

CITY OF SANDY
**DOWNTOWN
WALKABILITY
ASSESSMENT**

ACKNOWLEDGMENTS

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CONTENTS

EXECUTIVE SUMMARY 5

INTRODUCTION 7

PURPOSE AND OBJECTIVES 8

PROJECT BOUNDARY 9

NEED FOR ASSESSMENT 9

BENEFITS OF WALKABILITY 12

EXISTING CONDITIONS 14

TECHNICAL WALKING AUDIT 15

ACCESSIBILITY AND CONNECTIVITY 25

PUBLIC ENGAGEMENT 29

SURVEY 30

POP-UP MAPPING 38

COMMUNITY WALKING AUDIT 39

RECOMMENDATIONS 42



LIST OF FIGURES & TABLES

FIGURES

FIGURE 1.	MAP OF DOWNTOWN WALKABILITY ASSESSMENT BOUNDARY	9
FIGURE 2.	MAP OF INTERSECTIONS AND STREET SEGMENTS ASSESSED FOR PEQI	18
FIGURE 3.	PEQI SCORES FINAL MAP	21
FIGURE 4.	MISSING SIDEWALKS	22
FIGURE 5.	SIDEWALK IMPEDIMENTS AND NARROW SIDEWALKS	22
FIGURE 6.	MARKED INTERSECTIONS	24
FIGURE 7.	CURB RAMP AND PUSH BUTTON ACCESSIBILITY CONDITIONS	27
FIGURE 8.	POP-UP MAPPING ACTIVITY RESULTS	38
FIGURE 9.	COMMUNITY WALKING AUDIT GROUP ROUTES	39

TABLES

TABLE 1.	PEQI TABLE OF INDICATORS (ORIGINAL)	16
TABLE 2.	MODIFICATIONS TO PEQI INDICATORS FOR SANDY TECHNICAL ADULT	17
TABLE 3.	POSSIBLE SCORES: INTERSECTIONS AND STREET SEGMENTS	19
TABLE 4.	DESCRIPTION OF PEQI SCORES	19
TABLE 5.	INTERSECTION PEQI SCORES BY RANGE	20
TABLE 6.	STREET SEGMENTS PEQI SCORES BY RANGE	20
TABLE 7.	PEDESTRIAN CROSSING SIGNALS TIMING	26
TABLE 8.	SURVEY RESPONSES TO WALKABILITY FACTORS	35
TABLE 9.	SURVEY RESPONSES TO IMPROVEMENTS	36
TABLE 10.	WEIGHTED AVERAGE OF SURVEY RESPONSES TO PRIORITY OF WALKABILITY IMPROVEMENTS	37
TABLE 11.	RECOMMENDATIONS BY RELEVANT GOAL	43



EXECUTIVE SUMMARY

The purpose of the Downtown Walkability Assessment (DWA) is to evaluate the existing pedestrian conditions in downtown Sandy, understand barriers from the community, and create recommendations for improvements.

The purpose of the Downtown Walkability Assessment (DWA) is to evaluate the existing pedestrian conditions in downtown Sandy, understand barriers from the community, and create recommendations for improvements. A walkable and rollable downtown Sandy has benefits for Sandy residents, visitors, and local businesses, including but not limited to improvements in health, safety, accessibility, equity, economic vitality, and reductions in greenhouse gas emissions. Completion of the recommendations as contained in this document will create a more vibrant city center.

Information for the assessment was primarily gathered through a public engagement process with a technical assessment of conditions completed by city staff. The public process consisted of a survey, pop-up mapping activity, and community

walking audit. Collectively, over 200 members of the community provided feedback on walkability. The technical assessment of walkability conditions was completed using a modified version of the Pedestrian Environment Quality Index (PEQI), a scoring method that assesses numerous walkability factors and designates scores to intersections and street segments based upon the presence or absence of existing amenities. The information gathered from both the public process and assessment of existing conditions were the primary factors in creating a prioritized list of twenty-five recommendations. The recommendations are based on various factors including but not limited to existing conditions, cost, pedestrian demand, proximity to attractions, and proximity to services. With adequate funding, the recommendations within this assessment can likely be completed within ten years.

WHAT MAKES A CITY WALKABLE?

Walkability refers to how safe, welcome, and mobile pedestrians feel in a built environment. Higher walkability is associated with better health, higher economic prosperity, and a greener environment.





INTRODUCTION

As the City of Sandy continues to experience population growth, a vibrant city center will help build community and enhance quality of life for all Sandy residents.

Historically, the City of Sandy's downtown has centered around the Highway 26 couplet of Pioneer and Proctor Boulevards. Pioneer and Proctor Boulevards, from Bluff Road to Ten Eyck Road, are home to local businesses as well as civic and community spaces. Both Pioneer Boulevard and Proctor Boulevard route travelers to Sandy River, Mount Hood, and Central Oregon. Sandy's downtown is essential to residents and visitors alike, yet it also poses challenges as a high-volume vehicle and truck route. The DWA identifies existing barriers in downtown Sandy and provides solutions benefiting Sandy residents, visitors, and local businesses.

PURPOSE AND OBJECTIVES

The DWA assesses the current pedestrian environment of downtown Sandy and its connectivity to surrounding residential and parkland or open space areas. The DWA identifies several goals and objectives that drive the assessment. The goals for this assessment were created with the following guiding values related to walkability and the idea of creating a more vibrant downtown:

- **Livability:** Provide a high quality of life by providing alternative transportation options to a mix of amenities.
- **Safety and Health:** Enable people to safely walk, run, or roll (i.e., wheelchairs) around and to/from downtown.
- **Accessibility:** Provide pedestrian conditions that are suitable for individuals of all mobility levels, including people with visual, hearing, and mobility impairments.
- **Feasibility:** Use resources efficiently to make improvements.
- **Economic Vitality:** Encourage visitors and residents to invest in local businesses within the downtown.
- **Community:** Encourage community engagement and socializing through walking and rolling.

Overall, the recommendations are categorized into three main goals.

GOALS

- 1 IMPROVE PEDESTRIAN SAFETY AND COMFORT IN DOWNTOWN
- 2 IMPROVE PEDESTRIAN ACCESSIBILITY IN DOWNTOWN
- 3 IMPROVE PEDESTRIAN CONNECTIVITY IN DOWNTOWN

In order to achieve these goals, the City has identified three key objectives for this project:

OBJECTIVES

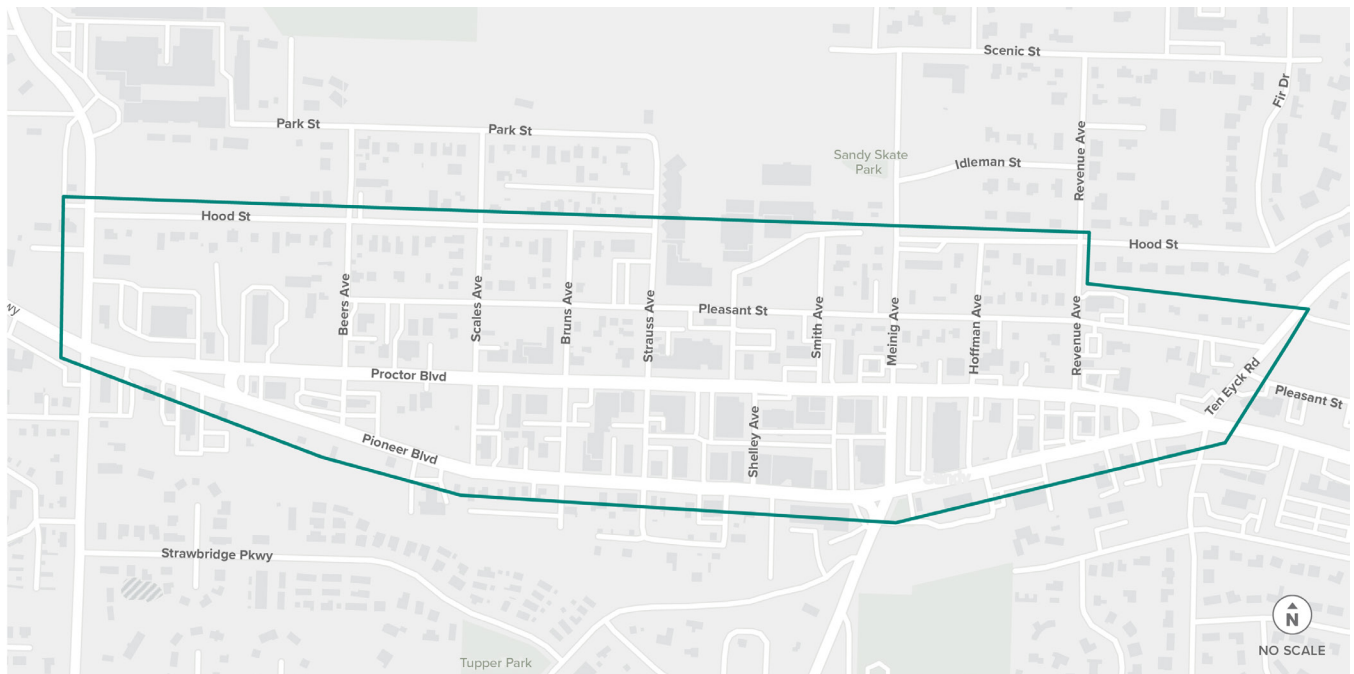
- 1 IDENTIFY WALKABILITY AND ROLLABILITY BARRIERS IN DOWNTOWN SANDY
- 2 IDENTIFY WALKABILITY IMPROVEMENTS THAT ARE REALISTIC AND FEASIBLE FOR DOWNTOWN SANDY
- 3 IDENTIFY PRIORITY AREAS FOR WALKABILITY IMPROVEMENTS BASED ON AREAS OF HIGH PEDESTRIAN TRAFFIC AND PROXIMITY TO FACILITIES AND/OR ATTRACTIONS

PROJECT BOUNDARY

The boundary of the Downtown Walkability Assessment (DWA) is defined in Figure 1 below. The study area is bounded to the north by Hood Street,

to the south by Pioneer Boulevard, to the east by Ten Eyck Road, and to the west by Bluff Road.

FIGURE 1. MAP OF DOWNTOWN WALKABILITY ASSESSMENT BOUNDARY



NEED FOR ASSESSMENT

Realizing the potential for a downtown core to serve a growing population, the City of Sandy started the urban renewal district in 1998 to implement goals and objectives of the Comprehensive Plan and to implement downtown development strategies. Several Comprehensive Plan policies were used for guidance in the urban renewal plan including connecting developments with safe and direct sidewalks, improving bicycle and pedestrian travel between residential areas and the downtown, and achieving a pedestrian-oriented city center. It was believed that enhancing public safety, providing for a more productive use of land in the urban renewal area, and making improvements to infrastructure would assist in creating a vibrant city center.

Since the adoption of the Urban Renewal Plan in 1998, the City has adopted design standards for street right-of-way infrastructure, design standards for buildings, installed wayfinding signage, and created a parking district to assist businesses with parking availability. Other projects have also been completed, such as the undergrounding of transmission and communication lines, remodeling of public buildings, and the implementation of the SandyNet fiber system to provide the community with increased Internet speeds.

Another significant service introduction in Sandy was the Sandy Area Metro (SAM) transit department in 2000, decreasing vehicle trips and providing an alternative mode of transportation. SAM provides access to downtown Sandy as well as connections to Gresham, Estacada, and Mount Hood. The Sandy Transit Center is located in downtown Sandy next to the Sandy Historical Society.

In 2015, the City of Sandy's City Council set goals for the 2015-2017 biennium. The City Council set several goals relevant to, and serving as a catalyst for, the Downtown Walkability Assessment, including the following:

- Conduct sidewalk inventories each year to improve pedestrian safety.
- Expand City Hall frontage and include upgrades to security and accessibility.
- Explore solutions to traffic problems at the crosswalk by the Sandy library.
- Work with ODOT to improve signal timing on Highway 26.
- Continue installation of signs per the downtown wayfinding plan.
- Continue the Urban Renewal "façade" program.
- Maintain and build on downtown community events.

Similarly, Clackamas County's Transportation System Plan (TSP), completed in 2013, acknowledges challenges specific to Clackamas County and sets goals relevant to the Downtown Walkability Assessment. The TSP for Clackamas County addresses congestion, traffic crash fatalities, environmental impacts of motor vehicles, economic growth and tourism, and equity and access within the transportation system. Goals relevant to the DWA include:

GOAL 1 Provide a transportation system that optimizes benefits to the environment, the economy, and the community.

GOAL 2 Plan the transportation system to create a prosperous and adaptable economy and further the economic well-being of businesses and residents of the County.

GOAL 3 Promote a transportation system that maintains or improves our safety, health, and security.

GOAL 4 Provide an equitable transportation system.

In 2015, the County added the Clackamas County Active Transportation Plan (ATP) to the TSP. The ATP solidified the County's commitment to pedestrian and bicycle facilities. The ATP also determined bicycle routes in the County to increase bicycle access, as well as to spur tourism and economic development. The DWA complements the TSP as it promotes safety, health, and economic development efforts in the City of Sandy.

The Cedar Ridge Middle School and Sandy Grade School Safe Routes to School Plan was completed and published in 2020. The plan's vision stated "the Oregon Trail School District community envisions a future where children and their families safely, comfortably, and conveniently walk and bicycle as part of the daily school commute and a healthy lifestyle." The plan identified barriers to walking and rolling to Cedar Ridge Middle School and Sandy Grade School, and provided recommendations based on safety assessments, observations made at student drop-off and pick-up, and community meetings. The plan prioritized ensuring students could walk and bike to and from campus within a quarter mile of the schools – a distance that would include the City of Sandy's downtown area.

Two other projects are currently underway in Sandy: the Pleasant Street Master Plan and the Sandy Community Campus. The Pleasant Street Master Plan will define a vision for an expanded downtown Sandy north of Proctor Boulevard focusing on a pedestrian-centric commercial corridor. The Pleasant Street commercial corridor will give pedestrians an option in downtown that is not located on a high-volume trucking route. The development of the Sandy Community Campus (formerly owned and operated by the Oregon Trail School District as the former location of the Cedar Ridge Middle School) to the north of Pleasant Street will eventually transform the property into a multi-generational community/aquatic facility. This facility located in the downtown and within close walking distance of schools and the



library will benefit the community for decades into the future.

In addition to City of Sandy goals and objectives, the evolving concerns around increases in obesity, decreases in physical activity, especially among youth, and environmental impacts caused by petroleum-based transportation have Planning Division staff concerned. Creating a walkability assessment that defines obstacles and creates recommendations to implement safe walking routes will hopefully encourage more active lifestyles through walking, reduce the use of petroleum-based vehicles, provide additional civic and community spaces, and create more opportunities for local businesses and residents.

Following several downtown developments and programs as well as City of Sandy and Clackamas County planning goals, the Downtown Walkability Assessment was initiated in 2017. The completion of the assessment took a two-year hiatus between planning internships due to staff workloads. The Downtown Walkability Assessment was primarily created through input from the community. Community input was collected through a walking audit, pop-up public mapping sessions, a community

survey, and a stakeholder committee. Technical analysis of existing walkability conditions and needs in Sandy's downtown aligned with community outreach efforts to create the DWA.

BENEFITS OF WALKABILITY

There are numerous benefits to creating and enhancing walkable environments. The benefits of walkability to communities can be broken into the following categories:¹



HEALTH

The health benefits for walkability can be separated into three main categories – reductions in cardiovascular issues, weight loss, and reductions in vehicular crashes. Walkable neighborhoods lower rates of traffic fatalities, reduce pollution from vehicles, and improve physical health by increasing opportunities for physical activity.

When discussing health benefits correlated to walkability, it is important to note there are benefits beyond improving physical health, such as helping people maintain or improve mental health.

EQUITY AND ACCESSIBILITY

Creating and enhancing walkable and rollable environments benefits all people, but particularly benefits vulnerable populations such as older adults, youth, people with visual and/or mobility impairments, low-income communities, and communities of color.² For example, as adults age, they may lose the ability or desire to drive a motor vehicle and are more likely to have visual and/or mobility impairments. Building a connected walkable and rollable network helps older adults and/or visually- and mobility-impaired populations to access services and resources, and maintain a sense of independence. Sidewalk and intersection improvements especially benefit those with mobility impairments. Similarly, youth without access to a driver's license rely on a connected walkable street network to access educational facilities, for example the Sandy Public Library, AntFarm, and Sandy Grade School.

ECONOMIC

A pedestrian-friendly environment is an important component of, or contributor to, a thriving downtown. The compact nature of infrastructure and customer-oriented businesses in downtowns create a great setting for walkability. "A bustling downtown flourishes when people get out of their vehicles and browse through shops, stop to have a bite to eat, and interact with their fellow community members."³ Foot traffic provides more exposure for local downtown businesses, which can significantly help the profitability of business.

1 Speck, Jeff. "Walkable City Rules: 101 Steps to Making Better Places." 2018. Island Press.
 2 Speck, Jeff. "Walkable City Rules" pp 8-9.
 3 <https://extension.ucdavis.edu/sites/default/files/walkability.pdf>

When accessibility and safety increase in the city center, a higher concentration of businesses is more likely. A more compact urban environment creates an ideal destination for walking from business to business, rather than necessitating driving to multiple destinations. Multiple small businesses in a downtown are also more likely entrepreneurial ‘mom and pop’ businesses that help create a sense of place and enable existing residents to become independent business owners. Having business owners who are invested in the community is valuable to the long-term success of Sandy and the vibrancy of the downtown.

WALK SCORE

Walk Score uses a patented methodology based on state-of-the-art research and analysis of hundreds of walking routes to nearby amenities in cities all over the country. Points are given according to the walking distance to amenities. Walk Score also analyzes variables such as block length and intersection density.

Real estate values also benefit from increases in walkability. Walk Score is a website that calculates neighborhood walkability, giving point values primarily based on vicinity to amenities while also factoring in population density and road metrics.¹ One study found an increase in real estate values of approximately \$500 to \$3,000 per one Walk Score point.² According to Redfin, research has shown that

one point of Walk Score is worth \$3,250 in home value.³ Additionally, owning and operating vehicles are large expenses for most Americans. The average household cost to own and operate one car in the U.S. is \$9,000 per year.⁴



COMMUNITY

Increasing the vibrancy of walkable environments can also help increase the number of social interactions, creating more connections and relationships amongst communities and neighborhoods.⁵ In fact, a University of New Hampshire study found that residents living in more walkable neighborhoods trusted their neighbors more, and volunteered and participated in community projects more often than residents living in less walkable neighborhoods.⁶ When communities connect parks, schools, libraries, and commercial areas, residents socialize and build community ties. Enhancing the pedestrian environment in downtown Sandy encourages a strengthened sense of community and identity.



CLIMATE

There are also significant environmental benefits associated with more walking, as has been published for decades by major environmental advocacy groups. Since transportation is responsible for one-third of all U.S. greenhouse gas emissions, walking would help decrease the amount of vehicle usage, and thus, lead to less smog and less traffic.⁷ Reducing greenhouse gas emissions in Sandy should be an altruistic goal for decades to come.

- 1 “Walk Score Methodology.” Walk Score. Web. <<http://www.walkscore.com/methodology.shtml>>.
- 2 Cortright, Joe. “Walking the Walk How Walkability Raises Home Values in U.S. Cities.” Walk Score Blog. CEOs for Cities, Aug 2009. Web. <http://blog.walkscore.com/wp-content/uploads/2009/08/WalkingTheWalk_CEOsforCities.pdf>.
- 3 Bokhari, Sheharyar . “How Much is a Point of Walk Score Worth?.” Redfin. 3 Aug 2016. Web. <<https://www.redfin.com/blog/2016/08/how-much-is-a-point-of-walk-score-worth.html>>.
- 4 Sam Schwartz Engineering , and America Walks. “Benefits of Walking.” America Walks . Web. <<http://americawalks.org/learning-center/benefits-of-walking-2/>>.
- 5 Zhou, Xuemei, Zhipeng Lu, Chia-Yuan Yu, Chanam Lee and George Mann. “Health Impacts of a Walkable Community.” Active Living Research. Mar 2014. Web. <http://activelivingresearch.org/sites/default/files/2014_WalkableCommunities_Zhu-Lee.pdf>.
- 6 Shannon H. Rogers et al., “Examining Walkability and Social Capital as Indicators of Quality of Life at the Municipal and Neighborhood Scales,” *Journal of Applied Research in Quality of Life* 6, no. 2 (2011): 2013.
- 7 Sam Schwartz Engineering , and America Walks. “Benefits of Walking.” America Walks . Web. <<http://americawalks.org/learning-center/benefits-of-walking-2/>>.



EXISTING CONDITIONS

The walkability of the existing conditions in downtown Sandy were evaluated through a technical walking audit that assessed pedestrian conditions across multiple factors and criteria.

TECHNICAL WALKING AUDIT – PEDESTRIAN ENVIRONMENTAL QUALITY INDEX (PEQI) ANALYSIS

BACKGROUND

To evaluate the existing walkability conditions in downtown Sandy, staff conducted a technical walking audit. While there are various toolkits to choose from when conducting a walking score audit, the Planning Division used the Pedestrian Environmental Quality Index (PEQI) walkability measurement system, developed by the San Francisco Department of Public Health (SFDPH). The PEQI assessment was chosen for its level of detail in assessing pedestrian conditions, evaluating thirty factors of walkability with separate criteria for intersections and street segments. The final product of the PEQI assessment provides scores to intersections and street segments on a 0 to 100 scale with 0 being the lowest score possible and 100 the highest score possible. For this audit, 30 intersections and 53 street segments were assessed within the project boundaries.

MEASUREMENT SYSTEM

To measure walkability conditions, the PEQI method designated scores for various factors of walkability. The creators of the PEQI, developed a list of different factors, referred to as ‘indicators’ in the PEQI assessment, for street segments and intersections associated with pedestrian environment and safety. The indicators were further divided into five categories, referred to as ‘domains’. The domains include intersection safety, traffic, street design, land use, and perceived safety.

According to the SFDPH, the list of factors was created “based on a review of transportation, planning and public health literature, including existing pedestrian quality or ‘walkability’ indices and level-of-service metrics, design guidelines, and factors associated with increased walking and improved pedestrian safety in empirical research.”¹ The table below includes the full list of walkability factors included in the PEQI method.

PEQI TERMS AND FORMULAS

TERMS:

- **Indicators:** factors of walkability
- **Indicator Response Category:** measurement of factors
- **Domain:** categories of walkability factors

FORMULAS:

- **Indicator Response Category Score Weighed** = (indicator score) x (indicator response category score)
- **Adjusted Score** = (unadjusted score - minimum score) x (100/maximum score - minimum score)

¹ “The Pedestrian Environmental Quality Index (PEQI): An assessment of the physical condition of streets and intersections.” Sustainable Technology & Policy Program (STPP) UCLA. San Francisco Department of Public Health, Fall 2008. Web. <<http://stpp.ucla.edu/sites/default/files/SF%20PEQI%20Methods.pdf>>.

TABLE 1. PEQI TABLE OF INDICATORS (ORIGINAL)

INTERSECTION	STREET INTERSECTION			
INTERSECTION SAFETY	TRAFFIC	STREET DESIGN	LAND USE	PERCEIVED SAFETY
Crosswalks	Number of lanes	Sidewalk width	Storefronts/retail use	Pedestrian scale lighting
Ladder crosswalks	Two-way traffic	Sidewalk impediments	Public art/historical sites	Graffiti
Pedestrian signal	Vehicle speed limit	Sidewalk obstructions		Litter
Traffic signal	Traffic volume	Presence of curb		Construction sites
Crossing speed	Traffic calming features	Driveway cuts		Abandoned buildings
Crosswalk scramble		Trees		
No turn on red signals		Presence of buffers		
Additional signs for pedestrians		Planters/gardens		
Traffic calming features		Public seating		

Once the factors of walkability were chosen, referred to as “indicators” for scoring, they were given scores by the SFDPH. The three sections of the PEQI scoring system were as follows: indicators, indicator response categories, and domain weight. All intersections and street sections were given scores based on a survey SFDPH conducted. The survey consulted national experts (i.e., city and transportation planners and consultants, and pedestrian advocates) on

the importance of each indicator to the pedestrian walking experience. Based on the survey responses to each indicator, a response category was given a score, and domain weights were decided. The final score used for calculations was the ‘indicator response category score weighted,’ which was equal to the indicator score times the indicator response category. For the full scores original PEQI see Appendix A.

MODIFICATIONS

Since its creation, the PEQI scoring system has continued to evolve. Indicators for the PEQI performed in Sandy were chosen from several versions of the PEQI method. Some factors used in the San Francisco PEQI assessment were omitted from the Sandy PEQI and other factors were added or given different weights to better evaluate the conditions and needs in downtown Sandy. It was important that the modifications were not extreme so comparisons of walkability to other geographic locations could still be made. Adjustments included

omissions and additions of indicators, changes to scores of indicator responses, and changes to domain weights. See Table 2 for an overview of the modifications. Score changes were evaluated to fit within the existing value range and correctly reflect relative importance to the other indicator and indicator response scores. In total, there were 9 indicators for intersections and 21 indicators for street segments assessed in Sandy with the modified system, resulting in one additional indicator for intersections.

TABLE 2. MODIFICATIONS TO PEQI INDICATORS FOR SANDY TECHNICAL ADULT

INTERSECTION	STREET INTERSECTION			
INTERSECTION SAFETY	TRAFFIC	STREET DESIGN	LAND USE	PERCEIVED SAFETY
Crosswalks	Number of lanes	Continuous sidewalk		Pedestrian scale lighting
High visibility crosswalks	Two-way traffic	Sidewalk width	Consumer-focused businesses and public spaces	Graffiti
Intersection lighting	Vehicle speed limit	Width of throughway		
Pedestrian signal & countdown		Sidewalk impediments		
Traffic control	Transportation Systems Plan classification	Sidewalk obstructions		Vacant lots
Pedestrian engineering countermeasures	Traffic calming features	Driveway cuts, trees, presence of buffers, planters/gardens, public seating/ public art		Derelict/vacant buildings
Intersection calming features				
Unprotected crossing distance				

DATA COLLECTION, ENTRY, AND MAPPING

Using the original PEQI audit form as a template, an audit form was created with modifications reflecting the indicators chosen for the Sandy PEQI Technical Walking Audit. The audit form listed all potential response options to all indicators for intersections and street segments, with separate response areas for different sides of street segments (i.e., north and south sides, or west and east sides). See form in Appendix A.

The audit forms were completed by walking the areas of the assessment and gathering the data through visual evaluation. There were a few factors not determined by walking and, therefore, they were omitted from the audit form. The factors not included on the audit form were unprotected crossing distance measured in Google Earth, and Transportation System Plan classifications. A total of 30 intersections and 53 street segments were audited, with separate evaluations for each side of the street segments. See

Figure 2 below for a map identifying locations of all street segments and intersections included in the PEQI assessment.

Once the information was gathered for all the intersection and street segments in the assessment, data entry and analysis followed. Scores were determined by the responses to each of the indicator response categories to determine the individual score for each factor. The indicator response category weight was calculated by multiplying the domain weight by the indicator category response score. Then all the weighted scores for every factor in an intersection or street segment were added together to give a final score for the individual intersection or street segment. Once all individual intersections and street segment scores were calculated they were adjusted to fit the 0 to 100 scale, which required a preliminary calculation of the highest possible score and lowest possible score of intersections and street segments. The minimum and maximum scores for this audit are contained in Table 3.

FIGURE 2. MAP OF INTERSECTIONS AND STREET SEGMENTS ASSESSED FOR PEQI

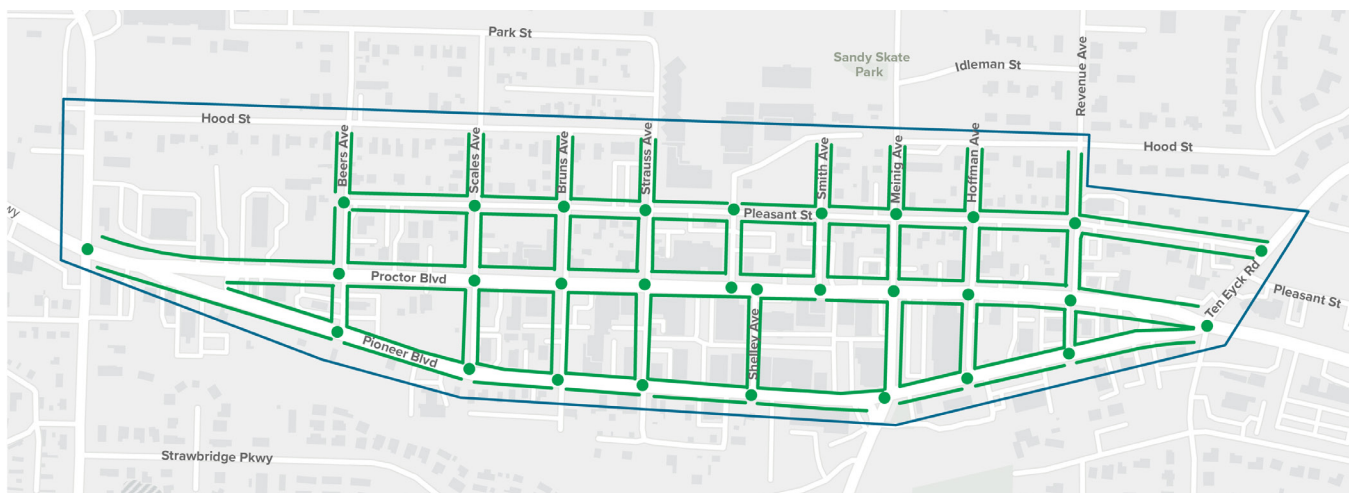


TABLE 3. POSSIBLE SCORES: INTERSECTIONS AND STREET SEGMENTS

	MAXIMUM SCORE	MINIMUM SCORE
INTERSECTION	175	65
STREET SEGMENT	348	118

Once the maximum and minimum scores were calculated, the scores were adjusted. The adjustment to the scores was completed using the following equation:

Adjusted score = (unadjusted score – minimum score) * (100/maximum score – min score)

Once the scores were adjusted, they could be compared to the scale of walkability created by SFDPH.

TABLE 4. DESCRIPTION OF PEQI SCORES

INTERSECTION AND STREET SEGMENT SCORE RANGE	PEDESTRIAN CONDITIONS
0 - 20	Environment not suitable for pedestrians; pedestrian conditions absent
21 - 40	Poor pedestrian conditions exist
41 - 60	Basic pedestrian conditions exist, but room for improvement
61 - 80	Reasonable pedestrian conditions exist; some important pedestrian conditions present
81 - 100	Ideal pedestrian conditions exist; many important pedestrian conditions present

RESULTS AND ANALYSIS

In this section, street segment refers to individual sides of each street segment; that is, the north/south or east/west side of 53 street segments (blocks) were assessed but there were 106 street segment scores (one for each side of the road on each segment).

The average intersection score (see Table 5) was 45 and the average street segment score (see Table 6) was 51. Both of these scores fell in the middle scoring category with corresponding pedestrian conditions of ‘basic pedestrian conditions exist, but room for improvement.’ For intersections, the most common scores were in the 21 to 40 range, which reflected that ‘poor pedestrian conditions exist’ at half of all intersections. For the street segments, the most common scoring category was 41 to 60 range, where ‘basic pedestrian conditions exist, but there is room for improvement.’

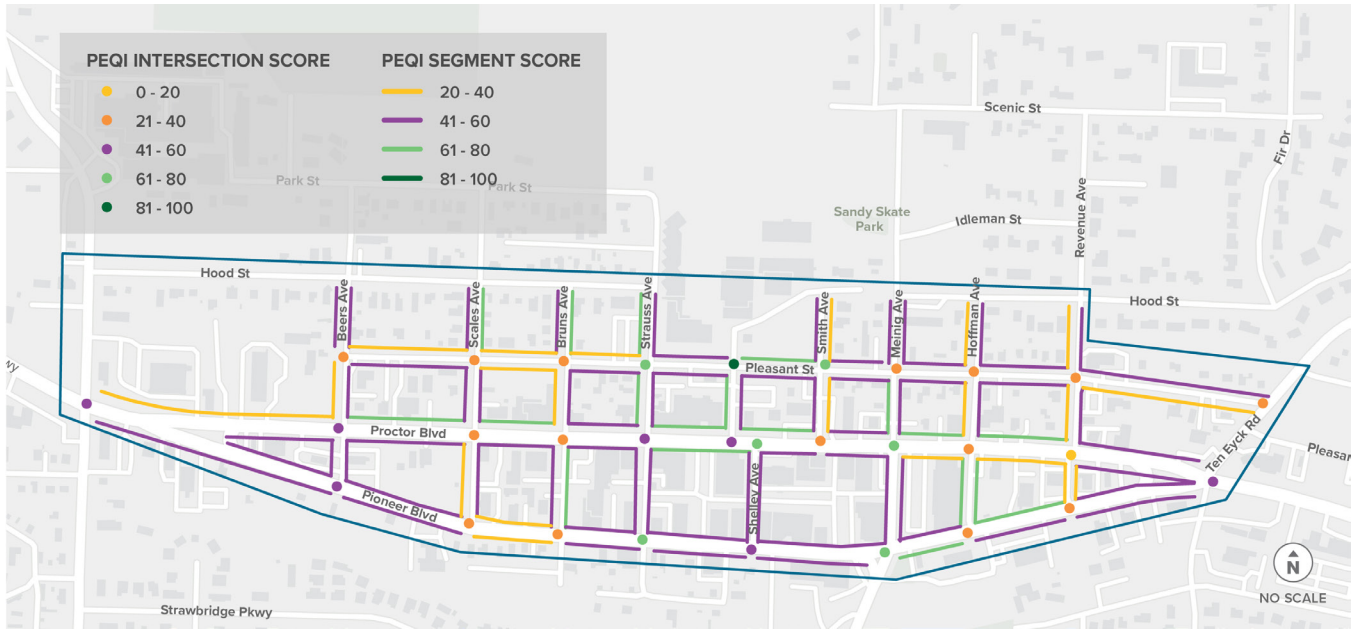
TABLE 5. INTERSECTION PEQI SCORES BY RANGE

SCORE RANGE	NUMBER OF INTERSECTIONS IN RANGE	PERCENTAGE OF INTERSECTIONS IN RANGE
0 - 20	1	3%
21 - 40	15	50%
41 - 60	7	23%
61 - 80	6	20%
81 - 100	1	3%

TABLE 6. STREET SEGMENTS PEQI SCORES BY RANGE

SCORE RANGE	NUMBER OF STREET SEGMENTS IN RANGE	PERCENTAGE OF STREET SEGMENTS IN RANGE
0 - 20	0	0%
21 - 40	20	19%
41 - 60	67	63%
61 - 80	19	18%
81 - 100	0	0%

FIGURE 3. PEQI SCORES FINAL MAP



SIDEWALKS

When assessing the street segments with the lowest scores – those between 21 to 40 – almost all had pavement gaps in the sidewalks. Note that for this assessment, the “not continuous sidewalks” determination means there is not consistent sidewalk infrastructure throughout the street segment, which can range from large portions of no sidewalk infrastructure to areas where asphalt in driveway or parking lot entryways act as the sidewalks.

The existing sidewalks within the assessment boundary were of fair width; a majority fell between five to eight feet. A few sidewalk segments were very narrow, with a width of less than five feet.

In comparison to sidewalk width, sidewalk clearpath widths were much narrower in most sidewalk sections, with most less than four feet or four to

six feet. The primary reason is the presence of obstructions. Throughout the study area there were numerous types of sidewalk obstructions, temporary and permanent, including but not limited to utility poles, sign poles, mailboxes, flower pots, utility boxes, parked cars, and more. Seventy-five percent of the street segments with continuous sidewalks had temporary and/or permanent obstructions. Impediments were also a sidewalk walkability concern in the study area. Impediment conditions included uneven sidewalks, and crumbling concrete sidewalks. All the conditions listed above are important when addressing walkability and accessibility. Having continuous sidewalk infrastructure in good condition is the foundation of a pedestrian-friendly environment. Furthermore, connected, sizable, and smooth sidewalk infrastructure is more accessible.

FIGURE 4. MISSING SIDEWALKS

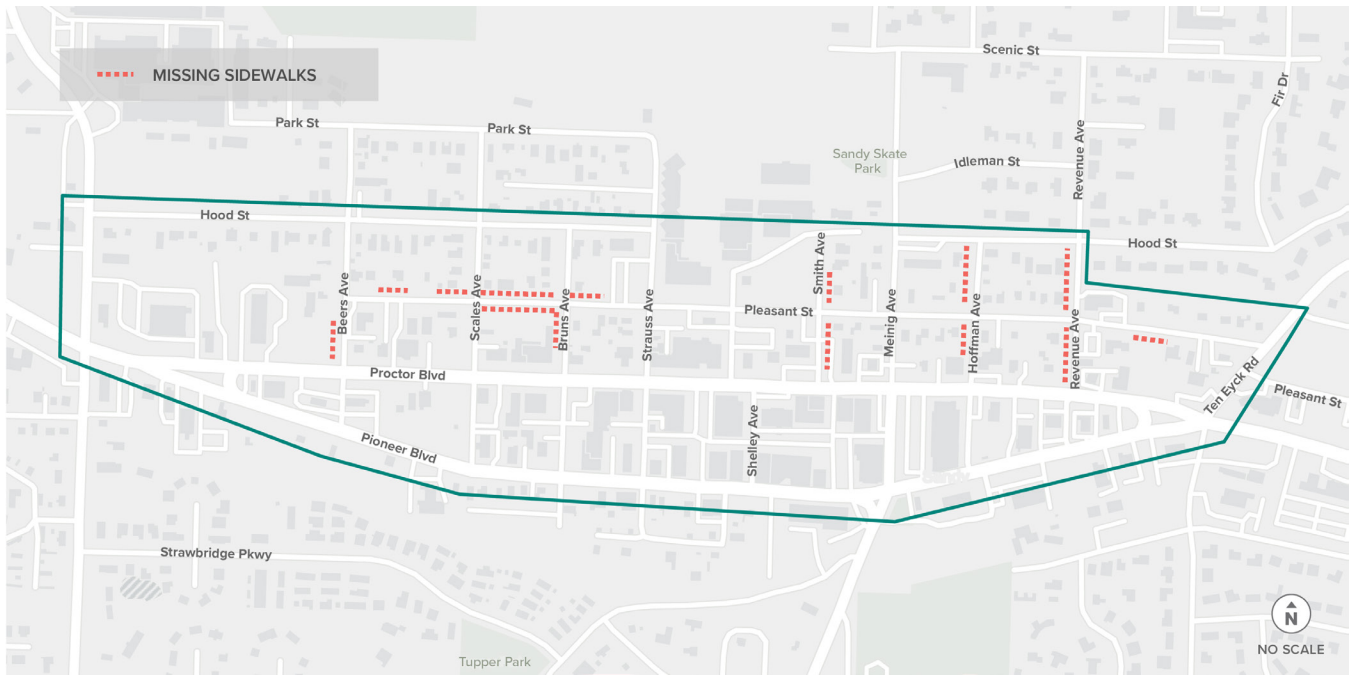
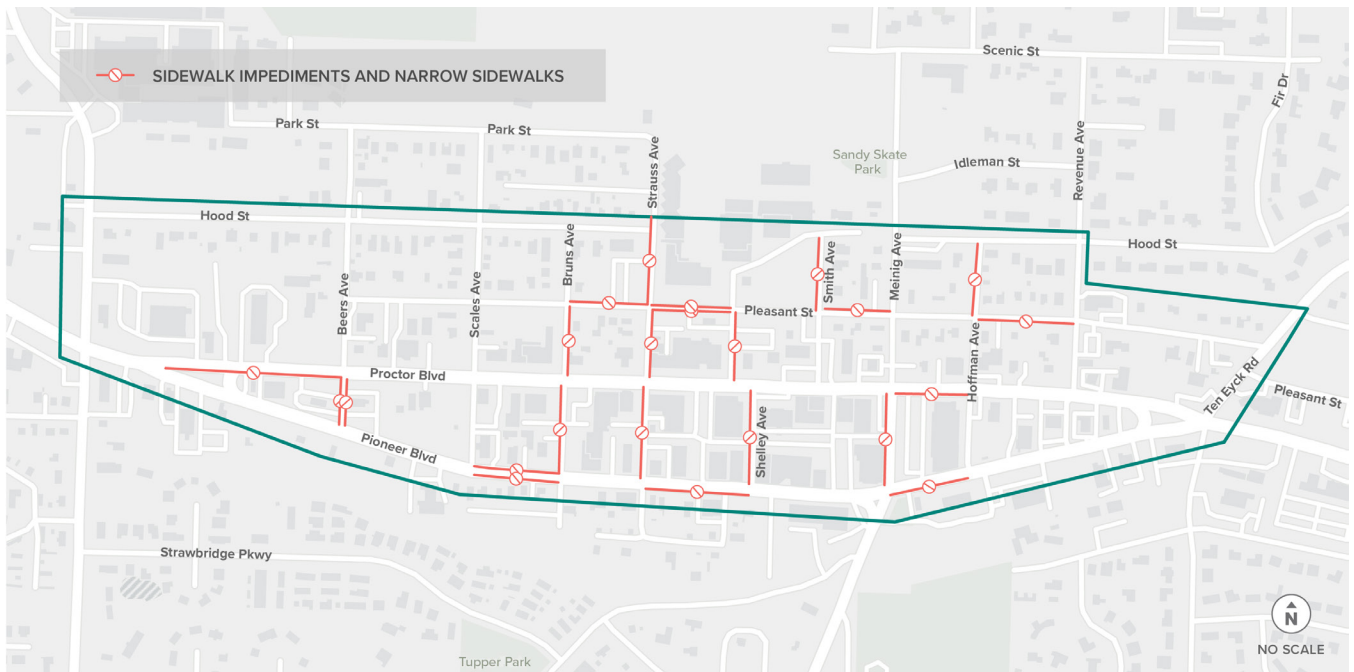


FIGURE 5. SIDEWALK IMPEDIMENTS AND NARROW SIDEWALKS



COMFORT AND AMENITIES

Driveway cuts are an important part of comfort for pedestrians. Forty-two percent (45 of 106) of street side segments had more than three driveway cuts for their block. Less than one percent of street segments had no driveway cuts. Twenty-seven percent of street segments had street trees. The trees assessed were limited to street trees between the clearpath pedestrian zone and the curb. Buffers between pedestrian areas and traffic existed on almost every street segment; buffers included on-street parking and bike lanes. Almost every street segment had buffers between the pedestrian areas and traffic (travel lanes). Parallel parking was present along almost every street in the study area. Also, the south side of Pioneer Boulevard and the north side of Proctor Boulevard both include existing bike lanes.

Planters were found throughout the downtown, predominantly located on Proctor Boulevard and on almost every street segment between Beers Avenue and Ten Eyck Road. Planters were found on 24.5 percent of sides of street segments. Public seating and public art were amenities that were less prevalent throughout the study area. Only four segments contained public art, which consisted of murals and sculptures. Public seating was found along ten street segments, again most heavily concentrated along Proctor Boulevard and the couplet area west of Meinig Avenue.

Within the couplet – Pioneer Boulevard, Proctor Boulevard, and their connecting roads – there are an abundance of customer-focused businesses and entities. Along Pleasant Street a few customer-focused businesses exist, but the main public amenities are Sandy Grade School and the Sandy Aquatics Center.

Outdoor public spaces beyond sidewalk infrastructure were scarce in the assessment boundaries, with Memorial Plaza across from City Hall as the major public space in the downtown.

SAFETY

Numerous derelict and/or vacant buildings and vacant lots were found throughout the study area. Their presence can reduce the comfort and aesthetic of the pedestrian environment. There was no graffiti of significant size found within the project area. Intersection lighting was found throughout the assessment area and every intersection had at least one light, except for Alt Avenue/Shelley Avenue/Proctor Boulevard, which had several pedestrian scale lights around the intersection. Only nine percent of street segments had pedestrian scale lighting.

Data pulled from the Sandy Police Department's crash reports from 2006 to 2016 showed that in that time period, there were a total of 26 motor vehicle crashes involving pedestrians within the city limits. Of those, six were located within the DWA project boundary.

For more detail on motor vehicle crashes involving pedestrians, see Appendix A. To see mapped locations on incidents within the project boundary see, Appendix A.

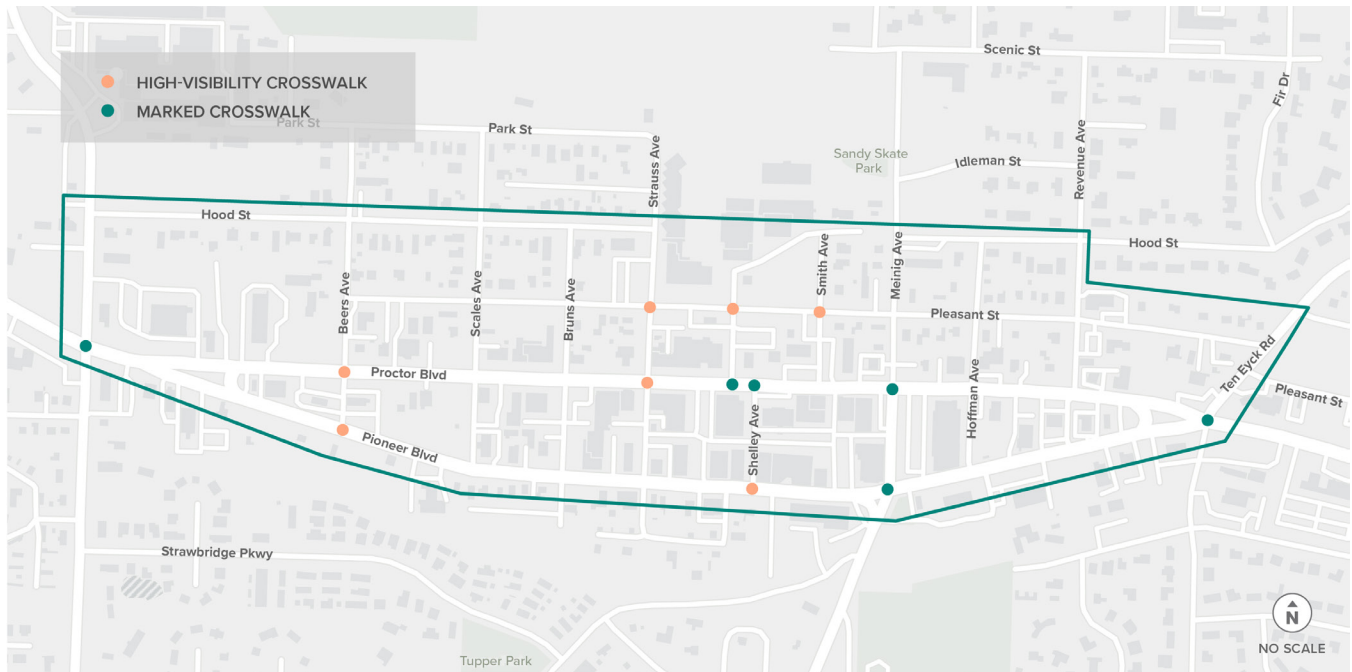
INTERSECTIONS

Almost all the intersections within the assessment area had the basic intersection elements assessed in the PEQI, which included traffic control, intersection lighting, and curb ramps. The only intersection without lighting was Proctor Boulevard at Revenue Avenue. This intersection was also the lowest scoring – the only one to score under 20, due to the lack of intersection lighting, marked crosswalks, and traffic control devices (traffic lights, stop signs, etc.). Only seven of the intersections had high visibility markings. All of the marked intersections in the project area are shown in Figure 6. All the intersections had at least one curb ramp, many with truncated domes. Intersections were not assessed for full ADA compliance; they were simply assessed for the existence of curb ramps and truncated domes.

Many of the curb ramps on Pioneer Boulevard and Proctor Boulevard were oriented to encourage east/west crossing but not to encourage crossing the boulevards, unless there was a marked intersection. Only a few intersections contained intersection calming features or pedestrian engineering

countermeasures, such as bulb-outs and additional signage. More intersection calming features and/or pedestrian engineering countermeasures could be beneficial for improving perceived safety of pedestrian crossings across Pioneer Boulevard and Proctor Boulevard.

FIGURE 6. MARKED INTERSECTIONS



ACCESSIBILITY AND CONNECTIVITY

In addition to PEQI assessments conducted by staff, existing conditions were evaluated by reviewing accessibility standards.

The information in Table 7 on the following page was provided by the Oregon Department of Transportation (ODOT). The information provided insight into some conditions of accessibility in downtown, specifically addressing pedestrian crossing times, pedestrian push buttons, and curb ramps. In the Sandy area there were several training and service centers for those with disabilities, such as Guide Dogs for the Blind and Oral Hull Center for the Blind and Low Vision, that used downtown Sandy as a training area, making it even more important that downtown is accessible for all users. The accessibility information addressed in this assessment was informed by comments related to accessibility expressed by the public.

Table 7 shows the crossing times at all signalized intersections in downtown. The total walk time shown in the table was calculated by totaling the “Walk” time (in seconds) plus the flashing “Don’t Walk” time. The timing for pedestrian signals was determined by ODOT, which uses the Manual on Uniform Traffic Control Devices (MUTCD) as a guide.

There is potential to allow longer cross times for those with disabilities, providing a comfortable window to cross busy downtown streets, particularly along Highway 26. These suggestions were responses to concerns expressed by the public.

ACCESSIBILITY COMPLIANCE OF CURB RAMPS AND PUSH BUTTONS

The *Oregon Department of Transportation Americans with Disabilities Act Transition Plan (2017)* details information on curb ramps. In 2011, ODOT evaluated curb ramps at approximately 7,000 street intersections

on all state highways, within incorporated cities, and other developed areas. A “Good-Fair-Poor” rating was developed to determine the physical conditions of these ramps, as defined further in the design recommendations in *Public Right-of-Way Accessibility Guidelines*. A “Good” rating indicated curb ramps met the ADA guidelines and the ramp was usable by most, if not all, people with disabilities. A “Fair” rating indicated that curb ramps met ADA guidelines but lacked a detectable warning, such as a truncated dome. A “Poor” rating described curb ramps that did not meet one or more ADA guidelines, making the ramp a barrier for all people with disabilities.

ODOT provides signals at numerous street intersections that control pedestrian traffic as well as vehicular traffic. ODOT has an inventory of these signal-controlled intersections and will refine this inventory to better evaluate pedestrian signals for full accessibility based on current standards. This refinement will improve the inventory of accessibility features at curb ramp locations where a traffic signal push-button is required to activate a street crossing signal.

ACCESSIBILITY ANALYSIS

ADA accessibility conditions in downtown Sandy currently meet some standards, but are not adequate for people with certain disabilities. Some efforts and evaluations have been made but further analysis is needed. Additionally, while certain conditions are deemed compliant or up to standards by governing agencies, the community has expressed that an extra step should be taken to ensure safety and accessibility.

TABLE 7. PEDESTRIAN CROSSING SIGNALS TIMING

INTERSECTION	CROSSING	PHASE #	WALK (SECONDS)	FLASHING DON'T WALK (SECONDS)	TOTAL TIME OF PED. SIGNAL (SECONDS)
Hwy 26 @ Bluff Rd	North across Bluff Rd	6	8	20	28
	East across Pioneer/Proctor	8	10	29	39
	South across Bluff Rd	2	7	18	25
	West across Hwy 26	4	8	29	37
Pioneer Blvd @ Strauss Ave	North across Strauss Ave	2	7	10	17
	East across Pioneer Blvd	4	7	10	17
	South across Strauss Ave	2	7	10	17
	West across Pioneer Blvd	4	7	10	17
Proctor Blvd @ Alt Ave/ Shelley Ave	North across Alt Ave	6	7	10	17
	East across Proctor Blvd	8	7	12	19
	South across Shelley Ave	6	7	12	19
	West across Proctor Blvd	4	7	12	19
Pioneer Blvd @ Meinig Ave	North across Meinig Ave	2	7	13	20
	East across Pioneer Blvd	8	7	14	21
	South across Meinig Ave	2	7	13	20
	West across Pioneer Blvd	4	7	10	17
Proctor Blvd @ Meinig Ave	North across Meinig Ave	6	7	12	19
	East across Proctor Blvd	8	7	15	22
	South across Meinig Ave	6	7	12	19
	West across Proctor Blvd	4	7	15	22
Hwy 26 @ Ten Eyck Rd	North across Ten Eyck Rd	6	7	19	26
	South across Ten Eyck Rd	2	7	15	22
	West across Pioneer Blvd	5	7	15	22
	West across Proctor Blvd	4	7	11	18

FIGURE 7. CURB RAMP AND PUSH BUTTON ACCESSIBILITY CONDITIONS



Source: Oregon Department of Transportation

CONNECTIVITY

Walkable connections, via sidewalks and paths, to Sandy's downtown are also vital to creating a pedestrian network. To encourage walking in the downtown, it is also important to provide easy ways to walk into the downtown.

The following streets are the major connections from neighborhoods to downtown. The Community Walking Audit Checklist was used to evaluate the condition of each connecting street, and the evaluations were completed in October and November of 2019.

1. Ten Eyck Road

Condition: The sidewalks could use improvement as there is no sidewalk on the east side and the sidewalk ends at Hood Court. A curb ramp is also missing when crossing Pleasant Street on Ten Eyck Road.

2. Pathways throughout Meinig Park

Condition: While the pathways throughout Meinig Park are well-marked and developed, there is a significant amount of debris from plants making it slippery for walking and rolling. The lighting on the pathways is also not sufficient for pedestrians.

3. Bluff Road north of Highway 26

Condition: There is adequate sidewalk infrastructure on Bluff Road north of Highway 26, but some overgrown vegetation makes it difficult to walk. There is a vehicle blind spot at Bluff Road and Hood Road, which presents a dangerous crossing for pedestrians.

4. Bluff Road south of Highway 26

Condition: There is adequate sidewalk infrastructure on Bluff Road south of Highway 26, but it is not very wide. Furthermore, the Bluff Road and Highway 26 intersection has a quick pedestrian signal, presenting a challenge to mobility-impaired pedestrians.

5. Wolf Drive

Condition: There are sidewalks on both sides of Wolf Drive from Kimberly Drive to Pioneer Boulevard. However, some street signs are missing and others are hard to see, which can present distractions for drivers. Wolf Drive also could use ADA improvements as there are several missing curb ramps.

6. Strawbridge Parkway

Condition: Strawbridge Parkway has adequate pedestrian infrastructure.


7. Tupper Road

Condition: There is only one sidewalk on the south side of the street, and pedestrians walking and rolling may have a difficult time due to tree debris on the sidewalk.

WALKABILITY IMPROVEMENTS FROM 2000-PRESENT

Other previous City of Sandy improvements to walkability and alternative transportation over the last twenty years or so, include but are not limited to:

- Undergrounding utilities on Proctor Boulevard
- Construction of sidewalks north of downtown
 - » North side of Pleasant Street from Meinig Avenue to Revenue Avenue
 - » Bruns Avenue, both sides, from Pleasant Street to Hood Street
 - » Beers Avenue, both sides, from Pleasant Street to Hood Street
- Creation of the Tickle Creek Trail and Sandy River Trail
- Street furniture upgrades
- Implementation of the downtown flower basket program



PUBLIC ENGAGEMENT

In assessing the conditions of the downtown pedestrian environment, it was important to engage the community to understand their perception of walkability.

Engaging the community to understand their perception of walkability was crucial in assessing the conditions of the downtown pedestrian environment – understanding reasons they do or do not walk, barriers to walkability, and their concerns about the current pedestrian conditions. The community engagement and feedback process consisted of three different outreach techniques – a survey, a pop-up mapping activity, and a community walking audit. This chapter details each of the public outreach techniques and summarizes the feedback received from the participants.

ADVISORY COMMITTEE

The Downtown Walkability Assessment Advisory Committee consisted of interested citizens, elected officials, and representatives from agencies/ departments (see Acknowledgments). The advisory committee met three times throughout the course of the study and provided feedback on various aspects of the assessment.

SURVEY

BACKGROUND

DOWNTOWN WALKABILITY ASSESSMENT



Survey conducted to receive **public feedback** on a range of walkability factors and existing conditions



Consisted of **27 questions**



Most surveys were completed online through **Survey Monkey**, an online survey platform



Total of **150 surveys** were completed



Majority of survey respondents were **Sandy residents** and **local business patrons**

* THE FULL SURVEY CAN BE FOUND IN APPENDIX B.

SURVEY DISTRIBUTION

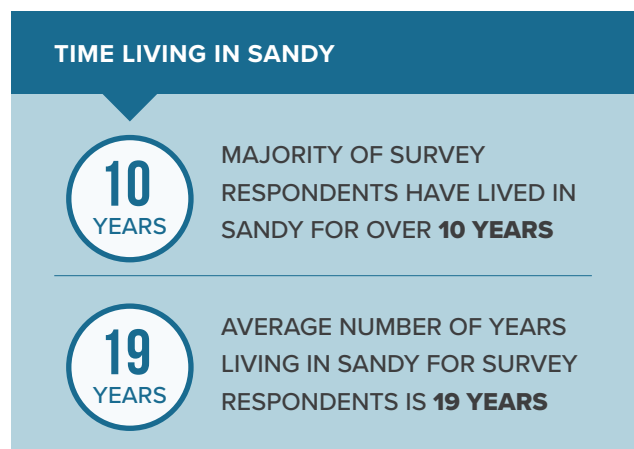
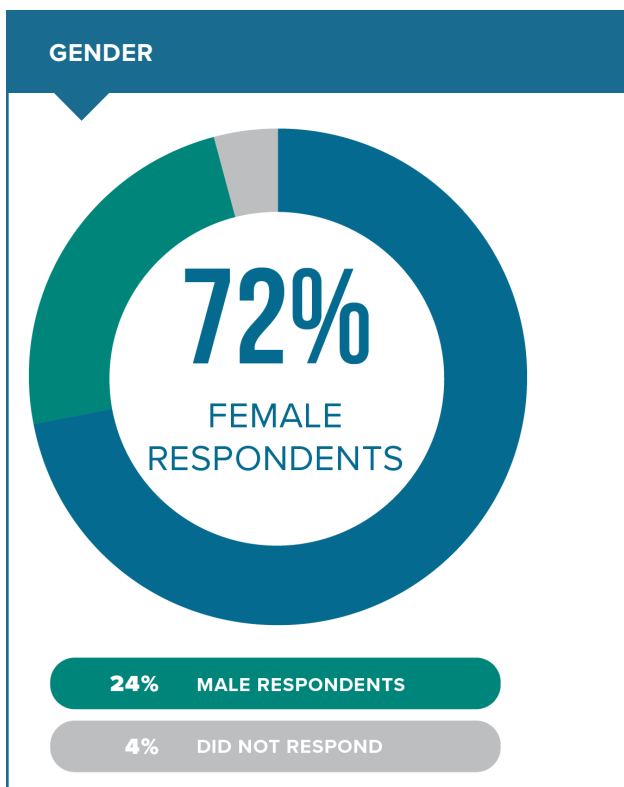
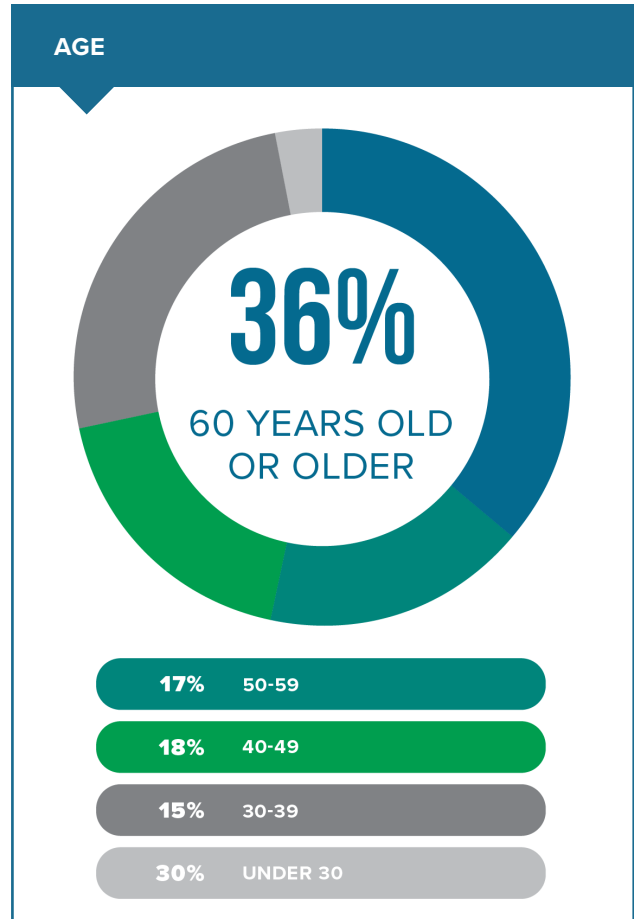
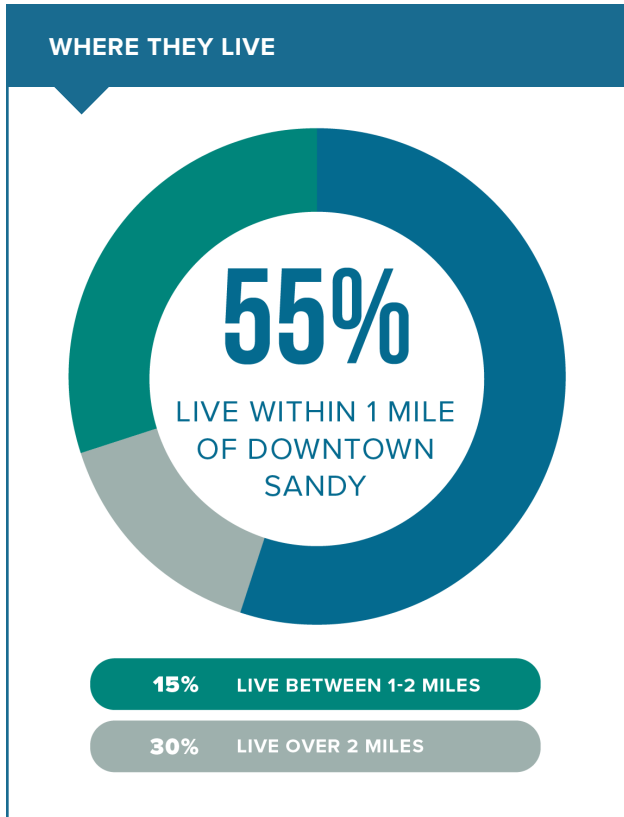
The survey was primarily distributed and completed online through SurveyMonkey. There were e-blasts sent by the Sandy Chamber network and several postings on the City of Sandy's Facebook page. There was also a Sandy Post Article, published on February 14, 2018, that informed and encouraged community members to complete the survey. A notice was also included with the monthly City of Sandy utility bill. Additionally, there was a session at the Senior Center where senior attendees were provided background information on the assessment and had the opportunity to complete paper versions of the survey.

SURVEY ANALYSIS

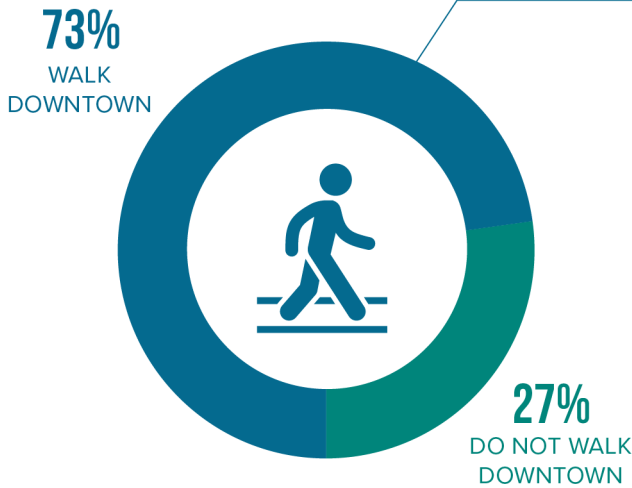
A summarized analysis of the responses to the Downtown Walkability Assessment survey is shown in the following section. To see detailed full survey responses, see Appendix B.

DEMOGRAPHICS

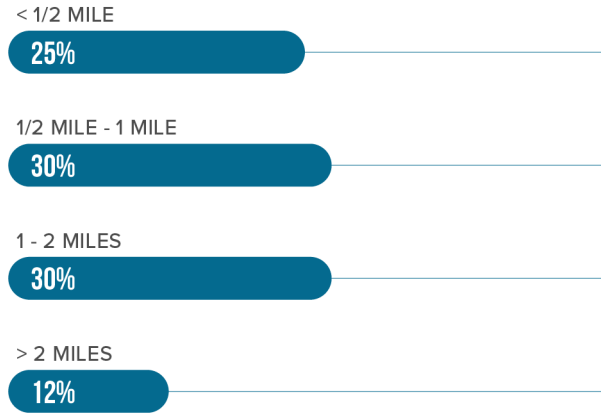
Of the 150 people who participated in the survey:



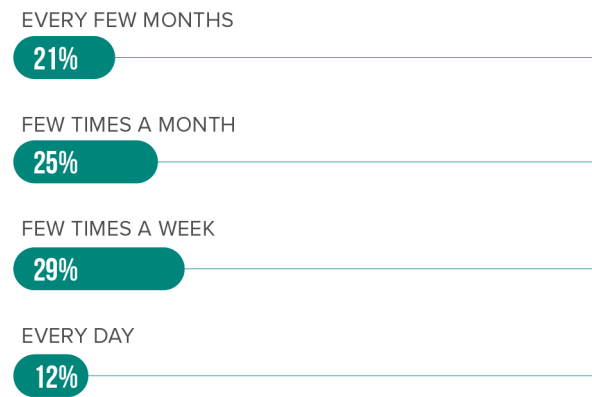
PEDESTRIAN BEHAVIORS



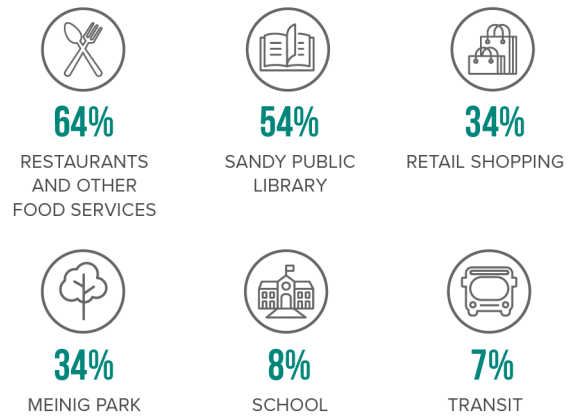
OF THOSE WHO DO WALK DOWNTOWN, RESPONDENTS TYPICALLY WALK:



MOST RESPONDENTS WALK DOWNTOWN:



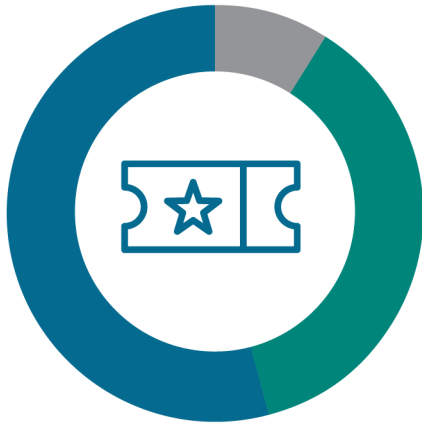
MOST POPULAR WALKING DESTINATIONS:



Some essential service destinations such as transit and school were less popular than other destinations, with much lower response rates of seven percent and eight percent, respectively. It is important to note that the Oregon Trail School District’s system of student-to-school pairing does not necessarily correlate to location of school. For example, a student that lives on Pleasant Street may not attend Sandy Grade School although it is the closest elementary school

to their residence. The proximity of school to home combined with the small percentage of people under 30 years of age responding to this survey provided some indication as to why a low percentage of survey respondents walk to school. Other destinations listed included trails, banks, work, and the Olin Bignall Aquatic Center. Several comments also noted that the purpose of walking was not to reach a destination, but rather for exercising.

“IF THERE WERE MORE EVENTS, ATTRACTIONS, OR DESTINATIONS...”



54% I WOULD WALK DOWNTOWN MORE

37% DEPENDS ON WHAT IT IS

9% I WOULD NOT WALK MORE

Planning staff wanted to understand if having more attractions and destinations in the downtown would influence pedestrian walking behaviors. The study found that 54 percent of survey respondents said they would walk downtown more often if there were more events, attractions, or destinations to walk to in the downtown. Meanwhile, 37 percent said ‘maybe, depends on what it is’ and nine percent said that additional attractions and destinations would not increase their desire to walk downtown. Throughout the survey, various comments stated that some community members thought there were not enough destinations downtown. When asked what events, attractions, and/or destinations would encourage people to walk downtown the suggestions included events similar to First Fridays, better restaurants, family-friendly events, more retail stores, and more festivals (i.e., Mountain Festival).

Understanding the reasons pedestrians walk in downtown Sandy is important for identifying barriers and helping prioritize improvements. The majority

of survey respondents, 62 percent, said they walk downtown ‘for exercise for my pet, my children, or myself,’ followed by 45 percent of respondents doing so for recreation, and 42 percent of respondents saying they walk to shop or complete errands. Several respondents stated they walk during breaks at work and because it is more efficient than driving around downtown. One survey respondent commented “the street layout wastes gas and time. Walking is faster. Really! This is because of how the streets are laid out and the signals work.”

TOP REASONS RESPONDENTS WALK DOWNTOWN:

EXERCISE FOR MY PET, MY CHILDREN, OR MYSELF

62%

RECREATION

45%

TO SHOP OR COMPLETE ERRANDS

42%

To understand connectivity and walkability barriers, survey respondents were asked if they typically take the fastest route when walking to the downtown. Sixty percent of survey respondents said they do take the fastest route and 26 percent said they do not use the fastest route. There was an assortment of reasons people chose to forgo the fastest route, with 38 percent of survey respondents doing so for recreation purposes, 35 percent choosing routes that feel safest, and 31 percent saying they opt for the most aesthetically-pleasing route. Two written comments included, “I take the safest route, which means routing longer based on sidewalk consistency and availability,” and “I try and use pathways, side streets, anywhere away from Pioneer Boulevard and Proctor Boulevard.”

FACTORS AFFECTING WALKABILITY

Determining safety of the downtown walking environment is important in defining barriers that must be overcome. Survey respondents were asked about traffic safety concerns as a pedestrian downtown. Respondents' answers included:

SAFETY CONCERNS:

NOT CONCERNED ABOUT TRAFFIC DANGERS

54%

FEEL SAFE AND SATISFIED WALKING DOWNTOWN

35%

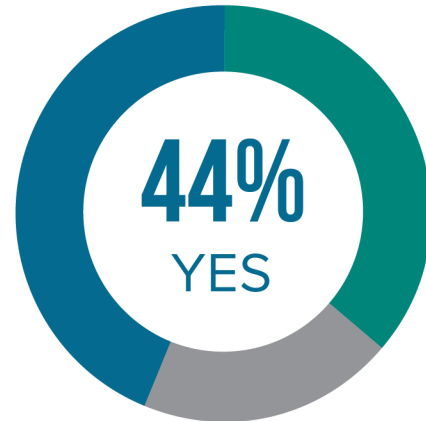
CONCERNED ABOUT THE CONDITIONS OF SIDEWALKS (UNEVEN, CRACKED, OBSTRUCTIONS, ETC.)

27%

Other safety concerns that were mentioned included pollution from traffic, congestion, traffic volume, driver blind spots of pedestrian areas, poor lighting at night, and long crossing distances. Following safety rules is important for pedestrian safety, but some conditions can lead to impatience, such as long wait times at pedestrian crossing signals. Forty-seven percent of respondents stated, 'I always cross at crosswalks, wait for pedestrian signal to walk, and follow pedestrian rules,' 40 percent said they typically follow pedestrian rules, ten percent said they sometimes follow the rules, and two percent said they do not follow any pedestrian safety rules because they are inconvenient.

Comfort in surroundings is an important aspect of walkability and while improving safety contributes to a positive pedestrian environment, amenities are extremely important in cultivating desirable pedestrian environments. Survey respondents were asked if they find walking downtown to be a pleasant experience. Forty-four percent said yes, 36 percent said maybe, and 20 percent said no.

"DO YOU FIND WALKING DOWNTOWN A PLEASANT EXPERIENCE?"



36% MAYBE

20% NO

Those respondents who did not find walking downtown to be a pleasant experience were asked why. They had the following responses:

NOT ENOUGH LIGHTING AT NIGHT

32%

NOT ENOUGH SEPARATION FROM TRAFFIC

30%

DIFFICULT AND TIME CONSUMING TO CROSS THE STREET

30%

Other comments regarding the unpleasant environment in downtown included poor weather conditions, lack of bus availability, pollution, not enough appealing destinations, vacant storefronts, and cars that stop too quickly or do not stop at all when they are attempting to cross streets.

When asked about the condition of pedestrian amenities downtown, 37 percent of respondents said they felt there were already enough pedestrian

amenities downtown, 47 percent said maybe, and 15 percent said there were not enough amenities. Written comments about pedestrian amenities included installation of more landscaping, more lighting, and reducing the number of overflowing trash receptacles. Additionally, several respondents noted that Pioneer Boulevard and Proctor Boulevard were popular pedestrian areas, yet they may not be the best locations for certain amenities such as benches. One respondent said, “It seems ridiculous

to have benches alongside Proctor and Pioneer, where traffic is nearly nonstop; it’s better to place them in areas away from traffic.”

To understand negative impacts on walkability, survey respondents were asked to identify the factors having the largest impact on their decision to walk downtown and to scale the impact. The most popular responses (strong impact, small impact, no impact) for each factor are depicted in Table 8.

TABLE 8. SURVEY RESPONSES TO WALKABILITY FACTORS

STRONG IMPACT	SMALL IMPACT	NO IMPACT
Automobile volume	Visually unappealing surroundings	I do not like to walk
Automobile speed	Bad weather	Travel with small children
Personal safety	Automobile noise	Difficult terrain (hills)
No sidewalks	Sidewalks in poor condition	Too many stops to make
Lack of continuous sidewalks along the same side of the road		Too much to carry
Lack of driver awareness for pedestrians		I do not have time
		Destinations are too far away
		Too many sidewalk obstructions (utility boxes, light poles, etc.)
		Crosswalk signals are too long

Based on the responses to the question about automobile behaviors, the survey respondents believed that traffic volume, speed, and lack of driver awareness had the strongest negative impact on walkability. Additionally, lack of sidewalks or continuous sidewalks on the same side of the street were also very popular choices for causing a strong

negative impact. Other factors that had less impact or no impact are listed in the second and third columns of the table. Other written comments regarding negative impacts on walkability included poorly-timed crosswalk signals that did not provide enough time to cross the street, exhaust and pollution from vehicles, and lack of destinations to stop at in downtown Sandy.

WALKABILITY IMPROVEMENTS

Survey respondents were asked what they believed were the most important walkability improvements with the most popular level of importance for each improvement listed below.


TABLE 9. SURVEY RESPONSES TO IMPROVEMENTS

VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
More sidewalks	Better street lighting	Walking groups
Improved sidewalks	Education/enforcement for motorists, pedestrians, and bicyclists	
Better intersections (pedestrian signals, crosswalks, etc.)	Beautification of surroundings	
More separation from vehicle traffic		
Reduced vehicle speed		
More downtown events (art fairs, music, etc.)		
Increase sidewalk connectivity between residential neighborhoods and downtown		

Survey respondents felt that infrastructure improvements were the most important factor but added that more events in downtown would encourage an increase in walking. Written comments included suggestions such as providing better parking and increasing the number of places to shop. One suggestion was to add more visible signalized intersections for pedestrians, such as the flashing light signage installed on Powell Boulevard at Roberts Avenue in Gresham.

Survey respondents were then asked to list their top three walkability improvements including a first, second, and third improvement from a list of potential improvements. The responses to each category were factored into a weighted average, with the lowest average number being the highest priority (see Table 10 on the following page).

TABLE 10. WEIGHTED AVERAGE OF SURVEY RESPONSES TO PRIORITY OF WALKABILITY IMPROVEMENTS

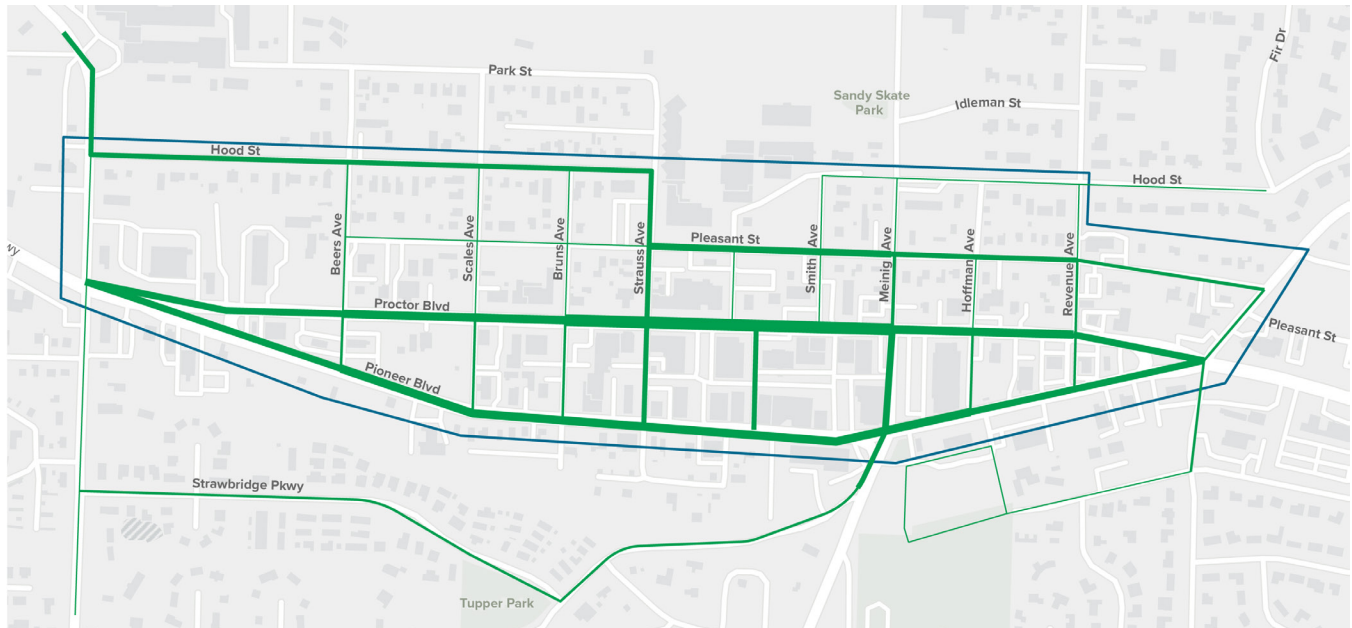
IMPROVEMENT CATEGORY	WEIGHTED AVERAGE		
Education / enforcement of motorists, pedestrians and bicyclists	1.59	HIGHEST PRIORITY	
More separation from vehicle traffic	1.72		
Reduce vehicle traffic	1.72		
More sidewalks	1.92		
More downtown events	1.96		
Better street lighting	1.97		
Better intersections	2.00		
More connecting sidewalks between residential neighborhoods and downtown	2.02		
Improved sidewalks	2.14		
Beautification of surroundings	2.21		
Walking programs	2.22		LOWEST PRIORITY

Note: A lower number denotes a higher priority

The top priority improvements were related to improving traffic conditions in the downtown, followed by recommendations for improving basic pedestrian features such as sidewalks, street lighting, and intersection crossings. Respondents also stated that holding more downtown events should remain a high priority.

POP-UP MAPPING

FIGURE 8. POP-UP MAPPING ACTIVITY RESULTS



BACKGROUND

The purpose of the pop-up mapping activity was to determine popular pedestrian routes and prioritize improvements for highly used pedestrian routes. The pop-up mapping activity included placing blank maps at several popular host locations throughout downtown. Community members visiting the host locations could choose to participate in the activity by drawing routes they typically walked downtown. The host locations included Mountain Moka, AntFarm, the Sandy Public Library, and Sandy City Hall. The activity was available at the above locations from May 7, 2018 to May 18, 2018. Additionally, there was a booth that included the activity at the Mount Hood Farmers Market, located in downtown Sandy, on May 11, 2018. To see the activity page and example, refer to Appendix B.

RESULTS

A total of 68 participants completed the pop-up mapping activity. It is important to note that the library was the most popular location for participation

in the pop-up mapping activity. The number of responses per street segment were compiled, calculated, and mapped (Figure 8). As informed by the responses to the activity, thicker line widths indicate a higher propensity of pedestrian traffic on that street segment.

The most popular pedestrian routes were unsurprisingly Pioneer Boulevard and Proctor Boulevard. Of those streets, the most popular blocks were concentrated towards the middle of the couplet between Scales Avenue and Smith Avenue on Proctor Boulevard.

The most common comments noted by respondents pertained to safety concerns at the intersection directly in front of the Sandy Public Library, currently being addressed with the redesign of Alt Avenue in the Pleasant Street Master Plan. Another common concern was the poor condition of sidewalks and/or lack of sidewalks in the downtown area. Sidewalk connection into the downtown was also a concern for numerous respondents. A full list of comments from the activity can be found in Appendix B.

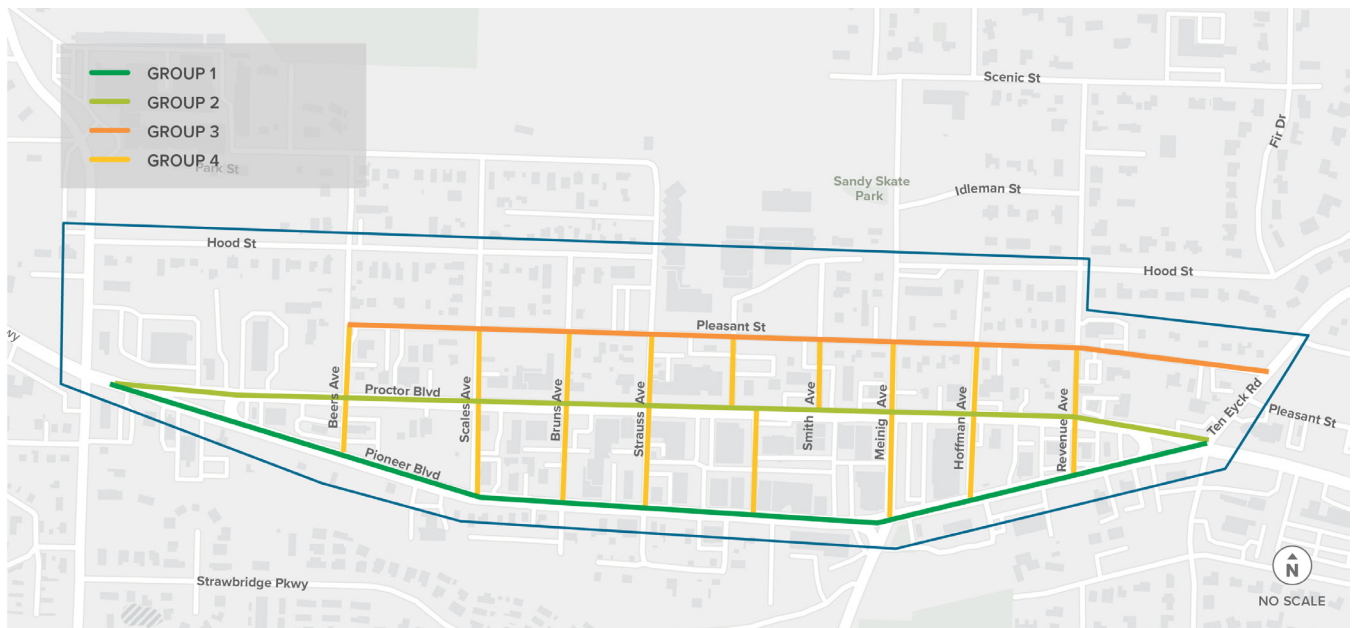
COMMUNITY WALKING AUDIT

INTRODUCTION

The intention of the Community Walking Audit event was to get community members involved to better understand the community perception of walkability and to identify pedestrian access barriers. In contrast to the technical walking audit, the Community Walking Audit focused primarily on addressing big picture concerns. The template for the Community Walking Audit was adapted from the *Safe Routes to School Handbook Audit Toolkit* template. The original template from the handbook and the revised version used for the Community Walking Audit can be found in Appendix B.

The Community Walking Audit was hosted on May 16, 2018. Eighteen community volunteers participated in the event, with individuals of varying mobility levels. Two volunteers with mobility impairments were able to inform staff of inadequate conditions and accessibility concerns for people with disabilities. The community volunteers who participated included interested citizens, elected officials, and city staff. Volunteers were divided into four groups, covering different sections of downtown. Figure 9 details the areas assessed. Furthermore, participants completed an exit survey listing their top concerns and priorities for pedestrian improvements.

FIGURE 9. COMMUNITY WALKING AUDIT GROUP ROUTES



SUMMARY OF RESPONSES

For purposes of assessing the Community Walking Audit, it is important to note that audit groups consisted of four to five people, with each person wearing a high visibility safety vest. It is likely that motorists were more aware and responsive to audit groups due to the high visibility vests and walking in small groups, as compared to typical pedestrians.

All four audit groups had recurring checklist items representing various walkability issues, including the following:

- Poorly marked crosswalks
- Lack of pedestrian-activated signals
- Parked cars blocking the view of vehicles approaching intersections
- Motorists speeding
- Motorists not looking for pedestrians
- A lack of trees and landscaping
- Trip hazards and sidewalk obstructions
- Presence of vacant or derelict buildings

Other comments were about specific areas, such as short pedestrian crosswalk timing at the signalized intersections of Meinig Avenue and Highway 26, and Ten Eyck Road and Highway 26, as well as the poor condition of the sidewalk in front of Two Brothers Mexican Restaurant (38786 Pioneer Boulevard). (Note: Since the audit, this sidewalk has been repaired.) See Appendix B for a full summary of audit responses and comments from each audit group.

The primary benefit of having two individuals with mobility impairments participating in the audit was to identify accessibility issues throughout downtown. Some of the key accessibility concerns identified during the audit were the following:

- Curb ramps are often too steep.
- Pedestrian signals downtown require push-button activation, which can be a difficult task for some individuals. A more accessible alternative would be to have an automatic pedestrian cycle at intersections with signals.
- Navigating mailboxes on the sidewalk is difficult for low-vision individuals using canes. The City should remove mailboxes no longer in use.
- The voice command at the Alt Avenue crosswalk could be misunderstood to be saying “Halt” in stead of “Alt.” A clearer alternative may be to fully state “Alt Avenue” and increase the volume of the voice command.
- Ten Eyck Road and Highway 26 intersection is missing an audible signal.
- Absence of a pedestrian signal between the pedestrian island and the sidewalk on the southwest side of the Meinig Avenue and Pioneer Boulevard intersection.

EXIT SURVEY RESPONSES

The exit survey provided after the audit asked for the top concerns in each of the following categories: sidewalk concerns, intersection and street crossing concerns, comfort concerns, overall concerns, and top improvements needed. The most common responses in each category are listed below.

Sidewalk Concerns:

- Narrow sidewalks
- Sidewalk obstructions of all types (utility poles, mailboxes, etc.)

Intersection & Street Crossing Concerns:

- Motorists having difficulty seeing pedestrians
- Motorists not stopping at crosswalks
- Needing more signage and markings at intersections
- Lack of marked crosswalks

Comfort Concerns:

- Vehicle speeds
- Noise pollution
- Lack of trees and landscaping

Overall Concerns:

- Traffic – too fast and noisy
- Crosswalk safety
- More signage and markings needed
- Lack of adequate lighting

Top Improvements Needed:

- Flashing light crosswalks
- More planter strips and trees
- Improving and repairing sidewalks

To see the full list of exit survey responses, see Appendix B.

SUMMARY OF COMMON WALKABILITY CONCERNS

Throughout the public engagement process for the Downtown Walkability Audit, the community expressed reoccurring concerns, including:

- Lack of crosswalks and unsafe crosswalks on Pioneer Boulevard and Proctor Boulevard (especially the crosswalk in front of the library at the intersection of Proctor Boulevard and Alt Avenue)
- Noise and speed of traffic on Pioneer Boulevard and Proctor Boulevard
- High traffic volume on Pioneer Boulevard and Proctor Boulevard
- Connectivity issues, including but not limited to:
 - » Missing sidewalks
 - » Not enough marked crosswalks on Pioneer Boulevard and Proctor Boulevard
 - » Missing pedestrian connections from surrounding neighborhoods to downtown
- Lack of destinations and/or attractions to walk to in downtown
- Accessibility (ADA) issues
- Poor lighting
- Sidewalk obstructions (old mailboxes, utility poles, etc.)
- Lack of amenities – no recycling, few and full trash receptacles, more landscaping needed
- Lack of pedestrian signals or signage
- Poor sidewalk conditions, including but not limited to:
 - » Uneven, crumbling sidewalks
 - » Narrow sidewalks
- Obstructed sight lines from parked cars



RECOMMENDATIONS

A list of recommended actions was created based on the results from the PEQI audit, existing conditions report, and the information gathered through the public process for the DWA.

Based on the results from the PEQI audit, existing conditions report, and the information gathered through the public process for the Downtown Walkability Audit, a list of recommendations has been created. The recommendations are grouped based on the related DWA goals.

The partner(s) listed are the agencies and/or departments which the City of Sandy's Planning Division will need to partner with to achieve the goals as identified within this assessment. A single circle indicates a shorter timeline to implement the action while two circles indicate a longer timeline for implementation.

TABLE 11. RECOMMENDATIONS BY RELEVANT GOAL

GOAL	RECOMMENDED ACTION	PARTNER(S)	TIMELINE ESTIMATE
PEDESTRIAN SAFETY AND COMFORT	A. Reduce speed limits in downtown	ODOT	●
	B. Enforce speed limits in downtown	Sandy Police Department	●
	C. Reduce speed on Hwy 26 east of downtown to provide for a better transition to reduced speeds in the downtown (reduction of 40 mph current speed limit)	ODOT	●
	D. Create traffic calming measures, such as rumble strips	ODOT, Public Works	● ●
	E. Plant additional landscaping and street trees on high volume streets	Urban Renewal Agency (URA), local businesses, local community groups	●
	F. Improve sight lines for pedestrian visibility by ensuring parking and street trees are placed in safe locations to intersections	Public Works	●
	G. Increase the number of marked crosswalks on Highway 26 in the downtown couplet	ODOT, Public Works	●
	H. Transition all marked crosswalks on Pioneer Blvd. and Proctor Blvd. to high visibility crosswalk paint	ODOT, Public Works	●
	I. Increase signage and/or install signalized flashing beacons at marked crosswalks	ODOT, Public Works	●
	J. Increase the number of pedestrian bulb-outs at intersections	ODOT, Public Works, URA	● ●
	K. Increase the number of pedestrian scale streetlights on street segments in the downtown	Public Works, URA, PGE	●

GOAL	RECOMMENDED ACTION	PARTNER(S)	TIMELINE ESTIMATE
PEDESTRIAN ACCESSIBILITY	A. Construct missing sidewalks within project boundaries	Public Works, URA	● ●
	B. Create a sidewalk maintenance plan to provide continuation of pedestrian enhancements	Public Works, URA	● ●
	C. Increase pedestrian walk signal timings at the intersections at the edges of downtown (Bluff Rd. and Ten Eyck Rd.) and at major intersections within the downtown couplet	ODOT, Public Works	●
	D. Widen narrow sidewalks within the project boundaries	Public Works, ODOT, URA, local businesses	● ●
	E. Improve sidewalks with major impediments and in poor condition	Public Works, URA, local businesses	●
	F. Improve and prioritize ADA accessibility along sidewalks and pedestrian crossings in downtown	ODOT, Public Works	● ●
	F1. Increase the number of audible crosswalk signals	ODOT, Public Works	●
	F2. Increase the number of truncated domes at curb cuts	ODOT, Public Works, URA	●
	F3. Transition to automated pedestrian signals	ODOT, Public Works	●
PEDESTRIAN CONNECTIVITY	A. Install wayfinding signage for pedestrians detailing distance from certain locations to the downtown via walking/rolling	Public Works, URA	●
	B. Construct sidewalks on connecting streets with missing sidewalks (see connectivity)	Public Works	● ●
	C. Complete and widen sidewalks on Pleasant St. (for more information reference Pleasant Street Master Plan) to create a more pedestrian friendly environment on Pleasant St.	Public Works, Oregon Trail School District, URA and businesses	● ●
	D. Reconfigure the crosswalk at the intersection of Alt Ave. and Proctor Blvd. in accordance with the Pleasant Street Master Plan to safely connect Pleasant St. to the south side of Proctor Blvd.	ODOT, Public Works, URA	● ●
	E. Encourage more events in the downtown with instructions on pedestrian access from neighboring areas	Economic Development, local businesses and institutions	●