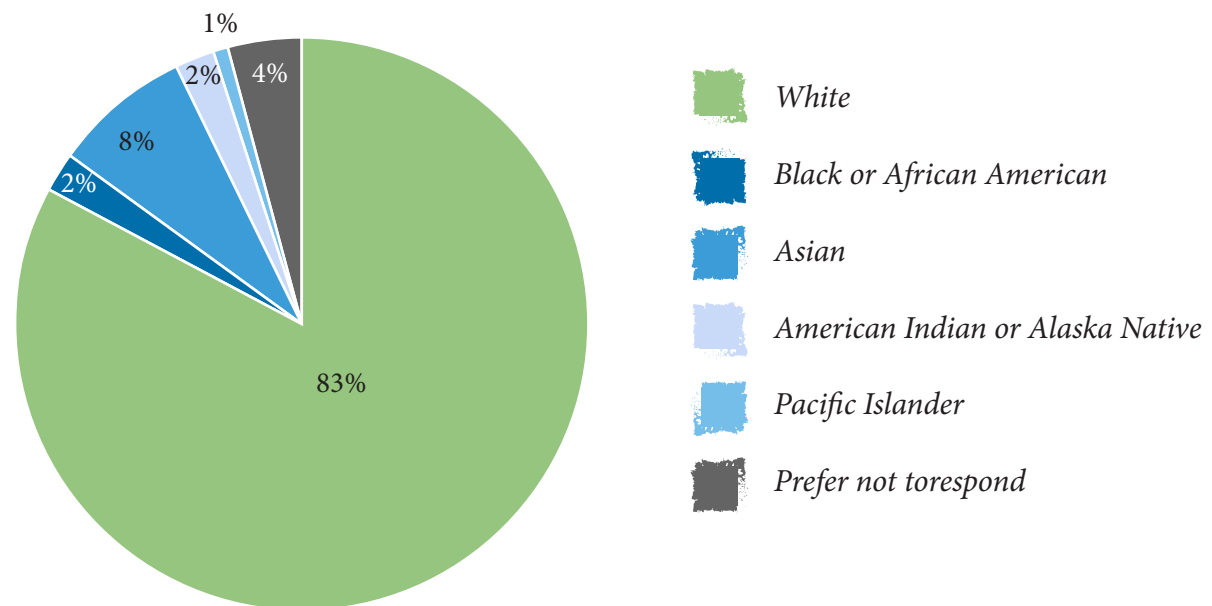


- 2 Average Number of Adults per Household
- 1 Average Number of Children per Household
- 2 Average Number of Motor Vehicles per Household

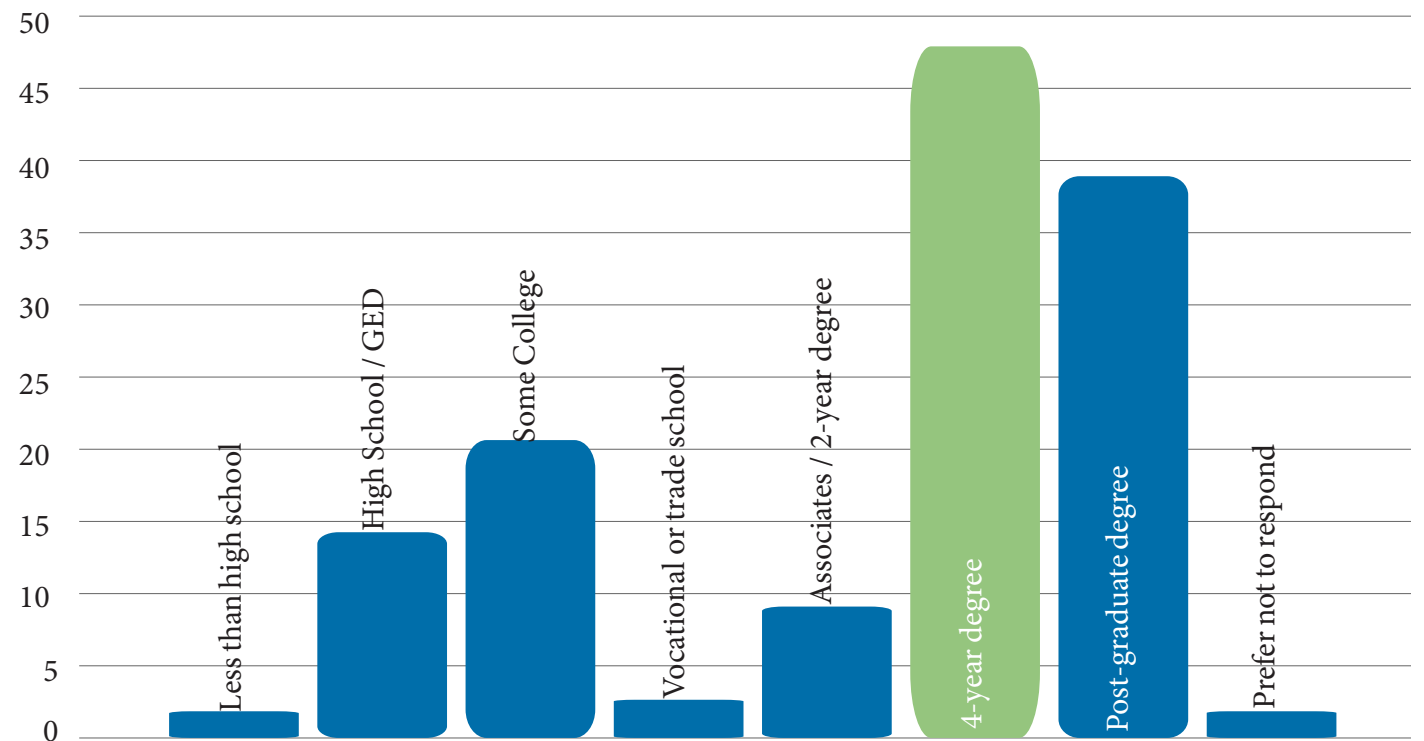
### Age



### Race



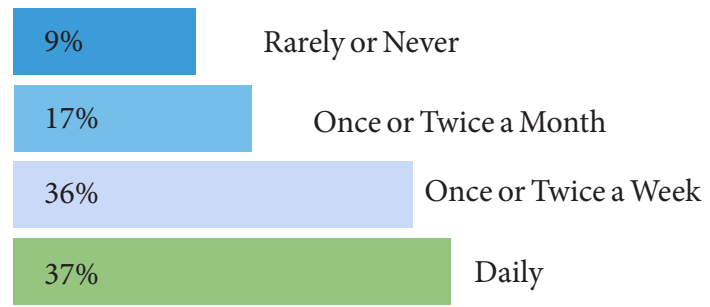
### Education



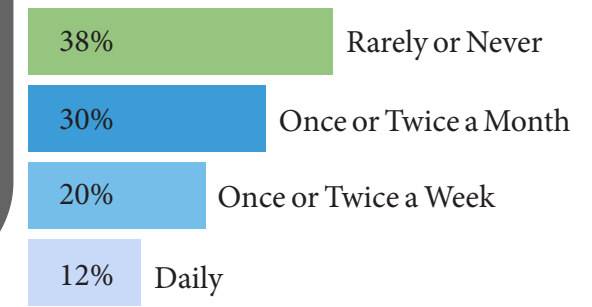
# Step III: Community Engagement

## WALKING BEHAVIOR

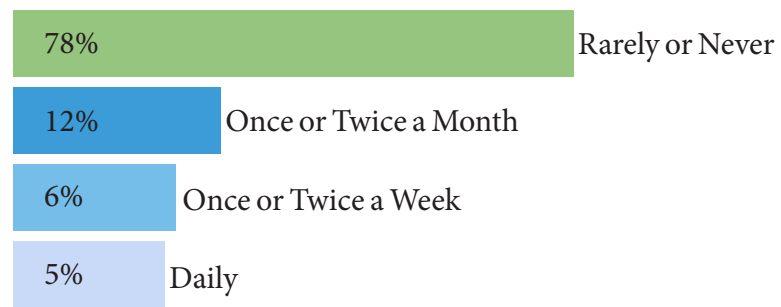
*How often do you walk in your neighborhood for exercise, recreation, or dog walking?*



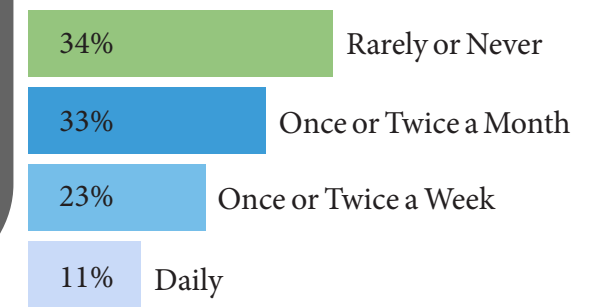
*How often do you walk in your neighborhood to a designation other than a bus stop or WES rail station?*



*How often do you walk to transit (bus stop or WES commuter rail station)?*



*How often do you walk on the off-street trails such as Fanno Creek Trail?*



Usually drive alone to work or school

Typically use the city's off-street trails for exercise.

Feel very comfortable walking on my neighborhood streets.

Feel very comfortable on off-street trails, such as the Fanno Creek Trail.

Would support a new neighborhood market, restaurant, or other small business destination within walking distance of their home

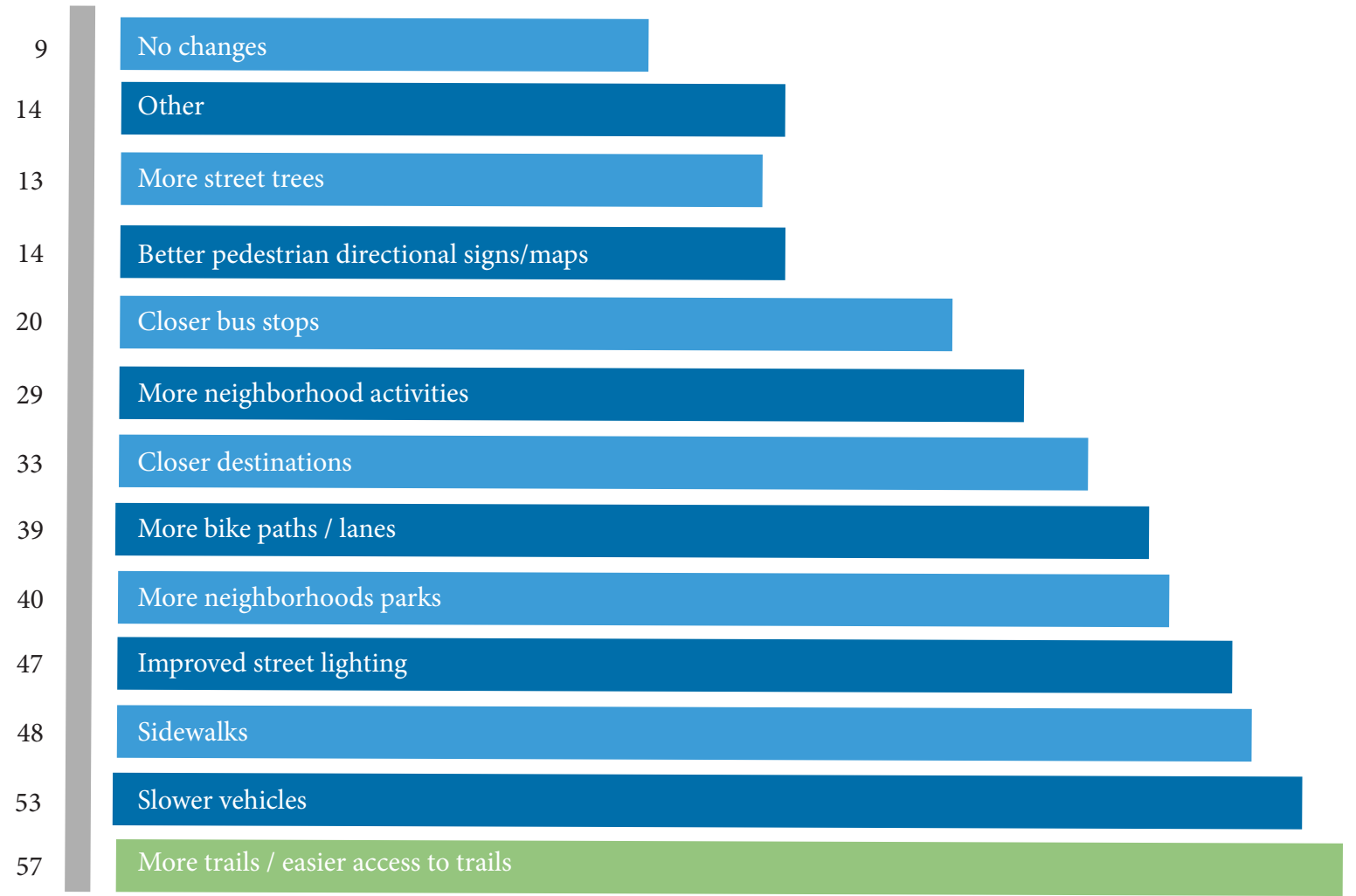
# Step III: Community Engagement

## WALKING IN TIGARD

### Do any of the following keep you from walking more often?



### What changes would make your neighborhood more comfortable to walk in?



*"Traffic enforcement (for cars mainly) would help reduce many problems/barriers. i.e. Speeding, not yielding to pedestrians at crosswalks (yes, even marked ones), Rolling through stops signs, etc."*

*"Drivers need to be educated to look out for pedestrian as they drive in Tigard."*

*"DOGS OFF LEASH!"*

*"SAFER CROSSWALKS"*

*"TREES & SHRUBS CUT BACK FROM SIDEWALKS"*

## Step III: Community Engagement

### INTERVIEWS

The StepUP Studio team interviewed 15 Tigard community members. These conversations allowed interested individuals to give input into the process and helped us develop important relationships.

#### Interview Period



#### **Lifestyles, and Social Norms Fail to Support Physical Activity**

Informants noted lack of time/motivation and car dependency as key issues regarding physical activity in Tigard.

##### What Residents Said:

- *People in the city think differently about walking to get places than those in the suburbs. [In the suburbs], it's a lifestyle thing. [People] live in a place dependent on the car, every family has two or more cars & only walk to and from the car. We just use our car without thinking about it!*
- *Many people are aware that of how their habits jeopardize their health, (poor diet, lack of exercise) but they don't see viable avenues for change and don't do much amidst their busy lives.*

#### **Lack of Opportunities**

Informants spoke of the lack of opportunities for physical activity, lack of access to playing areas.

##### What Residents Said:

- *There is a lack of access to places to play. We want an active parks and recreation department to provide services and programs. We want to make sure these opportunities are accessible to everyone. We want to provide ample opportunity for outdoor recreation.*

#### **Pathways, Crosswalks, and Safety**

Informants highlighted the lack of sidewalks and trails and in many instances the lack of connectivity and safe crossing where trails do exist as major factors influencing physical activity in Tigard.

##### What Residents Said:

- *More pathways and sidewalks are needed for walking. [We want] the ability to commute by foot to work, school, and to other activities. There is a lack of pathways and safe connections between home, work, and play. Also, community design is not pedestrian friendly. [Communities are] designed for automobiles. For example, Progress Ridge Townsquare is a mixed-use development straddling the city line between Tigard and Beaverton. It is nearly impossible to safely walk or bike there.*
- *Neighborhoods and trails [are separated] by busy thoroughways. We need to address pedestrian safety on city sidewalks and roads. The most populated sections of our city do not have complete sidewalks. The increase in traffic on residential streets and the increase in number of people speeding and/or going through stop signs causes concerns for pedestrian and child safety. The city is separated into two quadrants by a busy state highway (Pacific Highway). This creates safe pedestrian crossing problems.*

○ *"Our youth aren't even able to walk safely to school!"*

○ *"Highway 99 is not only a barrier, it is a travel dynamic changer, not only with respect to crossing it on foot, but with commute times."*



## Step III: Community Engagement

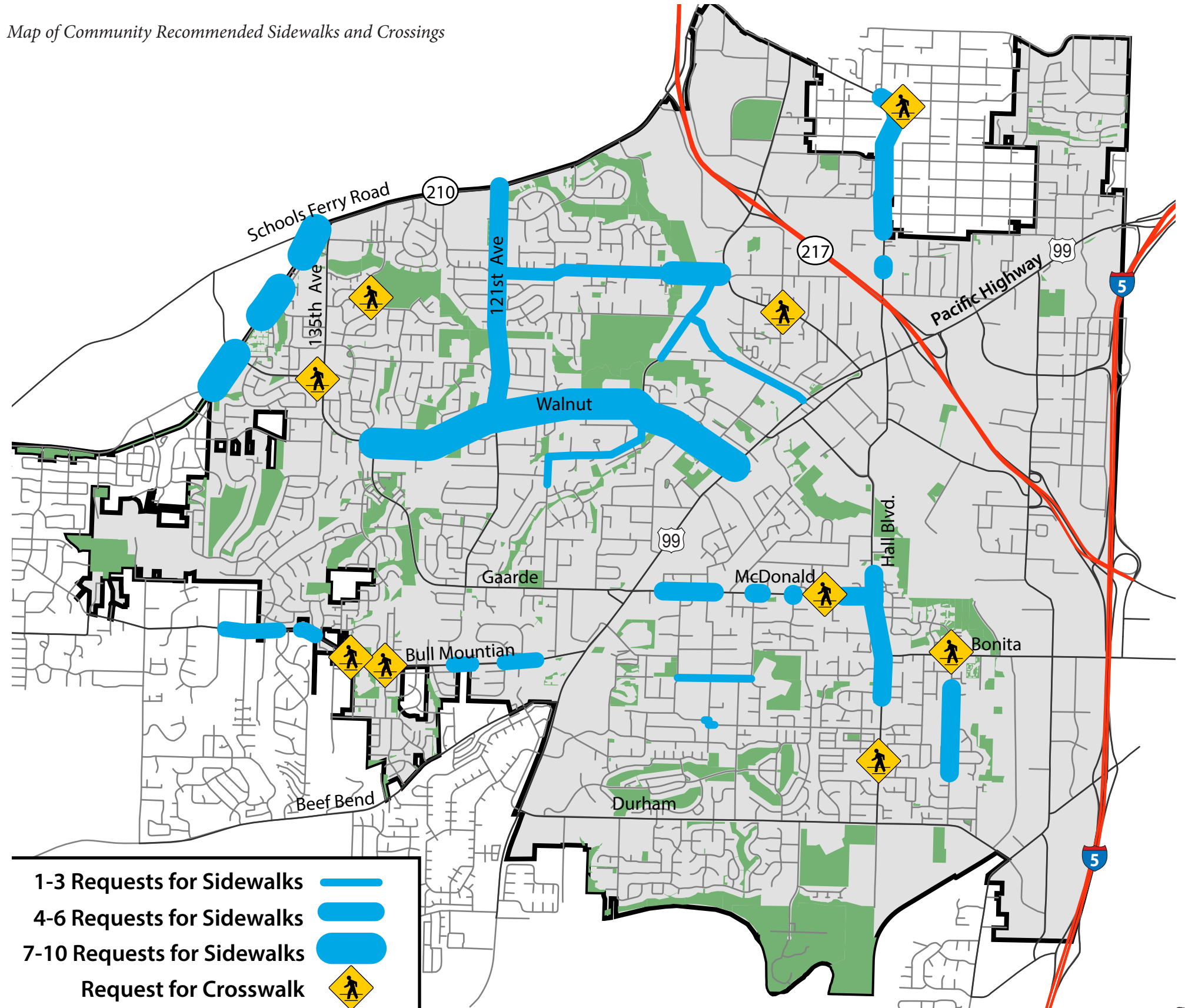
### ONLINE MAP FEEDBACK

StepUP Studio team members worked with Kittleson and Associates, Inc. to create an Interactive Online Map so that Tigard residents can share their thoughts and experiences on specific locations in their neighborhoods.

The map on the right illustrates some of the sidewalk improvements and crossings recommended by Tigard residents through the online map. Below are a few examples of what some had to say.

- *“Crossing Pfaffle at Hall is dangerous. Vehicles heading south on Hall and turning on Pfaffle are paying attention to oncoming traffic to turn, not pedestrians. Also cars on Pfaffle generally roll too far forward for people to cross in front of because the bridge partially blocks visibility. It needs a light and crosswalk lighting system.”*
- *“I love all the neighborhood connections! I hope they are high priority and come to fruition. They will make a huge difference in walkability. With these in place, it becomes feasible to get places without having the expense of adding sidewalks to certain areas. It would also make Tigard rival the SW with its SW Trails system.”*
- *“No Continuous Sidewalk. Kids should be able to walk to and from school without having to walk in a ditch or out into the street.”*
- *“Vehicles heading north on Main St but turning on to Hwy 99 east tend to turn right on red without stopping while people are in the crosswalk. I believe it’s because the traffic signal is not on the same pole as the other signals. When the other cars heading north from Main onto Greenburg have a green light, those turning right have a red light to allow for people to cross--but drivers need to look at the signal on a pole at the corner of Greenburg and Hall near the bank. If this sounds confusing, it’s because it is.”*
- *“The section of N Dakota from Greenburg Rd to the Fanno Creek Trail is probably about the most dangerous stretch of ground for a pedestrian in all of Tigard. There is no sidewalk and no extra room whatsoever crossing the little road bridge that goes over Fanno Creek. It’s amazing no one has been hit there. It’s a busy street with a lot of foot traffic.”*
- *“121st between SW Gaarde St and SW Walnut St has no shoulder, bike lane, or sidewalk. People walking or riding to the bus stop on Walnut, Fowler Middle School on Walnut, or to Gaarde have to walk or ride in the street and risk being hit by speeding cars and trucks. This is a very dangerous section of road and is a huge barrier for the neighborhoods.”*

Map of Community Recommended Sidewalks and Crossings



## WALKABILITY STRATEGIES

Through our research, analysis, and community outreach, we uncovered three core values that resonate across Tigard and efforts to increase walkability.

### **Family Friendly Neighborhoods**

Tigard's neighborhoods should be safe, vibrant communities, where people of all ages and backgrounds are welcome and encouraged to walk, talk, learn, and play.

### **Living Close to Home**

Tigard's neighborhoods should contain the destinations, facilities, and amenities that meet the needs of their residents.

### **Informed and Empowered Citizens**

Tigard's residents should have the tools, resources, and expertise to help make their communities better.

Each of these three core values are reflected in one or more of the plan's five strategies.

### **Why No "Sidewalks" Strategy?**

One of the most common responses to StepUP Studio's community outreach efforts was the lack of continuous sidewalks in Tigard. While we recognize the importance of a complete sidewalk network, we have not recommended sidewalk construction as a stand-alone strategy for several reasons.

First, the city already has active plans to increase sidewalk coverage as funding becomes available, and will soon complete several important sidewalk projects, including along Walnut Street near Fowler Middle School. Further, we recognize that there are limited financial resources to be devoted to walkability, and have attempted to suggest lower-cost, "outside the box" strategies. Finally, simply building more sidewalks doesn't resolve other issues addressed by the strategies, such as the lack of neighborhood destinations.

## 1. Safe Routes to School



Safe Routes to School programs have proven successful at increasing neighborhood walkability in a number of comparable cities across the country. Eugene and Portland, Oregon, and Alexandria, Virginia have each developed city-wide or regional SRTS policies that have led to SRTS curriculum and programming at their schools, the development of community resources to promote bicycle and pedestrian safety around schools, and helped secure funding for bike/ped infrastructure projects. Of particular benefit to Tigard, the SRTS Program Manager for the region is eager to work with the City and the school district to get started in Tigard.

## 2. Active Parks and Trails



Parks and trail systems are already the heart of Tigard's pedestrian network. Providing consistent activities such as walks and runs, community gardens, or summertime movies under the stars give area residents more opportunities to take advantage of these existing, and mostly walkable neighborhood destinations, and gets people out on their feet in their neighborhoods on a more regular basis.

## 3. Neighborhood Centers



Small, neighborhood commercial nodes provide a walkable alternative for basic goods and services. These centers, located on arterial or collector roads, house service sector businesses like restaurants, coffee shops, and small grocery markets. Increasing the number of walkable destinations within a low-density residential neighborhood can have a dramatic impact on overall walkability. Tigard's zoning code allows for this kind of activity through a C-N zone, but it is used in just three locations city wide.

## 4. Simple Signs



Much of the city's existing pedestrian infrastructure, including many cut-throughs and off-street paths, are unknown even to nearby residents. Part of the problem is that neighborhoods often lack adequate signage directed at people on their feet. Simple, visible, and frequent signs for both way-finding and education can go a long way to helping walkers feel more confident knowing where they're going and how long their journey will take. There are great examples of citizen-led, and city-assisted pedestrian signage initiatives from Raleigh, North Carolina to nearby SW Portland.

## 5. Talk the Walk



With its crisscrossing trails and central downtown, Tigard is already more walkable than most people realize. One thing that sets the most walkable cities apart is their commitment to sharing where and how they walk, through a regular column in the local paper, a set of easily available neighborhood walking maps, or even a "walk of the month" club. A set of communication tools for city staff, and a walkable neighborhoods guide with tips for the community should help shape the conversation about walkability in Tigard.

# Strategy 1: Safe Routes to School

Core Value: *Family Friendly Neighborhoods*

Since the 1970s, Safe Routes to School (SRTS) programs have helped build walkable, family friendly neighborhoods by promoting safe bicycle and pedestrian facilities and behaviors. Most SRTS programs have three primary goals: enable and encourage children to walk or bike to school; promote healthy and active lifestyles by making walking and bicycling a safer and more appealing transportation choice; and facilitate the planning, development, and implementation of projects and activities that improve safety while reducing traffic, fuel consumption, and air pollution near schools.

## EXAMPLES OF SUCCESSFUL SRTS PROGRAMS

### Eugene, Oregon

[eugenesrts.org](http://eugenesrts.org)

The school districts in Eugene and Springfield teamed with local stakeholders to develop an SRTS strategy for the entire region, leading to programs, maps, tools, and resources for schools of all grades.

### Portland, Oregon

[portlandoregon.gov/transportation/article/373691](http://portlandoregon.gov/transportation/article/373691)

Portland has implemented a comprehensive SRTS policy that includes sustained funding through a percentage of the city's revenue from traffic fines.

### Alexandria, Virginia

[alexandriava.gov/localmotion/info/default.aspx?id=11552](http://alexandriava.gov/localmotion/info/default.aspx?id=11552)

In Alexandria, 80% of the city's schools have SRTS curriculum and programming, including regular Walk to School events and support for Walking Wednesdays at a number of schools.

## SRTS PROGRAM COMPOSITION

Though the specifics of SRTS programs vary from school to school, they are typically organized around the following primary components:

- Educational and curricula for students that promote active transportation;
- Community engagement efforts to encourage safe driving behavior near schools and support for active transportation choices for students;
- Prioritization of and support for bike-ped infrastructure projects.

On the curricular front, schools might partner with local active transportation advocacy organizations to offer pedestrian and bicycle safety classes during the day. Bicycle safety lessons are often incorporated into the Physical Education curriculum. A pedestrian safety curriculum could cover safe walking behavior in different scenarios and environments, including parking lots, intersections with and without crosswalks, or near buses or heavy traffic. Safe walking behavior can be practiced on school grounds and through regular community walks. Parents and caregivers should be provided guidance materials so they can model safe behavior and practice them with their children.

School administrators, parents and PTAs will need to work together to provide structured support for safe biking and walking to school. Federal funding may be available for the creation of safe walking maps that show existing sidewalks, crosswalks, traffic signals and crossing guards within an average 5-, 10-, and 15-minute walking radius. Printed maps should include safety and encouragement tips as well.

Some schools have organized 'Walking School Bus' events to raise awareness of active transportation, Once a week parent volunteers "pick up" students in the neighborhood on the way to school, just like a regular school bus. Providing incentives for students who walk or bike often, through "frequent walkers/bikers" punch cards has also proved successful for many schools.

While maps and punch cards are relatively inexpensive, cash-strapped schools often lack the resources to fully support even the thriftiest program on their own. These are great opportunities to seek support from granting foundations in the area that have provided grants for education and encouragement programs. Community resources and in kind contributions could also help, such as High school students in need of community service credits.

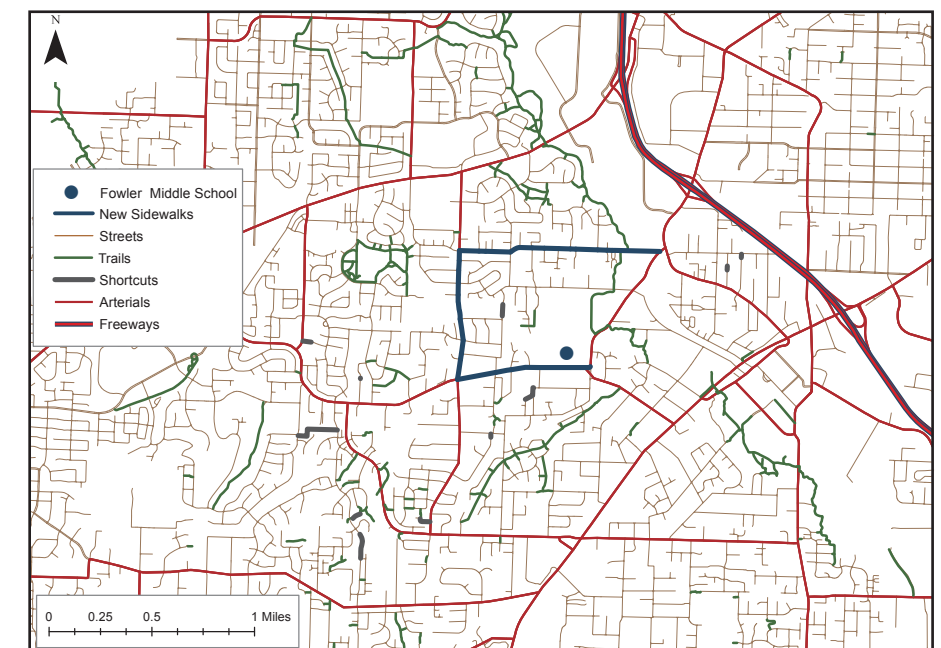
## IMAGINE SAFE ROUTES TO FOWLER

Depending on the level of interest and cooperation across the city, Tigard might have greater success through a city-wide policy like those in Eugene and Portland. Decisions regarding which specific curricular and programming elements are the best fit for Tigard will need to come from district and school administrations, PTAs, and community stakeholders, by way of a steering committee or a preliminary Action Plan that leads to a more thorough SRTS strategy. But the first step is for the city to adopt a Safe Routes to School policy to guide future work.

For the purposes of this document, we conducted a preliminary assessment of pedestrian infrastructure projects that would potentially have the greatest impact on Safe Routes to Fowler Middle School, based on analysis of Tigard's pedestrian network and the city's existing list of bike-ped priority projects.

- Construction of sidewalks along Tiedeman Avenue between Tigard Street and Greenburg Road serving Fowler could potentially be funded with \$1.4 million listed as financially constrained in the Tigard TSP.
- Sidewalks serving the school on Walnut Street between Tiedeman Avenue and Hwy 99 that have not been programmed in the RTP could be partially funded through SRTS programs.
- Other pedestrian projects serving the school that have been identified by City staff and been placed on the financially constrained list include sidewalks on North Dakota Street between Tiedeman Avenue and 121<sup>st</sup> Avenue, and on Tigard Street between 115<sup>th</sup> Avenue and Hwy 99.

Map showing potential sidewalk projects around Fowler Middle School



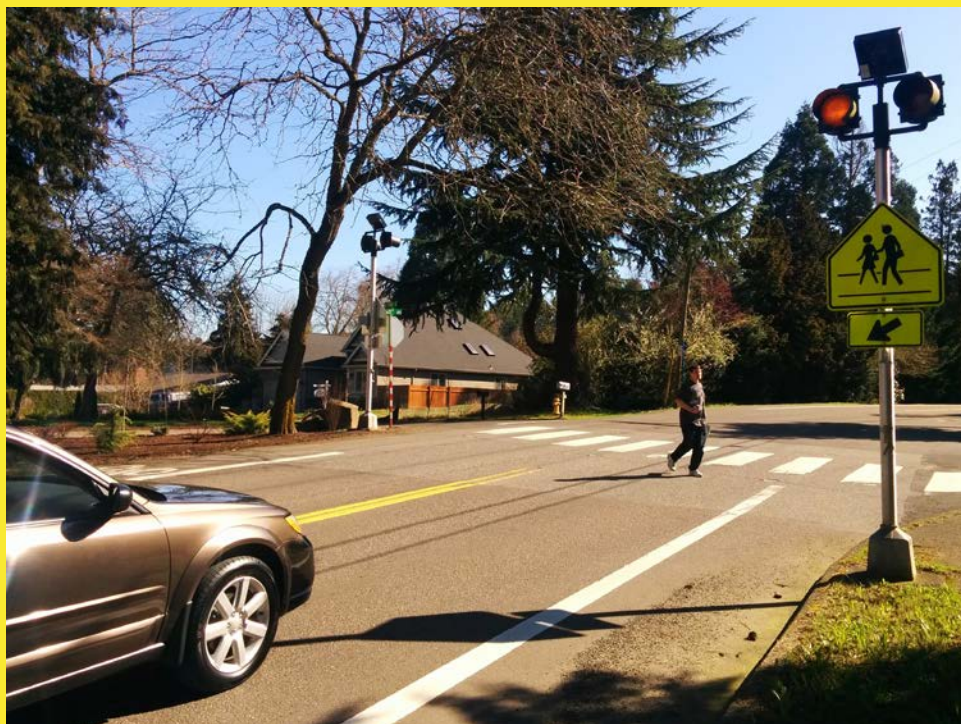
## Funding for Safe Routes to School

Appealing to Tigard residents' existing support for walking will go a long way towards the successful implementation of SRTS curriculum and education programs, but it cannot fully cover ongoing programmatic expenses or the cost of building necessary pedestrian infrastructure around schools. Funding for SRTS originating at the federal level is administered by the Federal Highway Administration (FHWA) and programmed by the Oregon Department of Transportation (ODOT).

Under MAP 21, the 2012 transportation bill, SRTS falls within the Transportation Alternatives Program (TAP). The program, equal to 2% of funds available in the Highway Trust Fund, includes all bicycle, pedestrian, trail and SRTS funding. The amount allocated for Bike and Ped improvements has been reduced by 40% while dedicated funding for SRTS at the national level has ended.

Oregon is supplementing national funding under TAP with \$2 million in non-infrastructure funding from the state's surface transportation allocation. They permit pedestrian improvements near schools to compete with other State projects in the Enhanced category beginning fiscal year 2016. Accessing federal TAP dollars for pedestrian projects under SRTS requires a minimum 20% local match.

Money for pedestrian improvements is still available from the previous SAFETEA-LU transportation bill. Oregon allocated 70% of roughly \$2.5 million in programmed funds to infrastructure projects with no local match requirement. Money for SRTS is divided between state and regional administrators of the program through a competitive grant process.



Federal transportation funds are allocated within the Portland region by the regional government, Metro. Metro lists projects in a Regional Transportation Plan (RTP) as “financially constrained” when a local transportation plan has been adopted. Tigard adopted a new TSP in late 2010 and has nine pedestrian projects listed as financially constrained. Working with Metro regional partners to prioritize pedestrian projects on the financially constrained list will be critical to ensure improvements are built in the near term, as represented in the Tigard TSP.

Funding for local SRTS match requirements for sidewalk improvement projects under MAP 21 could potentially come from a number of sources. A special assessment on local property taxes after the formation of a Local Improvement District (LID) would be a reliable source of revenue to pay for needed sidewalk facilities and could help meet the required 20% match for SRTS projects under MAP-21. A precedent exists in Tigard where an LID was formed to make street improvements in the Tigard Triangle. While some properties were removed from the LID at the request of certain property owners, the special assessment helped pay for millions of dollars worth of street, sidewalk and curb and gutter improvements to bring artifact county roads up to City standards.

Implementing a local gas tax increase targeted at safe and comfortable access to schools is a reliable way to fund needed sidewalk projects. In 2006, Tigard passed such a limited duration gas tax to fund intersection improvements at Greenburg Road and Hwy 99 without being referred to the voters. More recently, the Tigard City Council resolved to block State legislation that extends or makes permanent a moratorium on local gas tax increases. These local initiatives demonstrate an appetite for raising funds for specific projects through local gas tax increases.

Transfers of transportation funds from Washington County are another potential match source for SRTS capital projects. The county Board of Commissioners approved a \$175 million Major Streets Transportation Program (MSTIP) in 2012, of which \$160 million was set aside for multi-modal street projects with sidewalks. This five year capital improvements program funding pool will be used to rebuild Walnut Street from 116th Avenue with bike lanes and sidewalks, providing critical connections to Fowler Middle School. Opportunities exist to further tap into Washington County MSTIP funds cover the required 20% match for SRTS projects under MAP-21 and improve important pedestrian connections like new sidewalks and replacing the narrow bridge on North Dakota Street over Fanno Creek.

## NEXT STEPS FOR TIGARD

### Adopt a Safe Routes to School policy

- Engage Tigard-Tualatin School District and Safe Routes to School Pacific NW Regional Policy Manager in preliminary SRTS policy development discussions.

A successful SRTS program in Tigard - at Fowler or elsewhere - will first and foremost require leadership and support from the city in the form of a city-wide SRTS policy, that will lead to participation and involvement from school leadership (principal and teachers), the school district (superintendent), Parent Teacher Associations, and students and their parents. For many schools faced with a seemingly endless list of unmettable financial obligations, it can be difficult to make SRTS programming a high enough priority to ensure its success. Here, civic and community leaders play an important role, by ensuring that their support for an SRTS program is felt by the school, the district, and the community at large.

## ADDITIONAL RESOURCES

### SRTS Policy Workbook

[changelabsolutions.org/safe-routes/welcome](http://changelabsolutions.org/safe-routes/welcome)

The SRTS Policy Workbook is a remarkable tool designed to help Schools and city's build a successful SRTS policy. Users are walked step-by-step through the different components of SRTS and given guidance on how large or comprehensive of a policy to create.

### Safe Routes to School National Partnership - Pacific Northwest

[saferoutespacificnorthwest.org](http://saferoutespacificnorthwest.org)

The Pacific Northwest chapter of the Safe Routes to School National Partnership can provide guidance for establishing a new SRTS policy.

## Strategy 2: Active Parks and Trails

Core Values: *Family Friendly Neighborhoods, Living Close to Home*

Parks and trail systems are already the heart of Tigard's pedestrian network. Providing consistent activities gives leverages these great assets and gives area residents more opportunities to take advantage of existing, and generally walkable neighborhood destinations on a more regular basis. This strategy involves partnering with community organizations to promote and fulfill activities and events that can consistently attract interested residents.

### MOBILIZING VOLUNTEERS

Many examples of private sector initiatives to activate parks and trails are evident around the country. Citizen volunteers have founded non-profit organizations to bring musicians, festivals, crafts, tournaments and movies to parks. The Austin Parks Foundation, for instance, uses grants, donations and corporate sponsorships to support improvement programs such as Adopt-a-Park, Its My Park Day and National Trails day volunteer events, as well as organizing events like movies in the park, yoga in the park and a youth giant chess tournament.

The foundation bridges a gap between what needs to be done to reach the full community potential of parks and trails and what their parks department can offer with limited public funding. Their record of success is noteworthy; the latest Its My Park Day, for example, mobilized over 3,000 volunteers putting in over 10,000 hours working on more than 100 projects. With support from the Tigard Parks Department, citizen advocates wanting more active parks could engage the community and organize volunteers to promote and run events in parks.

Management of programming and operations of Pioneer Courthouse Square in downtown Portland has been delivered by a private 501(c)(3) corporation since the public space opened in 1984. With help from community volunteers and private sector sponsorships, the urban park organizes over 300 events per year and hosts more than 26,000 visitors a day. A diverse Board of Trustees draws from the business, non-profit, construction, communications, entertainment and civic communities. Essential local police, fire, water, transportation and parks and recreation agencies work with media and marketing partners to promote and serve events in the square. The organizational structure and community partnership approach of Pioneer Courthouse Square can serve as a model for Tigard to activate its parks. Soliciting volunteers through the Tigard Parks Department's Recreation Resource Guide could form a catalyst of support for a non-profit group interested in orchestrating engaging events in Tigard's parks, and stimulate walking throughout the city.

### EXAMPLES OF ACTIVE PARKS AND PUBLIC SPACE

#### **Live Music**

Concerts in parks can be a good way to attract new parks and trails users who may walk to shows. This concept has worked well in Napa, California where the Napa City Nights concert series has packed the waterfront for years. Founded in 2008 by a group of musicians, their summer events are run entirely by volunteers under a non-profit model. Free weekly shows on Fridays at Veterans Memorial Park overlooking the Napa River are family friendly, drawing hundreds of fans. The non-profit is supported with donations from the community and sponsorships from the city parks and recreation foundation, the downtown association, and local businesses.

Music on the Half Shell in Roseburg, Oregon has been attracting a diversity of bands from Pink Martini to Susan Tedeschi to The Whalers. The music series brings more than 10,000 spectators to Stewart Park, many of whom walk due to limited parking at the venue. Its annual budget of over \$100,000 is covered through grants, sponsorships and donations dropped in a hat at shows. Rallying musicians around their trade is a natural fit. Connecting talent with a public venue to promote the musical arts, with assistance from Tigard's economic development and parks officials, may be initiated through a call for proposals in the Tigard's monthly CityScape newsletter.



#### **Art and Wine Festivals**

Putting on art and wine festivals can be a good way to stimulate walking to parks. In California, the Santa Clara Art and Wine festival attracted 50,000 people to its Central Park in 2013. While the event drew people from surrounding communities who mostly drove, local art and wine fans walked or biked to the park's location in the city's core. Local artists and charities benefit from visitors who enjoy tasting the new releases from nearby wineries, the participation of micro-breweries and shows by talented musicians. The two-day event generates hundreds of thousands of dollars in donations for local charities. Although the event is organized by the city's Parks and Recreation Department, a private non-profit organization could achieve the same ends.

#### **Events for Kids**

World famous Balboa Park in San Diego has a 234 seat puppet theater that appeals to small children. The Marie Hitchcock Puppet Theater is operated by a non-profit guild dedicated to serving children (and adults) with wholesome entertainment. Shows run year round in Pallisades Building. The picnic shelter at Summerlake Park or the Bishop-Scheckla Pavilion at Cook Park would be appropriate venues for year-round performances.

Storytelling in parks would also attract families to Tigard's parks. The city of Hampton, Virginia hosts storytelling groups during the summer months at Bluebird Gap Farm. As with puppet theaters, this type of event can be held year round with proper cover. Securing grants to provide seed money for storytelling or a puppet theatre company would be a key ingredient to launch such efforts.

#### **Movies in the Park**

The Portland Metro region has numerous examples of movie nights in parks during the summer months. The cities of Lake Oswego, West Linn, Portland, and Beaverton all have this park amenity. Lake Oswego holds four kid friendly shows at Millennium Plaza Park in July and August. Moviegoers bring blankets, pillows and lawn chairs and relax under the stars. The movies are put on by the Lake Oswego Parks and Recreation Department, with the help of sponsors, and feature free popcorn and other movie snacks. This is a relatively inexpensive way to activate Tigard's parks and encourage walking to reach destinations. The only requirements are available power, a projector and portable screen.

## Community Gardens

Hosting community gardens in parks would create daily foot traffic by neighbors wanting to cultivate their own fruits, vegetables and flowers. The local food movement is in full swing, making the timing right to take advantage of this momentum. The best locations for community gardens in Tigard's parks appear to be in Windmill, Woodard, Commercial, Summerlake and Jack parks. The parks are evenly dispersed throughout western Tigard and offer ready access via neighborhood trails to pedestrian traffic. Hosting community gardens in Tigard's parks would create daily foot traffic by neighbors wanting to cultivate their own fruits, vegetables and flowers. One example with twelve plots at Greenfield Drive and 132nd Avenue has been tilled since 2009. Parks are evenly dispersed throughout western Tigard and offer ready access via neighborhood trails to pedestrian traffic.

Residents of Greenburg Oaks apartments discussed organizing around community gardens in their regular meeting last month. Facilitating a community garden at Commercial Park could generate significant foot traffic in the neighborhood, benefiting the health of their low-income residents. Additional buzz has been created by a condominium association, which has organized a community garden fronting Fanno Creek Trail where it intersects North Dakota Street. An interview with a family living in the condos demonstrates local demand for such garden plots. Their testimonial included stories about passers by on the trail asking about how to start a community garden.

Another nearby example of community gardens in parks can be found in the adjacent Tualatin Hills Parks and Recreation District (THPRD). The district has initiated a community garden program to provide cultivation opportunities in eleven parks. Residents that are part the district, including Tigard residents who have purchased an assessment, can rent community garden plots for a year with an option to renew their plot. Residency cards are renewed every three years to ensure that interlopers are not occupying plots.

Garden plots managed by THPRD can be a gathering place for families and provide opportunities for chance encounters with neighbors. Renters of plots must bring their own hand tools (machine tools are not permitted) and garden hoses. Sharing gardening implements, hoses and growing tips builds relationships in the community. Cooperation and trust are further enabled when water is conserved, plots are kept free of weeds and the fruits of labor respected. The only cost to THPRD would be setting aside half an acre of land in each park and the cost of materials to build raised beds, since the Boy Scouts can be engaged to build the raised beds, and rental fees collected for plots cover the cost of administering the program.

## Action on the Trails

Activating trails requires mobile strategies to maximize the value of targeted events. Walkathons and ambling dog shows could attract attention to Tigard's many trails, exposing users to new routes and experiences. Walkathons are natural catalysts to initiate a shift towards the pedestrian mode of travel. Numerous charity events use them to raise money for their cause, with the March of Dimes, the American Cancer Society's Relay for Life and AIDS walks some of the most popular. Finding representatives of the charity organizations to form local chapters and organize walkathons is something the Tigard Parks Department can assist with. Once engaged, the city can influence a charity's choice of route by offering walking maps with loops of a mile or less. Ultimately, a walkathon will increase awareness about walking routes in Tigard and encourage residents to get out and walk more.

Mobile dog shows are a way to engage dog walkers on Tigard's trails and draw residents to trails about which they may not be aware. This could be an engaging way for Tigard's many dog-owning residents to interact with each other and connect with the city's parks and trails. The viewing public could hold score cards up as dog walkers pass by with the winner awarded a dubious prize. These shows could be organized as a charitable event by coordinating with the local Humane Society.



## NEXT STEPS FOR TIGARD

### Organize community programming board or authority

- Engage non-profit entities with the Tigard Parks Department to organize, fund-raise, promote and fulfill activities and events that make parks and trails destinations.
- Activities could include community gardening, walkathons or dog shows. Plan events like movies in parks, musical performances, art and wine festivals, or kid friendly puppet shows and storytelling.

## ADDITIONAL RESOURCES

### Oregon Walks

[oregonwalks.org](http://oregonwalks.org)

Oregon Walks is a non-profit organization dedicated to promoting walking and making the conditions for walking more safe, convenient, and attractive. They are a leading resource for efforts to promote walking all over the state.

### OSU Master Gardener Program

[extension.oregonstate.edu/mg](http://extension.oregonstate.edu/mg)

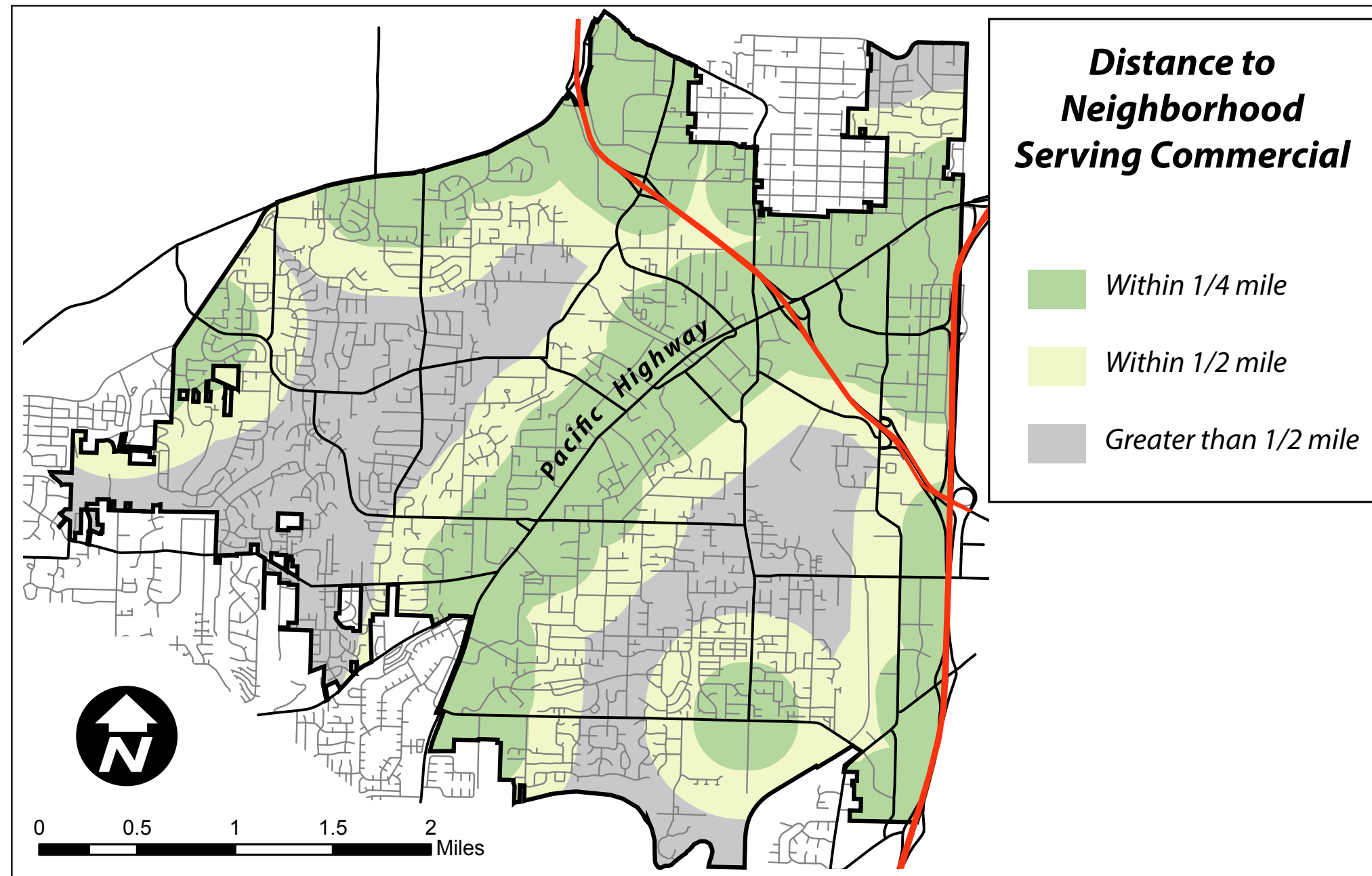
The Master Gardener extension service program through Oregon State University facilitates community education and training for Oregonians on growing and caring for plants. They are a great resource for brand new Community Garden efforts.

## Strategy 3: Neighborhood Centers

Core Value: *Living Close to Home*

While sidewalks, street crossings, off-street trails, and other walking infrastructure are important, a truly walkable neighborhood includes multiple destinations within walking distance that provide residents ample reasons to walk. From WalkScore.com's rating of real estate to Portland's 20-minute neighborhoods, proximity to goods and services is a crucial metric for walkability. Yet most of Tigard's residential neighborhoods exist under zoning that explicitly prohibits nearby neighborhood-oriented businesses, forcing residents to drive to meet their daily needs.

Allowing for small neighborhood centers of commercial activity can go a long way towards activating a neighborhood with pedestrians. Small commercial nodes containing markets, cafes, restaurants or boutique shops help to draw people out of their houses and cars, offering casual walking trips to everyday locations and allowing Tigard residents to experience the value of living close to home.



### Plan and Code Support

The City of Tigard has already recognized the importance of neighborhood commercial districts in crafting the development plan for the River Terrace area, which includes a commercial node. In fact, the City's zoning code has a category specifically to support neighborhood commercial centers;

*The C-N zoning district is designed to provide convenience goods and services within a small cluster of stores adjacent to residential neighborhoods... Such uses include convenience markets, personal services, and repair shops. A limited number of other uses... are permitted conditionally.*

18.520.020(a) See **Appendix B: Existing Conditions** for full code description.

At the same time, the Tigard 2035 Transportation System Plan recognizes commercial nodes in residential areas as a land use strategy for potential further plan or study that supports non-automobile travel choices while retaining the suburban residential character;

*Commercial nodes in residential areas would provide residents with the opportunity to take non-work trips by bike or walking. These neighborhood commercial (N-C) nodes could include small restaurants, coffee shops, or neighborhood retail. This could be accomplished by allowing neighborhood-commercial as a permitted or conditional use in residential zones, or through designating specific nodes on the City's comprehensive plan map as neighborhood commercial. The N-C designation currently exists within the City.*

While Tigard's zoning code has a designation for neighborhood-oriented commercial uses, it is currently in use in only three locations city wide, as the majority of land in Tigard is zoned specifically for residential uses. Residential areas are separated from the commercial areas, which are located primarily along Pacific Highway and in the Tigard Triangle. This leaves the heart of Tigard's residential neighborhoods, such as the area around TVFR Fire Station 50, devoid of neighborhood businesses, with some areas being over a mile from the nearest corner market or coffee shop.



## Strategy 3: Neighborhood Centers

### NEIGHBORHOOD-SCALE COMMERCIAL

Studies using regularly collected household surveys to assess commercial walking trips in California<sup>1</sup> and Texas<sup>2</sup> found that neighborhood commercial establishments can induce walking trips, as people take trips they would not otherwise consider in a car. Researchers found that residents in neighborhoods without commercial destinations walked to stores less than once a month, while residents in neighborhoods with commercial destinations did so more than six times a month.

Similarly, studies in the Portland region found that while people who walk or bike to shops spend less money on each visit than those who drive, they make substantially more visits to those businesses, ultimately spending more money overall.<sup>3</sup> Thus expanded neighborhood commercial opportunities can not only promote walking, but also promote economic development as residents spend more of their money close to home.

### IMPLEMENTATION OPTIONS

Introducing neighborhood commercial zones could be accomplished by allowing neighborhood-commercial activity as a permitted or conditional use in residential zones, or through designating neighborhood commercial at specific nodes on the City's comprehensive plan map. As legislative amendments to an adopted comprehensive plan can be challenging, another option could be to have the City's economic development agency purchase suitable properties for redevelopment, and attract a developer who could request a quasi-judicial plan amendment and zone change.

### Neighborhood Commercial and Sidewalks

Just as a perfect network is insufficient without adequate destinations, neighborhood commercial centers need a good pedestrian network to positively impact walkability. It is the interplay between places to walk and an accessible pedestrian network that induces walking trips. A study in the Puget Sound region found 78% of pedestrians arrive at suburban commercial centers via the sidewalk network, yet less than half of suburban retail locations have sidewalks, demonstrating that retail centers without sidewalks are less able to attract walkers.<sup>4</sup>

Good pedestrian access is also important from an equity standpoint, as this same study also found a disproportionate percentage of suburban shoppers who walk to stores were under age 18, and are therefore particularly vulnerable to unsafe walking conditions.

### SITE SELECTION CRITERIA

Based on the local examples discussed below and national best practices, the following basic criteria serve as baseline for the siting of neighborhood commercial nodes.

- Allow for at least 10,000-20,000 square feet of developable land; single parcel preferred.
- Are along a collector street; at the intersection with another collector or arterial preferred.
- Are between one-quarter mile and one-half mile from other commercial nodes.
- Are reasonably well connected to the pedestrian network, or can be made so.

### SPOT ZONING

Whether as part of a legislative plan amendment or a quasi-judicial change, concerns over spot zoning may arise, as small neighborhood commercial zones, like in the examples later in this section, are small enough in nature to be contained on one or two parcels. The classic definition of spot zoning is "the process of singling out a small parcel of land for a use classification totally different from that of the surrounding area for the benefit of the owner of such property and to the detriment of other owners." Such practices are generally prohibited by law.

The size of the parcels of land under consideration is only one aspect of determining instances of spot zoning; as is the importance of the proposed land use and its inter-relationship with surrounding properties. However the primary consideration is the consistency with the city's comprehensive plan; Tigard Comprehensive Plan Chapter 2, Goal 2.1, Policy 15(c) states:

*The new land use designation shall fulfill a proven community need such as **provision of needed commercial goods and services**, employment, housing, public and community services, etc. in the particular location, versus other appropriately designated and developable properties.*

Findings of consistency with statute, rule, plan policies and local ordinances would have to be made prior to any quasi-judicial land use approval.

### PHASING

Development of a neighborhood commercial center, including any applicable zone changes and subsequent construction, will take time. An interim step could be to allow less permanent commercial uses such as farm stands or food carts. Popular throughout the metro region, such uses could provide some walkability benefit in the near-term while awaiting decisions on further development.

1 Handy, S. L. (1996). Understanding the link between urban form and nonwork travel behavior. *Journal of planning education and research*, 15(3), 183-198.

2 Handy, S. L. (1996). Urban form and pedestrian choices: study of Austin neighborhoods. *Transportation Research Record: Journal of the Transportation Research Board*, 1552(1), 135-144.

3 Clifton, Kelly (February 2013). "Examining Consumer Behavior and Travel Choices." *Oregon Transportation Research and Education Consortium*. OTREC-RR-12-15.

4 Hess, P. M., Moudon, A. V., Snyder, M. C., & Stanilov, K. (1999). Site design and pedestrian travel. *Transportation Research Record: Journal of the Transportation Research Board*, 1674(1), 9-19.

## Strategy 3: Neighborhood Centers

### EXAMPLES

There are a number of examples of small neighborhood scale commercial nodes throughout the Portland Metro region. These pockets of neighborhood commercial zoning allow small businesses to thrive by catering to neighborhood foot traffic. Aerial photos of Portland-Region examples are below, and include such nodes at NE 24<sup>th</sup> and Fremont, NE 33<sup>rd</sup> and Knott, NE 15<sup>th</sup> and Prescott, and SW Virginia and Nebraska. While these examples are host to corner markets, coffee shops, restaurants, and personal services, their small scale blends well with the adjacent residential neighborhoods.

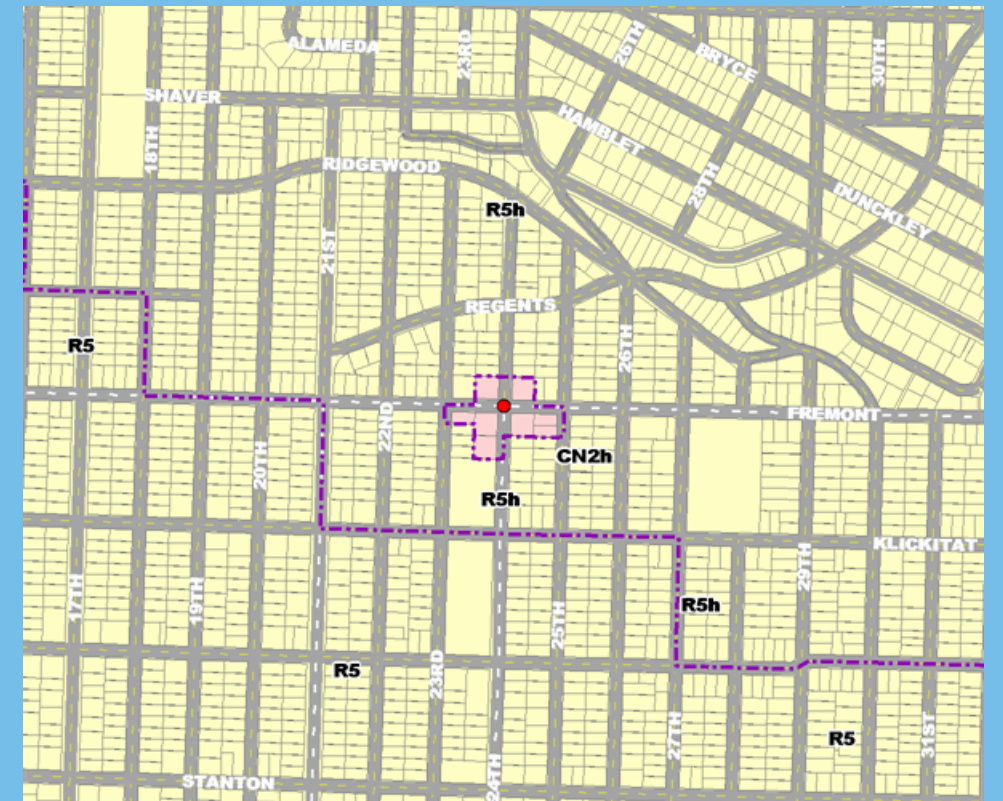
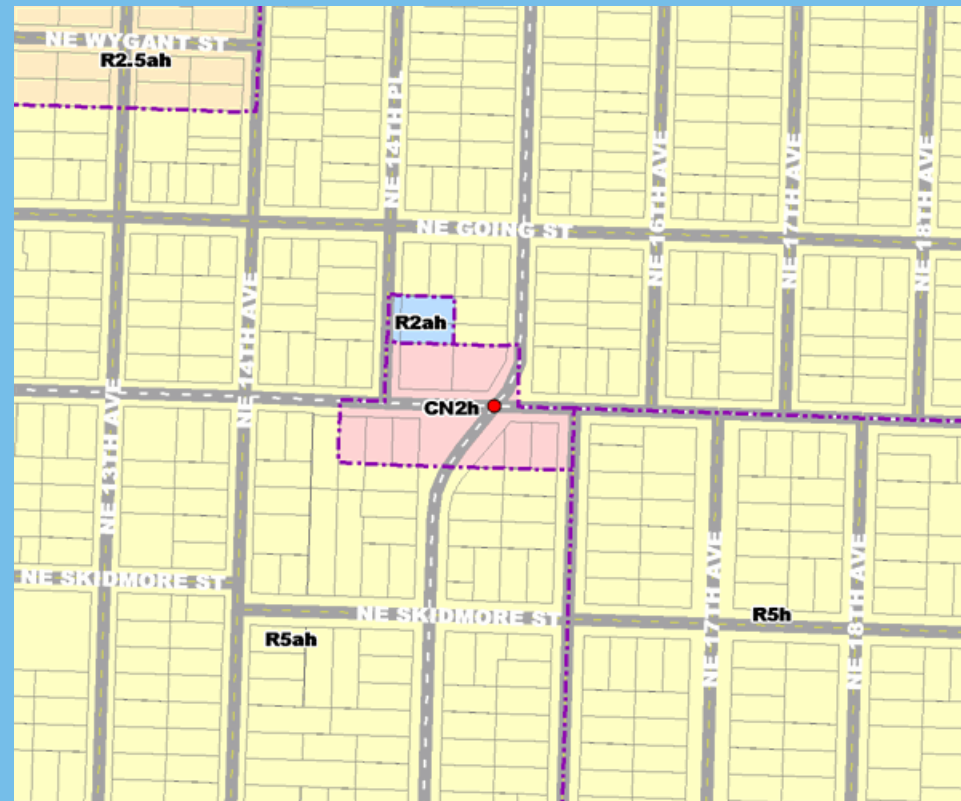
*Commercial centers make walking, biking, or taking transit more viable options for meeting everyday shopping, dining, and entertainment needs. >>>>*

*The lots around each intersection are zoned for neighborhood-scale commercial activity, intended to support the surrounding residential areas. >>>>*

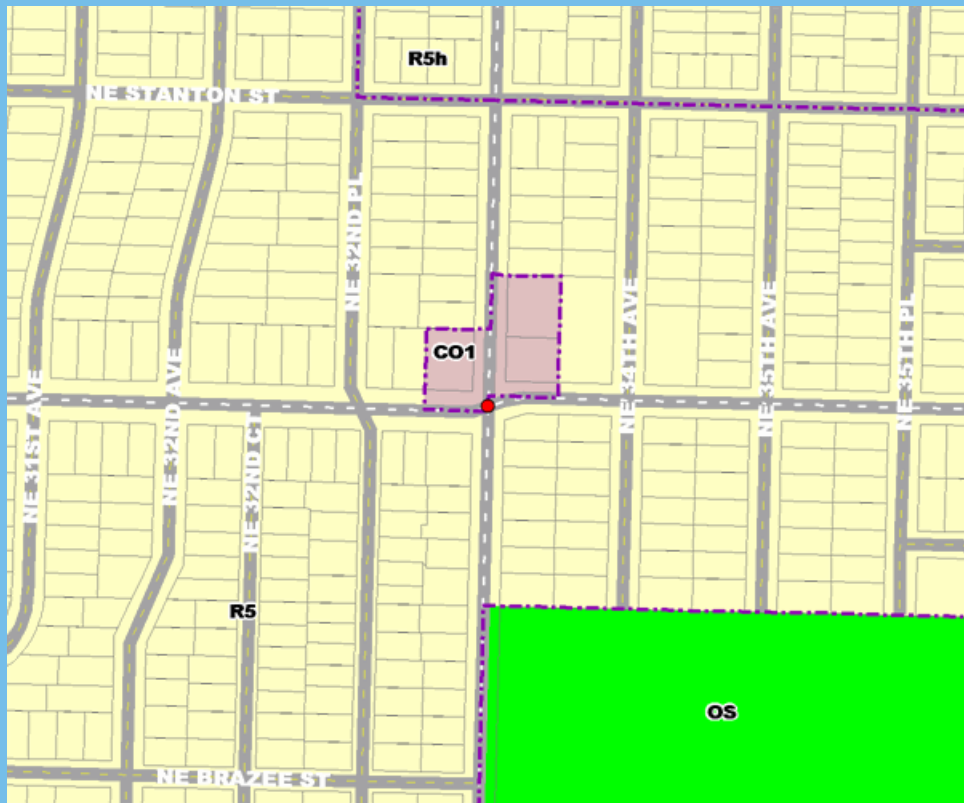
### NE 15<sup>th</sup> and Prescott Street in Portland



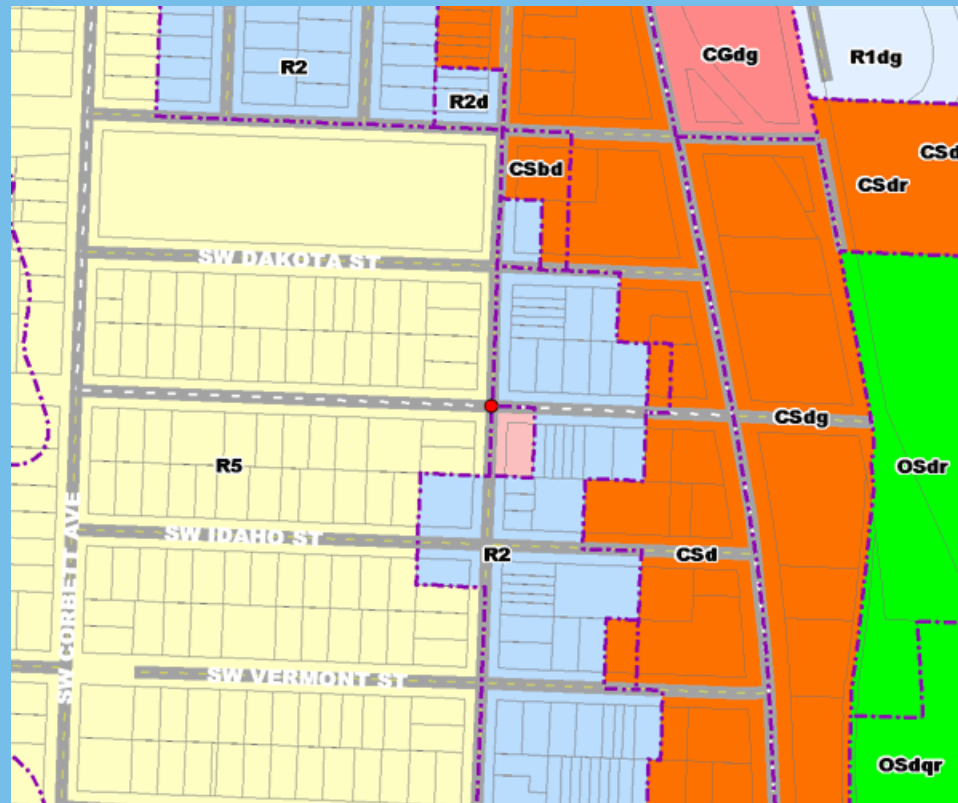
### NE 24<sup>th</sup> and Fremont Street in Portland



**NE 33<sup>rd</sup> and Knott Street in Portland**



**SW Virginia Avenue and Nebraska Street in Portland**



## NEXT STEPS FOR TIGARD

### **Policy changes to promote Neighborhood Centers**

- Support the development of small neighborhood commercial nodes of restaurants, coffee shops, or neighborhood retail in residential neighborhoods. This can be done by expanding locations designated with the Neighborhood Commercial (N-C) zone, or by permitting certain N-C uses in residential zones as a conditional use.

## ADDITIONAL RESOURCES

### **Healthy Corner Stores Network**

[healthycornerstores.org/resources](http://healthycornerstores.org/resources)

The Healthy Corner Stores Network provides educational, programmatic, and industry resources to support the availability and sales of healthy, affordable foods through small-scale stores.

### **Example code for commercial uses in residential zones**

[dczoningupdate.org](http://dczoningupdate.org)

Washington DC is currently updating their zoning code to support development of new corner stores as a permitted use in certain residential zones, and legalize existing stores. Subtitle D, Chapter 16, Section 1605 - Corner Stores Conditions specifies where in 'R' zones this is an allowable use, what kinds of commercial uses, hours of operation, and other important considerations.

### **Special Use Infill Options and Design Tools (Austin TX)**

[austintexas.gov/department/neighborhood-planning-resources](http://austintexas.gov/department/neighborhood-planning-resources)

These special uses (including corner stores) are designed to permit a greater diversity of housing types and to improve compatibility between existing neighborhoods and new development. The corner store special use allows a small retail use on a property with residential zoning at an intersection, and regulates the appearance and management of corner stores to gain the acceptance of residents.

## Strategy 4: Simple Signs

Core Value: *Informed and Empowered Citizens*

Navigating the disconnected street grid of a suburban landscape can be a daunting challenge for pedestrians. Loops and cul-de-sacs may be effective at reducing cut-through vehicular traffic but they are often an unmarked, complex maze to people on their feet. To alleviate these issues, the city and parks department have done a remarkable job creating pedestrian connections through many of the city's cul-de-sacs by way of short segments of off-street walkways. But such connections are provided intermittently, and often lack clear indication of where such off-street trails are and where they go.

Community-driven way-finding and informational pedestrian signage strategies have helped address these challenges in other communities, and have the potential to be successful in Tigard. As in Raleigh, North Carolina (see sidebar), local residents and community organizations could work in partnership with the city on designing a network of pedestrian-scale way-finding signs to be installed by the city or community volunteers.

This strategy is a perfect reflection of value of informed and empowered citizens in Tigard. The resulting signs provide needed navigational information and increases awareness of the connections throughout the community, while using local knowledge and community volunteers to build the sign network creates a sense of community ownership.

Other local community-driven public works groups have a successful history of working with city governments to leverage volunteer labor for the public good. Friends of East Bull Mountain Park, a community organization based in Tigard, has worked with the City and volunteer groups such as the Boy Scouts of America to build trails and other improvements in city-owned Bull Mountain Park. Similarly, SW Trails is a community group which promotes walking and biking in southwest Portland, in part by organizing volunteer work parties to build and maintain trails, many in the public right-of-way.

### SIGN CONTENT

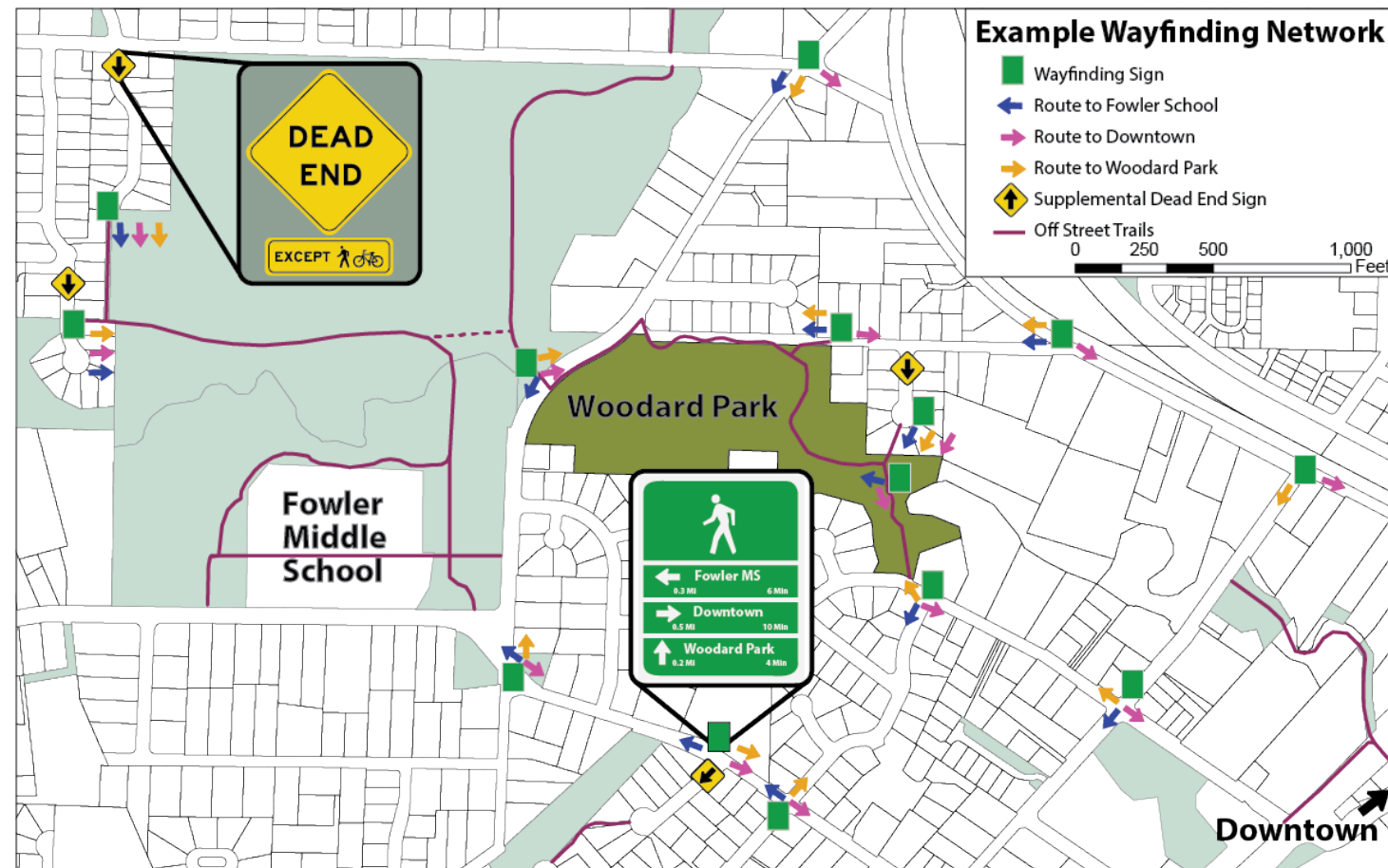
There are many examples of pedestrian way-finding signs. The best design for Tigard would need to be determined in consultation with residents, engaged community-based organization, and the city. Even so, best practices show two key features of way-finding signs that can improve walking rates and inform citizens:

#### Destination

- Because the signs are intended to help stitch together the confusing, disconnected street system, information about where a walking route goes should be a key component of a way-finding sign, particularly for routes involving off-street connections.

#### Time/Distance

- Part of the appeal of way-finding signage is the ability to reduce perceived distances. In listing walking time to community destinations, the project in Raleigh attempted to highlight that these destinations were actually much closer than many residents believed; Portland's bicycle way-finding signs include time and distance for much the same reason.



### SW Trails

SW Trails is a community group that promotes wellness through walking and biking in Southwest Portland. They work with local governments to build and maintain trails and related facilities, relying on the local knowledge of residents about cut-through passages in parks and the unbuilt rights-of-way that neighbors already use. By organizing large volunteer groups, SW Trails has completed 30-40 trail projects. They employ innovative construction techniques, including “bucket brigades” to lay gravel along dirt trails with limited vehicle access.

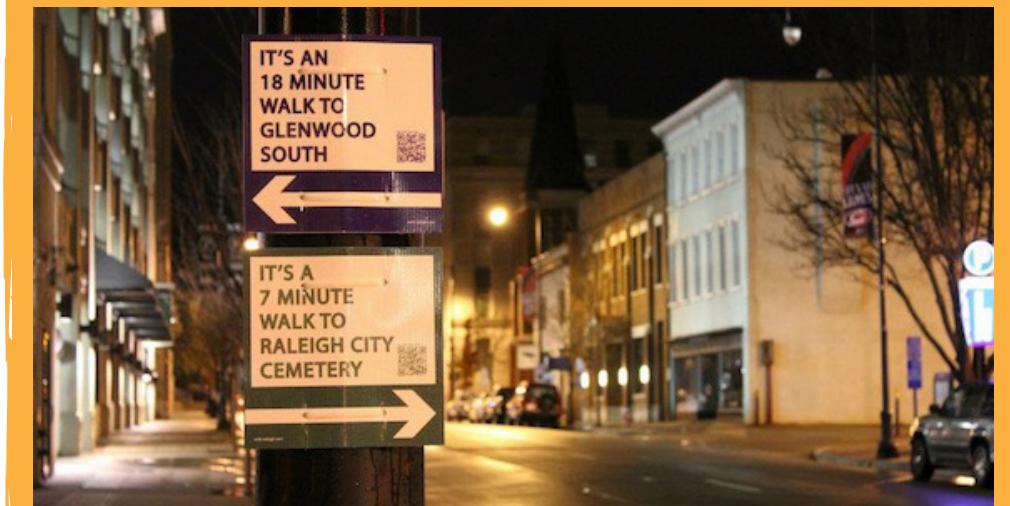


Working in partnership with the City of Portland, SW Trails designed the signs the city installs to mark their seven numbered trails, and conducted field engineering for sign placement locations.

### Walk Raleigh

In Raleigh, NC, a community group known as *Walk Raleigh* created and installed a series of pedestrian way-finding signs, intended to highlight the convenience of walking to neighborhood destinations. Printed on cheap corrugated plastic and installed illegally in the public right-of-way with removable zip-ties, the signs generated a positive response in the community.

Noting the signs were consistent with Raleigh's long-term goals to integrate travel modes, enhance bike/ped infrastructure and expand way-finding signage, the city developed a process to legalize the community-made signs as part of a formal public education campaign. Based on their success organizers created the “Walk [Your City]” campaign, providing a toolkit to spur similar efforts in other communities.



## Vehicular Dead End Signs

Tigard has a significant number of cul-de-sacs and dead end streets, most of which are posted with “no outlet” or “dead end” signage to communicate to motorists that such streets are not a through route for vehicular travel. However, many dead end roads connect to off-street trails. Such routes, dubbed “Living End Roads” by the International Federation of Pedestrians, are through routes for pedestrians, and sometimes cyclists depending on trail surface.

Yet the purpose of the dead end sign discourages people from traveling these roads, when in fact they may be the most direct and appropriate route for cyclists and pedestrians. This is especially the case for people not familiar with the area, yet even local residents are often misled by the dead end sign, as everyone must at some point be a first-time user.



Building trails connecting dead end streets may not be sufficient if pedestrians do not know such connections exist, and the standard dead end sign poses a barrier to that knowledge. While other nations incorporate through passage for pedestrians and cyclists into their dead end signs in the U.S. this would need to be done with supplemental signage, as in figure x above. Such sign changes could be a simple and cost effective step to increasing walkability in Tigard’s residential neighborhoods.

*Supplemental Bike/Ped signage concept*

*German Dead End sign denoting through Bike/Ped passage*



## SIGN CODE AND RIGHT-OF-WAY PLACEMENT

City code currently prohibits placement of any sign within the public right-of-way, except those placed by or on behalf of a government agency (Tigard Municipal Code 18.780.070 (K)). Collaboration between the city and community organization wishing to implement the sign strategy will be necessary to mobilize volunteers and build community trust.

If the city is unable to permit such actions by a community group, pedestrian way-finding signs would need to be installed by city crews, as is the case in the Walk Raleigh and SW Trails examples. Having the city do the work may diminish the community-building aspect and sense of community ownership, so care should be exercised to ensure the community is sufficiently involved.

### Criteria for sign placement

Local knowledge from within the community is crucial for identifying ideal sign placement and optimal routes not readily visible to outsiders. Still, some basic criteria for sign placement should include the following locations:

- At the entrance to off-street trails, including cul-de-sac passageways.
- At the entrance to dead-end streets that provide through passage for pedestrians.
- At intersections along key walking routes to important neighborhood destinations, such as schools, parks, and commercial centers.

### Partners and Funding

Having strong community partners and adequate funding are both vital to the success of this strategy. There are several existing community groups who utilize volunteer labor towards similar missions, including Friends of East Bull Mountain Park in Tigard, and SW Trails in Portland. Alternately, the city could work through existing contacts, such as the bike-ped committee, to establish and promote a new community group. If costs are kept down by having a community group to do the design work or installation, the fabrication of the signs could more easily be covered by the city through the existing transportation budget or travel options grants.

## NEXT STEPS FOR TIGARD

### Pedestrian Signs policy and procedures

- Engage existing or new community groups such as SW Trails or Friends of Bull Mountain Park in developing standards and procedures for sign production and installation.

### Bike/Ped exceptions for Dead End signs

- Add supplemental signage to existing Dead End signs where off-street paths permit through movement of pedestrians.

## ADDITIONAL RESOURCES

### Walk [Your City]

[www.walkyourcity.org](http://www.walkyourcity.org)

Based on the successful Walk Raleigh campaign, Walk [Your City] now provides an online toolkit to creating pedestrian signs for use in other cities.

### SW Trails

[www.swtrails.org](http://www.swtrails.org)

SW Trails can help organize volunteer efforts to create and distribute walking signs along pedestrian paths and trails.

## Strategy 5: Talk the Walk

Core Value: *Informed and Empowered Citizens*

Tigard residents like to walk. They walk their dogs around the neighborhood, they walk for fitness along Fanno Creek, and they walk downtown to visit the Farmer's Market and the businesses on Main Street. Nearly every Tigard resident we spoke with stated that they enjoy walking and love the region's trails. Yet despite overwhelming support for walking in Tigard and a growing network of trails and pedestrian facilities, most people do not think of Tigard as a city where people walk.

There are a number of steps the city can take to help shape the public perception about Tigard's walkability. By utilizing the tools and assets that the city already has at their disposal, such as the CityScape newsletter, website, and social network sites, Tigard's walkability could be promoted much more regularly to help keep walking at the forefront of people's minds. Basic guidelines for messaging around walkability are outlined in the Walkability: Communications Guide, created as a supplement to this plan.

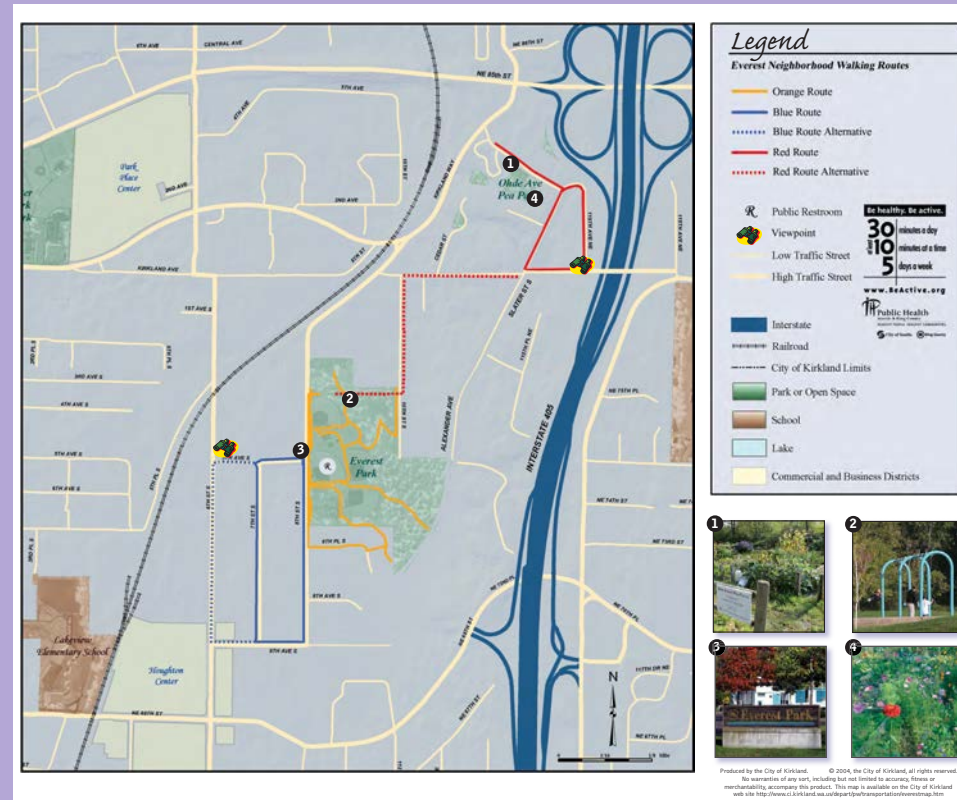
Communication can also play a significant role in empowering the community to be part of the solution. Two neighbors who would like to have a pedestrian cut-through between their property should not have to wait for the city to come knock on their doors to make it happen, but likely have questions about what steps they can or cannot take. The city can help inform and empower citizens to be involved, by providing them with the resources necessary. Walkable Neighborhoods: A Community Guide outlines some of these steps, and is intended to help support informed and empowered citizens in Tigard.

While many in Tigard walk regularly for fun or exercise, even more still are likely to do so with a little motivation and the right information. Walking maps for different neighborhoods around the city can further inform and empower pedestrians, not only providing the a valuable guide but insights into points of interest and previously unknown destinations.

### Kirkland, Washington

[kirklandwa.gov/depart/parks/parks/neighborhood\\_walking\\_maps.htm](http://kirklandwa.gov/depart/parks/parks/neighborhood_walking_maps.htm)

The City of Kirkland, Washington partnered with their neighborhood associations to produce walking maps for different neighborhoods around the city, complete with safety tips, viewpoints, and suggested routes. Maps like these empower residents to get out on their feet and explore different neighborhoods, while their very existence helps to change public perceptions about how seriously their city is about walking.



### Rochester, New York

[www.cityofrochester.gov/rochesterwalks](http://www.cityofrochester.gov/rochesterwalks)

Rochester, New York went a step further. With help from a New York State Department of Health grant the city created a Rochester Walks! landing page on their website, where community members can go for route maps, tips, and information about walking groups. The city offers pedometers, Rochester Walks! t-shirts, and other incentives to community organized walking groups.

## NEXT STEPS FOR TIGARD

### Walking Maps

- Create Walking Maps for the areas around Woodward Elementary/Summerlake, Fowler Middle School, Tigard High School/Durham City Park, Bull Mountain, and others. Consider working within existing neighborhood boundaries and highlighting interesting routes.
- The city already has a walking map template in the form of the Downtown Tigard Walking Map ([www.tigard-or.gov/downtown\\_tigard/going\\_green/walking\\_map.asp](http://www.tigard-or.gov/downtown_tigard/going_green/walking_map.asp)). The map on the opposite page is an example of what such neighborhood maps could look like.

### Implement the Communications Plan

- Institute the steps outlined in *Walkable Tigard: A Communications Plan* to promote pedestrian activity in Tigard.

### Promote the Toolkit

- Make *Walkable Neighborhoods: A Community Toolkit* available for use by Tigard residents by promoting it online, in the CityScape newsletter, and in the press.

## ADDITIONAL RESOURCES

### Walkable Tigard: A Communications Plan

A simple guide book for community members containing steps they can take to make their city and neighborhoods more walkable.

### Walkable Neighborhoods: A Community Toolkit

A basic communications plan to help the city promote walkability.

# Strategy 5: Talk the Walk

## WOODARD PARK WALKING ROUTES

### 1 Route #1 ~

This casual 1.4 mile loop starts by heading south from Woodard Park to SW Johnson. Walk down Johnson until SW Grant where you will take a Left and walk to connect to the brand new segment of the Fanno Creek Trail. Take the trail southeast, going under Hwy 99 before reaching Main Street, where you can enjoy the local flavor of Tigard businesses. From there walk northeast on Main Street until reaching Tigard Street where you take a left, again going under Hwy 99, heading northwest on this return portion of the loop. You will see the railroad tracks to your right where there is a plan for future trail development. When you reach SW Katherine St. take a left and walk for about 500 ft. until Karol Ct., where you will take another left to head south, back to Woodard Park to finish the loop.

### 2 Route #2 ~

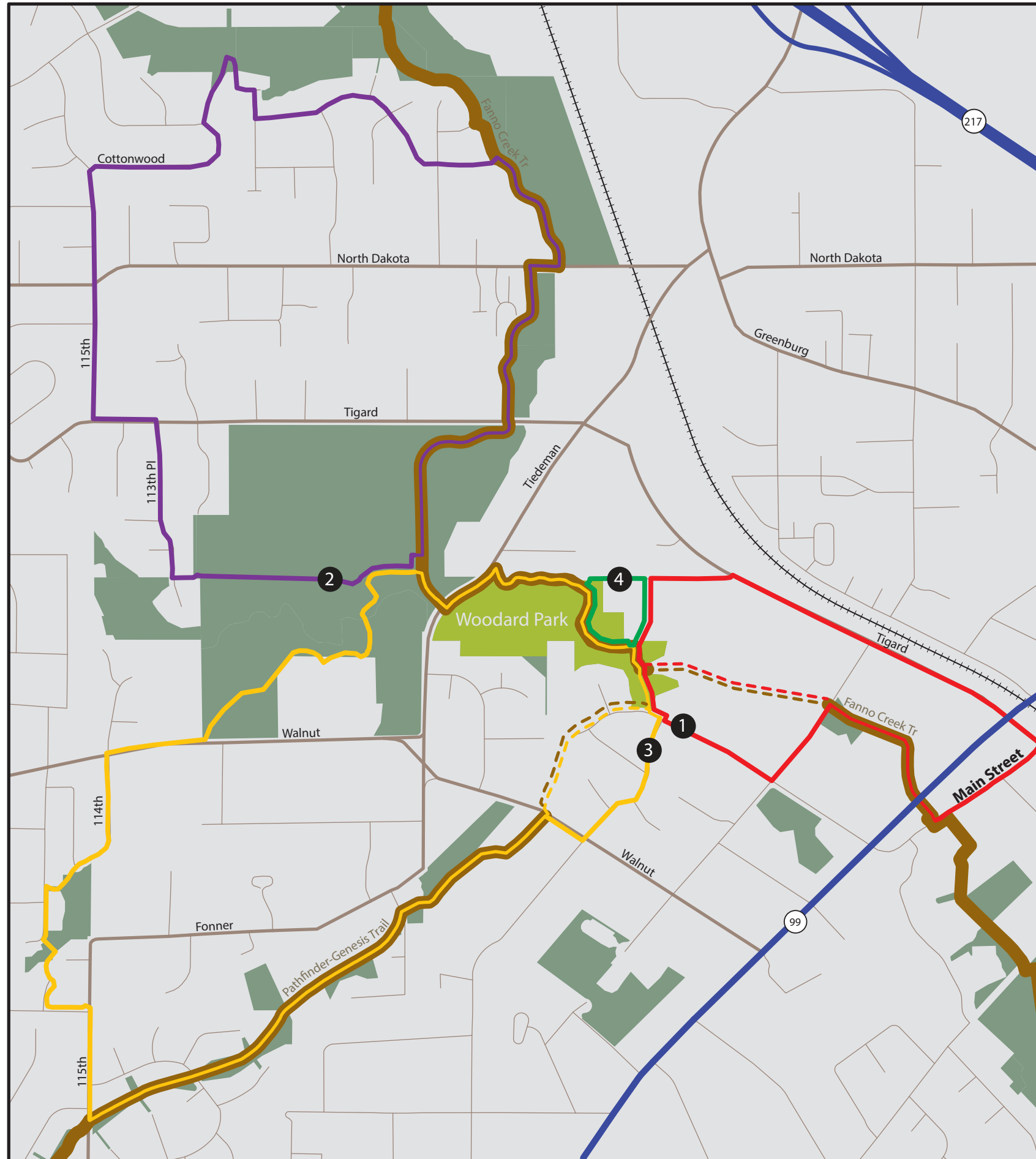
This 2.6 mile loop also begins by heading south from Woodard Park to SW Johnson, but you take a quick right on SW Brookside and walk until reaching SW Walnut. Take care while crossing Walnut and take its sidewalk northwest until reaching SW Pathfinder Ct which is a dead-end street where you will take a left. At the end of the cul-de-sac, you begin the Pathfinder-Genesis trail. Begin walking southwest and enjoy the quiet natural surroundings as you head along Krueger Creek. Continue walking for about 2/3 of a mile until reaching SW 115th. Head north on this quiet street's sidewalk until the sidewalk ends then carefully continue for about 50 feet before turning left on SW Fonner, and a quick right on SW 116th Pl. A cut-through trail at the end of the cul-de-sac will lead you to 116th Ave. Take this street for about 350 feet until reaching a paved trail on your right. Taking this will get you to SW 114th Terrace, where you will head north to SW Walnut. Take a right on Walnut and walk through Fowler Middle School's parking area until you reach a path. Follow this path behind the school until the next path which is the Fowler Woods Trail. This trail heads north and then east until reaching the Fanno Creek Trail, where you will head south, crossing SW Tiedeman at the marked crosswalk to reach Woodard Park.

### 3 Route #3 ~

This 2.6 mile loop takes you across SW Tiedeman, briefly along the Fanno Creek Trail until reaching the Fowler Woods Trail. Take this trail to SW 113th Pl., up to SW Tigard St. where you will take a left to reach SW 115th. Take a right turn to head north until reaching SW Cottonwood Ln. and follow that around the curve until your first right which is a cul-de-sac. Take the trail at the end of the cul-de-sac which will bring you in to Englewood City Park. Ignore the first left trail you come to and walk a few more feet to take a right on a well traveled path that will take you southeast. After traveling on this path between two houses you will end up on SW Mary Pl. Continue on this until reaching SW Black Diamond Way where you will take a left and continue until meeting back up with the Fanno Creek Trail. Take a right on Fanno Creek Trail and walk until you get back to Woodard Park, after using the cross walk on SW Tiedeman.

### 4 Route #4 ~

This quick route is a third of a mile and allows you to walk from Woodard Park along a small section of the Fanno Creek Trail before quickly heading back east along the SW Katherine Street, a Tigard neighborhood street, until reaching SW Karol Court. Here is where you will take a right, continuing down Karol Court until coming back to Woodard Park



### TIGARD TRAIL CONNECTIONS



*These routes are easy to moderate in difficulty. Not all sections are ADA accessible. You assume risk for your safety when walking these routes.*

# Implementation

The city of Tigard has done great work creating pedestrian connections through residential neighborhoods. With priorities for walkable neighborhoods set by Tigard staff and elected officials for the Strategic Plan, realizing the goals and objectives of many years of planning may consist of building sidewalks on certain arterial and collector roads, developing more neighborhood commercial destinations and providing signage and activities on trails and in parks. The table below illustrates existing policy and other support in Tigard's long-range planning documents speaking to walking.

Implementing the plan's recommended strategies and using its supplemental tools will build on a significant body of recent planning work. New opportunities exist in strengthening partnerships with regional Safe Routes to School representatives, employing frequent, targeted communications about walking, and involving community groups to permit and install signage for trails and to activate parks with events and community gardens. These, and other recommendations in this plan for walkable neighborhoods, will continue to advance Tigard's legacy of improving pedestrian access.

PLAN: >> STRATEGY: √	COMP PLAN (2007)	NBRHD TRAILS (2009)	TSP (2010)	TRAILS MSTR PLN (2011)
1. Safe Routes to School • Adopt SRTS Policy	Chapter 8, Policy 20	Action Item 1.2	Goal 3, Policy 10	Destinations, Pg. 12
2. Active Parks & Trails • Programming Board	Chapter 8, Policy 4	Action Item 4.1	Goal 3, Policy 9	Destinations, Pg. 13
3. Neighborhood Centers • Policy Changes	Chapter 2, Policy 15(c)		For Future Study, Pg. 46	Destinations, Pg. 12
4. Simple Signs • Pedestrian Sign Policy • Dead-end exceptions	Chapter 8, Policy 16	Action Item 2.1	Goal 4, Policy 1	Signing, pg. 68
5. Talk the Walk • Neighborhood walk maps • Communications Plan • Community Toolkit	Chapter 8, Policy 11			



# Appendices and Supplemental Tools

## APPENDICES

The following three appendices provide useful background information, context, and additional resources for the Walkable Neighborhoods Plan for Tigard.

### **Appendix A: Literature Review - pg 38**

A review of current literature around GIS-based analysis for pedestrian travel, walkability, and role of neighborhood-scale commercial activity.

### **Appendix B: Existing Conditions - pg 41**

A summary of existing plans, policies and current zoning that pertain to walkability.

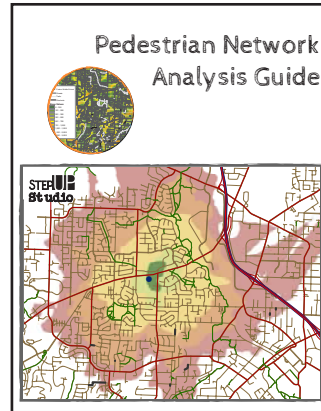
### **Appendix C: Case Studies - pg 46**

Summaries of lessons to learn from a handful of other cities.

## SUPPLEMENTAL TOOLS

The following set of tools were created to support continued implementation of the five walkability strategies, as well as the City of Tigard's efforts to promote walkability through their ongoing strategic planning process.

### **Pedestrian Network Analysis Guidebook**



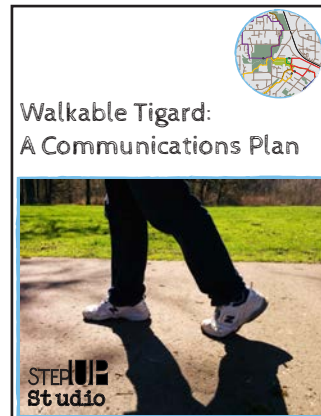
A step-by-step how-to guide for continued use of the Pedestrian Network Analysis ArcGIS tool.

### **Walkable Neighborhoods: A Community Toolkit**



A simple guide book for community members containing steps they can take to make their city and neighborhoods more walkable.

### **Walkable Tigard: A Communications Plan**



A basic communications plan to help the city promote walkability.

Walk on, Tigard.

STEPUP  
Studio

June  
13<sup>th</sup>  
2014



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