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Enhancing Older Adults' Mobility in Active Living and Tiered Living Communities

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Report 23-61

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June 2023

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16. Abstract

The U.S. population is aging rapidly. As people get older, they increasingly face issues such as increased susceptibility to injuries and the need to be assisted with many day-to-day activities. Older adults have the opportunity to opt-in to live in an older adult community (OAC) based on their needs and capabilities. This study comprehensively reviews existing governing development regulations and design criteria related to the older adults' communities, conducts surveys among people involved with some of these communities in California, and recommends improvements to community design for active living and tiered living communities. This study proposes a new scoring system to evaluate the overall life-space mobility of OACs and the surrounding areas. For each of the ten communities within California, the area's Active Mobility Infrastructure (AMI), both inside and outside, and Permeability (PERM) are assessed. Furthermore, the study aims to comprehend how residents feel about the available facilities and how they are utilized through a survey that includes questions regarding how frequently residents partake in active transportation within and outside their communities and assesses residents' financial and educational standings. Using Welch's T-Test, Pearson's Correlation Coefficient, and a Multinomial Logit Regression model, this study addresses three questions: (1) Are there any statistically significant differences in the transportation connection qualities within and surrounding the older adult communities perceived by their residents? (2) Are there strong correlations between the quality of transport connections and the walking frequency of the residents? (3) What are the main influential factors of walking frequency? The findings from this research can aid transportation professionals in improving the governing development regulations and associated design criteria for better person-environment fit in older living communities.

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It is also worth mentioning that two high school students, Edwin Feng and Irisa Le, actively participated in this project's literature review and data analysis. The authors hope this project can inspire the next generation to pursue a career enhancing older adults' life-space mobility worldwide.

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1. Introduction

The main goal of this project is to enhance older adults' life-space mobility in active living and tiered living communities via a comprehensive literature review and a well-designed survey. This would aid transportation professionals to improve the governing of development regulations and associated design criteria for better person–environment fit in older living communities.

Quality of life (QOL) is usually defined as the individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns (Anderson et al., 2009). It stems from multifaceted perceptions of various essential aspects of one's life, such as health, social relationships, and living environment. In California, the over-sixty population is projected to diversify and grow faster than any other age group. By 2030, 10.8 million Californians will be older adults, making up one-quarter of the state's population (California Master Plan for Aging, 2019). Among older people, a key component of QOL is heavily dependent on life-space mobility (Miyashita et al., 2021; Rantanen et al., 2021), which refers to the area where people move in their daily life. This ranges from being confined to one room, to moving in the town and beyond and incorporates the frequency and independence of travel (Baker et al. 2003). Past studies illustrate that older adults with higher life-space mobility tend to be more physically active (Portegijs et al., 2014) and have better physical performance capacity (Portegijs et al., 2015), which improves wellness and overall quality of life.

Compared with people of other ages, older adults, often due to their reduced physical capabilities, need special housing options that are foundational to their well-being and need continued engagement in civic, economic, and social life. Hence, many older adults choose to live in these communities, which are typically divided into two distinct categories based on the levels of care needed: the active living communities and the tiered living (or continuous care) communities (Treichler et al., 2020). These communities have enormous benefits, such as low-maintenance living, close connections with other older adults, and easy access to various food, housekeeping, and health services. However, many of them suffer from a poor or inadequate community and active mobility infrastructure (AMI) (i.e., sidewalks, transit stops, roadway crossings, bicycle facilities, and streetscaping) design that hinders the ability of older adults to remain active through walking, jogging, and cycling. As mentioned above, life-space mobility is the range of mobility older adults have for their everyday needs. Active mobility infrastructure (AMI) is a type of built environment that supports walking, bicycling, and using public transit. It exists alongside a built environment that supports motor vehicle travel. When AMI is higher, it allows older adults to have more independence in their daily mobility and better life-space mobility.

A scrutiny of the pertinent literature also illustrates that older adults are a frequently overlooked transportation-disadvantaged group. For example, Achuthan et al. (2010) assessed a pedestrian network in the city center of St. Albans, UK. The study demonstrated the extent to which pedestrian barriers can significantly hinder the mobility of older or physically impaired walkers. Using a qualitative approach, Grant et al. (2010) showed that older residents in lower socioeconomic neighborhoods had fewer active transportation facilities and higher pedestrian vehicle collision risk. Anciaes (2011) also found that many older travelers were centrally located and had difficulty accessing sidewalks.

The main explanation for the current situation of older adult living communities is the lack of clear and conclusive design criteria that especially accommodate the characteristics of the elderly lifestyle. After retirement, people have more time to enjoy recreational activities and other community facilities. At the same time, conditions such as chronic diseases and impaired vision may limit their moving capabilities and life-space mobility. In effect, the person-environment fit theory (Siegel et al., 2021) indicates that the individual not only influences their environment, but the environment also affects the individual. The adequacy of this fit between a person and the environment can affect the person's motivation, behavior, and overall mental and physical health (Rantanen et al., 2018). Therefore, there is a demonstrated need to comprehensively review the existing pertinent development regulations and local policies, and their connections with each older adult community's campus layout. Furthermore, to the authors' best knowledge, very few studies have revealed the difference between active living and tiered living communities in terms of how the AMI establishes a functional network for walking, using public transit, etc., making it imperative to investigate the factors that improve conditions for older adults to remain physically active. To fill this research gap, this study aims to compare active living and tiered living communities and review governing development regulations to understand their impact on community design. It is anticipated that the findings would yield better recommendations to enhance the person-environment fit for both active and tired living communities.

The study aims to comprehensively review existing governing development regulations and design criteria related to older adult communities, conduct surveys among people involved with some of these communities in California, and recommend improvements to community design for active living and tiered living communities. The ultimate goal is to help prepare the state for substantial future increases in the older adult population.

2. Literature Review

An older adult is commonly defined as a person over the age of sixty-five. With age also comes challenges for many older adults—they are much more susceptible to injuries and often require assistance with what the average person might find second nature. Due to reduced muscle mass, bone strength, and reduced cognitive abilities, many older adults often require help eating, bathing themselves, and getting up or down (LeWine, 2013). Fortunately, older adults can opt to live in tiered living, which offers a safer place for them due to the number of design criteria set by the Centers for Disease Control and Prevention (CDC, 2019) and the Americans with Disabilities Act (Liao, 2018). While federal government standards set a baseline of design standards and considerations for older adults (Eastman, 2013), further design considerations and variations of standards are set by other government entities such as state, county, and city-level standards.

Tiered living communities are typically divided into three distinct categories or tiers. The first is the active adult community or independent living community. According to Where You Live Matters, as site created by the American Seniors Housing Association (ASHA) to provide unbiased, expert resources about senior living options, these communities offer an independent lifestyle to older adults. These communities comprise people 55 years or older and are usually defined as communities of older adults capable of taking care of themselves with minimal to no outside help. Additionally, these communities allow older adults to live in their own homes. The next type of community is continuous care or assisted living communities. As the name suggests, these communities offer continuous care for those who can no longer safely live in their residence. While the amount of care that each resident within the community needs varies, these communities offer 24-hour assistance by providing food, housekeeping, and health services, among others (Szlauderbach, 2020). The final type of community is nursing care. Nursing homes are for those with more chronic health conditions in need of constant monitoring. According to HealthinAging.org, a site created by the American Geriatrics Society's Health in Aging Foundation to provide up-to-date information and advice on health and aging, those in these communities cannot care for themselves in many capacities, especially those with memory problems, difficulty with hearing or seeing, or incontinence. Table 1 summarizes the different tiers of older adult living.

Table 1. Summary of Tiered Living Facilities

	Independent Living Communities	Continuous Care Communities	Nursing Homes
Level of Care	24/7 Availability	24/7 Availability	24/7 Monitoring
Level of Freedom	Non-Restricted	Semi-Restricted	Highly Restricted
Cost	Low	Medium	High

Providing care to older adults is important; however, it is also crucial to implement an indicator to determine their well-being, whether this be their cognitive, mental, or physical health (Bayat et

al., 2021). Fortunately, the life-space framework provides insight into the factors determining one's well-being. Life-space is the environmental geography through which a person moves within a specified period (May et al., 1985). Furthermore, life-space mobility is a concept for evaluating functional mobility patterns over time (Johnson et al., 2020). Ensuring that older adults have access to a higher life-space mobility promotes physical activity (Xiao et al., 2011) and are more physically capable, and have fewer difficulties moving around (Rantakokko et al., 2017). In addition to having a high level of life-space mobility, older adult mobility also depends on the individual's age, medication, physical activity frequency, or chronic diseases, such as arthritis (Yeom et al., 2015). Table 2 presents different factors impairing older adult mobility and the studies exploring them.

Table 2. Literary Summary of Older Adult Mobility Factors

Factor	Literary Studies
Gender	(Yoshikawa & Bednarz, 2013); (Fried et al., 2000); (Rivera et al., 2008); (CDC, 2009); (Ferrucci et al., 1996); (Xu & Wang, 2021)
Age	(Ferrucci et al., 1996); (Koster et al., 2007); (Al Snih et al., 2005); (Wolinsky et al., 2011); (Yarasheski, 2003); (Hinrichs et al., 2016)
Weight	(Koster et al., 2007); (Bannerman et al., 2002); (Koster et al., 2008); (Wannamethee et al., 2005)
Physical Activity	(Marko et al., 2012); (Hardy et al., 2011); (Ferrucci et al., 1996); (Gill et al., 2012); (Koster et al., 2007); (Al Snih et al., 2005); (Ayis et al., 2006); (Ferrucci et al., 2002); (Onder et al., 2005); (Yarasheski, 2003); (Rantanen et al., 1999)
Chronic Diseases	(CDC, 2009); (Fried & Guralnik, 1997); (Ferrucci et al., 1996); (Inouye et al., 2007); (Al Snih et al., 2005); (Wannamethee et al., 2005)
Impaired Strength/Balance	(Inouye et al., 2007); (Ferrucci et al., 2002); (Guralnik et 33al., 1994); (Rantanen et al., 1999); (Ikpeze et al., 2018)

While the design standards within tiered living communities are often clearly defined, the life-space outside these communities isn't always considered. Willis (2021) and Lazo (2021) describe the issues with active transportation outside these communities, highlighting the need to take higher design criteria outside older adult communities. In a personal interview with an active transportation planner at the City of Mountain View, the city considers older adults during the planning process. Unfortunately, the level of consideration varies from area to area within the city and from city to city. Grant et al. (2010) conducted focus groups and interviews with older residents of Ottawa, Canada. Those living in lower socioeconomic neighborhoods had fewer active transportation facilities, a higher pedestrian-vehicle collision risk, and a greater concern for traffic hazards. There have been some concepts discussed that could provide safer active transportation opportunities for older adults. One such idea is the fifteen-minute neighborhood, which is a method to reorganize clusters of land with various purposes into sections that can comfortably be reached via active transportation within fifteen minutes (Meng et al., 2021; Pozoukidou and Chatziyiannaki, 2021). While this new method of city organization does present higher levels of walkability for older adult-concentrated areas, it is necessary to take socioeconomic status into account when determining the overall walkability of an area (Weng et al., 2019).

Fortunately, city planners consider older adult mobility when designing transportation networks, as well as environmental impacts and city land use. Even more so, countries such as China (Wong et al., 2018; Linchuan & Xu, 2020), England (Metz, 2000), Germany (Pucher & Dijkstra, 2003), and Italy (Papa et al., 2018) have already implemented policies to improve overall older adult mobility outside of older adult communities. These policies range from ensuring that older adults have adequately designed green spaces (Tan et al., 2019) to ensuring older adults have access to local transit systems (Becerra et a., 2013) and improving the life-space of local neighborhoods and households for older adults (Forsyth et al., 2019). A list of literary studies exploring the various planning policies implemented across different continents is outlined in Table 3.

Table 3. Literary Summary of Older Adult Mobility Planning Policies from Various Regions of the World

Region	Literary Articles
Asia	(Wong et al., 2018); (Phillips et al., 2004); (Phillips, 2002); (Chao & Huang; 2016); (Hermalin, 2010); (Tan et al., 2019); (Loo et al., 2017); (De Leeuw & Simos, 2017)
Europe	(Green, 2013); (Gargiulo et al., 2018); (Mollenkopf et al., 2005); (Barton et al., 2003); (WHO, 2002); (Van Hoof et al., 2018); (von Schönfeld & Ferreira, 2021); (Buffel et al., 2012); (Andersen & Van Kempen, 2003)
South America	(De Leeuw & Simos, 2017); (Parra et al., 2010); (Becerra et a., 2013); (Rabinovitch & Leitman, 2015)
Australia	(Alidoust & Bosman, 2016); (Vine et al., 2012); (Alidoust & Bosman, 2015); (Petersen & Warburton, 2012); (Somenahalli et al., 2016); (Forsyth et al., 2019); (White & Sutton, 2001); (Alidoust et al., 2019)
Africa	(De Leeuw & Simos, 2017); (Amosun et al., 2007); (Rogerson, 1993); (McQuaid et al., 2021); (Mabunda et al., 2008)
North America	(Mayen Huerta & Cafagna, 2021); (Channer et al., 2020); (Páez et a., 2007); (Hartt & Biglieri, 2021); (Mercado et al., 2010); (Mercado et al., 2007); (Nelson & Rosenberg, 2021)

In addition to the international efforts to improve older adult mobility through the implementation of various planning policies, different states within the US have also adopted various planning policies toward the same goal. While the implemented policy varies from state to state or city to city within a state, each approach tends to fall into one of three policy types. The first focuses on modifying life-space for older adults. This usually includes ensuring that homes, pathways, and public areas are accessible to older adults in a safe manner (Taylor et al., 2019). The second type ensures that older adults have safe and reliable transportation. This includes providing transportation services specific to older adults or changing policies for older adults' abilities to operate vehicles (Bond et al., 2017). The final policy type revolves around health treatment for older adults. These policies include dietary changes/recommendations, physical therapy, and specific treatments for older adults to enhance mobility (Andersen et al., 2011). A summary of the different policy types and states where these policies are implemented can be seen in Table 4.

Table 4. Literary Summary of Older Adult Mobility Planning Policies from the Different States within the US

State	Policy Type	Literary Articles
Alabama	Life-space Modification	(Baker et al., 2003); (Peel et al., 2005); (Loyd et al., 2018)
	Health Treatment	(Rohan, 2017); (Locher et al., 2007); (Parker et al., 2003)
Arizona	Life-space Modification	(McDowell & Wonders, 2009); (AZMAG, 2022)
Arkansas	Health Treatment	(Means et al., 2005)
	Transportation Assistance	(Keene, 2020); (Agingarkansas.org, 2021)
Colorado	Transportation Assistance	(Cui et al., 2017); (Boschmann & Brady, 2013)
	Life-space Modification	(Hanson et al., 2012); (Silberschmidt et al., 2017)
Connecticut	Life-space Modification	(Johnson et al., 2020)
	Health Treatment	(Pahor et al., 2014)
Delaware	Health Treatment	(Bowen & Griffioen, 2019); (Burns et al., 2006)
Florida	Life-space Modification	(Dumbaugh, 2008); (Laws, 1993); (Pastalan & Cowart, 1989)
	Transportation Assistance	(Duncan et al., 2015)
Georgia	Life-space Modification	(Lewinson & Esnard, 2015); (Dumbaugh, 2008)
	Health Treatment	(Fitzpatrick et al., 2008)
Hawaii	Transportation Assistance	(Staplin & Freund, 2013)
Idaho	Life-space Modification	(Mason, 2010)
Illinois	Life-space Modification	(Shah et al., 2012); (Wen et al., 2006); (Hanson et al., 2012); (Illinois.gov, no date, n.d.)
Indiana	Transportation Assistance	(Kutsche, 1978); (City of Evansville, n.d.)
Iowa	Health Treatment	(Fry & Keyes, 2010); (Soh et al., 2018);
	Life-space Modification	(Satariano et al., 2012)
Kansas	Transportation Assistance	(RideKC, n.d.)

State	Policy Type	Literary Articles
	Life-space Modification	(Havighurst, 1963)
Kentucky	Transportation Assistance	(Burkhardt et al., 2011)
Louisiana	Life-space Modification	(Peel et al., 2005)
Maine	Life-space Modification	(MaineHousing, n.d.); (Keeney, 2015)
	Transportation Assistance	(Freund, 2015)
Maryland	Life-space Modification	(Reed & Sen, 2005)
Massachusetts	Transportation Assistance	(Coughlin & Proulx, 2012)
Michigan	Transportation Assistance	(Kostyniuk & Shope, 2003); (Rosenbloom, 2001); (Satariano et al., 2012)
Minnesota	Life-space Modification	(Polku, 2020)
	Health Treatment	(Garrido et al., 2012)
Mississippi	Life-space Modification	(Rabig et al., 2006)
	Health Treatment	(Dubbert et al., 2002)
Missouri	Life-space Modification	(Demiris et al., 2004); (Rantz et al., 2011)
Montana	Transportation Assistance	(Berman et al., 2008); (Enders & Seekins, 2009)
Nebraska	Life-space Modification	(Wan et al., 2013)
Nevada	Transportation Assistance	(Guerra, 2016)
New Hampshire	Life-space Modification	(Brackett, 2003); (Choi et al., 2020); (Fox et al., 2015)
	Transportation Assistance	(Fox et al., 2015)
	Health Treatment	(New Hampshire Community Action Association, 2011)
New Jersey	Transportation Assistance	(Deka et al., 2021); (Deka, 2022)
	Health Treatment	(Boltz et al., 2011)
New Mexico	Life-space Modification	(Silberschmidt et al., 2017); (Chung et al., 2020); (Carrico et al., 2019)
	Health Treatment	(Averill, 2002)
	Transportation Assistance	(Del Rio et al., 2017); (Castillo et al., 2020)
New York	Life-space Modification	(Forsyth et al., 2019); (Satariano et al., 2012)

State	Policy Type	Literary Articles
	Transportation Assistance	(Austin et al., 2006)
North Carolina	Transportation Assistance	(Satariano et al., 2012); (Arcury et al., 2005); (Combs et al., 2016)
	Life-space Modification	(Hanson et al., 2012); (Hunter et al., 2013)
	Heath Treatment	(Rejeski et al., 2011)
North Dakota	Life-space Modification	(Powell, 2012)
	Transportation Assistance	(Mielke et al., 2005); (Hegland et al., 2005)
Ohio	Life-space Modification	(Kracker et al., 2011);
	Transportation Assistance	Sarles et al., 2012); (Kaye & Long, 2019)
Oklahoma	Life-space Modification	(Fisher, 1991)
	Heath Treatment	(Aronson & Oman, 2004); (Bender & Hart, 1987)
Oregon	Life-space Modification	(Zambrana & DeLaTorre, 2019); (DeLaTorre et al., 2019); (Hanson et al., 2012); (Li et al., 2005); (Chaudhury et al., 2012); (Mahmood & Keating, 2012)
Pennsylvania	Life-space Modification	(Rosso et al., 2013)
	Transportation Assistance	(Li et al., 2021); (Vance et al., 2010)
	Heath Treatment	(Jobe et al., 2001)
Rhode Island	Life-space Modification	(Meeks, 2022); (Smith et al., 2017); (Winters et al., 2015)
	Heath Treatment	(Gould & Fulton, 2016); (Clark et al., 2005); (Resnik et al., 2009); (Han et al., 2022)
South Carolina	Life-space Modification	(Ugalde, 2016)
	Heath Treatment	(Wilcox et al., 2005)
South Dakota	Heath Treatment	(Tilly, 2007)
	Transportation Assistance	(Mattson, 2011)
Tennessee	Transportation Assistance	(Cervero et al., 2017)
	Heath Treatment	(Fredman et al., 2008)
Texas	Life-space Modification	(Silberschmidt et al., 2017); (Snih et al., 2012); (Hyun et al., 2021)

State	Policy Type	Literary Articles
	Transportation Assistance	(Adorno et al., 2018); (Southeast Texas Regional Planning Commission, 2006)
	Heath Treatment	(Zabihinoury, 2021)
Utah	Life-space Modification	(Zambrana & DeLaTorre, 2019)
	Transportation Assistance	(Zambrana & DeLaTorre, 2019); (Jansuwan et al., 2013)
Vermont	Transportation Assistance	(Nemet & Bailey, 2000); (Caro et al., 2002); (Arcury et al., 2005); (Sullivan et al., 2012)
Virginia	Transportation Assistance	(Lawrence, 1991); (Rosenbloom et al., 2012)
	Life-space Modification	(Warner et al., 2010)
Washington	Life-space Modification	(Yen & Anderson, 2012); (Hanson et al., 2012)
	Transportation Assistance	(Classen et al., 2011)
West Virginia	Heath Treatment	(Jiang et al., 2017); (Reger et al., 2002); (Riffle et al., 1989)
Wisconsin	Heath Treatment	(Wenker, 2016); (Woodward, 2009)
	Transportation Assistance	(Bittner, 2011); (Rigdon et al., 2014)
Wyoming	Life-space Modification	(Scott et al., 2010)
	Transportation Assistance	(Mattson, 2011)

Finally, there are a number of policies within California that aim to facilitate safe mobility for older adults (Alexander et al., 2020). Similar to the table above, most of these policies can be organized into the same three categories: life-space modification, transportation assistance, and heath treatment. However, due to the diverse populations and transportation needs that vary from county to county and from city to city, there is a wide range of policies within each category. In addition, in 2010, the World Health Organization (WHO) established a network of age-friendly cities and communities encompassing twenty-five cities across ten countries. The primary goal of this network is to provide a safe place to promote healthy and active aging in a variety of means.

San Diego County joined the WHO's network in 2016, and the cities of La Mesa and Chula Vista joined two years later. In 2018, San Diego County released an action plan to build and implement safe aging practices. Such policies include ensuring that homes within older adult communities have an adequate life-space, are in relative proximity to goods and services (Pettigrew, 2013), and offer affordable and reliable transportation services accessible for all ages (Duncan et al., 2021). La Mesa builds upon this plan and focuses on life-space outside of the home (La Mesa, 2019). Chula

Vista aims to provide safe routes for older adults, including transit services, adequate walking paths, and safe biking options (Chula Vista, 2020).

In Los Angeles County, Los Angeles and West Hollywood joined the WHO's network in 2016, and the cities of Long Beach, Culver City, and Glendale joined in 2018. While Los Angeles County is not explicitly part of this network, the City of Los Angeles released a mobility plan in 2015 that catered to increasing the overall mobility of all Angelenos. In this plan, it is proposed that shuttle bus services such as Cityride would be used to provide transportation assistance to older adults and individuals with disabilities (Los Angeles City Planning, 2015). This policy is similar to that proposed by Culver City, in which particular transportation assistance policies are tailored specifically for older adults (Los Angeles City Planning, 2015). That same year, the City of West Hollywood published a five-year strategic plan that aims to touch upon not only transportation programs but also life-space, both within homes and at various outdoor facilities and health treatment programs (City of West Hollywood, 2015). In addition, focusing on multiple aspects of older adult mobility, the Long Beach Age-Friendly Initiative touches on transportation assistance, health treatment, and life-space modifications, except for housing for older adults (Long Beach Healthy Aging, n.d.). Finally, Glendale focuses on older adult needs rather than only generating a general plan to make evident in the Community Services and Parks Department Senior Needs Assessment (City of Glendale, 2017). The City of Glendale's Community Services and Parks Department has four community centers dedicated to "senior recreational programming, nutritional meals program, services, supportive services, case management, HICAP, classes, educational opportunities, and lifelong learning." (WHO, 2023)

Moving north along the coast, Santa Clara County officially joined the network in 2018. The City of Los Altos in Santa Clara County had already been in the network since 2011. Since its induction into the network, Los Altos has already implemented alternative transportation programs such as rideshare (City of Los Altos, California, n.d.). In 2016, three more cities joined the network including Gilroy, Saratoga, and Morgan Hill. Gilroy primarily focuses on providing older adults with affordable housing by offering lower living costs on specific properties to those who qualify (Gilroy, n. d.). On the other hand, Morgan Hill aims to provide specialized transportation services to various older adult communities and centers to ensure safer travel for their residents (Morgan Hill Community-based Transportation Plan, 2021). Saratoga focuses on multiple aspects including life-space modification for older adult housing and various outdoor facilities, transportation services, and health services, as stated in its action plan for an age- friendly Silicon Valley (Age-friendly Silicon Valley, n.d.). The following year, Cupertino joined the network and released a Mobility Management Planning Study focusing on housing and transportation policies and practices for older adults (Age Friendly Cupertino, 2019). The City of Palo Alto joined a more extensive transit network. The VA hospital is a stop on this transit network along with older adult communities and other medical facilities in nearby cities using a service called Redi-Wheels (SamTrans, n.d.). Los Gatos and Monte Sereno partnered to create a more comprehensive transit network for older adults.

In addition, Los Gatos provided health and exercise services at healthcare and recreation facilities in their 2040 General Plan (The Los Gatos CA Official Site, n.d.). Finally, Sunnyvale was inducted in 2018 and has since developed an action plan focusing on life-space for housing and outdoor space modifications and transportation services (Sunnyvale, n.d.).

Nearby, Marin County became a network member in 2018; however, much like Santa Clara, a city joined before its induction. Novato joined in 2017, and in their 2040 General Plan, older adults are considered in city planning due to the numerous outdoor facilities, specific housing units, and transit and taxi services for older adults (the City of Novato, n.d.). The following year, the City of San Rafael also joined the network. It released a general plan that encourages housing whose life-space is adequate for older adults, transportation services that offer door-to-door transportation, and outdoor facilities at community centers tailored to accommodate older adults (San Rafael, 2020).

To the southeast lies Almeda County, in which three cities became a part of the WHO's network. Since its induction, Fremont became a member in 2017 and has provided an action plan outlining policies to help older adults' general wellness and mobility (WHO, n.d.). These policies include various health treatments, life-space modifications for homes and public areas, and transportation options for those unable to drive themselves. The following year, the Cities of Oakland and Emeryville also joined the network. In 2022, Oakland released a comprehensive transportation plan for Grand Avenue that benefits all residents, including older adults (the City of Oakland, n.d.). In 2021, Emeryville released design guidelines for public and private buildings to ensure all can utilize them safely and effectively (Emeryville, n.d.).

While there are counties that both host cities that have joined the network and the county itself is considered a member, there are a few instances where an entire county only has a singular city or the county itself without any of its cities being part of the network. Sonoma County joined the network in 2016 and, in 2020, published a four-year area plan on aging that primarily focuses on the transportation needs of its residents (County of Sonoma, n.d.). The City of Roseville has been a member of the network since 2013. To improve the overall mobility of older adults, specifically on transit systems, the city offers training to help older adults safely and independently use the city's transit system (Mobility Training, n.d.). In 2014, San Francisco joined the network and provided a coordinated public transit plan to help older adults and those with disabilities (Metropolitan Transportation Commission, 2022). The following year, West Sacramento joined the network and, since its induction, has released an action plan to ensure age-friendly living for its residents (The City of West Sacramento, n.d.). Finally, the City of Lafayette became a network member in 2018. Lafayette has submitted a commitment letter and will take the necessary actions to determine the best response to its residents' needs (WHO, n.d.). In addition to the WHO's age-friendly cities and communities network, the American Association of Retired Persons (AARP) compiled a list of age-friendly states, counties, and cities that are all committed to working towards making their city, county, or state a viable place for people of all ages to live in.

Membership in this network of states and cities only entails a commitment toward this goal, and it is not necessary to already be considered age-friendly (AARP Livable Communities, n.d.). Each city and county are given an overall livability score that is based on scores between 0 and 100 in seven categories (AARP livability index, n.d.). The first category is housing, measured by the different metrics and policies promoting accessibility, availability, and affordability. The next category is the neighborhood, and its score is determined by the proximity to key locations, safety, and the support of mixed-use development. Transportation is calculated by its convenience, safety, and transportation modes. The air and water quality, energy efficiency, and hazard mitigation plans measure the environment. Different policies and metrics determine health to promote healthy behaviors such as exercise opportunities. Engagement revolves around voting and human rights, as well as cultural engagement. Finally, the opportunity is measured by job availability, the creditworthiness of the government, and graduation rates. All seven categories are averaged to give a final livability score. The scores of AARP network city and county members in California are summarized in Table 5.

Table 5. Summary of Categorical and Total Livability Scores of Different Cities in California

City/County	Housing	Neighborhood	Transportation	Environment	Health	Engagement	Opportunity	Total Score
Alameda County	46	65	60	48	77	56	60	59
Anaheim	52	68	44	39	72	49	48	53
Azusa	47	67	46	30	66	40	54	50
Belvedere	22	68	55	63	85	87	32	59
Berkeley	51	71	74	47	84	61	51	63
Burlingame	40	69	54	49	85	61	61	60
Carlsbad	36	59	44	35	77	50	55	51
Chula Vista	46	62	41	34	68	51	53	51
Colma	47	61	53	48	80	53	57	57
Corte Madera	36	66	53	51	80	79	37	57
Culver City	41	72	54	19	74	47	52	51
Cupertino	34	64	53	44	90	44	81	59
Daly City	49	71	56	44	83	53	54	58
El Granada	32	47	40	57	84	74	63	57
El Segundo	34	74	51	30	66	50	72	54
Emeryville	54	70	68	44	81	59	57	62
Fairfax	44	63	52	63	79	63	35	57
Foster City	42	69	56	55	90	53	59	61
Fremont	39	63	54	50	81	55	68	58
Glendale	45	72	53	27	67	52	50	52
Half Moon Bay	42	53	38	53	83	78	59	58
Healdsburg	47	64	50	52	70	88	57	61
Hermosa Beach	31	77	62	20	79	48	39	51
La Canada Flintridge	15	62	35	31	75	60	60	48
La Honda	39	30	20	59	80	79	61	53
La Mesa	49	65	44	34	67	49	45	50
Lafayette	30	54	43	48	79	58	65	54
Larkspur	42	65	57	57	81	75	33	59
Long Beach	52	69	48	26	62	40	47	49
Los Angeles	49	70	53	22	64	47	38	49
Los Angeles County	47	68	48	25	64	44	46	49

City/County	Housing	Neighborhood	Transportation	Environment	Health	Engagement	Opportunity	Total Score
Marin County	43	62	52	55	78	73	38	57
Montara	32	52	39	58	80	73	59	56
Moss Beach	41	51	38	58	80	74	62	58
National City	60	67	46	38	63	48	50	53
Novato	48	63	49	56	75	67	49	58
Oakland	54	70	67	47	74	58	50	60
Pacifica	42	63	45	50	80	60	58	57
Pescadero	42	22	10	59	80	76	54	49
Petaluma	45	66	59	51	67	81	34	57
Placer County	43	53	54	51	71	59	62	56
Redwood City	45	66	56	48	78	52	44	56
Riverside	55	60	52	23	59	22	50	46
Roseville	45	60	60	50	72	56	59	57
Ross	30	57	48	63	81	69	37	55
Sacramento	59	64	62	45	65	49	53	57
Sacramento County	54	61	58	45	66	50	58	56
San Anselmo	36	67	56	59	80	64	37	57
San Carlos	33	62	54	54	85	51	48	55
San Diego	48	66	45	36	71	52	50	53
San Diego County	46	62	44	37	70	52	50	51
San Francisco County	54	74	80	48	88	66	43	65
San Jose	43	68	51	47	78	44	74	58
San Leandro	48	67	58	48	73	56	65	59
San Mateo	43	66	54	44	84	54	57	58
San Rafael	49	67	59	51	76	70	35	58
Santa Clara County	41	66	51	47	81	45	73	58
Santa Clarita	35	57	31	29	67	39	41	43
Saratoga	27	60	47	51	85	45	76	56
Sausalito	44	70	61	48	81	85	28	60
Solana Beach	37	60	44	40	80	56	40	51
Sonoma County	46	57	52	51	69	82	44	57
Sunnyvale	43	66	56	45	86	45	67	58
Temple City	40	65	48	30	75	40	61	51

City/County	Housing	Neighborhood	Transportation	Environment	Health	Engagement	Opportunity	Total Score
West Hollywood	55	74	64	20	71	48	32	52
West Sacramento	55	62	55	51	65	45	53	55
Watsonville	54	64	59	53	56	64	40	56
Windsor	43	65	48	47	70	83	51	58

The studies above demonstrate that while older adults are considered in design and planning standards in various counties and cities, they are still frequently overlooked. They should be addressed to improve the roadway environment and the overall safety of older adults. As life expectancy within the US increases (Montez et al., 2020), the need for safer transportation facilities within and surrounding older adult communities also increases. While improving the design of sidewalks and biking paths inside and immediately outside of older adult communities, or providing a more universally comprehensible system to indicate the purpose and use of active transportation facilities will help, there is still a noticeable lack of solutions to remedy this issue.

3. Data Collection

The primary focus of this study is to understand the overall life-space mobility of ten different OACs, the areas immediately surrounding them, how their residents feel about it, and how they utilize the available facilities.

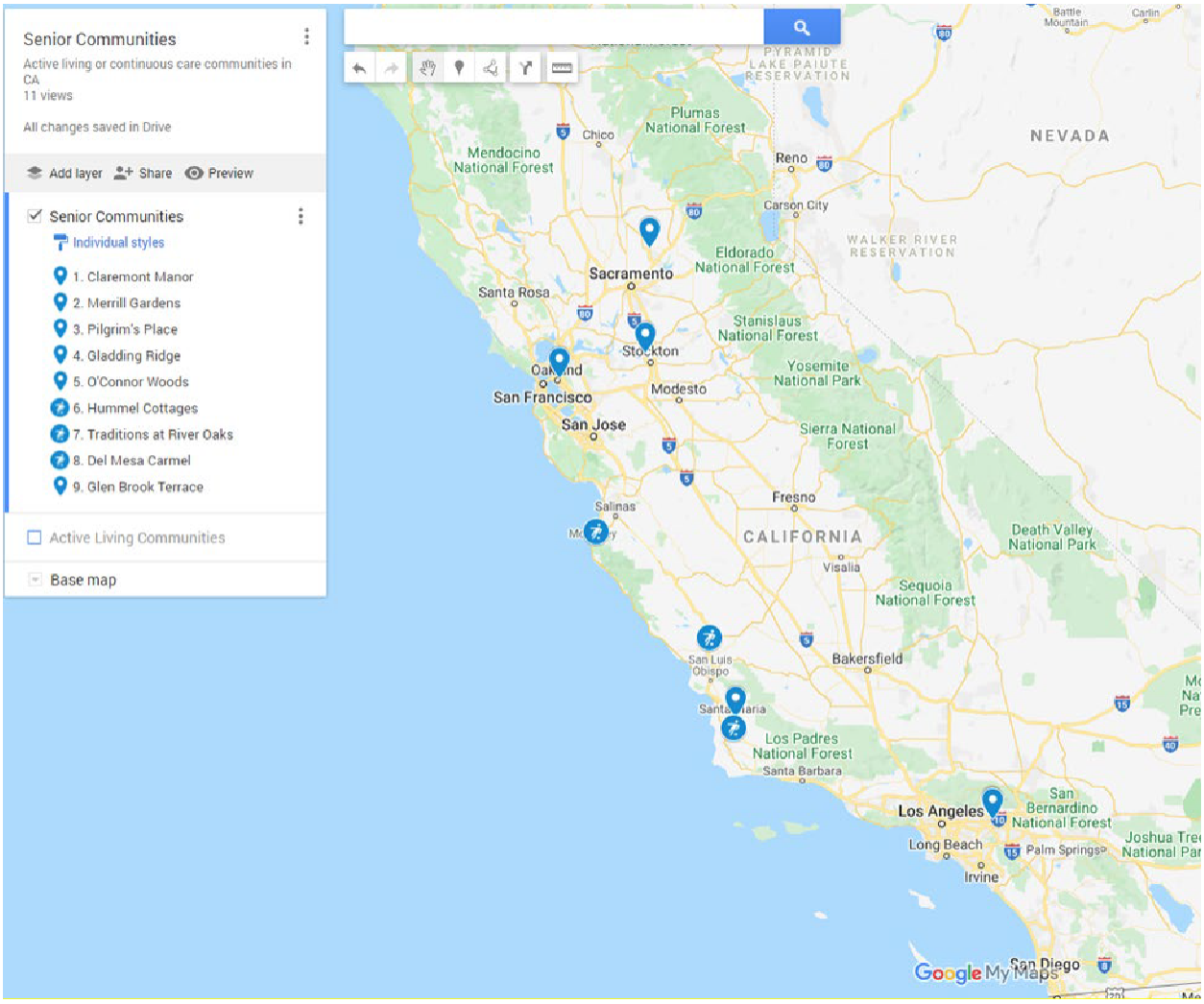
The project team collected the following data for this research:

- Survey data from residents in the ten Older Adults Communities (OACs)
- Additional data related to OACs from interviews with OAC staff
- Data and reports related to how jurisdictions planned or implemented measures to promote active transportation for older adults from interviews with city staff and searches on the internet
- Demographic, socio-economic, and transit performance data for the census block groups where the OACs are located from US Census Bureau and AllTransit.cnt.org

Older Adults Communities (OACs)

Realizing the importance of survey implementation and community participation, the research team has made enormous outreach efforts to contact many older adult living communities across California based on the team's previous experience and personal contacts. The targeted nine communities include Claremont Manor, Merrill Gardens, Pilgrim's Place, Gladding Ridge, O'Connor Woods, Hummel Cottages (Nath Property Solutions), Traditions at River Oaks, Del Mesa Carmel, and Glen Brook Terrace. The detailed geographic distribution of these communities, including continuous care, independent living, assisted and memory only, and active living, is shown in Figure 1.

Figure 1. Geographic Distribution of the 9 OACs (Originally Planned)



Most of the communities on the map are identified to address population and geographic diversity, and some of them (e.g., Pilgrim's Place) are recommended by the personnel we contacted due to their familiarity with the local active living and tiered living communities.

Through frequent email and phone conversations with contacts with different roles (e.g., community general manager, service manager, marketing director, wellness director, social worker, city planning staff, city community development staff, and local resident), the team secured the expressed commitments to project participation from various personnel from both local governments (or, the planning and community development departments) and older adult living communities.

Table 6 summarizes the demographic, socio-economic, and transit performance score data collected through various sources for the census block group each community lies in.

Table 6. Demographic and Socio-Economic Profile of the Nine OACs

	Community Name	1. Claremont Manor	2. Merrill Gardens	3. Pilgrim's Place	4. Gladding Ridge	5. O'Connor Woods	6. Hummel Cottages	7. Traditions at River Oaks	8. Del Mesa Carmel	9. Glen Brook Terrace
	AllTransit Performance Score (1-worst, 10-best)	8.6	5	7	2.3	1.9	2.7	1.3	2.5	8.9
Race	White alone	39.9%	69.5%	38.3%	53.2%	38.9%	74.5%	77.8%	98.2%	77.1%
	Black or African American	21.2%	0.0%	2.1%	1.8%	7.3%	1.2%	0.0%	0.0%	0.0%
	American Indian and	1.6%	0.0%	0.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	Asian alone	11.5%	7.2%	12.5%	0.8%	17.4%	2.7%	0.3%	0.0%	14.2%
	Native Hawaiian and	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%
	Other	3.3%	6.4%	1.2%	14.3%	7.0%	0.0%	0.5%	1.3%	2.3%
	Hispanic or Latino	22.6%	16.9%	45.4%	29.0%	29.4%	21.6%	21.2%	0.5%	4.8%
Education Attainment	Less than High School	7.6%	6.4%	15.3%	11.0%	5.7%	8.1%	5.3%	5.1%	1.6%
	High School or Equivalent	3.5%	8.3%	12.8%	22.9%	18.7%	9.7%	17.1%	11.9%	13.1%
	Some College	20.7%	45.5%	16.0%	20.7%	28.0%	32.4%	31.7%	29.4%	18.0%
	Bachelor's or Advanced	45.6%	33.3%	23.6%	10.1%	20.8%	27.1%	21.7%	41.6%	61.2%

	Community Name	1. Claremont Manor	2. Merrill Gardens	3. Pilgrim's Place	4. Gladding Ridge	5. O'Connor Woods	6. Hummel Cottages	7. Traditions at River Oaks	8. Del Mesa Carmel	9. Glen Brook Terrace
Household Income	$25,000 or less	22.5%	24.5%	17.2%	28.8%	17.9%	19.0%	14.1%	29.7%	17.6%
	$25,000 to $49,999	15.7%	20.2%	17.1%	26.5%	18.7%	16.2%	22.4%	12.0%	11.9%
	$50,000 to $74,999	18.0%	37.8%	23.1%	9.8%	15.5%	10.6%	20.6%	5.6%	10.6%
	$75,000 to $99,999	8.9%	0.0%	11.4%	12.2%	14.9%	13.4%	12.9%	10.1%	11.6%
	$100,000 or more	34.8%	17.5%	31.0%	22.7%	33.0%	40.8%	31.2%	42.6%	48.3%
Vehicle Ownership	No vehicles	15.2%	23.2%	12.9%	17.7%	17.6%	1.2%	1.2%	14.8%	14.3%
	One vehicle	58.6%	46.0%	36.9%	32.6%	24.7%	27.5%	34.1%	43.1%	61.7%
	Two or more vehicles	26.2%	30.8%	50.2%	49.7%	57.7%	71.4%	64.7%	42.0%	24.0%

The following section describes how the research team worked with OACs and city staff to identify and engage OACs.

Recruitment

The project team recruited older adult communities from different parts of California, aiming for a mix of geographies, incomes, races, and community types (i.e., independent or tiered). The team conducted parallel recruitment for interviews with transportation and development review staff in each city with a participating older adult community. In cases where the team gained the agreement of city staff but had difficulty identifying or gaining the participation of an older adult community, the team asked city staff to assist. Staff from Oakland, Mountain View, and Claremont helped identify OAC; however, they had minimal direct contact with managers in these communities. The project team's meetings with the Senior Advisory Committees in Oakland and Mountain View did result in a community in each participating city.

The resulting pairing of participating older adult communities and city staff is imperfect. For example, the team worked with two OACs in Paso Robles but was only able to talk with a retired city planner instead of city staff. Staff from Santa Maria and Santa Barbara County participated in interviews, but the team was unable to gain access to identified OACs in either jurisdiction. Due to the useful information gained from jurisdictional staff, the project team completed a desktop review of two OACs in Santa Maria and one in Santa Barbara County.

Pandemic

The pandemic hindered more direct engagement with OACs and city staff. The team completed only one on-site visit, during which team members interviewed the Resident Service Supervisor, relying on the telephone or Google Meet interviews with managers from other older adult communities and with city staff.

Resident Survey

In addition to interviews and desktop reviews, residents in each participating community were invited to complete a survey to capture their active mobility. The survey was tested during Fall 2021, then approved through the Institutional Review Board (IRB) review process, which added information about human subject testing and a question asking participants to affirm their knowledge of the project purpose. The project team received 185 surveys with varying degrees of completeness.

Originally developed through the online survey platform Alchemer, we developed a paper version due to the team's inability to work in-person with residents. The paper version replicated the "skip logic" from the Alchemer version through a series of "if you answered this question as such, go to question...." To ease the understanding of the paper version, the team offered and held Google

Meet community meetings for residents at Chet Dotter in Paso Robles and Allen Temple Arms in Oakland. See Appendix 2 for the Resident Survey.

Interviews

The project team interviewed City and OAC staff (typically the general manager or resident services supervisor) using a set list of questions. Responses were recorded in an input form on Alchemer within a day of the interview. An OAC manager is the housing manager who oversees the OAC's maintenance, including directing caregivers, organizing kitchen workers, planning resident activities, hiring certified employees, and communicating with residents' families, etc.

The names of all participants in an interview were recorded on the input form, but individual interviews with staff from the same city were recorded separately. See Appendix 3 for OAC Staff Interview Questions and Appendix 4 for City Staff Interview Questions.

The team also interviewed two developers in Paso Robles: the Executive Director of the Paso Robles Housing Authority, which is developing a new OAC; and the developer of an upper-income independent community. See the section, How AMI is Considered as Part of New OACs: Conversations with Two Developers, for a summary of these interviews.

Resulting Participation

This report provides information for eight cities and ten OACs, as shown below.

- Claremont Manor, Claremont
- Encina Royale, Goleta
- Allen Temple Arms, Oakland
- Chet Dotter, Paso Robles
- Traditions at River Oaks, Paso Robles
- Hummel Cottages, Santa Barbara County (unincorporated)
- Merrill Gardens, Santa Maria
- O'Connor Woods, Stockton
- Sunset Estates, Mountain View
- Villa del Sol, Santa Maria

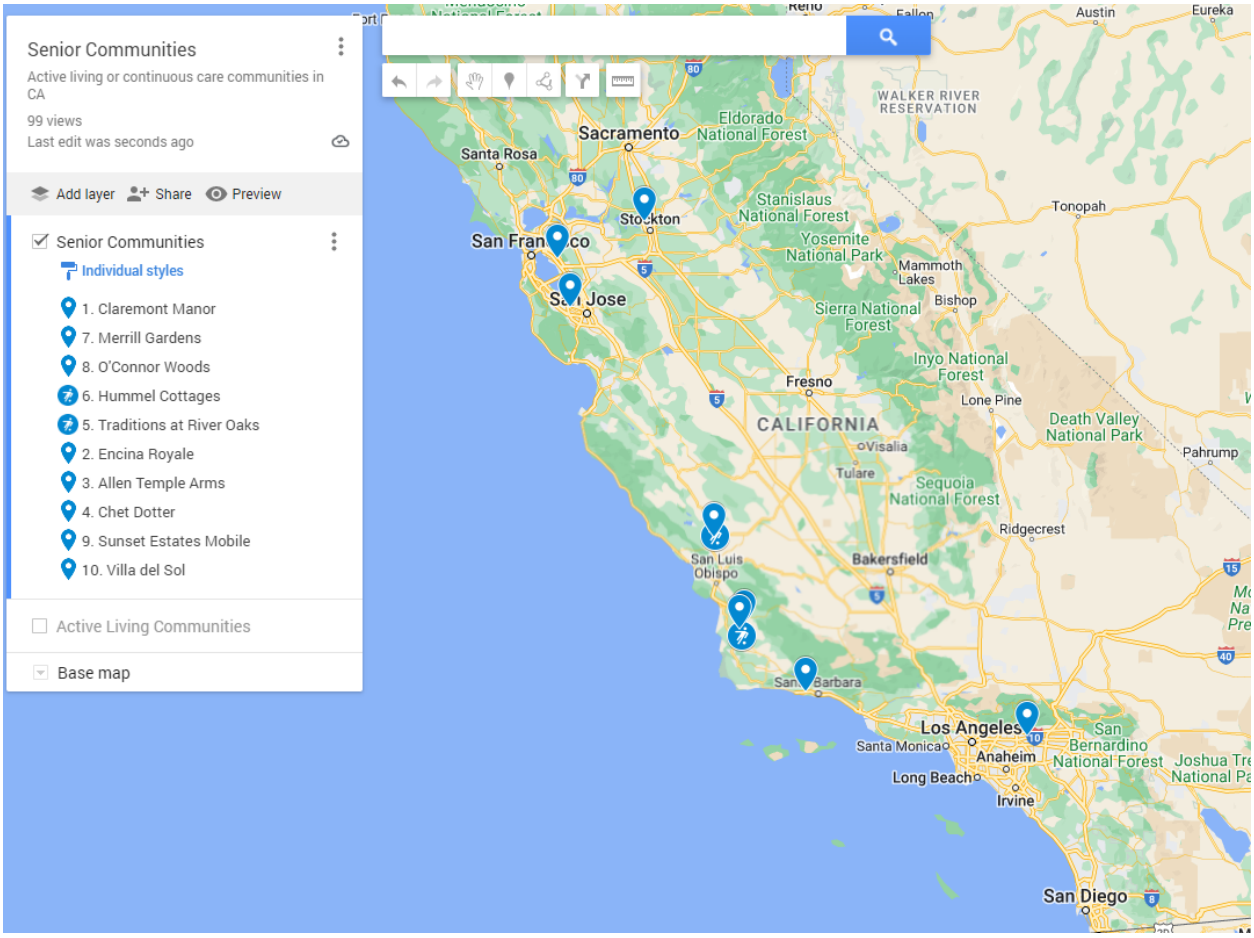
A summary of the OACs consisting of the type of community and the financial demographics is outlined in Table 7 below.

Table 7. The Ten OACs

OAC City or County	Type of Community	Demographics
Claremont Manor Claremont	Tiered living, independent living apartments	Moderate to high income
Encina Royale Goleta	Independent living single-family homes	Moderate to high income
Allen Temple Arms Oakland	Independent living apartments	Lower-income and rental assistance
Chet Dotter Paso Robles	Independent living in apartments	Lower-income managed by the Housing Authority
Traditions at River Oaks Paso Robles	Independent living single-family homes	Upper income
Hummel Cottages* Santa Barbara County	Independent living four-unit cottages	Moderate income
Merrill Gardens* Santa Maria	Tiered living, independent living apartments	Moderate to high income
O'Connor Woods Stockton	Tiered living, independent living apartments	Moderate to high income
Sunset Estates Mobile Home Community Mountain View	Independent living in detached mobile homes	Moderate income
Villa del Sol* Santa Maria	Independent living in an apartment community	Moderate income

Note: * Denotes that the OAC opted out of participating in the survey.

Figure 2. Geographic Distribution of the Ten OACs Selected



Tables 8 summarizes the demographic, socio-economic, and transit performance score data collected through various sources for the census block group each community lies in.

Table 8. Demographic and Socio-Economic Profile of the Ten OACs

	Community Name	1. Claremont Manor	2. Encina Royale	3. Allen Temple Arms	4. Chet Dotter	5. Traditions at River Oaks	6. Hummel Cottages	7. Merrill Gardens	8. O'Connor Woods	9. Sunset Estates Mobile Home	10. Villa del Sol
	AllTransit Performance Score (1-worst, 10-best)	8.6	5.4	9.6	2.9	1.3	2.7	5	1.9	8.3	2.4
Race	White	39.9%	80.4%	2.9%	13.4%	77.8%	74.5%	69.5%	38.9%	43.8%	21.6%
	Black or African	21.2%	0.0%	29.9%	1.3%	0.0%	1.2%	0.0%	7.3%	2.9%	4.7%
	American Indian	1.6%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
	Asian	11.5%	14.9%	4.8%	0.0%	0.3%	2.7%	7.2%	17.4%	32.9%	8.5%
	Native Hawaiian	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Other	3.3%	0.0%	1.6%	0.0%	0.5%	0.0%	6.4%	7.0%	2.0%	1.1%
	Hispanic or Latino	22.6%	4.6%	59.3%	85.4%	21.2%	21.6%	16.9%	29.4%	18.4%	64.0%
Education Attainment	Less than Highschool	7.6%	1.3%	25.0%	29.8%	5.3%	8.1%	6.4%	5.7%	3.9%	15.1%
	High School	3.5%	10.8%	14.9%	3.5%	17.1%	9.7%	8.3%	18.7%	6.8%	10.0%
	Some College	20.7%	17.9%	13.9%	15.1%	31.7%	32.4%	45.5%	28.0%	16.6%	20.0%
	Bachelor's or Advanced	45.6%	56.6%	4.6%	0.0%	21.7%	27.1%	33.3%	20.8%	51.4%	8.9%

	Community Name	1. Claremont Manor	2. Encina Royale	3. Allen Temple Arms	4. Chet Dotter	5. Traditions at River Oaks	6. Hummel Cottages	7. Merrill Gardens	8. O'Connor Woods	9. Sunset Estates Mobile Home	10. Villa del Sol
Household Income	$25,000 or less	22.5%	2.3%	57.8%	43.7%	14.1%	19.0%	24.5%	17.9%	6.8%	22.9%
	$25,000 to $49,999	15.7%	35.0%	15.5%	26.1%	22.4%	16.2%	20.2%	18.7%	21.6%	20.0%
	$50,000 to $74,999	18.0%	29.7%	17.4%	21.3%	20.6%	10.6%	37.8%	15.5%	12.4%	16.8%
	$75,000 to $99,999	8.9%	6.7%	5.7%	0.0%	12.9%	13.4%	0.0%	14.9%	15.5%	15.9%
	$100,000 or more	34.8%	26.2%	3.6%	8.9%	31.2%	40.8%	17.5%	33.0%	43.8%	24.2%
Vehicle Ownership	No vehicles	15.2%	2.6%	41.5%	14.1%	1.2%	1.2%	23.2%	17.6%	1.2%	6.4%
	One vehicle	58.6%	58.6%	36.7%	40.0%	34.1%	27.5%	46.0%	24.7%	51.6%	24.6%
	Two or more vehicles	26.2%	38.8%	21.8%	45.9%	64.7%	71.4%	30.8%	57.7%	47.1%	69.0%

Tables 9A–9G provide a summary of each OAC reviewed, and Table 10 provides a summary of city staff interviews for cities in which OACs were located. A profile for each OAC-City pairing provides more details and applies the two assessment tools developed for this project: the AMI rating and OAC in Active Transportation Planning. See Appendix 1 for the profiles of each OAC listed above, Appendix 4 for detailed information on city staff interviews, and the two assessment tools developed and used for this project, described in Section 4: Methodology.

Table 9. Summary of OAC Participation

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
1. Claremont Manor, City of Claremont	Tiered living, independent living apartments	Moderate to high income	Campus provides a complete network of sidewalks and pathways for residents; the project team observed residents using these during the site visit. Policy to reduce on-site parking for staff and contractors creates safer walking environments for residents and staff. Community is close enough to the Village for residents to walk. Staff offer to drive residents back from the Village after walking there, but residents often prefer to walk back.
2. Encina Royale, City of Goleta	Independent living single-family homes	Moderate to high income	Residents formed the New Town Goleta Safety group (NTGS) to work with the city for changes. They have been successful in getting grants for several safety and access improvements at key roadway crossings. They are strong advocates (participating in City meetings and projects) for bicycle, pedestrian, and vehicle safety improvements throughout the City, participating in planning processes such as the Goleta City Pedestrian and Bicycle Master Plan. In the summer of 2021, this work resulted in City Council approving an additional $3.8M for six additional road rehabilitation segments. The NTGS group requested a Senior Zone for Encina Road and Fairview Avenue. While some residents bike, there is no good network once outside Encina Royale, especially to cross US 101. Goleta is divided into four areas by major roadways, creating the need to mitigate these barriers for people walking and bicycling. There are seven bus stops nearby, but they are all for the same bus route.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
3. Allen Temple Arms, City of Oakland	Independent living apartments	Lower-income and rental assistance	Newly upgraded pedestrian access to the BRT station at International Boulevard and 82nd Ave. are appreciated. However, residents continue to experience safety issues when crossing International Boulevard due to motor vehicle speeds. In Spring 2022, a resident in a wheelchair crossing on the south leg of the intersection was hit by a motorist. People walk in the garden area within the fenced campus due to personal safety concerns and poor sidewalk conditions around the community, some of which were repaired for the new BRT stations. The Walgreens across the street closed in the past year due to security concerns, as did the closest grocery store. This has left residents in a food, pharmacy, banking, and medical services desert. Their best connection to these services is the new BRT. Desired changes to AMI and overall ease of access are: • Install a pedestrian crossing on the south leg at the intersection of International Blvd. and 81st Ave. for residents in building 2 to use since the entrance is on 82nd Ave. • Improved overall sidewalk maintenance. • Assistance with personal safety concerns. • City efforts to bring a grocery store within walking distance, as well as other services such as banking, pharmacy, doctor's office within walking distance that is comfortable for the residents. Foodvale Market at 3401 International Blvd. was renovated and is a good model for what should be available to Allen Temple Arms residents. The Market is at a BRT station, and residents take a twenty-minute BRT trip to get there.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
4. Chet Dotter, City of Paso Robles	Independent living in apartments	Lower-income managed by Housing Authority	The community is located at the corner of 28th and Park St., both of which are relatively narrow neighborhood streets. Sidewalks along Park St. are about four-feet wide and immediately next to the roadway. Sidewalks along 28th St. are about five-feet wide and are buffered from the roadway. Mobility options for residents are walking, public transit, accessible public transit, or dial-a-ride. A bus stop on 28th St. near the community entrance is accessible from the building's parking lot entrance. The bus travels along Spring St., one block to the west of Park St. The campus is fenced, with two gates for pedestrians. A driveway into the parking lot is the only way motor vehicles can access the campus, although there is a parking pad on the Park St. side of the building. A perimeter sidewalk is around the building, inside the fence.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
5. Traditions at River Oaks, City of Paso Robles	Independent living single-family homes	Upper income	People move to the community primarily for physical activity features such as the swimming pool, the sidewalk network, and the greenway trail. Most people walk to the pool, given the small geographic community size and sidewalk presence. Many residents have a regular walking buddy. Some residents walk to the nearby park. Many residents bike within the community, while some use the adjacent trail, in spite of the poor connection to it (especially given the topography where one has to go down to get to it, and climb up to get back home). A bike path or multiuse trail separated from the roadway is also needed. Some residents have cruisers and bikes around town. Others belong to riding groups outside the community, given the strong cycling community among older Paso Robles residents. One of the benefits of staying with the community is spontaneous and informal socialization, i.e., you see others walking and stop to chat. The number and placement of benches encourage socializing. There is also adequate lighting for walking at night. People walking within the community can offer assistance for those who fall, which would not be the case when walking or cycling outside the community. The community is gated, with only 2 vehicle entrances and 6 key-controlled pedestrian gates. The community's Helping Hands Committee assists residents with wellness needs.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
6. Hummel Cottages*, Santa Barbara County	Independent living four-unit cottages	Moderate income	Hummel Cottages is an independent living community for people aged 55 and over. It comprises five cottages, each with four one-floor private apartment suites. Each apartment has a covered garage with storage. Most residents are single; only two units are occupied by couples. Three residents are 94, several are in their late 80s, and one is in their late 60s (as of summer 2021). The community is in a more rural context along a two-lane road with sidewalks on each side and a posted speed limit of 30 MPH. The community is gated with access via a lock combination. Many residents regularly use the walking loop accessible from the end of Hummel Village Court's cul-de-sac. A public multi-use trail provides connections to other areas without walking along the street for the entire trip, such to the grocery store. People primarily drive for daily needs.
7. Merrill Gardens*, City of Santa Maria	Tiered living, independent living apartments	Moderate to high income	Merrill Gardens is a tiered living community of studio, one- and two-bedroom apartments. The campus includes a swimming pool. The community offers residents transportation options but does not appear to foster active mobility outside the community. The community appears to be well-resourced with trees, greenspace and sidewalks. The community is fully fenced in with limited locations for residents to exit and enter. Surrounding streets have average sidewalk space and minimum width bike lanes along two- and four-lane roads. Intersections are not designed well for pedestrian crossings.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
8. O'Connor Woods, City of Stockton	Tiered living, independent living apartments	Moderate to high income	O'Connor Woods is on 34 acres, nestled in a larger residential neighborhood. It has three independent living buildings, two sets of fourteen independent living cottages, two assisted living buildings, two memory care buildings, and a 100-bed skilled nursing facility. Many residents walk on campus, some rigorously, others more casually. Only one resident bikes. Some residents do not want to walk much or at all, affecting where events are planned. It can be difficult to encourage these residents out of their apartments to walk, even to the dining room. They will either eat in their apartment or drive to the dining room. Those completing the survey indicate they use the outdoor space for exercise and socializing. However, the resident services supervisor's observation is that due to the discomfort from extreme temperatures, residents prefer to be indoors. The outdoor lamp posts do not provide sufficient lighting on campus and in parking lots. On-campus motorists exceed the posted 10 MPH limit, which can create safety concerns when residents walk in the street or cross at locations other than crosswalks. In general, the campus is comfortable and aesthetically pleasing, given the trees and green space. Motor vehicle speeds on Wagner Heights Rd. are of concern when residents leave the campus when driving.

OAC, City or County	Type of Community	Demographics	Key Takeaways from Interviews and Site Visits (in Person/Desktop)
9. Sunset Estates Mobile Home Community, City of Mountain View	Independent living in detached mobile homes	Moderate income	The community comprises 144 housing units and a resident population of 200 to 250, and is located in the southeast quadrant of State Routes (SR) 85 and 237, which limits easy access by walking or biking to destinations north and west. A community park is within walking distance, but grocery stores, medical facilities, drug stores, department stores, restaurants, etc., are typically north and west, beyond SRs 85 and 237. Sylvan Avenue has sidewalks, a bike lane on each side, parking on the side opposite Sunset Estates, and two motor vehicle travel lanes. One bus route serves the community, with 30-minute headways. The area is primarily residential, with another age-restricted mobile home community just north of Sunset Estates and rental apartments nearby. Some residents use the bus to go shopping and get to other destinations. Many walk once or twice a week for exercise and daily needs. Identified improvements include better lighting inside and outside the community, sidewalk repair, and maintenance. Driving or riding with another driver is a common way to get around.
10. Villa del Sol*, City of Santa Maria	Independent living in apartment community	Moderate income	Studio, one-, and two-bedroom units with a centrally located pool. The community's campus is designed for easy access on foot. The community is fully walled with only one way in and out. Several logical places where pedestrian access to adjacent streets could provide walking opportunities. Sidewalk and bicycling networks along adjacent streets are higher stress due to the roadway's width and the posted speed limit. Intersections are not designed well for pedestrian crossings. The City's Local Road Safety Plan has identified mid-block and intersection crashes.

*OAC did not participate either by declining or not responding to repeated requests to participate. These OACs are included here due to information the project team received from city staff and the fact that they provide useful information for their type of community.

Table 10. Summary of City Staff Interviews

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Claremont	City Planner Chris Viers	The land use and transportation planning support walkable communities, formalized by its Complete Streets policy OACs are treated as an institution, such as college campuses. The large number of OACs means older adults (OAs) form large voting blocks. OAs living in SFHs on large lots expect parking to be available when they drive into town. This is at odds with the town's approach and the desires of younger residents. It is unclear how OAs living in OACs feel.	Pedestrians Bicyclists Transit Trails	The approach has always been equity for all ages, abilities, socio-economic backgrounds, races, ethnicities, etc. See this in the General Plan.	Dial-a-Ride and paratransit service. Organization that helps families plan for aging–Aging Next–includes mobility such as rides to the grocery store, etc.	OACs treated like an institution, such as a college campus. For OA communities with memory care, they support circular sidewalks to help prevent residents from leaving the campus unattended.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Goleta	Public Works Director Charles Ebeling	Goleta has been successful in getting and using funding for active transportation infrastructure improvements. The City has responded to community requests, primarily due to the work of Steve George from Encino Royale. The City understands how infrastructure improvements can benefit multiple communities, such as adjacent schools and older adult communities. The City's project prioritization process values older adult populations equally with other populations identified in their equity and inclusion program. It is unclear if the successes resulting from Steve George's work would continue if he were not involved.	Pedestrians Bicyclists Transit Trails	See page 25 of Chapter 1 and TOC in the BPMP. Also, the Regional Transportation Plan SBCAG is developing an E&I focus.	No Older Adults Master Plan, but Public Works is prioritizing older adult areas because of community advocates such as Steve George. This is now affecting their capital project development. Through this process, Steve is learning about the world of transportation planning and engineering, which he is taking back to his community.	The City's planning department negotiates for off-site infrastructure improvements from developers. However, Public Works is establishing a site plan review position for transportation elements in the plan.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Lincoln	Senior Planner Rommel Pabalinas	The city's non- motorized modes include NEVs (golf carts), as well as walking and bicycling. The signature project is on Lincoln Boulevard, aiming to increase trips by these modes.	Pedestrians* Bicyclists Transit* Trails *NOTE: These are published maps, not master plans	Yes, for transit access, as stated in the mayor's 2021 State of the Town address, but no specifics.	Area plans included some accessibility elements for older adults, such as in the Village 5 General Development Plan.	Same requirements for all-ages residential communities, with all ADA requirements fulfilled. Facilities beyond this can vary by the developer. For example, some developers of active older adult communities want facilities that accommodate NEVs.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Oakland	Transportation Planner Manual Corona Development Review Lead Audrey Harris	Oakland has a well-defined system for addressing equity and inclusion needs. There is a critical overlap with older adults and persons with disabilities, and for development review, including accessible on-street parking and dual-directional curb ramps adjacent to a site and at the receiving end are required to be updated and maintained. Caltrans design standard for accessible parking is also to be maintained.	Pedestrians Bicyclists Transit Trails	Yes. Oakland's program is focused on addressing historically underserved communities based on race, household income, and age. It has a universal mobility program to increase travel by all modes for all residents	Planning is guided by a number of approved documents and processes, including: OakDOT's geographic equity toolbox OAK 311 triaged to OakDOT and other requests from high-priority neighborhoods, libraries, near schools, and locations near senior centers. Crash Analysis, such as data on crashes in Oakland and their disparities Safe Oakland Street initiative includes goals and strategies that focus on the needs of older adults and persons with disabilities.	Same requirements as for all-age residential communities.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Paso Robles	City Planner (retired) Susan DeCampli Clark	The City did not specifically engage older adult communities in developing the BPMP, but tried to connect with all demographics through workshops and other techniques. Selected projects tend to focus on easy fixes for school access. The city tends to use an opportunistic approach to getting AMI, as well as applying for state and federal grants. Neighborhood and area plans have connectivity needs The Senior Parking Program provides close-by parking in downtown areas for residents 65 and over.	Pedestrians Bicyclists Transit Trails	No	SLO COG coordinates and specialized mobility services for older adults and others in need.	Uncertain.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Santa Barbara County	Alternative Transportation Manager Mark Friedlander Site Plan Reviewer Will Robertson	Currently developing an Active Transportation Plan, but it does not specifically address mobility needs for older adults The County's equity and inclusion focus does not always allow for addressing user experience. Because of the rural nature of much of the unincorporated county, funding roads is a higher priority than funding sidewalks and intersection crossing infrastructure for pedestrians. This means that there are fewer pedestrian crossings in these areas. A lot of the county has two-lane roads and residents do not want sidewalks and street lights. Some community plans specify that these facilities will not be provided.	Pedestrians Bicyclists Transit Trails Note: SBCAG (http://www.sbcag.org/) does a regional AT plan which brings it all together	Yes, its focus is on low-income individuals, vehicle access, activity generators, existing conditions (facility, safety analysis, other inputs), and is being used in developing the Active Transportation Plan for unincorporated areas	Nothing specific beyond paratransit service. The regulations call for our urban street standards of minimum five-foot sidewalks, etc. Hummel Cottages is on a Neighborhood Collector, which lends itself to higher speeds. The trails behind Hummel Cottages serve its residents.	Same requirements as for all-ages residential communities. While much of the unincorporated county is rural, older adult communities in more urban or village contexts have better onsite and adjacent AMI. The Golden Inn and Village for low- income older adults is an example of this.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Santa Maria	City Engineer Mark Mueller Transit Manager Gamaliel Anguiano	The newly revised bus system provides better on-time service with added flexibility in destinations. Three routes now serve Merrill Gardens, but bus stop access is limited by a few access points from the campus. While transit planning is based on efficient operations, the people that use the system have a say in the final outcome. A lot of the county has two-lane roads and residents do not want sidewalks and street lights. Some community plans specify that these facilities will not be provided.	Pedestrians Bicyclists Transit* Trails Note: Also has a bus stop improvement plan.	The ATP includes a methodology for determining disadvantaged communities associated with Residential Key Nodes (see page 27, Table 15). People aged seventy-five and over are included.	timed transfers at the transit center. The base headways are 45 minutes, the next goal is to get to twenty-minute headways.	Same requirements as for all-ages residential communities.

City or County	Role, staff person/s	Key Takeaways	Active Transportation Master Planning	Equity and Inclusion Focus on Transportation Planning	Planning for Older Adult Mobility	Subdivision Regulations for Older Adult Communities
Stockton	Senior Project Manager Rosa Alvarez Engineer Dodgie Vidad Community Development Planner Even Marcelo	They are always thinking ahead as to what is needed. They are flexible and ready to modify existing plans to reflect changing circumstances. The city uses the 2017 Bike Master Plan as a beginning place, adding or modifying it as new development takes place. Safety is the top driver of AT infrastructure projects. All new developments and in-fill projects must have pedestrian and bicycle networks that are connected to the surrounding networks. The city is not bashful about getting developer-built AT infrastructure. The city is known as a place that is committed to AT infrastructure. While the City has not been mindful of integrating AT facilities into older adult communities, this (SB-1) project raises awareness.	Pedestrians Bicyclists Transit Trails	Safety is the primary driver. See the example from Westlake Village currently being developed.	The general plan captures all residential areas. When reviewing site plans and paper streets, they make sure there is sufficient width for AT facilities. Any other mobility services are provided by the San Joachim County Human Services Administration.	Same requirements as for all-ages residential communities.

How AMI is Considered as Part of New OACs: Conversations with Two Developers

Different approaches result in two different active mobility outcomes in the same city. The project team spoke with two developers in Paso Robles about the process of designing two older adult communities: River Walk Terrace (currently under development) and Traditions at River Oaks (developed in the early 2000s).

The discussion was framed around four questions:

1. Why this site? Why this type of community?
2. What was your interaction with local government staff? What did the city's subdivision regulations require or allow you to do?
3. What are your expectations for active mobility for residents?
4. What attention did you give to active mobility connections with surrounding areas?

A summary of each conversation is below. Table 11 provides a side-by-side comparison of the factors considered in each community's development.

River Walk Terrace

Niblick Road in Woodland Plaza 2, Paso Roble minimum resident age of 62. https://pasoroblesha.org/new-projects/

Two- and three-story buildings with 79 garden-style apartments. All but six are one-bedroom. Expected completion 2023/2024.

Interview with David Cooke, the Paso Robles Housing Authority (PRHA) Executive Director, on April 19, 2022.

Figure 3. River Walk Terrace

Several years ago, Dave Cooke identified the site for River Walk Terrace as an older adult community due to its proximity to stores, transit service, and the river walk, as well as connections to surrounding areas. A market analysis of the site confirmed its suitability for this type of residential use, stating,

The project is located within ¼ mile or less from the following: grocery shopping; pharmacy; optometrist, public transportation, bus stop, medical offices, dentist office, parks, walking paths, shopping, banks, fast-food restaurants and other conveniences that will benefit the residents…. We have explored many developable properties within Paso Robles and note that this particular property stood out by far as the most conducive property for older adult living because of the close proximity and walkability to all of the above.

Given the need for affordable housing for older adults in Paso Robles and San Luis Obispo (SLO) County, the analysis recommended marketing to a target population in the greater Paso Robles area with household incomes in the extremely low, very low, and low Area Media Income (AMI) groups, i.e., these older adults make 30–60% of the SLO County area median income renters' income. Given this need for affordable housing, the city staff was receptive, and the Planning Commission approved rezoning the property from commercial to mixed-use, which allows for apartments.

The site design includes a fence for both security and privacy around the property with one motor vehicle entrance and pedestrian entrances at the front plaza, resident center, and near the River Walk access point. A walkway will be inside the fence. An interior courtyard will provide space for walking, socializing, and traveling between units along four-foot-wide pathways. A new ten-foot opening and ramp located on the northwest corner of the site will provide River Walk access. The site plan indicates 18 bike racks will be provided. A total of 82 motor vehicle parking spaces includes four handicapped spaces. PRHA expects to discuss off-site improvements, such as signal timing, with city staff and AMI infrastructure between the site and nearby stores in the shopping center.

Traditions at River Oaks

700 Clubhouse Dr, Paso Robles, CA 93446 http://riveroakspasorobles.com/

202 acres, with 562 homes (mix of active adult, conventional, and medium density). Also includes 9.8 acres of commercial, 6.49 acres of parks, open space, a golf course, and 10.5 acres of a school. Note that Estrella is currently building River Oaks II just north of River Oaks. This development will include 271 active adult and conventional homes, and open space on 129 acres. Interview with Dick Willhoite, President, and CEO of Estrella Associates, took place on March 31, 2022.

Figure 4. Traditions at River Oaks

River Oaks was developed as an active OAC, different from the then-common Del Webb retirement community model. Its seven neighborhoods offered a range of sizes and prices, including some marketed to families, hence the elementary school.

Developing Traditions at River Oaks included an extensive market analysis process to determine the potential market. A research company analyzed census data to determine the in-migration and home-buying of older adults, then used a 28-page survey with a series of vignettes to determine designs for lifestyle, architecture, and common areas. This process shaped the final community design in many ways. For example, the term "lanes" is used instead of "alleys" for narrow roadways behind houses. Based on the research and surveys, 65% of homes are lane-loaded. Additionally, the planned greenbelt proved popular, with residents having a high preference for the front door to be on the greenbelt. In fact, Estrella hired a lifestyle coordinator to help market the development two years before any homes were sold. They talked with prospective buyers about the community's lifestyle options. Based on the extensive work Estrella did to determine the community's land development form, even with the range of housing options and prices when the community opened, its target population has evolved into "portfolio" buyers who are deliberative, buying off of their portfolios.

The community conforms to the city's Borkey Specific Plan and city subdivision ordinance. The Borkey Area Specific Plan, which covers just under 770 acres, comprises six planning areas intended for residential single-family units, low-density residential single-family units, commercial services, public facilities, and agriculture. The Estrella website notes that *since 1990, the Specific Plan has been amended 15 times to continually address and modify the plan's land use and development standards. Subarea B of the first phase of River Oaks, is built out.* Every street includes pedestrian facilities according to the city's requirements. This means four-foot-wide sidewalks on one side and eight-foot-wide sidewalks on the other to accommodate cyclists. It also has over six miles of

walking and biking trails. Access to the community is through two gates for motor vehicles (not with posted security) and six code-controlled pedestrian gates.

Table 11. Comparison of Factors Affecting Site Development

Factors affecting site development potential	River Walk Terrace	Traditions at River Oaks
Income of target residents	No more than 60% of SLO County area median income renters' income	"Portfolio" buyers
Size	Four acres, 79 apartments	202 acres; 562 houses
Market analysis re: AMI	Focused on proximity to destinations for daily activities. Size of site precludes extensive onsite AMI.	Focused on features for an active lifestyle such as the greenway and sidewalks along streets which the size of the site allows.
Onsite active mobility features	Pathways in an interior courtyard, connection to River Walk.	Sidewalks, greenway, golf course, swimming pool.
Proximity to walkable destinations	Destinations include: grocery shopping; pharmacy; optometrist; public transportation; bus stop; medical offices; dentist office; parks; walking paths; shopping; banks; fast-food restaurants; and other conveniences	Not a factor. Residents drive or use delivery services.
Transit service	Route 84, 60-minute headway. The nearest stop is 1,400 feet from the community entrance.	9N, 60-minute headway. The nearest stop is 2,680 feet from the community entrance on Clubhouse Road.
Consistent with a City objective	Expand affordable housing.	Development of site per the Borkey Specific Area Plan.

Findings

In the two examples described here, both in Paso Robles, residents are expected to be physically active, but the amount and variety of on-site facilities will differ. Walking, gardening, and other on-site activities create opportunities for social interaction among residents, which has the benefits of both promoting physical health and a connection with their community.

Household income can significantly affect the context for active mobility for older adults living in planned communities. Traditions at River Oaks is a larger community with higher household incomes, allowing it to build on-site AMI for residents. The location of the community is

immaterial to the need for adjacent AMI and permeability. The development serves a particular resident who wants to remain physically active through recreation rather than transportation.

Conversely, River Walk Terrace is a smaller community that serves low- and very-low-income older adults. The site location is the driving factor for developing the community, as it provides walkable access to destinations for daily needs and a bus line. AMI is provided on-site with a pathway in the interior courtyard. The best recreational activity option is the river walk, which is steps away. While on-site parking is planned, residents who take advantage of the community's location will benefit from physical activity by walking to nearby destinations or using the available bus service for daily needs.

Some potential areas of concern for the River Walk Terrance site include (this information is also included in the OAC Profile for Chet Dotter, Appendix 1):

1. The lack of a crosswalk on the west leg of the intersection serving westbound buses. We encourage the city and the Housing Authority to add a crosswalk with a fully operational pedestrian signal and a median refuge island and to establish a pedestrian crossing time appropriate for residents.

2. SLO County Transit's route 84 serves the stops available to residents. SLO County Transit is encouraged to market to residents and increase the frequency to a minimum of twice hourly, as the 60-minute headways will likely not serve the transportation needs of residents.

3. It is unclear from the site plan what the pedestrian network will be and how residents are expected to walk to destinations in the shopping center such as Kohl's and Walmart. The stores, restaurants, etc., in Woodland Plaza 2 are on the perimeter of large parking lots. A perimeter walking path or designated pathways through the parking lots with direct access to entrances will encourage residents to walk to these destinations and to do so safely.

Resident Survey

Of the ten OACs, only seven agreed to distribute the survey to its residents, for a total of 185 participants. A summary of the survey results of the residents from the aforementioned communities is outlined in Tables 12A-E.

Table 12. Descriptive Statistics for Variables

Variables	Description	Details of categories (frequency, percentage)
Ans	Who answered the survey	1-Myself (170, 91.9%); 2-A Family Member (5, 2.7%); 3-A Non-family Member Caregiver (1, 0.5%); 4-A Staff Member of the OAC in Which I Live (9, 4.8%)
Comm_Type	Community Type	1-Independent (171, 92.4%); 2-Assisted (1, 0.5%); 3-Memory Care (1, 0.5%); 4-Nursing care (0,0%); 5-Other (12, 6.5%)
Age	Age Group	1-Under 65 (14, 7.6%); 2-65 to 69 (16, 8.6%); 3-70 to 74 (31, 16.7%); 4-75 to 80 (35, 18.9%); 5-80 and over (86, 46.5%)
Gender	Gender	1-Woman (125, 67.6%); 2-Man (53, 28.6%); 3-Other (1, 0.5%); 4-Prefer not to answer (2, 1.1%)
Inc	Income Range	1-Less than $25,000 (15; 8.1%); 2-$25,000 to $49,999 (31, 16.8%); 3-$50,000 to $74,999 (34, 18.4%); 4-$75,000 to $99,999 (19, 10.3%); 5-$100,000 or more (27, 14.6%); 6-Prefer not to answer (56, 30.3%)
Hisp	Hispanic or Latino	1-No, not of Hispanic, Latino, or Spanish origin (169; 91.4%); 2-Yes, Mexican, Mexican American, Chicano (6, 3.2%); 3-Yes, Puerto Rican (0, 0%); 4-Yes, Cuban (1, 0.5%); 5-Yes, another Hispanic, Latino, or Spanish origin (1, 0.5%); 6-Prefer not to answer (7, 3.8%)
Eth	Ethnicity	1-White (144, 77.8%); 2-Black or African American (13, 7.0%); 3-American Indian and Alaska Native (2, 1.1%); 4-Asian (1, 0.5%); 5-Native Hawaiian and Other Pacific Islander (1, 0.5%); 6-Some other race alone or two or more races (1, 0.5%); 7-Hispanic or Latino (1, 0.5%); 8-Two or more races (1,0.5%); 9-Chinese (4, 2.2%); 10-Filipino (2, 1.1%); 11-Asian Indian (1, 0.5%); 12-Vietnamese (2, 1.1%); 13-Korean (1, 0.5%); 14-Japanese (3, 1.6%); 15-Other Asian (1, 0.5%); 16-Native Hawaiian (1, 0.5%); 17-Samoan (1, 0.5%); 18-Chamorro (1, 0.5%); 19-Other Pacific Islander (1, 0.5%); 20- Two or more races (3, 1.6%); 21-Prefer not to answer (2, 1.1%)

Variables	Description	Details of categories (frequency, percentage)
Edu	Educational Attainment	1-Less than high school (3, 1.6%); 2-High school or equivalent (16, 8.6%); 3-Some college or Associate's Degree (44, 23.8%); 4-Bachelor's or Advanced Degree (117, 63.2%); 5- Prefer not to answer (1, 0.5%)
Lst	Living Status	1-I live alone (108, 58.4%); 2-I live with my life partner (58, 31.4%); 3-I live with a roommate (7, 3.7%); 4-I live alone, but my life partner is in nursing or memory care (0,0%); 5-Other (6, 3.2%); 6-Prefer not to answer (3, 1.6%)
Walk_Pur	Walking Purpose	1-Exercise (155, 83.8%); 2-Socialization (82, 44.3%); 3-Daily errands (114, 61.6%); 4-To walk my dog (20, 10.8%); 5- Volunteer commitments, classes or other education activities (61, 33.0%); 6-To get to entertainment venues (39, 21.1%); 7-I am not a regular walker (28, 15.1%)
Walk_Freq	Walking Frequency	1-Once or twice a week (26, 14.1%); 2-Three or four times a week (22, 11.9%); 3-Nearly every day (115, 62.2%)
Non_Walk	Reason Why Not a Regular Walker	1-I cannot walk independently or without a cane, walker, etc. (3, 1.6%); 2-I do not have the strength or stamina to walk very much (3, 1.6%); 3-I have concerns about falling (3, 1.6%); 4-The place I live does not have sidewalks or paths I feel comfortable using (2, 1.1%); 5-None of the places I go are within a comfortable walking distance for me (2, 1.1%); 6-I am concerned about my personal safety (3, 1.6%); 7-I don't have anyone to walk with (1, 0.5%); 8-Other (4, 2.2%)
AT_or_not	Are You a Regular Walker	1-Yes (43, 23.2%); 2-No (92, 49.7%); 3-I used to but no longer do so (42, 22.7%)
Njog_Reas	Why You Don't Jog or Run Regularly Anymore	1-I no longer have the physical ability to do this (23, 12.4%); 2-I have a chronic condition that made me stop (8, 4.3%); 3-I switched to regular walking (17, 9.2%); 4-I switched to bicycling (4, 2.2%); 5-After I moved to this community, I realized that the layout, etc., isn't conducive to it (1, 0.5%); 6-I just got tired of it (1, 0.5%); 7-Other (4, 2.2%)

Variables	Description	Details of categories (frequency, percentage)
Bike_Pur	Biking Purpose	1-Exercise (28, 15.1%); 2-Socialization (10, 5.4%); 3-Daily errands (10, 5.4%); 4-Volunteer activities, classes and other learning activities (4, 2.2%); 5-To get to entertainment venues (2, 1.1%); 6-I no longer bicycle (67, 36.2%); 7-I am not interested in bicycling (83, 44.9%)
Bike_Freq	Biking Frequency	1-Nearly every day (4, 2.2%); 2-Once or twice a week (10, 5.4%); 3-Three or four times a week (5, 2.7%); 4-Other (7, 3.8%)
Non_Walk	Reason Why Not a Regular Biker	1-I do not have a bicycle, a working bicycle, or have one that works for me (64, 34.6%); 2-I do not have the balance or strength to bicycle (31, 16.8%); 3-I am simply not interested in bicycling (54, 29.2%); 4-There are no bike lanes or pathways where I live (7, 3.8%); 5-The places I go are not within a comfortable bicycling distance for me (6, 3.2%); 6-I don't have anyone to bicycle with (7, 3.8%); 7-Other (17, 9.2%)
AT_Comm	Do You Walk Within Community	1-Yes (149, 80.5%); 2-No (27, 14.6%)
AT_Comm_Pur	Why Do You Walk Within Community	1-It's just easier than going elsewhere (80, 43.2%); 2-There are people close-by if I need help (39, 21.1%); 3-Benches are handy for resting and visiting with neighbors (45, 24.3%); 4- There is enough light for walking at dawn and dusk (41, 22.2%); 5-I don't travel very far, so this is just the right distance (31, 16.8%); 6-There are no easy connections to places I go in areas surrounding the older adult community in which I live (11, 5.9%); 7-I enjoy the park spaces or gardens within the older adult community In which live (84, 45.4%); 8- Other (21, 11.4%); 9-I prefer not to walk or bicycle within the older adult community in which I live (1, 0.5%)

Variables	Description	Details of categories (frequency, percentage)
NAT_Comm_Reas	Why Don't You Walk Within Community	1-I cannot get enough distance because there aren't enough sidewalks (3, 1.6%); 2-I'm concerned there won't be someone to help me if I need help (1, 0.5%); 3-There are no or not enough places for me to sit if I need to rest (3, 1.6%); 4-There is not enough light for walking at dawn and dusk (2, 1.1%); 5-I like to have a destination when I walk or bicycle, such as going to the store, and there are none in my community (2, 1.1%); 6-There are no easy connections to surrounding areas where I like to go (1, 0.5%); 7-There is not much of a network of sidewalks or pathways in or immediately around my older adult community (1, 0.5%); 8-I enjoy the park spaces or gardens within my community (1, 0.5%); 9-Other (21, 11.4%); 10-I prefer not to walk or bicycle within the community (1,0.5%)
Qua_Comm	Quality of Community	1-Very incomplete (2, 1.1%); 2-Incomplete (9, 4.9%); 3-Average level of completeness (39, 21.1%); 4-Complete (32, 17.3%); 5-Very complete (71, 38.4%)
Qua_NW	Quality of Network	1-Very little access (4, 2.2%); 2-Little access (13, 7.03%); 3-Average ease of access (20, 10.8%); 4-Good access (27, 14.6%); 5-Very good access (71, 38.4%)
Trans_Pur	Reason for Using Transit	1-Socialization (2, 1.1%); 2-Daily errands (19, 10.3%); 3-Volunteer commitments, classes or other learning activities (4, 2.2%); 4-To get to entertainment venues (4, 2.2%); 5-Other (23, 12.4%); 5-I don't use public transit (135, 73.0%)
Trans_Freq	Transit Use Frequency	1-Nearly every day (4, 2.2%); 2-Once or twice a week (5, 2.7%); 3-Three or four times a week (2, 1.1%); 4-Other (7, 3.8%)
Ntrans_Reas	Reason Why Not a Regular Transit User	1-There is no public transit near my community (10, 5.4%); 2-Access to the stop is difficult or doesn't feel safe (6, 3.2%); 3-The service doesn't go where I need to go or when I need to travel (23, 12.4%); 4-It's too expensive (6, 3.2%); 5-Other (97, 52.3%)

Variables	Description	Details of categories (frequency, percentage)
Driv_Pur	Motor Vehicle Use	1-I drive a car or ride with someone else in their car for socialization (115, 62.2%); 2-I use a ridesharing service for socialization (6, 3.2%); 3-I don't usually travel in a motor vehicle for socialization (17, 9.2%); 4-I drive a car or ride with someone else in their car for daily errands (133, 72.0%); 5-I use a ridesharing service for daily errands (14, 7.6%); 6-I don't usually travel in a motor vehicle for daily errands (13, 7.0%); 7-I drive a car or ride with someone else in their car for volunteer activities, classes or other educational activities (97, 52.4%); 8-I use a ridesharing service for volunteer activities, classes or other educational activities (6, 3.3%); 9-I don't usually travel in a motor vehicle for volunteer activities, classes or other educational activities (16, 8.6%); 10-I drive a car or ride with someone else in their car to get to entertainment venues (92, 49.7%); 11-I use a ridesharing service to get to entertainment venues (3, 1.6%); 12-I don't usually travel in a motor vehicle to get to entertainment venues (3, 1.6%); 13-I drive a car or ride with someone else in their car for other reasons (84, 45.4%); 14-I use a ridesharing service for other reasons (12, 6.5%); 15-I don't usually travel in a motor vehicle for other reasons (1, 0.5%); 16-I drive a car or ride with someone else in their car because I don't drive or use ridesharing (38, 20.5%); 17-I use a ridesharing service because I don't drive or use ridesharing (6, 3.2%); 18-I don't usually travel in a motor vehicle because I don't drive or use ridesharing (8, 4.3%)

4. Methodology and Analysis

The previous section elaborated on the data collection methods (resident surveys, interviews, and internet searches). This section explains other methodologies used in this project, including Community Ranking Criteria using AMI and statistical analysis on the resident surveys.

Community Ranking Criteria: Assessing Active Mobility Infrastructure (AMI)

This project reviewed ten OACs of varying sizes, types, and locations to determine how well existing policies, procedures, and planning support or restrict active mobility. Given these varying factors, the project team developed a tool for assessing active mobility infrastructure based on three elements: On-site, Adjacent or Nearby, and Permeability, each with a scoring range of 1 to 5 (See Table 13 and Figures 5, 6, and 7). Conceptual diagrams for each element were used to normalize differences among the OACs. The elements are as follows:

- On-site infrastructure: The presence of sidewalks, pathways, calm streets, and designated crossings for people walking and biking on-site.

- Adjacent or Nearby infrastructure: The presence of sidewalks, pathways, calm streets, and designated crossings for people walking and biking immediately adjacent to the site.

- Permeability: The ease with which residents, employees, and visitors can walk or bike between the OAC and surrounding areas. This is assessed by the number of access points that are solely for or include non-motorized facilities, such as sidewalks or other pathways.

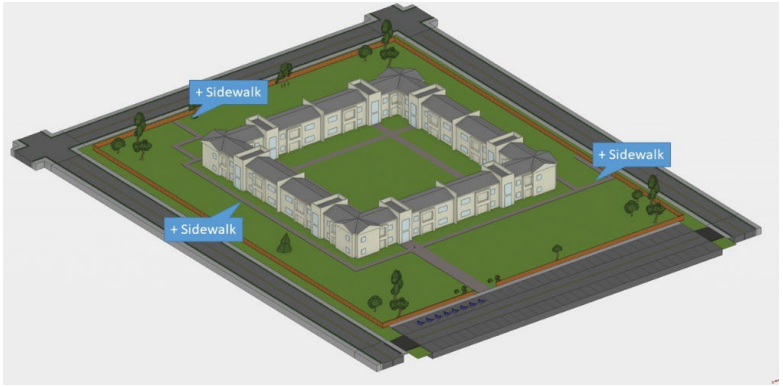
Table 13. Active Mobility Infrastructure Assessment Elements

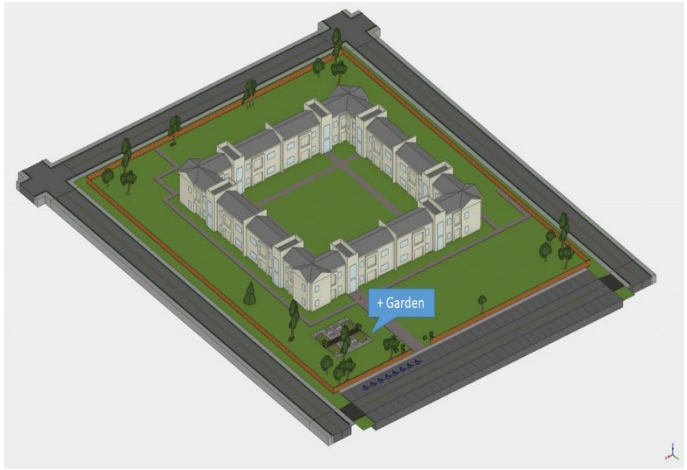
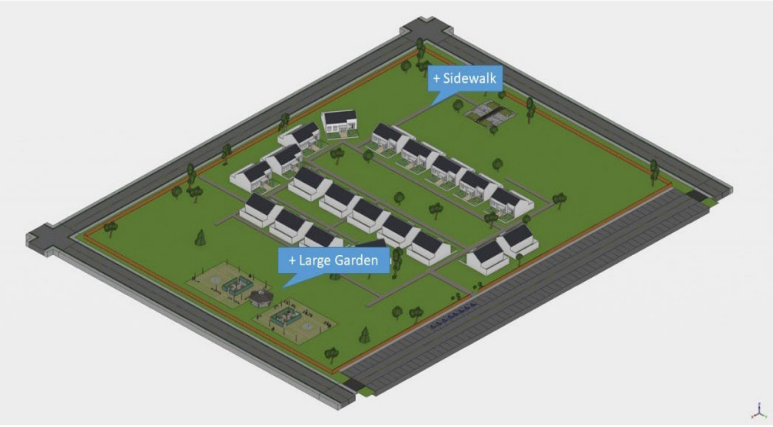
Element	Determining a score		
On-site active mobility infrastructure (AMI) Score range 1 to 5	Low AMI: 1 Perimeter sidewalks only connect parking to building entrances. Internal courtyard sidewalks. Crosswalks only for handicapped parking.	Mid AMI: 2-4 All in Low AMI, and... Some onsite sidewalks lead to gardens or other on-site places.	High AMI: 5 All in Low and Mid AMI, and... Complete and connected sidewalks. Sidewalks at least 6'– 8' wide for sociable walking. Crosswalks present at roadway crossings. Presence of multiuse trails or greenways with easy access from residences or sidewalks. Low-volume, low-speed neighborhood roadways. Adequate bicycle parking.
Adjacent or nearby active mobility infrastructure (AMI) Score range 1 to 5	Low AMI: 1 Sidewalk and pathway 'desert'.	Mid AMI: 2-4 Presence of sidewalks and pathways ranges from more than a few to nearly complete. For example, sidewalks may be on one side of the street only or missing from some streets.	High AMI: 5 Complete sidewalk network. Sidewalks wide enough for sociable walking.

Element	Determining a score				
	Formalized roadway crossings more than 300' apart. Long crossing distances due to wide streets or lack of curb extensions or center crossing islands. No pedestrian connections to nearby attractors, i.e., must travel along the roadway, typically longer travel distance.				The bicycle network includes adjacent streets and pathways. Pedestrian connections to nearby attractors to create a dense pedestrian network. Established pathways through parking lots in nearby attractors. May have an established Senior Zone per CA Vehicle Code.
Permeability	Low PERM: 1	Modest PERM: 2	Average PERM: 3	Above Average PERM: 4	Full flow PERM: 5
Score range 1 to 5	Constricted access, especially on foot with gates spaced far apart.** Based on the number of points of access relative to the size of the community.	Allows for limited ease of access on foot. More points of access.* Based on the number of points of access relative to the size of the community.	The average amount of access on foot. Distance from the front door of the residence or building is no more than 300 feet or a direct route to the nearby AIM.**	Above average amount of access on foot. Very few barriers to connections between the community, adjacent sidewalks, and streets. Distance from the front door of the residence or building is no more than 100 feet.**	Generally little or no barriers to connections between the community. adjacent sidewalks, and streets.

Note: * Based on the number of points of access relative to the size of the community. ** Measured in Google Maps

Figure 5. AMI Element

AMI Element	Onsite, building configuration	Onsite, house or cottages configuration
AMI 1		
AMI 2		

AMI Element	Onsite, building configuration	Onsite, house or cottages configuration
AMI 3		
AMI 4		

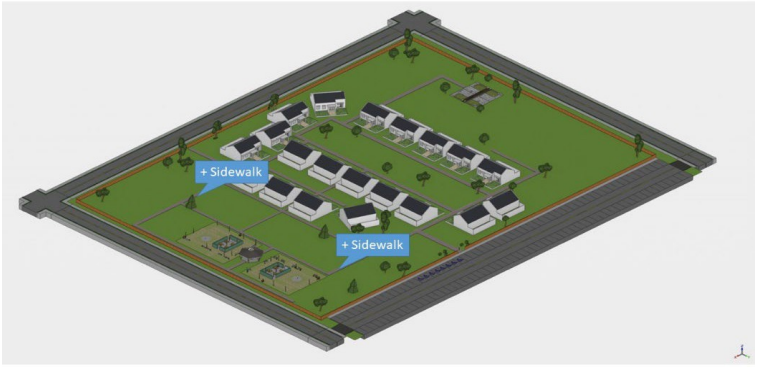
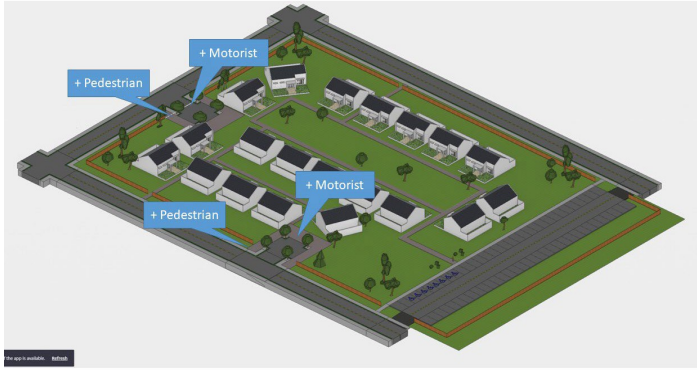
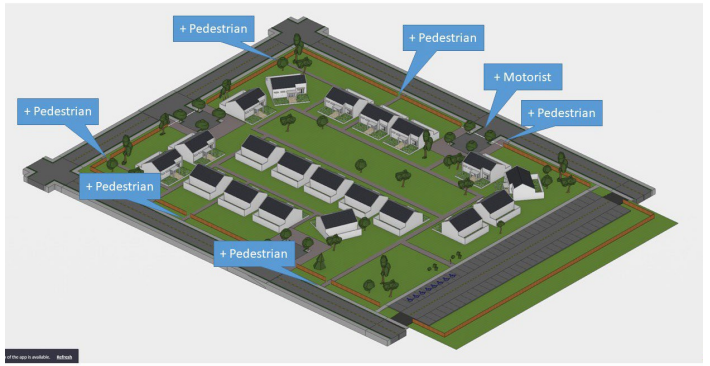
AMI Element	Onsite, building configuration	Onsite, house or cottages configuration
AMI 5		

Figure 6. Permeability Element

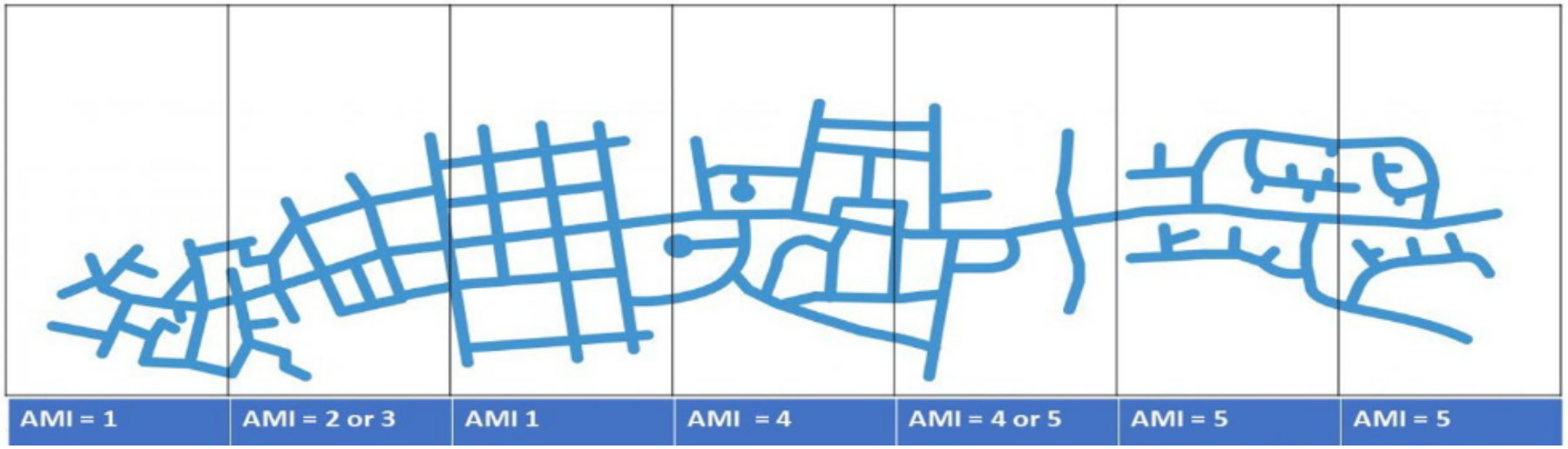
Permeability Element	Building configuration	House or cottages configuration
PERM 1		
PERM 2		

Permeability Element	Building configuration	House or cottages configuration
PERM 3		
PERM 4		

Permeability Element	Building configuration	House or cottages configuration
PERM 5		

Adjacent or Nearby AMI

Figure 7. Adjacent or Nearby AMI



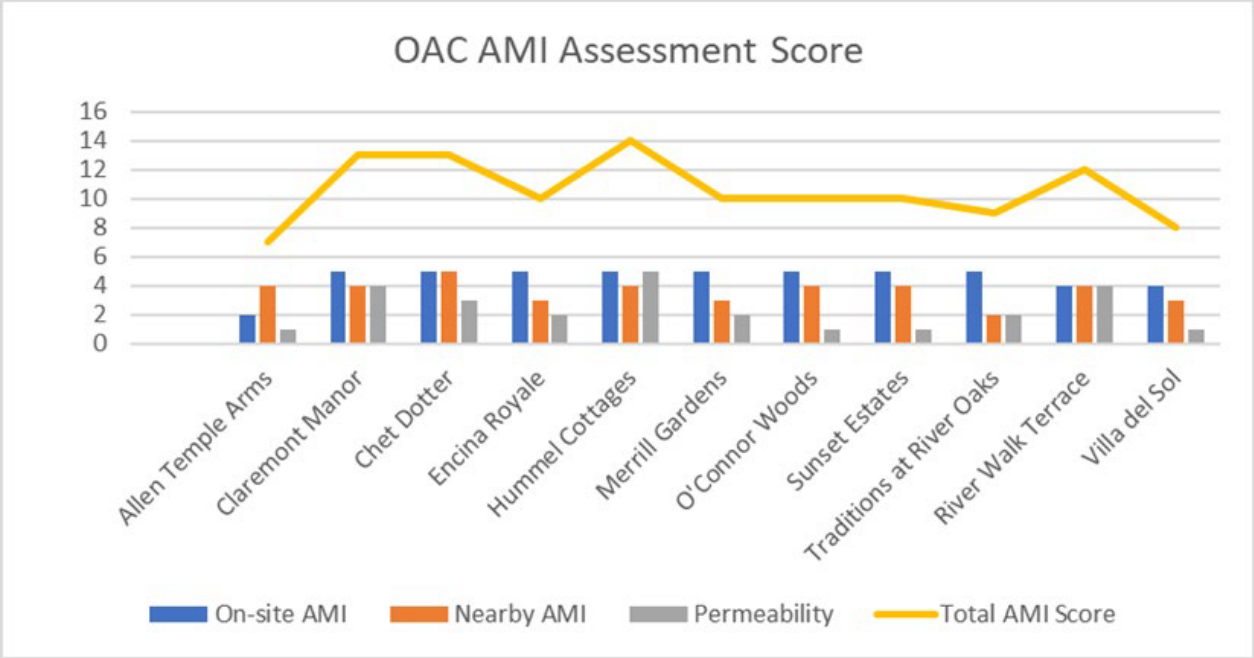
Note: Consider pedestrian roadway crossing locations, spacing and features, and the number of Intersection approaches.

Assigning a score to a community's overall mobility is calculated by assessing the Adult Mobility Infrastructure (AMI) of both the community and immediately surrounding areas and the community's Permeability (PERM). In general, the presence of various facilities, such as sidewalks, pathways, and designated crossings for pedestrians and bicyclists, will yield a higher AMI score (www.cnu.org, n.d.; Patil et al., 2020). PERM has influenced the ease with which residents, employees, and visitors can walk or bike within a community or surrounding areas (53).

The project team assessed each OAC included in this project based on these three elements. The assessment was completed through on-site observations, a desktop review of Google Maps and Street View images, conversations with community managers and developers, and resident surveys. The total score for each community is the sum of scores for each element and represents the quality and functionality of active mobility infrastructure for each community.

The AMI and PERM scores are calculated for each of the 10 OACs, and the results are highlighted in Figure 8 below.

Figure 8. AMI and PERM Scores of Communities of Interest



Upon reviewing the results in the figure above, most communities had high On-site and Nearby AMI scores. It is also clear that if a community scored low in one AMI category, they scored higher with their Nearby AMI score. In addition, if a single AMI score is low, the overall PERM score also seems to falter as well. This suggests that permeability is closely related to a community's overall AMI (Wood et al., 2006). While the AMI and PERM scores are helpful in determining the efficacy of mobility within a community, it is also necessary to understand how its residents react to the available facilities.

Assessing How Cities Include OACs in Active Mobility Planning

The 2008 Complete Streets Act requires all cities and counties include complete streets policies as part of any substantial revision to the circulation element of their general plans. This translates into active mobility infrastructure planning through structured community engagement, the inclusion of population characteristics (such as household income, race, ethnicity, car ownership, and age), and significant thresholds for these characteristics. Also included are generators, typically for all ages, and activity centers, such as age-based development, such as schools and senior centers. Not all cities purposefully include OACs in active mobility infrastructure (AMI) planning, relying instead on population density, such as for people 65 or 75 years and older. Yet the very existence of OACs means that its residents have mobility needs that may differ from their peers living in all-ages neighborhoods.

During the conversations with city staff, the project team learned about different approaches to incorporating OACs in AMI planning. In several cases, staff admitted that the conversation created awareness for them. In other cases, staff felt they had a good process. Interestingly, in only a few instances did staff have a familiarity with an OAC in their city to the extent that they could provide an entry for the project team. A summary of staff interviewed and key takeaways are included in Table 9.

To encourage AMI planning to include OACs more purposefully, the project team developed a tool to assess current processes. The assessment used a five-point Likert scale based on the following five factors:

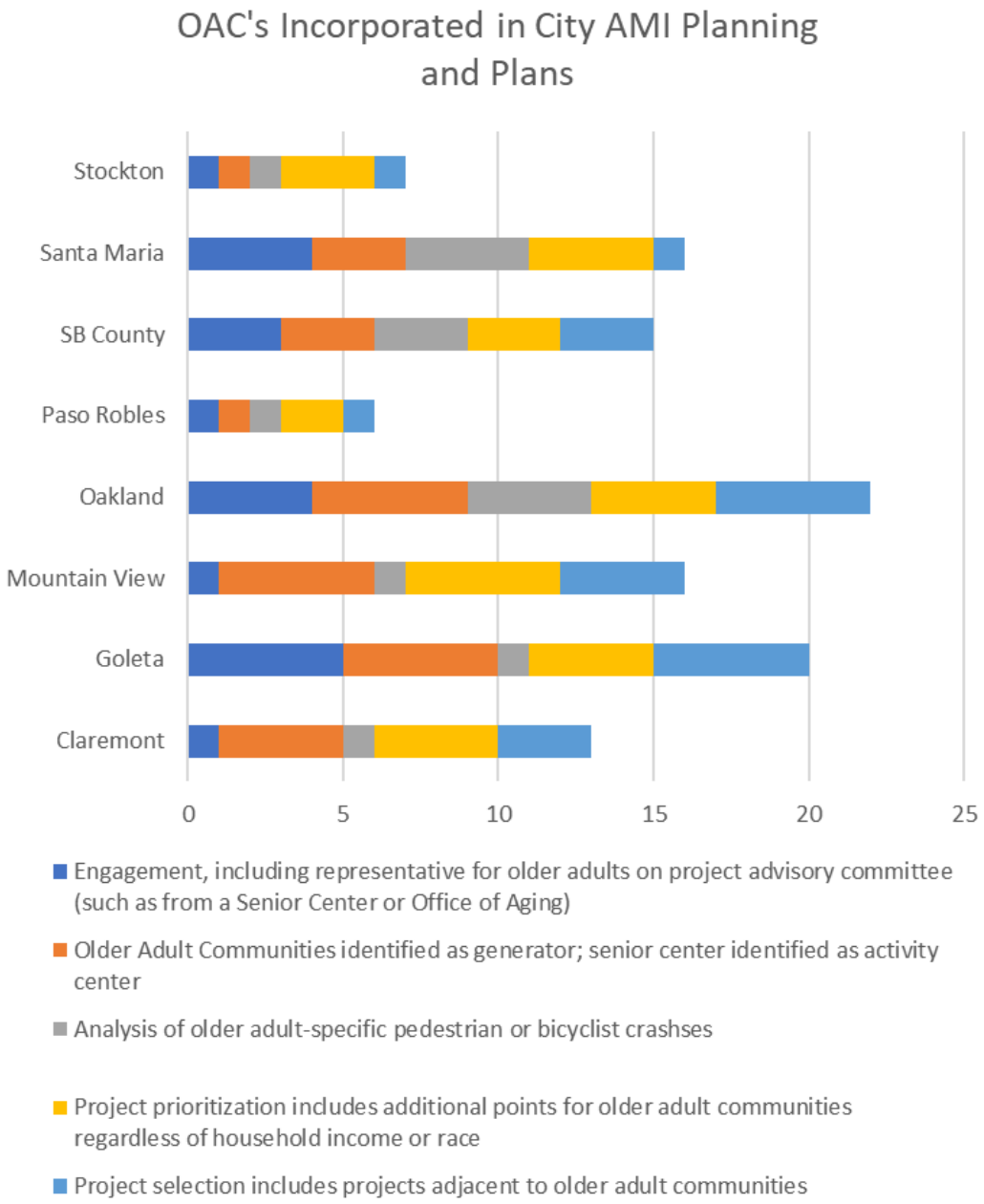
- Engagement, including representatives for older adults on the project advisory committee (such as from a Senior Center or Office of Aging).
- OACs are identified as a generator, while senior centers are identified as an activity center.
- Analysis of older-adult-specific pedestrian or bicyclist crashes.
- Project prioritization that adds points for OACs regardless of household income or race.
- Project selection that benefits an OAC.

The project team reviewed plans and other materials identified by city staff, or through an internet search of the city's website. Key search terms used in the review were: seniors, older adults, elderly, 65+, 75+, crashes, etc. Table 14 shows the materials reviewed for each city, and Figure 9 shows the assessment's result.

Table 14. Materials Reviewed When Assessing Cities for Including OACs in AMI Planning

City	Materials Reviewed
Stockton	• Bicycle Master Plan Update • Greater Downtown Active Transportation Plan
Santa Maria	• Active Transportation Plan, Summer 2020 • Bus Stop Improvement Plan, Fall 2021 • Local Road Safety Plan, Spring 2022
Santa Barbara County	• Orcutt Community Plan, updated 2020 • Santa Barbara Active Transportation Plan – currently being developed • APT Cycle 6 Applications – based on conversation with County staff
Paso Robles	• Bicycle and Pedestrian Master Plan, December 2018 • General Plan Circulation Element Update, 2019
Oakland	• Oakland Walks! 2017 Pedestrian Master Plan • E&I Project Prioritization • Lake Merritt BART TOD staff report to Planning Commission
Mountain View	• Vision Zero Action Plan and Local Road Safety Action Plan • El Camino Real Precise Plan • El Camino El Monte Draft Complete Streets Checklist • Pedestrian and Bicyclist Crashes by quarter
Goleta	• Goleta Bicycle and Pedestrian Master Plan adoption recommendations memorandum, October 2018; various plan sections
Claremont	• General Plan Community Mobility Element • Signalized intersections upgrade recommendations memorandum, May 2022 • Section of Senior Zone provision in California Code

Figure 9. Assessment of Cities for Including OACs in AMI Planning



Survey Data Analysis

As mentioned in the Data Collection section, the survey collected a significant amount of information. Even though many factors and phenomena can be explored based on the survey data, the authors focused on three questions more closely related to the project's intentions: (1) Whether there are any statistically significant differences in the transportation connection qualities within and surrounding the communities perceived by the old residents. (2) Whether there are strong correlations between the qualities of transportation connections and the walking frequency of the residents. (3) What are the main influential factors of walking frequency? It is important to note

that the same research can be done on the frequency of riding bikes or taking transit. The study chose only walking frequency since the other two modes had very few responses. Specifically, the Welch Two Sample T-test (Keselman et al., 2004) was chosen for Question 1, Pearson's correlation test (Ly et al., 2018) was utilized to answer Question 2, and the multinomial regression model was developed to quantify the impact of covariates on walking frequency from Question 3. The first two tools are somewhat easy and have been utilized extensively in various fields, and interested readers can refer to pertinent materials for details of the former two tools. Hence, the following is dedicated to describing the third tool, the multinomial regression model.

Various regression models are available to analyze walking frequency that is categorical in nature, including multinomial, ordinal, logit, and probit. Even though multinomial structures do not consider the ordering of walking frequency, such models can provide more consistent parameter estimates and reduce the monotonic effects of variables imposed by ordered probability models (Malyshkina and Mannering, 2008). In addition, logit has demonstrated some benefits over probit (Borooah, 2002). Therefore, the multinomial logit (MNL) model was utilized. In such a model, the level of walking frequency is a dependent variable where y_i can equal 1, 2, and 3 for low, moderate, and high, respectively. The covariates include socioeconomic, demographic, and other influencing factors. The model can take the following expression:

$$ln\left(\frac{P_{(y=i)}}{P_{(y=1)}}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_{ki} + \varepsilon_i; (i = 1,2,3) \qquad (1)$$

In the above equation, β is a coefficient, x represents the covariates, ε_i is the error term assumed to have a generalized extreme value (GEV) distribution. y = 1 refers to a reference level for the dependent variables, corresponding to the low frequency of walking. Level i refers to other walking frequency levels.

Model Results

The first issue this research intends to examine is whether there is a dramatic difference in the transportation connectivity ratings between the community residents who conduct active transportation and those who do not. The Welch two-sample T-test was performed, and the relative results are shown in Table 15. It is interesting to note that Mean_Yes is greater than Mean_No in both cases of Qua_Comm and Qua_NW for AT_or_not, whereas the findings are totally opposite for AT_Comm. Such phenomena suggest that the residents who get involved in overall active transportation give a higher rating score for the quality of transportation accessibility within or adjacent to the communities. However, those who actually conducted active transportation in the communities delivered a lower average rating of the transportation connectivity quality compared with those who did not walk, bike, or jog in the same communities. It is also worth noting that the above findings are statistically significant only for the case of AT_or_not vs. Qua_NW. Other cases may need further verifications with more data being collected.

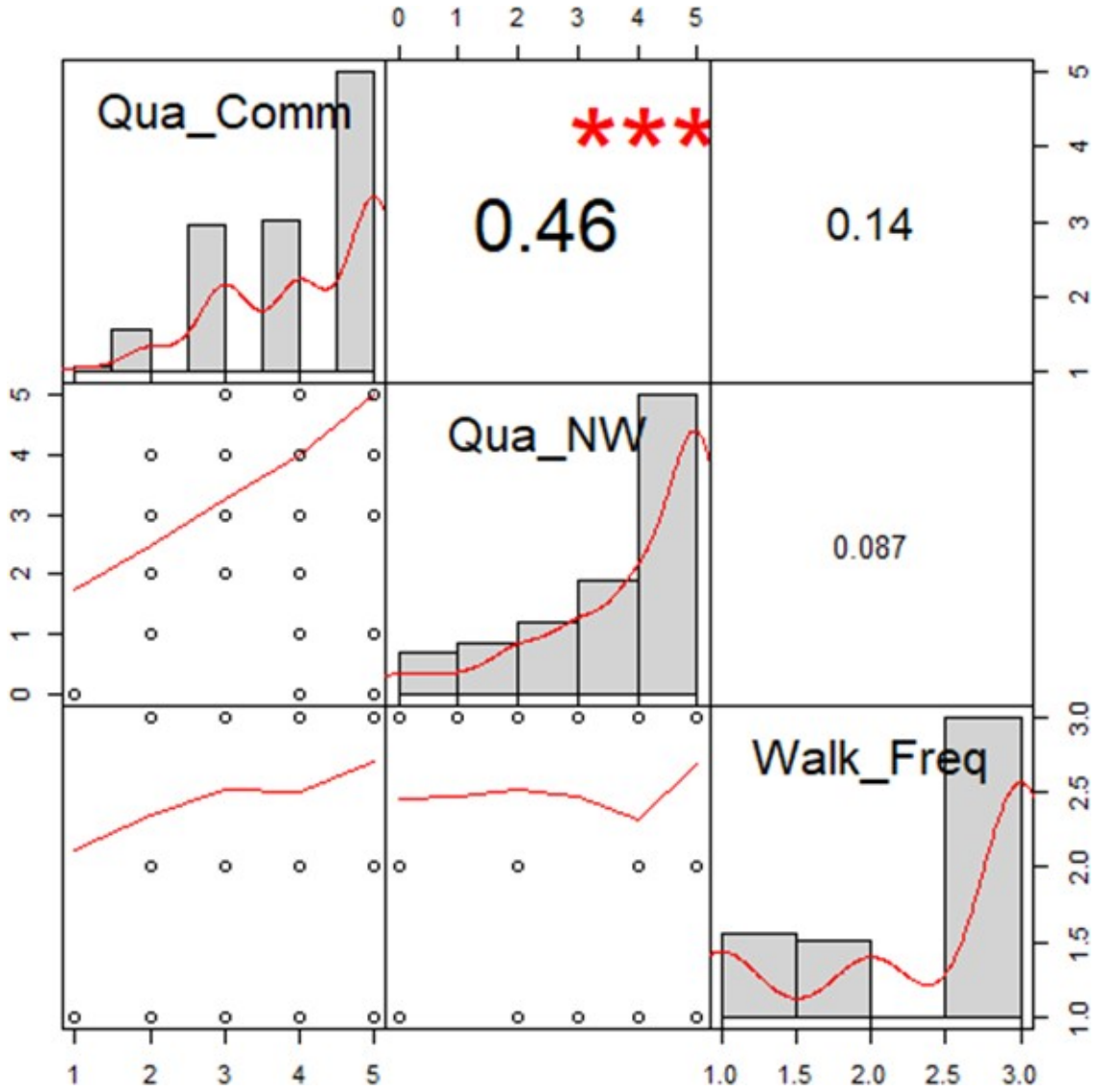
Table 15. Welch Two Sample T-test Results

Mean_Yes	Mean_No	t-value	Degree of freedom	p-value
AT_or_not vs. Qua_Comm				
4.297	4.145	0.796	74.935	0.428
AT_Comm vs. Qua_Comm				
4.016	4.222	-1.017	41.626	0.315
AT_or_not vs. Qua_NW				
4.424	3.829	2.473	92.495	0.015
AT_Comm vs. Qua_NW				
3.895	4.037	-0.443	36.525	0.661

Notes: 1. Refer to Table 12 for definitions of AT_or_not, AT_Comm, Qua_Comm, and Qua_NW. 2. The bold font indicates the statistically significant situation at the significance level of 0.05. 3. Mean_Yes indicates that the average value of Qua_Comm or Qua_NW given that AT_or_not or AT_Comm is Yes. For example, for AT_or_not vs. Qua_Comm, Mean_Yes means the average value of Qua_Comm for all cases where the response of AT_or_not is Yes. 4. Mean_No has a similar definition to Mean_Yes.

Another issue of interest is how transportation accessibility would impact the intensity of residents' walking activity. The detailed Pearson's correlation results for Qua_Comm, Qua_NW, and Walk_Freq are presented in Figure 10. Qua_Comm is correlated with Qua_NW with a positive value in a statistically significant way, indicating that transportation accessibility within and surrounding the communities closely interacts. The higher transportation accessibility inside the communities leads to an elevated transportation network nearby the communities, and vice versa. As expected, the greater values of Qua_Comm and Qua_NW would yield a higher level of walking frequency. In other words, if it is easier to access the transportation facilities inside or adjacent to the older adult communities, the residents seem to get more involved in the walking activities. It is an insightful finding should the designer or planner aim to enhance the active transportation activities of the local residents. Nonetheless, more data shall be collected to confirm such findings as the pertinent correlation coefficients is statistically significant.

Figure 10. Correlation Plot Matrix among Qua_Comm, Qua_NW, and Walk_Freq



Notes: 1. Refer to Table 12 for definitions of Qua_Comm, Qua_NW, and Walk_Freq. 2. Three asterisks indicate the significance level of 0.01, and one asterisk signifies the significance level of 0.05. If there are no asterisks shown next to the correlation coefficients, it means the associated correlations are not statistically significant at the level of 0.05.

In addition to the prior T-test and correlation analysis, the popular multinomial logit model was also developed to quantify the impacts on walking frequency from various factors such as age, gender, income, ethnicity, community type, etc. Specifically, the walking frequency of 1 (or low-level) was selected as the base level. From Table 16, it is known that Comm_Type, Age, Eth, Edu, and Lst appear to have a statistically significant influence on the walking frequency, while Gender and Inc have a mild effect on the walking activity of the older residents. Similar to the previous correlation analysis, even with the confounding effects of other factors, the Qua_Comm and Qua_NW demonstrate a statistically insignificant positive relationship with Walk_Freq. Among the two models (or 2 vs. 1 and 3 vs. 1), the former exhibits more statistically significant variables than the latter. For the case of 2 vs. 1, the Age and Comm_Type have a positive impact on

Walk_Freq in comparison with the associated base level, while the pertinent coefficients from Eth, Edu, and Lst are consistently negative. Under the condition of 3 vs. 1, relative to the selected base levels, the Comm_Type and Eth appear to have a positive influence, while Lst exerted a mixed influence. In one specific example, the estimated coefficient for Edu of 2 in model 2 vs 1 is -5.679. Such finding indicates that the log odds of Walk_Freq 2 vs. 1 for Edu is -5.679. To put it another way, compared to the base education attainment of less than high school, the resident who has a high school education or equivalent (i.e., Edu=2) tends to walk less on a weekly basis. The same situation applies to other education levels. A potential explanation might be more choices of activities (e.g., reading) for the residents that have obtained more education. As a matter of fact, the following relation holds: the higher the education level, the more there is a propensity for activities other than walking, as indicated by the associated coefficient values of -5.769, -6.108, and -7.862 for Edu of 2, 4, and 6, respectively.

Table 16. Parameter Estimation of the Multinomial Logit Model for Walk_Freq

Variables	Descriptions	Walk_Freq (2 vs. 1)	Walk_Freq (3 vs. 1)
		Estimate (p-value)	Estimate (p-value)
Numerical Variables			
Constants	Intercept	-19.740 (0.000)	-0.912 (0.534)
Qua_Comm	(Quality of Community)	0.586 (0.164)	0.529 (0.128)
Qua_NW	(Quality of Network)	0.120 (0.687)	0.127 (0.598)
Categorical Variables			
Comm_Type			
	1 (Independent, Base)		
	2 (Assisted)	0.001 (1.000)	0.001 (1.000)
	3 (Memory Care)	0.001 (1.000)	0.001 (0.995)
	5 (Other)	16.102 (0.001)	16.194 (0.001)
Age			
	1 (Under 65, Base)		
	2 (65 to 69)	22.699 (0.001)	1.864 (0.162)
	3 (70 to 74)	26.137 (0.001)	2.853 (0.063)
	4 (75 to 80)	24.267 (0.001)	0.367 (0.747)
	5 (80 and over)	24.368 (0.001)	1.517 (0.175)
Gender			
	1 (Woman, Base)		
	2 (Man)	-0.472 (0.619)	0.043 (0.948)
	3 (Other)	0.001 (1.000)	0.001 (0.958)
	4 (Prefer not to answer)	0.001 (1.000)	0.001 (0.992)
Inc			
	1 (Less than $25,000, Base)		
	2 (-$25,000 to $49,999)	1.491 (0.449)	-1.482 (0.312)
	3 (-$50,000 to $74,999)	-1.819 (0.417)	-1.702 (0.253)
	4 (-$75,000 to $99,999)	2.004 (0.352)	-1.562 (0.355)
	5 (-$100,000 or more)	2.599 (0.204)	-1.058 (0.496)
	6 (Prefer not to answer)	0.596 (0.764)	-0.502 (0.739)
Eth			
	1 (White, Base)		
	2 (Black or African American)	-21.506 (0.001)	-0.853 (0.656)
	4 (Asian)	0.001 (1.000)	0.001 (0.988)
	5 (Native Hawaiian and Other Pacific Islander)	0.001 (0.994)	0.001 (0.992)
	6 (Some other race alone or	-11.714 (0.001)	13.654 (0.001)

Variables	Descriptions	Walk_Freq (2 vs. 1)	Walk_Freq (3 vs. 1)
		Estimate (p-value)	Estimate (p-value)
	two or more races)		
Edu			
	1 (Less than high school, Base)		
	2 (High school or equivalent)	-5.769 (0.004)	1.131 (0.253)
	34 (Some college or Associate's Degree)	-6.108 (0.001)	-0.992 (0.239)
	46 (Bachelor's or Advanced Degree)	-7.862 (0.001)	-1.052 (0.178)
	57 (Prefer not to answer)	0.001 (0.999)	0.001 (0.992)
Lst			
	1 (I live alone, Base)		
	2 (I live with my life partner)	-0.749 (0.423)	0.676 (0.322)
	3 (I live with a roommate)	-12.656 (0.001)	0.579 (0.687)
	5 (Other)	2.067 (0.309)	-18.025 (0.002)
	6 (Prefer not to answer)	-2.245 (0.001)	7.013 (0.001)

Note: The bold font indicates a significance level of 0.05.

Upon reviewing the results outlined in the table above, it is clear that the type of community, specifically ones that are Independent, Assisted, or Memory care, is statistically significant to the frequency in which residents walk. Such facilities could include hospitals (Tucker et al., 2004) or the homes of the older adult's family (Suija et al., 2009). Another key point of interest is how the older the resident, the more frequently they walk. While older adults will not walk excessively, they may be more inclined to exercise regularly to improve their physical and cognitive health (McPhillips et al., 1989; Porhaska et al., 2009). Another interesting point to note is the educational attainment of residents and the frequency of their walks. It appears that the higher their educational level, the less likely they will go on a walk within or around their community. These older adults may prefer to stay inside and read or perform some other cognitive exercise (Anderson-Hanley et al., 2010). Finally, living with a roommate may provide a source of socialization for which some older adults use walking. Having a roommate or another unique living situation may provide someone else the ability to interact and keep busy (Bitzan, 1998). This could explain why walking frequency is lower for older adults with roommates.

To summarize the analysis above, residents living in seven of the ten studied communities completed the survey, in numbers ranging from a handful to several dozen, with a total of 185 survey responses. Given this limited survey data, the conclusions and recommendations presented below cannot be segmented easily into different demographic groups; however, they do provide valuable insights into how existing active mobility infrastructure is used and evaluated by residents.

It is highly recommended that more data be collected for the verification of these pioneering survey results as related to older adults.

The residents who get involved in overall active transportation tend to give a higher rating score for the quality of transportation accessibility within, or adjacent to, the communities. However, those who actually conducted active transportation in the communities delivered a lower average rating of the transportation connectivity quality, compared with those who did not perform such activities in the same communities.

Transportation accessibility within and surrounding the community closely interact with each other. The higher the transportation accessibility inside the community, the higher the quality of the transportation network nearby the communities is, and vice versa. Many other factors, including community type, age, ethnicity, education, and living status, seem to have a statistically significant impact on the walking frequency of local residents in older adult communities.

5. Findings, Conclusions, and Recommendations

This project studied how existing practices affect active mobility infrastructure in and around older adult communities (OACs) and their use by residents. The mixed methods approach of statistical analysis of the surveys, interviews with city and older adult community staff, and an existing conditions review shows differences among the cities and OACs studied. In some cases, city staff believe they are doing a good job of including older adults in their active transportation planning. In other cases, they readily admit to planning without specific input from these residents. OACs also vary in their design and the attention they give to active mobility for residents. Household income, the OAC's location, and the type of lifestyle offered affect this outcome.

The specific conclusions and recommendations presented below are from a planning perspective and from the approach of designing and operating older adult communities. The recommendations cite existing resources and tactics available at the state and federal levels for increasing the likelihood that residents of OACs will engage in active mobility. The ten OACs and eight cities studied through this project provide a starting point in assessing the factors relevant to older adults' mobility. The tools developed for this project should be used in other locations to gain a fuller understanding of the issues studied.

Findings and Conclusions

Findings and Conclusions about OACs

The most common factors affecting the AMI for OACs include when they were built, the planned average household income of residents, the targeted lifestyle for residents, and the source of funding for the community's development, i.e., private or public.

OAC staff vary by the attention given to active mobility based on formal programming and on-site AMI available to residents. Many staff encourage physical activity within the OAC's campus through swimming, exercise classes, a trail system, etc. Residents often feel more comfortable staying within their community, even in smaller communities with fewer active mobility facilities. Exceptions to this include:

1. Smaller, lower-income communities for which residents are more likely to walk outside their community for daily needs, often using public transit (e.g., Chet Dotter and Allen Temple Arms).

2. Active living communities with nearby shopping, trails, and other destinations serving residents with an active mobility lifestyle (e.g., Encina Royale and Claremont Manor).

3. Residents use public transit due to necessity, i.e., a lack of other mobility options, or because it is convenient. Few residents in moderate or higher-income communities use public transit.

The number of gateways (the amount of permeability) between an OAC and its surrounding areas can affect mobility by mode. All communities studied are either fenced or walled, many with only one or two entrances and security gates. This is a common feature of residential communities, multi-age or age-restricted alike. Exceptions to this include:

1. Claremont Manor has numerous sidewalk and driveway connections, allowing residents to walk outside the neighborhood easily. The number of driveway connections for those driving allows for easy access to streets without forcing longer driving distances within the campus's street network and creating potential conflicts with pedestrians.

2. Chet Dotter has easy access to its parking lot and the sidewalk, including a ramp from the building entrance to a bus stop adjacent to the community.

Older adult communities located close to each other are not inclined to join forces to accomplish shared needs. The community manager of Claremont Manor indicated that there is little direct contact with another OAC about a block away and along the same street. The manager of Encina Royale is aware of the mobility needs of a nearby assisted living community but has been unsuccessful in gaining their interest in working together.

Findings and Conclusions about Jurisdictional Planning

Jurisdictions vary by their attention to older pedestrians, bicyclists, and transit riders. Equity and inclusion factors, as a variable in project identification and prioritization, typically do not include older adults. Exceptions to this are:

1. Santa Maria, which includes older adults aged 75 and over.

2. Oakland and Goleta both hold community meetings at an OAC when developing their respective bicycle and pedestrian master plans.

Some jurisdictions are responsive to the mobility, safety, and access needs of those living in OACs, especially if there is an advocate devoted to the effort. The question is how well this attention shifts business practices, i.e., would the attention remain if the advocate went away? We learned this from Goleta, where the relationship between the public works director and a resident advocate of Encina Royale has benefited both individuals (and the community).

Older adult communities are typically not considered a generator in active transportation planning. If they were, OACs would be included in the existing conditions analysis that informs network development and project prioritizations. Schools are included as a generator, even though the

number of OACs can be equal to or greater than the number of schools. Both school children and older adults are vulnerable populations, so including older adult communities similar to schools is a relatively easy way to recognize potential AMI needs.

Exceptions to this are:

- Goleta, where a pedestrian crossing safety improvement was identified as serving both an older adult community and a school.

- The Paso Robles Bicycle and Pedestrian Master Plan (2018) includes Pedestrian and Bicyclist Propensity Models, which have a higher-than-average propensity for walking and biking around Traditions at River Oaks. Based on interviews with residents, most residents take advantage of on-site AMI through walking and to a lesser extent bicycling but do so to a much lesser degree outside the community.

Residents of lower-income OACs often live in areas of a city with historically lower investments in sidewalks, streetscapes, and public transit stop features that offer mobility and dignity for its users. While some cities (such as Oakland), and some organizations (such as the Paso Robles Public Housing Authority) are working to change this, more is needed to acknowledge that older adults in these communities can and do remain physically active.

A city's age-friendly commitment demonstrated through membership in AARP's Age-Friendly Network may or may not affect how it addresses AMI for OACs. Of the highest-scoring cities in the assessment of five factors for incorporating OACs in their AMI planning, only Oakland is a member of the network. However, cities such as Santa Maria have demonstrated a strong commitment to mobility for older adults living in OACs through their active transportation planning and transit system management (routes, bus stop placement and design). For example, Santa Maria has a level headway system, i.e., same headways regardless of the time of day, which offers more accessible travel by bus for older adults and others who do not commute to work.

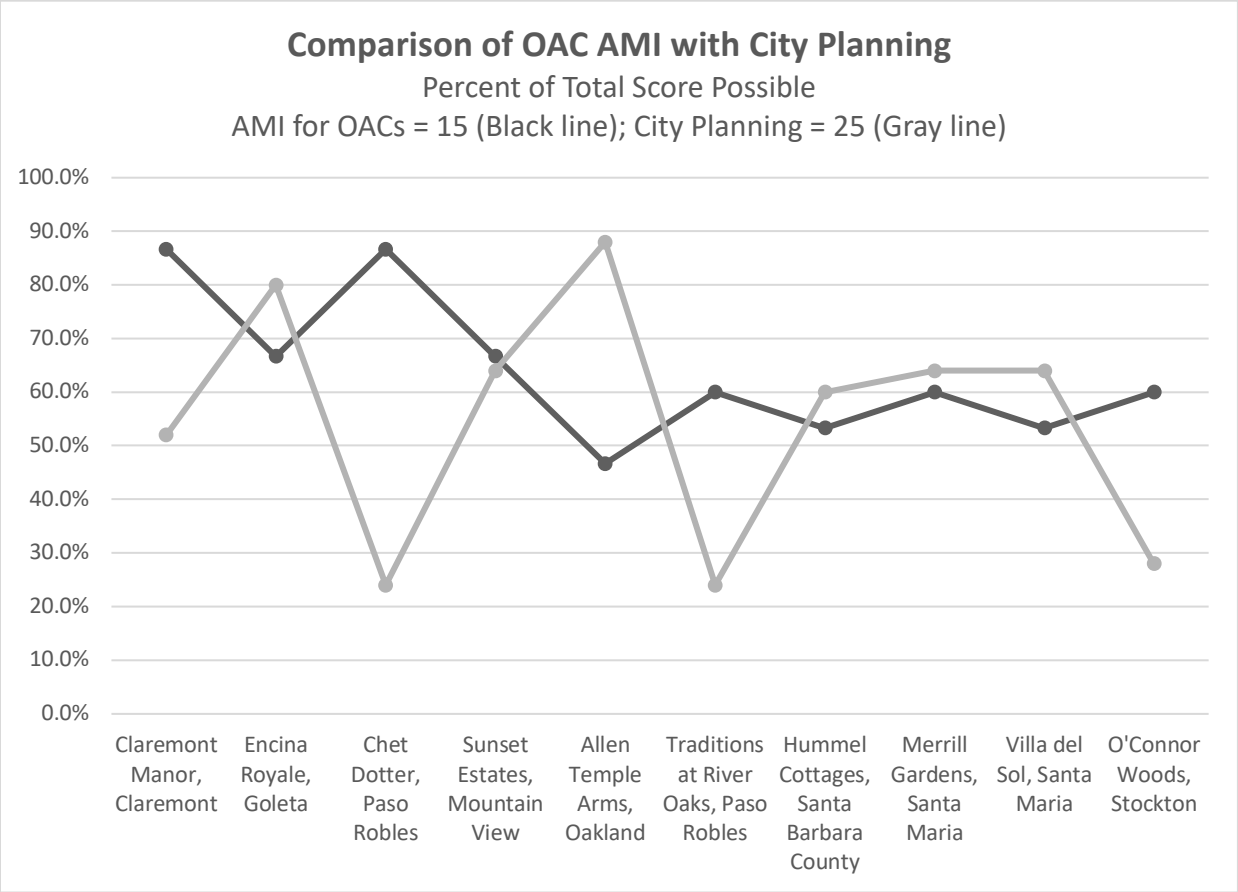
As stated earlier, factors affecting the AMI of an OAC when it was built are more about the development process than a jurisdiction's AMI planning process. Greater knowledge about mobility in OACs, which often lives primarily with the offices of aging and social services, would be helpful for transportation planners in order to better recognize and address residents' mobility needs and opportunities. While some cities are moving towards incorporating OACs in their AMI planning, there is work to be done in all cities. Oakland and Goleta have scores of at least 18 of 25, while Santa Maria and Mountain View each have scores of 16, with varying scores for each factor. The goal would be for cities to better incorporate OACs in their planning and project selection through all five factors used in this assessment. Based on the average score for each, factors in need of the greatest attention are: Engagement, Crash Analysis, and Project Selection.

Table 17. Average Score for Five Factors Used in Assessing How Well Cities Include AMI Needs for OACs in Planning and Project Selection

Average score	Factors
2.5	Engagement, including a representative for older adults on the project advisory committee (such as from a Senior Center or Office of Aging)
3.375	Older Adult Communities were identified as a generator; senior centers were identified as the activity center
2	Analysis of older adult-specific pedestrian or bicyclist crashes
3.625	Project prioritization includes additional points for older adult communities regardless of household income or race
2.875	Project selection includes projects adjacent to older adult communities

The chart below compares the AMI score for each OAC studied with the score for planning for AMI serving older adult communities by the city in which it is located. The percentages shown represent the percentage of the total score possible for each, such that an OAC with a total possible score of 15 and a city with a total possible score of 15 would each be shown as 100%.

Figure 12. Comparison of OAC AMI with City Planning



As the chart shows, some cities and older adult community pairs match up; others do not. The table below groups the outcomes into three categories:

Table 18. Comparison of AMI for OACs Score with City Planning Score

Higher OAC AMI Percentage	Higher City Planning Percentage	About the Same Percentage
• Claremont Manor • Chet Dotter • Traditions at River Oaks • O'Connor Woods	• Goleta • Oakland • Paso Robles • Stockton	• Mountain View • Santa Barbara • Santa Maria

Recommendations

Cities have the tools to reflect the active mobility needs of people living in older adult communities in their planning, but typically do not use them. Doing so will not require special knowledge, tools, or engagement techniques. Instead, city staff can begin by creating relationships with OAC staff and residents to include them in project planning and implementation. For example, the City of Oakland held a bicycle plan community meeting at an OAC. The awareness and knowledge that city staff gain from these relationships should affect the approach they take to planning and program work. The next step may be to consider how existing countermeasures are best applied to AMI serving older adults. For example, based on crash data, New York City's Safe Streets for Seniors program uses the Leading Pedestrian Interval (LPI) timing and location in senior priority areas.

It does require a shift away from considering older adult communities as isolated from their surrounding neighborhoods. Many OAC residents are, through necessity or lifestyle, physically active through walking and biking, and use public transit for daily needs, socialization, recreation, and exercise. Hence, city transportation planning processes that actively engage OACs can better meet the needs and lifestyles of their residents and create conditions that may encourage resident who are not physically active to incorporate more bodily movement into their lives.

In addition to understanding how the built environment can specifically benefit older adults when walking, biking, and using transit, Universal Design principles offer a useful approach to active mobility infrastructure design, as it benefits all users, regardless of ability. It is very true that the benefits of using the facilities should go beyond recreational and health reasons within and surrounding the older adult communities.

Safe Routes for Seniors programs are similar to Safe Routes to School programs in that they aim to increase the amount of walking and biking older adults do and provide safe infrastructure. The Los Angeles Safe Routes for Seniors program (Safe Routes for Seniors, LADOT) has three program goals centered around increasing walking and biking rates, improving health outcomes related to health care access and increased physical activity, and empowering older adults to communicate about their mobility needs for an improved quality of life. New York City's Safe Streets for Senior program (Safe Streets for Seniors, NYCDOT) aims to improve the walkability and safety of the city's streets in priority areas. The program assesses walking conditions from the perspective of older adults. The program's 2022 report, Pedestrian Safety and Older New Yorkers (2022), includes a set of action steps aimed at addressing pedestrian safety findings for older adults.

Safe Routes for Seniors programs help raise awareness of the active mobility needs of older adults. Cities should find a way to balance the needs of historically underserved communities in transportation project recommendations with those needed for older adult communities.

An intersectionality approach will provide the best understanding of the dual disadvantages of being both older and living in an underserved community. A study by Adrienne Cohen (2021) traces the history of intersectionality as it has come to include older adults. Cohen cites work by Calasanti and Giles (2017), who explore "the intertwining of their various categorical memberships within systems of inequalities" (p.70), including old age as a disadvantaged status, regardless of economic status. When combined with living in an underserved community, attention to older adults' mobility needs is more complex. For example, when comparing OACs of varying economic means for this project, lower-income OACs have less space for residents to be physically active within the community, forcing them to use public spaces. In underserved communities, public facilities may be in poor condition, missing, or inadequate for residents' needs, such as in the case of Allen Temple Arms in Oakland. This condition, combined with disinvestment in grocery and drug stores and medical facilities, creates a hardship for residents.

We recommend cities incorporate the two tools developed for the project into age-friendly community work, active mobility infrastructure planning, and project selection. This will bring a new focus on AMI mobility opportunities for OACs.

We recommend that cities improve their inclusion of OACs in AMI planning by addressing all five factors. Specific recommendations for some of the factors are provided below.

Engagement Strategies

- Begin by including a representative from an OAC and the local area agency on aging on the project advisory committee. These people can serve as liaisons to older adults in the community and guide other engagement activities. Cities should also hold workshops and information-gathering events at OACs to make residents aware of the plan development and learn about resident mobility habits and needs. These include a walk audit, which can provide insights into AMI needs that may otherwise be unidentified. The resident survey used with this project is available to use at these events, perhaps by asking people living in the OAC to complete the survey or by using it for "prompt questions" in small or whole group discussions.

- Including OACs as a generator is important as well, providing the complement to including Senior Centers as an attractor.[1] A city's equity goals can be incorporated into this by placing a higher valuing on OACs with lower household income and higher rates of people of color, as well as those that have a high rate of older adults.

Older Adult Pedestrian and Bicyclist Crash Analysis

- While there may be fewer crashes around an OAC due to lower walking and bicycling rates, older adults may be dissuaded from walking and biking outside of their OAC due to

[1] Note that the Santa Maria Active Transportation Plan uses the term activity generator to mean an attractor and residential or non-residential point-of-interest for generators.

a perceived risk. Thus, providing a higher value (i.e., numeric value if doing a heat map) will allow a subsequent project identification and selection process to favor projects that benefit these communities.

- In addition to crash analysis, a pedestrian quality of service (QOS) should be used to determine the impact of the built environment on pedestrian safety and comfort. Findings from a recent study (LaJeunesse, et al., 2021) which determined "how safety countermeasures affect the pedestrian QOS of roadway crossings, based on physiological measurements of pedestrians performing normal walking activities in varied traffic contexts" can be used to assess the walking environment around OACs, then used in the project identification and selection process.

Transportation planners and engineers are encouraged to become familiar with and use the Older Drivers and Pedestrians Special Rule (FHWA). The Federal Highway Administration (FHWA) provides general guidance about the special rule, as well as design guidance. Santa Maria's Active Transportation Plan includes some of the Special Rule's guidance.

Active mobility planning should reflect the life-space mobility framework alongside the fifteen-minute cities or fifteen-minute neighborhood construct to increase mobility between OACs and their surroundings. OACs situated on major arterials can offer better active mobility infrastructure if the planning and funding process is focused on it. The River Walk Terrace older adult apartment community being planned in Paso Robles is an example of how attention to active mobility infrastructure is needed. See the Chet Dotter profile (Appendix 1) and Developer Conversations summary.

City and older adult community staff should consider the value of establishing a Senior Zone along streets adjacent to the OAC to designate locations with a propensity for older adults to walk, bike, or use public transportation. Where speed limits are greater than 25 MPH, the designation of a portion of the roadway as a Senior Zone includes reducing the posted speed limit to 25 MPH. See California Vehicle Code § 22352(b)(3) for details. City staff should leverage emerging, low-cost solutions such as Seattle's low-cost sidewalks (see Figure 11) and those that prioritize people biking, such as edge lane roads.

Figure 11. Example of a Low-Cost Sidewalk

City transportation planning, engineering, and public works staff should incorporate the California Master Plan of Aging into active transportation planning and project selection, especially with respect to public transit as a mobility option. Key initiatives included in this plan relative to OACs are:

- ✓ Initiative 12: Promote within existing resources ways to improve community walkability for older adults and people with disabilities through the California Active Transportation Program and Complete Streets projects (Lead Agencies: SGC, CalSTA).

- ✓ Initiative 13: Promote within existing resources safer transportation for older adults using multiple transportation modes by implementing recommendations from the Zero Traffic Fatalities Task Force, including consideration of lower speed limits in urban, suburban, and rural areas to meet needs as funds allow (Lead Agencies: SGC, CalSTA).

- ✓ Initiative 14: Promote within existing resources free bus/transit (including using digital ID solutions to streamline access) and transit rider education, both beginning at younger ages.

The integration of fare systems should increase access in urban, suburban, and rural areas to meet the needs of those communities (Lead Agencies: CalSTA, GovOps).

✓ Initiative 15: Promote expansion of bus/transit stops that are age- and disability-friendly (e.g., locations, seating, weather) to meet needs (Lead Agency: CalSTA).

✓ Initiative 16: Establish person-centered MOUs (Memorandum of Understanding) between transit districts to allow paratransit to cross transit district lines to meet rider needs (Lead Agency: CalSTA).

✓ Initiative 17: Encourage innovation in flexible transit options; for example, demand response, especially, but not only in rural communities (Lead Agency: CalSTA).

✓ Initiative 18: Provide older driver safety education training, including information about transportation options other than driving, to meet needs as funds allow (Lead Agency: CalSTA).

✓ Initiative 19: Review community walkability scores and Vehicle Miles Traveled data for opportunities to analyze aging demographics and to include them in the Data Dashboard for Aging (Lead Agencies: SGC, CalSTA).

The demographic trend of a greater share of older adults that comprise a city's overall population has not waned, nor has the attractiveness of OACs, whether by choice or need. Both should motivate an updated approach to the built environment serving older adults in all parts of a community, including those in OACs.

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Enhancing Older Adults' Mobility
in Active Living and Tiered Living Communities

APPENDICES

Appendix 1 AMI Brochure/Older Adult Community Profiles

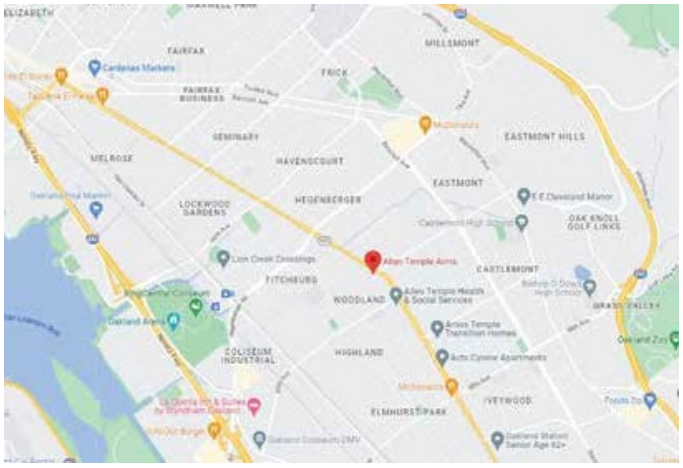
This Appendix provides information about each OAC studied in this project. The profile is comprised of background information on the community, including its geographic location, type of OAC, demographic information, and information obtained through interviews and a desktop review. The community's Active Mobility Infrastructure (AMI) score for each factor -- onsite AMI, permeability, and nearby AMI – are shown, along with example photos that support the score. The city rating for older adult community-focused AMI planning and implementation is also included. Several OAC profiles include additional information of particular relevance to that community.

community profile

Allen Temple Arms

8135 International Blvd, Oakland, CA 94621

humangood.org/allen-temple-arms-I-and-II



Entrance seen via Google Street View

Background

- Housing units—126 housing units
- Resident population—140
- The two buildings are connected by a multipurpose room, which allows residents to walk between them. The grounds are fenced with only two entrances—one on International Blvd for Building 1; the other on 81st for Building 2. Pedestrian access gates are kept locked due to safety concerns.
- A garden with pond and walking path is on the grounds between the two buildings on the 82nd Ave side. Sidewalks are at the front entrance loop on International Blvd and for access from the parking lot off of the 81st Street entrance.
- The Life Enrichment Coordinator plans program, including twice-monthly produce and farmers markets.
- New bus rapid transit service station at front entrance on International Blvd, resulted in sidewalk and intersection upgrades at east side only.

Project Involvement

Oakland City Staff Interview

Allen Temple Arms Resident Services Supervisor Interview

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

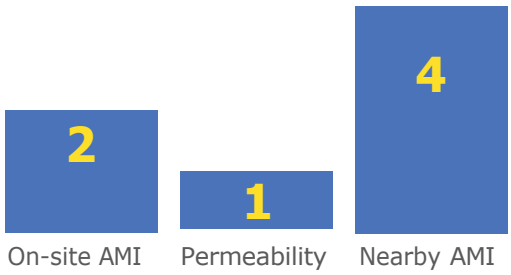
Key take-aways from city staff interviews:

1. Oakland has a well-defined system for addressing equity and inclusion needs.
2. There is a critical overlap with seniors and persons with disabilities and for development review.
3. Mobility needs are addressed through several approved plans and processes, such as OakDOT's geographic equity toolbox, its crash analysis that identifies disparities, and the Safe Oakland Street initiative.

Key take-aways from older adult community interview, desktop site visit, survey results

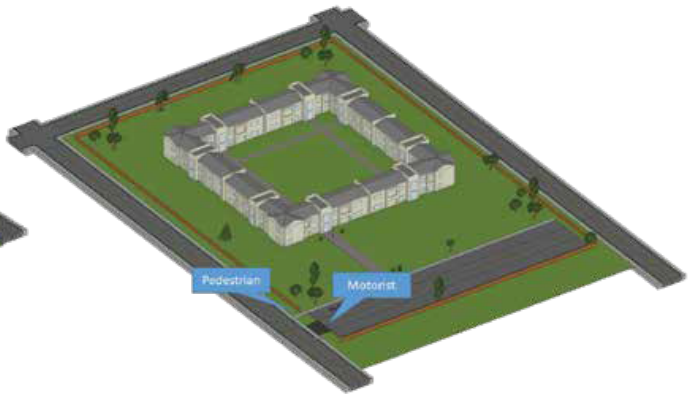
1. Newly upgraded pedestrian access to the BRT station at International Blvd and 82nd Ave are appreciated; however, residents continue to experience safety issues when crossing International Blvd due to motor vehicle speeds. In the spring 2022, a resident in a wheelchair crossing on the south leg of the intersection was hit by a motorist.
2. People walk in the garden area within the fenced campus due to poor sidewalk conditions around the community, some of which were repaired for the new BRT stations, and personal safety concerns.
3. The Walgreens across the street closed in the past year due to security concerns, as did the closest grocery store. This has left residents in a food, pharmacy, banking, and medical services desert. The new BRT provides connections to these services elsewhere.
4. Desired changes to AMI and overall ease of access are:
   - Install a pedestrian crossing on the south leg at the intersection of International Blvd and 81st Ave for residents in Building 2 to use since the entrance is on 82nd Avenue;
   - Improved overall sidewalk maintenance;
   - Assistance with personal safety concerns; and
   - City efforts to bring a grocery store and other services such as banking, pharmacy, doctor's office within walking distance that is comfortable for the residents.
5. Foodvale Market at 3401 International Blvd was renovated and is a good model for what should be available to Allen Temple Arms residents. The Market is at a BRT station and residents take a 20-minute BRT trip to get there.

7/15 Allen Temple Arms Overall AMI score: 7 of 15

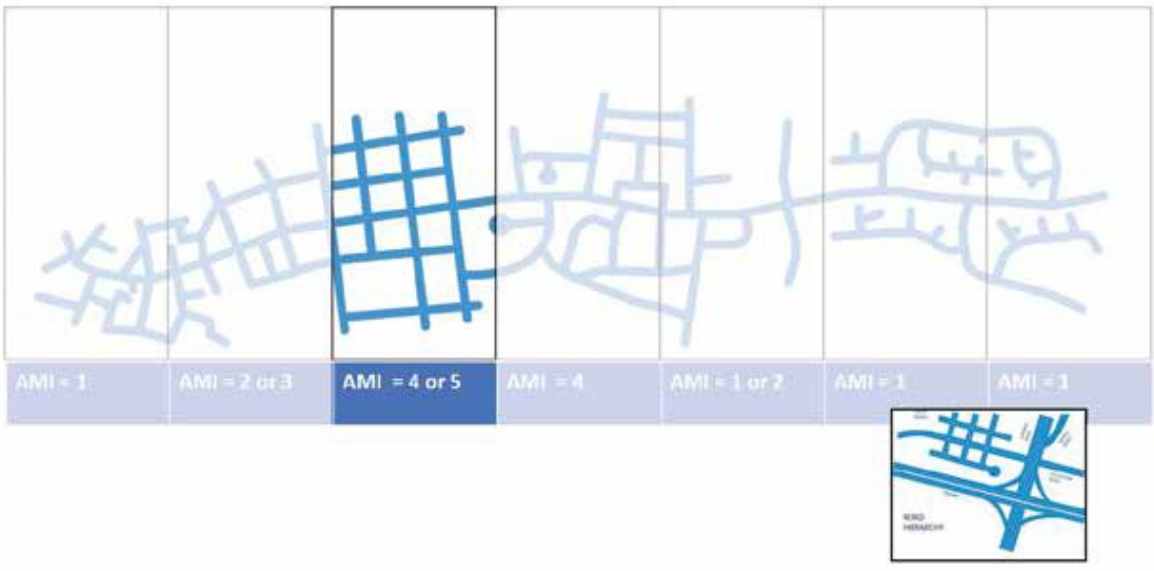


On-site AMI of 2

Permeability of 1



Nearby AMI of 4



22/25 Oakland rating for older adult community-focused AMI: 22 of 25

Based on a review of the documents listed below.

1. Oakland Walks! 2017 Pedestrian Master Plan
2. E&I Project Prioritization
3. Lake Merritt BART TOD staff report to Planning Commission

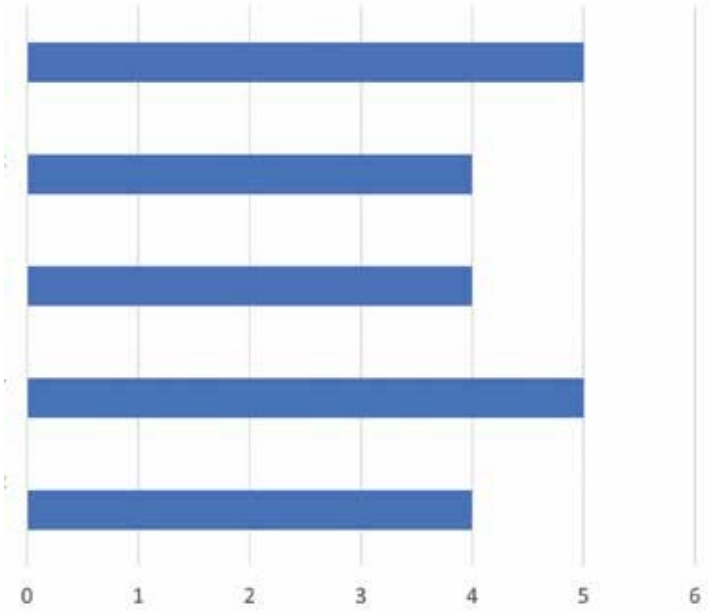
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

Sidewalks lead into the front entrance of Building 1 and from parking lots to both buildings.

Existing Conditions

Permeability

Main entrance to Allen Temple Arms on International Blvd

Fence continues along 82nd Avenue

Fence continues along 81st Avenue with gate into parking lot. Notice the School warning sign does not mention the older adult community.

Nearby AMI

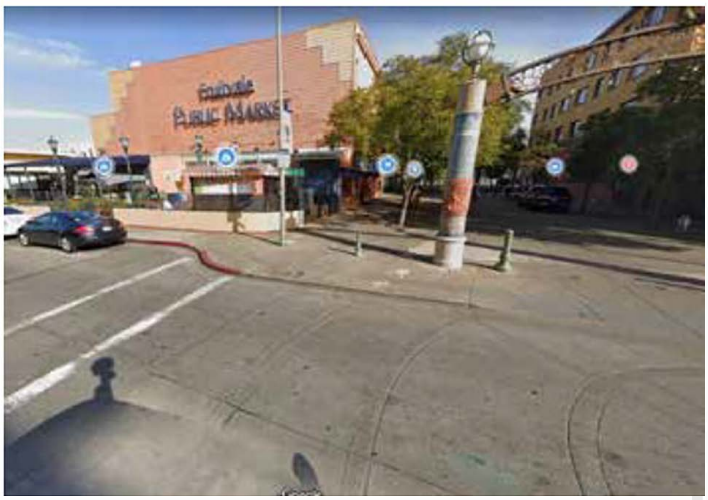
Sidewalks along 82nd Avenue are generally in good repair. Speed bumps and a posted speed 15 MPH speed limit are intended to create comfortable walking conditions.

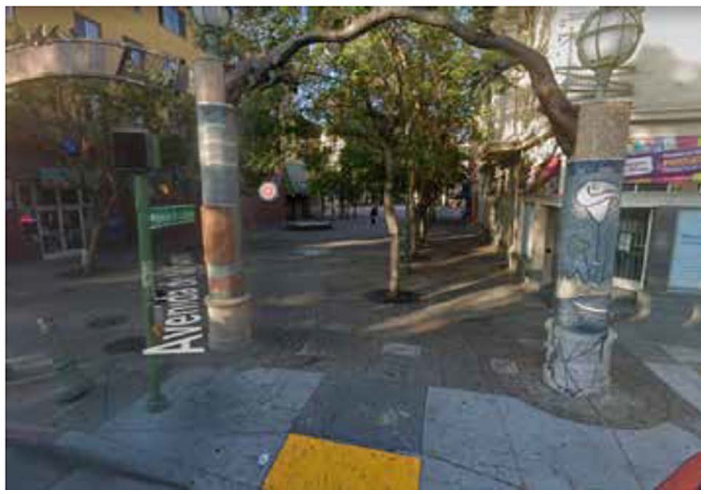
Missing crosswalk on south leg of intersection with 81st Avenue, on the Allen Temple Arms side of the block.

Crossing at One Stop Market is well marked, but only has signage alerting motorists of pedestrians instead of something more visible such as a flashing beacon.

Mobility and safety are important for Allen Temple Arms residents.

Information from the resident services supervisor and resident surveys show a desire for improved overall conditions such as good sidewalks and a pleasant walking environment. With the closing of Walgreens and a grocery store, residents are limited in nearby access to daily services. They desire improved conditions and accessible destinations, citing the Fruitval Market area as a vision. The market, other shops, and pedestrian mall are three miles north of Allen Temple Arms and a 20-to- 25-minute BRT ride.





community profile

Chet Dotter

801 28th Street, Paso Robles, CA 93446

pasoroblesha.org/affordable-housing/chet-dotter

Entrance seen via Google Street View

Background

- Housing units—40 housing units, rent assisted
- Resident population—60 (estimate)
- The community is located on a block with several other housing authority apartment communities, none of which is age-restricted.
- The apartments are within a three-story structure centered around a common courtyard and a community center.

Project Involvement

Paso Robles City Staff Interview (retired staff person)

Executive Director of Paso Robles Housing Authority

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

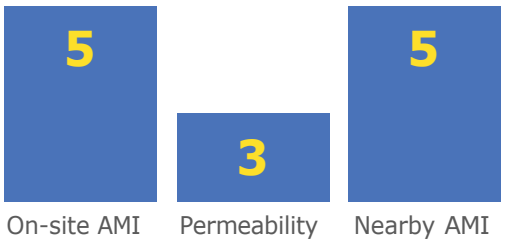
Key take-aways from city staff interviews:

1. City staff did not specifically engage older adult communities in developing the Bicycle and Pedestrian Master Plan (BPMP, 2018) but tried to connect with all demographics through workshops and other techniques.
2. Selected projects tend to focus on easy fixes for school access.
3. The City tends to use an opportunistic approach to getting AMI, through development and redevelopment, as well as applying for state and federal grants.
4. Neighborhood and area plans include connectivity needs.
5. The Senior Parking Program provides close-by parking in downtown areas for residents 65+.

Key take-aways from older adult community interview, desktop site visit, survey results

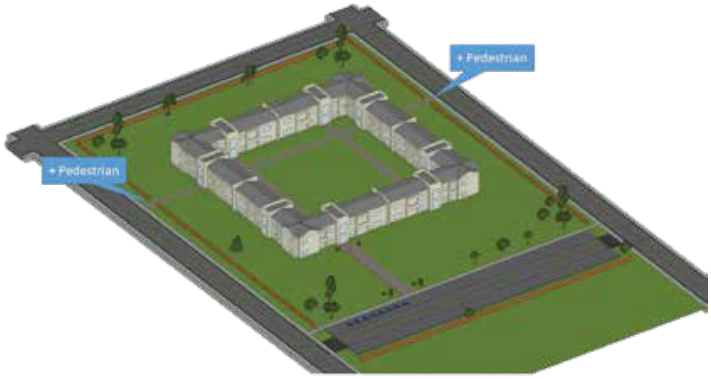
1. The community is located at the corner of 28th Street and Park Street, both of which are relatively narrow neighborhood streets. Sidewalks along Park Street are about 4 feet wide and immediately next to the roadway. Sidewalks along 28th Street are about 5 feet wide and are buffered from the roadway.
2. Mobility options for residents are walking, public transit, accessible public transit or dial a ride.
3. A bus stop on 28th Street near the community entrance is accessible from the building's parking lot entrance. The bus travels along Spring Street, one block to the west of Park Street.
4. The campus is fenced, with access for people walking via two gates.
5. A driveway into the parking lot is the only motor vehicle access to the campus, although there is a parking pad on the Park Street side of the building.
6. A perimeter sidewalk is around the building is inside the fence.

12/15 Chet Ditter Overall AMI score: 7 of 15

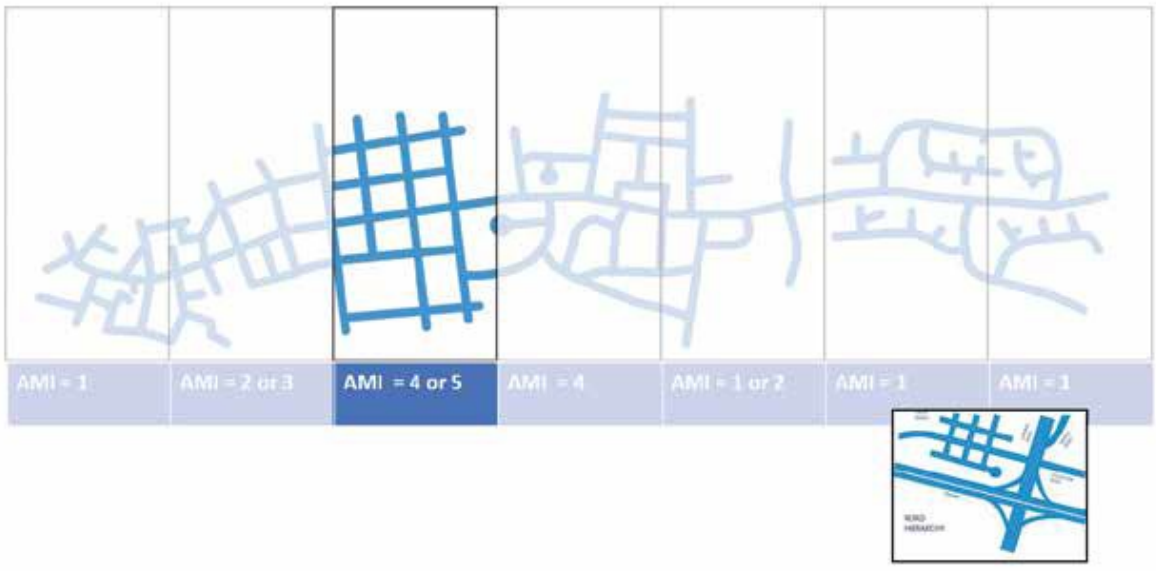


On-site AMI of 5

Permeability of 3



Nearby AMI of 4



6
25

Paso Robles rating for older adult community-focused AMI: 6 of 25

Based on a review of the documents listed below.

1. Bicycle and Pedestrian Master Plan, December 2018
2. General Plan Circulation Element Update, 2019

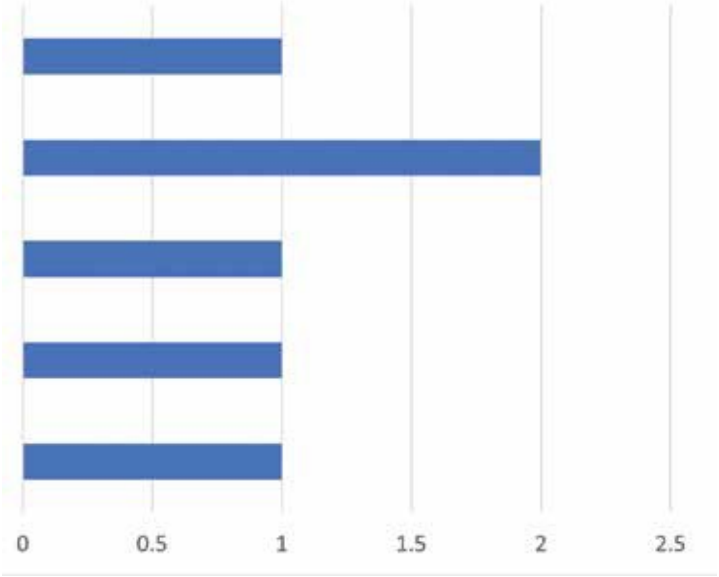
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

Sidewalks lead into the front entrance and around to other onsite destinations.

Existing Conditions

Permeability

Fence around Chet Dotter at front allows for bus stop access.

Fence continues along Park Street.

Parking lot has accessible features for easy pickup and drop-off.

Nearby AMI

The neighborhood has a complete sidewalk network, including at the intersection of Park Street and Spring Street where bus service runs.

The intersection of Park Street and 28th is stopped controlled only for motorists traveling along 28th Street.

The Paso Robles Housing Authority (PRHA) cares about resident mobility.[1]

Several years ago, PRHA's Executive Director Dave Cooke identified the site for a new older adult community based on its proximity to stores, transit service, and the river walk, as well as connections to surrounding areas. A market analysis of the site confirmed its suitability for this type of residential use, stating, *The project is located within ¼ mile or less from the following: grocery shopping; pharmacy; optometrist, public transportation, bus stop, medical offices, dentist office, parks, walking paths, shopping, banks, fast-food restaurants and other conveniences that will benefit the residents…. We have explored many developable properties within Paso Robles and note that this particular property stood out by far as the most conducive property for senior living because of the close proximity and walkability to all of the above.*

Given the need for affordable housing for older adults in Paso Robles and San Luis Obispo (SLO) County , the analysis recommended marketing to a target population in the greater Paso Robles area with household incomes in the extremely low, very low, and low Area Media Income groups, i.e., these older adults make 30-60% of the SLO County area median income renters' income.

PRHA is assembling a funding package for the development. Concurrently with this work, there are some mobility needs to be reviewed and resolved.

- The lack of a crosswalk on the west leg of the intersection serving westbound buses. We encourage the City and the Housing Authority to add a crosswalk with a fully operational pedestrian signal, as well as a median refuge island, and to establish a pedestrian crossing time appropriate for residents.
- SLO County Transit's route 84 serves the stops available to residents. SLO County Transit is encouraged to market to residents and increase the frequency to a minimum of twice hourly, as the 60-minute headways will likely not serve the transportation need of residents.
- It is unclear from the site plan what the pedestrian network will be for residents to walk to destinations in the shopping center, such as Kohl's and Walmart. The stores, restaurants, etc. in Woodland Plaza 2 are on the perimeter of large parking lots. A perimeter walking path or designated pathways through the parking lots with direct access to entrances will encourage residents to walk to these destinations and do so safely.

The new older adult community will be called River Walk Terrace is located on Niblick Road between the 101 and S. River Road.

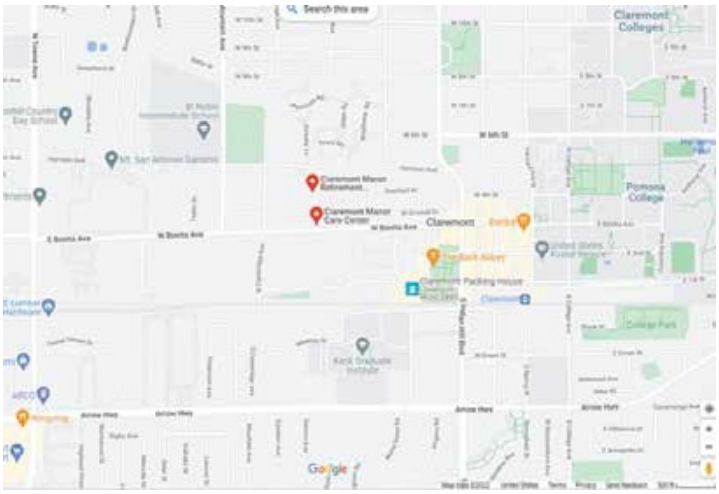
[1] More information about the new community, River Walk Terrace is available in the write-up of Developer Interviews, found on page XX of this report.

community profile

Claremont, Claremont Manor

650 Harrison Avenue, Claremont, CA 91711

claremontmanor.org



Entrance with signage, including a campus map

Background

- Tiered living community with 169 residents in independent living
- One- and two-bedroom apartments available
- Campus provides a complete network of sidewalks and pathways for residents; project team observed residents using these during site visit.
- Policy to reduce on-site parking for staff and contractors creates safer walking environment for residents and staff.
- Raised crosswalks makes pedestrians more visible and keeps motor vehicle speeds low.

Project Involvement

Claremont City Staff Interview

Claremont Manor Staff Interview and Site Visit

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from city staff interviews:

1. Older adult communities are institutions and treated the same as other institutions such as college campuses.
2. Land use and transportation planning support walkable communities, formalized by Claremont's Complete Streets policy. The policy addresses all demographics (age, ability, and equity considerations).
3. The large number of OACs means older adults are a large voting blocks. However, many living in single family homes on large lots prefer driving and want parking available in town. This is at odds with the town's approach and the desires of younger residents. Preferences of older adults living in OACs in unknown.
4. The Senior Program offers classes in different types of physical activity such as yoga and dancing. It offers AARP's Smart Driving course for people 50 and older but does not offer classes on ways to be safe walking and bicycling.
   (based on a review of several issues of the program's newsletter, The Clicks.
5. There is a strong older adult cycling community, called Claremont Senior Bike Group, with Facebook presence.

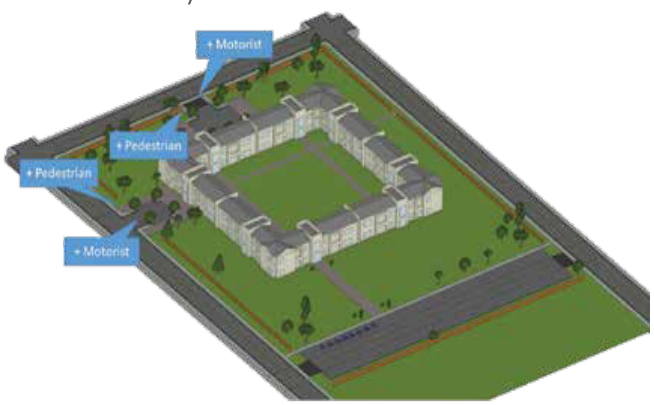
Key take-aways from older adult community and site visit (in person or desktop)

1. Options for transport include:
   - Walking—Sidewalks are well-used; the project team observed this during its December 2021 site visit
   - Driving
   - Using the Claremont Manor van
   - Using Lyft (Claremont Manor has a contract with them, residents self-pay)
   - Car transports residents to doctor's appointments but needs to be scheduled in advance
   - Several bus stops on the southernmost street, but most don't use transit.
   - Many residents walk around the campus for exercise, using sidewalks and streets
2. Community is close enough to the Village for residents to walk. Staff offers to drive residents back from the Village after walking there, but residents often prefer to walk back. Pilgrim's Place is across the streets on Harrison and to the west one block, to active transportation infrastructure will benefit them, too.

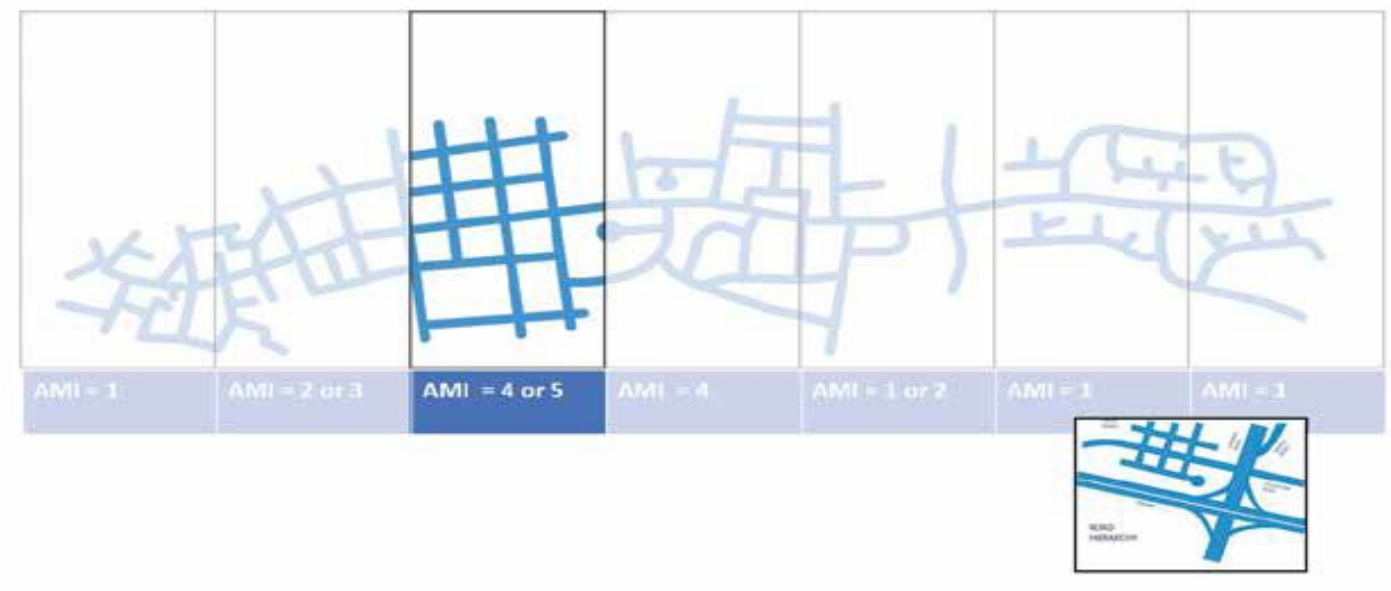
13/15 **Claremont Manor Overall AIM score: 13 of 15**

On-site AMI of 5

Permeability of 4



Nearby AMI of 4



13
15

City of Claremont rating for older adult community-focused

AMI: 13 of 25

Based on a review of the documents listed below.

1. General Plan Community Mobility Element
2. Signalized intersections upgrade recommendations memorandum, May 2022
3. Use of Senior Zone provision in California Code

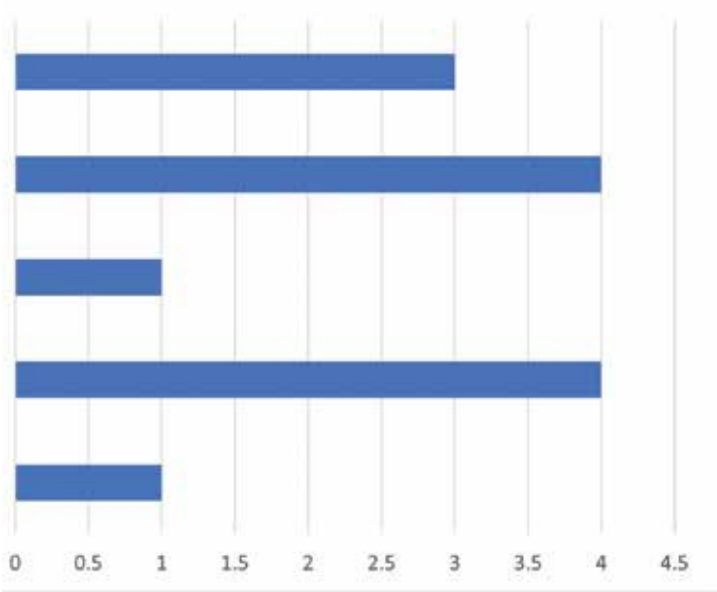
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

Front entrance of Claremont Manor.

Raised pedestrian crossing at on-site roads force motorists to slow down.

On-site pathways connect residents to all buildings.

Permeability

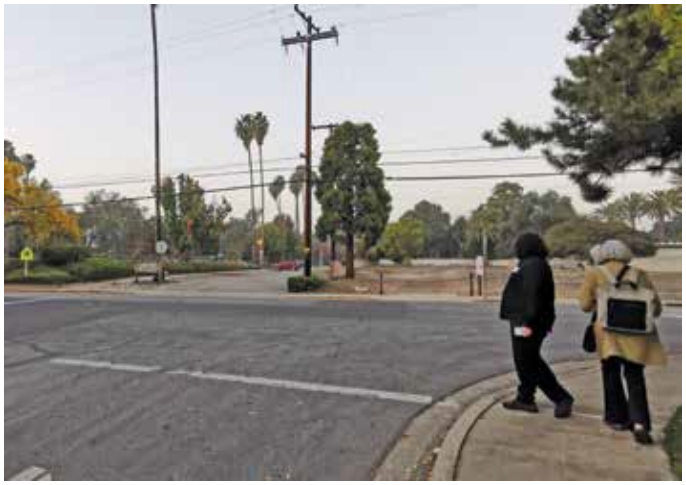
Driveways and sidewalks connect residents to adjacent neighborhood.

Existing Conditions

Nearby AMI

Harrison Avenue is a designated Senior Zone.

Well-marked pedestrian crossings with signal at intersections on Bonita Ave leading to transit stop. Bonita also includes a bike lane.



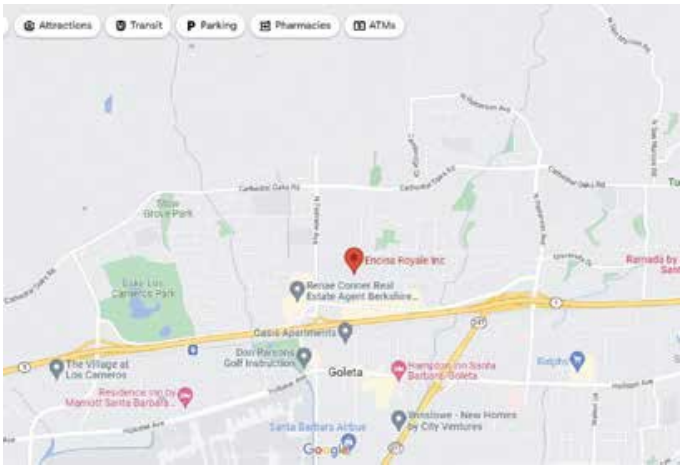
Intersection on Harrison leading to Larking Park Community Center lacks curb ramps and some crosswalks. However, the crosswalk does not align with driveway, intended as a curb ramp.

community profile

Encinca Royale

250 Moreton Bay Lane, Goleta, CA 93117

encinaroyale.com



Entrance seen via Google Street View

Background

- Housing units—360 housing units on 42 acres, developed in the 1960s
- Resident population—500 to 600
- Ideally located two or three blocks from destinations (shopping, medical, etc.), but poor access for people walking and bicycling affects residents' active mobility.
- Seven bus stops around the community provide service for the same bus route.
- Private homes on the north and east side of the community restrict permeability for residents, such as to Berkeley Road and Sylvan Drive.

Project Involvement

Goleta City Staff Interview

Encina Royale Staff Interview

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from city staff interviews:

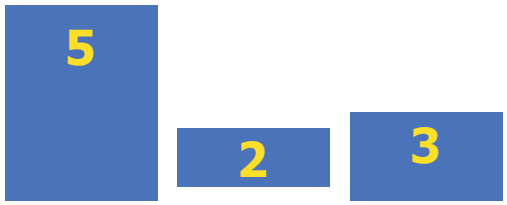
1. Goleta is successful in getting and using funding for active transportation infrastructure improvements.
2. The City has responded to community requests, primarily due to the work of Steve George from Encino Royale.
3. The City understands how infrastructure improvements can benefit multiple communities, such as schools and OACs located close to each other along the same road.
4. The City's project prioritization process appears to value older adult populations equally with other populations identified in their equity and inclusion program.
5. It is unclear that if residents such as Steve George are not involved in pushing for infrastructure changes, the process would continue, i.e., is it institutionalized?

Key take-aways from older adult community interview and site visit (in person or desktop)

1. Residents formed the New Town Goleta Safety group (NTGS) to work with city for changes. They have been successful in getting grants for several safety and access improvements at key roadway crossings. They are strong advocates (participating in City meetings and projects) for bicycle, pedestrian, and vehicle safety improvements throughout the City, participating in planning processes such as the 2018 Goleta City Pedestrian and Bicycle Master Plan. In the summer 2021, this work resulted in City Council approving an additional $3.8M for six additional road rehabilitation segments.
2. The NTGS group requested a Senior Zone for Encina Road and Fairview Avenue.
3. While some resident bicycle, there is not a good network once outside Encina Royale, especially to get across the 101 freeway.
4. Goleta is divided into four areas by major roadways, creating the need to mitigate these barriers for people walking and bicycling.

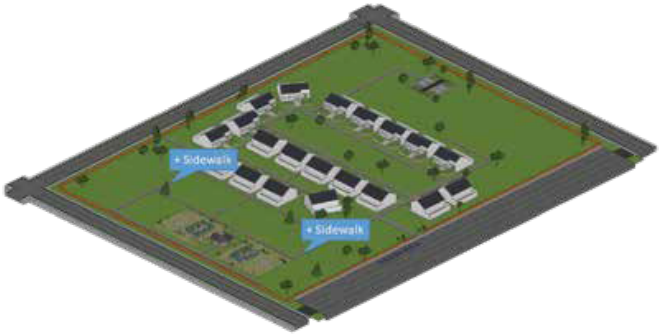
10
15

Encina Royale
Overall AMI score: 10 of 15



On-site AMI | Permeability | Nearby AMI

On-site AMI of 5



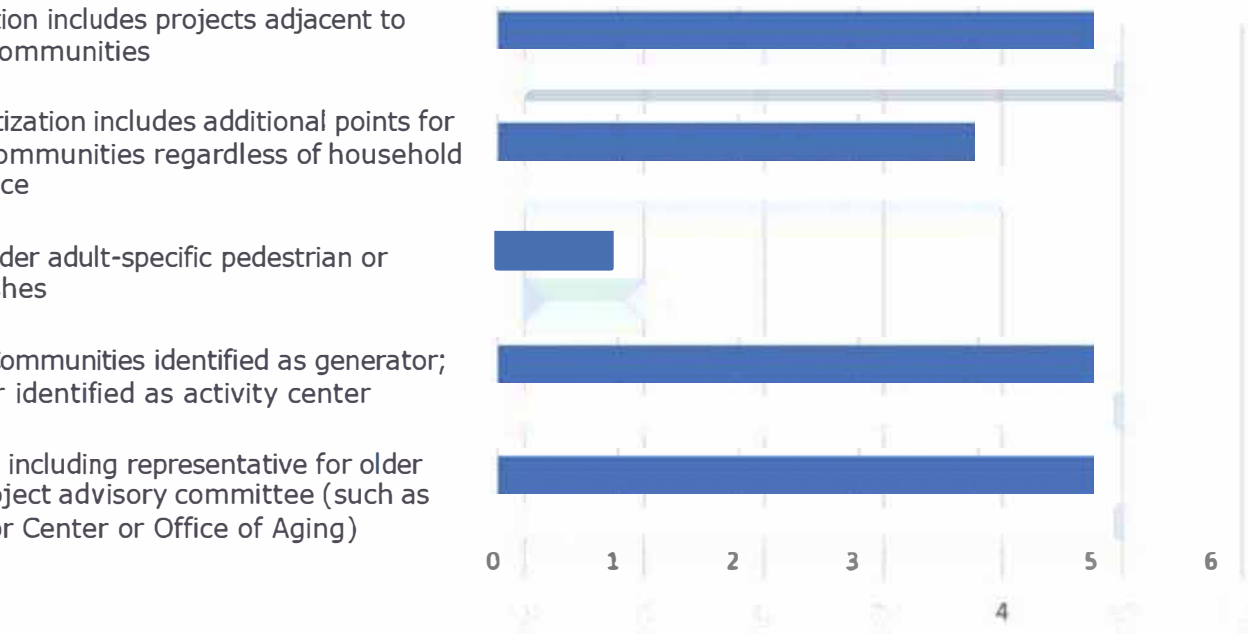
Permeability of 2

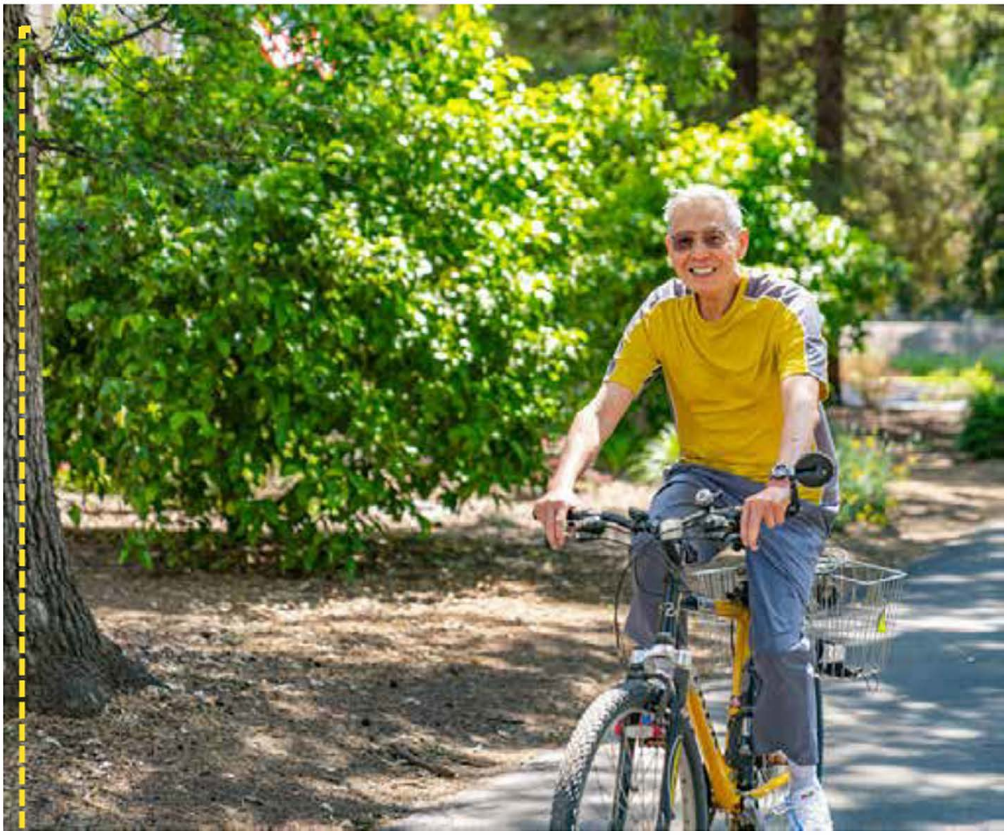
Nearby AMI of 3

20/25 Goleta rating for older adult community-focused AMI: 20 of 25

Based on a review of the documents listed below.

Goleta Bicycle and Pedestrian Master Plan adoption recommendations memorandum, October 2018; various plan sections.





Existing Conditions

Onsite AMI

Sidewalks from Encina Royale lead into the community and continue throughout. Motorists are reminded to slow down.

Sidewalk network throughout community begins at the center loop street.

Sidewalk network continues to edge of the community.

Permeability

One of the two entrances to Encina Royale along Encina Road.

Wall and fence around portion of perimeter constrains bus stop access.

Existing Conditions

Nearby AMI

New sidewalk on east side of Fairview Avenue, due to work of Encina Royale residents.

Senior Zone on Encina Road.

HAWK on Calle Real and Kingston installed due to efforts of Encina Royale residents.

Pedestrian Crossing on Calle Real between stores.

Additional Information

Residents of Encina Royale have consistently organized and successfully advocated for safety and access improvements around their community. The following was provided via email in the fall 2021 by one of the group's founders, Steve George.

I formed an organization called NTGS (New Town Goleta Safety) as a tongue-in-cheek play on "Old Town Goleta" that seemed to get all of the attention and funding. Our group, mostly formed by seniors from Encina Royale, started trying to identify areas needing safety improvements. Some of the steps along the way that we did were:

- *Facilitated a walk with a cop*
- *Hosted a transportation fair and forum for Encina Royale (attended by over 200 seniors, all of the Goleta City Council Members, guest speaker Ashleigh Brilliant, and representatives from numerous transportation companies and providers).*
- *Held a rally for "Make Fairview Center Safe for Pedestrians" with about 40 participants.*
- *Safe routes to schools presentations to Goleta Valley JR High PTA and Old Town Business Association.*
- *Frequent meetings with the Mayor, City Council Members, and monthly meetings with the Director of Public Works.*
- *Membership with Coast and active participant in meetings.*

As a result of our efforts, we were able to accomplish the following projects (securing funding and approval from the City):

- *Red safety curbs by all Encina Royale parking lots and entrance/exit driveways (this was a project that took almost 12 years to accomplish - it was being worked on prior to my arrival)*
- *Sidewalk infill projects at Fairview Gardens/Goleta Library and on the Fairview freeway overpass*
- *Sidewalk replacement and new storm drains on Encina Road (I negotiated shared financing with the city and Encina Royale)*
- *3 pedestrian controlled signaled (HAWK) crosswalks on Calle Real (the heart of New Town Goleta). (two crosswalks are still in progress with 1 starting construction next month and 1 starting in early 2022).*
- *Conversion of Encina Road to a "senior zone" (the first in the county) so that the 25 MPH speed limit is enforceable*
- *Shopping Center and City barriers added to the Fairview Theater plaza where vehicles frequently jumped the curb thinking it was a road.*
- *Improved timing on area crosswalks*

- *Personally cleared vegetation, dirt and debris from the sidewalk connecting Maravilla Retirement Center with New Town Goleta and worked with City Council to have the City and Elks Club (adjacent property) maintain it going forward so that ADA impacted pedestrians could navigate the sidewalk.*

We continue our work being strong advocates (participating in City meetings and projects) for bicycle, pedestrian, and vehicle safety improvements throughout the City. We participated in the development of the Goleta City Pedestrian and Bicycle Master plan and have been vocal advocates for road rehabilitation projects (that include improved bicycle paths). Last night I spoke at the City Council meeting where they approved an additional $3.8M for 6 additional road rehabilitation segments.

I just share all of this (not just to pat ourselves on the back) so that you can see "Seniors can make a difference". It is all about persistence, using quality data, staying informed, and being willing to face the challenges. We have some great people here at Encina Royale.

Safety meeting with Goleta Department of Public Works.

Advocating for improvements along Fairview Avenue. Fairview Avenue improvements were included in adopted BPMP.

Walking with residents of adjacent neighborhood.

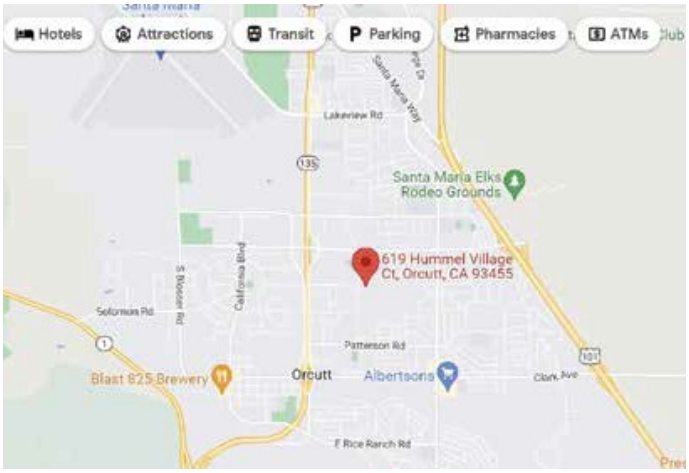
Transportation forum with COAST and others.

community profile

Hummel Cottages

619-626 Hummel Village Court, Orcutt, CA 93455

https://www.hummelcottages.com/



Entrance seen via Google Street View

Background

- Hummel Cottages is an independent living community for people 55+. It is comprised of five cottages, each with four one-floor private apartment suites. Each apartment has a covered garage with storage.
- The community is in a more rural context along a two-lane road with sidewalks on each side and a posted speed limit of 30 MPH.
- The community is gated with access via a lock combination. Most residents are single; only two are occupied by couples. three are 94; several are late 80's; one in late 60's (as of summer 2021).

- Many residents regularly use the walking loop accessible from the end of Hummel Village Court cul de sac.
- A public multi-use trail provides connections from the community to other areas without walking along the street for the entire trip, such as going to the grocery store.
- People primarily drive for daily needs.

Project Involvement

Santa Barbara County staff interviewed

Property Manager (former) interviewed

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from county staff:

1. The County is currently developing an Active Transportation Plan, but it does not specifically address active transportation for older adults.
2. The County's equity and inclusion focus does not always allow for addressing the user's experience.
3. Because of the rural nature of much of the unincorporated county, funding roads is a higher priority than funding facilities for pedestrians. This means that there are fewer pedestrian crossings in these areas.
4. Much of the county has 2-lane roads and residents do not want sidewalks and streetlights. Some community plans specify that these facilities will not be provided.

Key take-aways from Resident Services Supervisor, desktop site visit, survey results:

1. The community appears isolated from access to adjacent areas except by motor vehicle and an off-road trail.
2. Posted speed on Hummel Road, minimum width sidewalks adjacent to the roadway, and the lack of pedestrian crossings likely dissuade residents from walking.
3. While much of the unincorporated county is rural, older adult communities in more urban or village contexts have better onsite and adjacent AMI. The Golden Inn and Village for low-income older adults is an example of this.

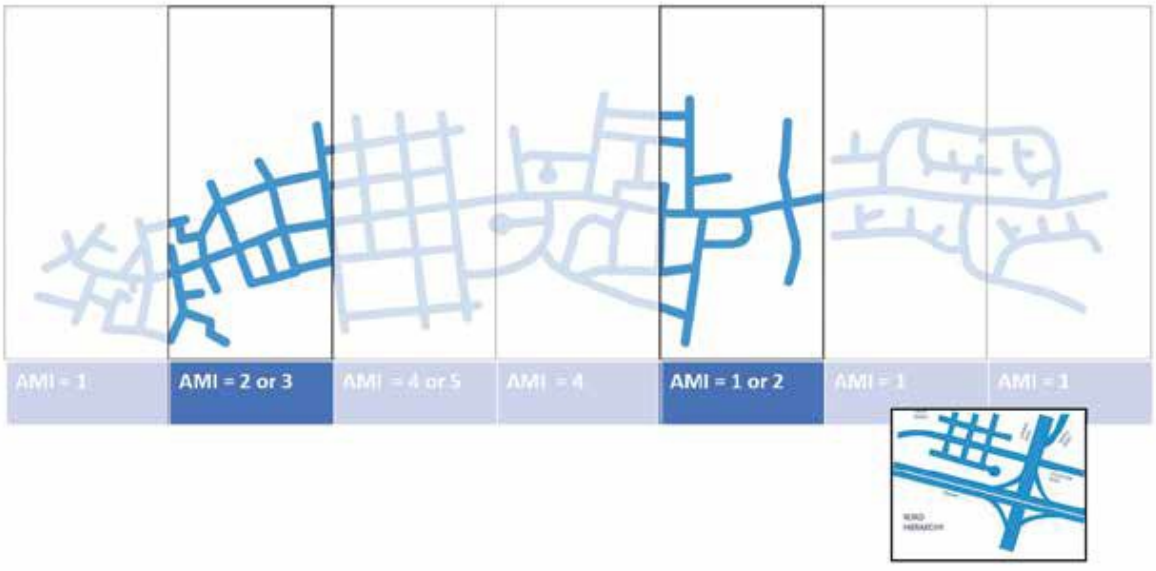
8/15 Hummel Cottages Overall AMI score: 8 of 15

4	2	2
On-site AMI	Permeability	Nearby AMI

On-site AMI of 4

Permeability of 2

Nearby AMI of 2



11
25

Rating for older adult community-focused AMI: 11 of 25

Based on a review of the documents listed below.

1. Orcutt Community Plan, updated 2020
2. Santa Barbara Active Transportation Plan—currently being developed
3. APT Cycle 6 Applications—based on conversation with County staff

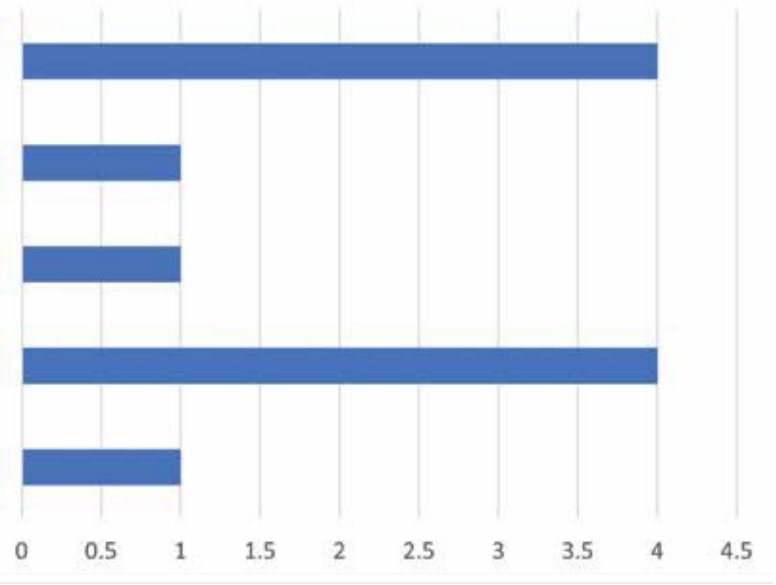
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

The community relines on low volume, low speed streets for walking, primarily due to its size and when it was developed. Residents make good use of the walking loop on the east portion of the community.

Existing Conditions

Permeability

In addition to the fence and gate at the front entrance, the community is fenced around its perimeter. It is unclear what access is available to the trail system to the southeast of the community.

Nearby AMI

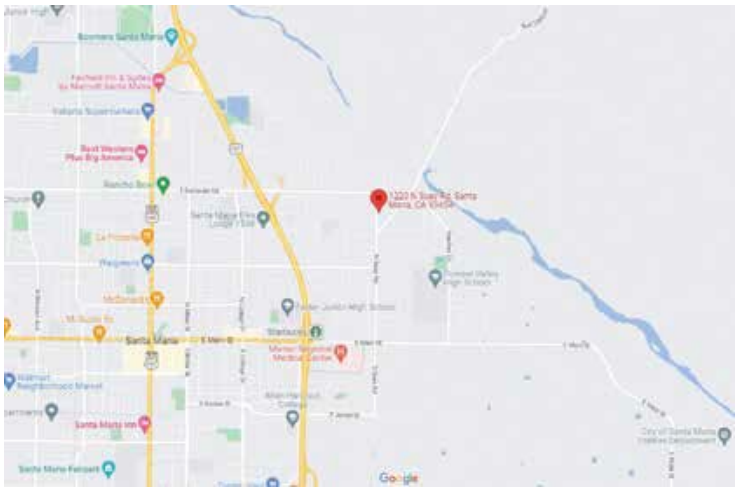
Narrow sidewalks and wide intersections at closest intersection to main entrance. Posted speed limit of 35 MPH, but no crosswalks.

community profile

Merrill Gardens

1220 Suey Road, Santa Maria, CA 93454

merrillgardens.com/senior-living/ca/santa-maria/merrill-gardens-at-santa-maria/?utm_source=GBP&utm_medium=organic



Entrance seen via Google Street View

Background

- Merrill Gardens is a tiered living community of studio, one- and two-bedroom apartments.
- The community offers residents transportation options but does not appear to foster active mobility outside the community.

Project Involvement

Santa Maria Staff Interview

Property Manager interviewed

Resident Survey

Note: we tried numerous times and several ways to talk with the General Manager, but were unsuccessful. Given the information provided by Santa Maria staff about transit service to this community, we decided to do a desktop assessment.

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from city staff:

1. The City's Active Transportation Plan (ATP) is supplemented by Local Road Safety Plan (LRSP, April 2022) which identified issues such as mid-block and intersection crashes.
2. There are no ATP recommendations at or near older adult communities in Santa Maria, even though most are located on roads identified as high stress.
3. The ATP equity and inclusion focus includes 75+ adults for 'low mobility' (per SBCAG definition).
4. Survey results in the LRSP, Figure 4 shows walking and biking have the highest modal safety concern for all ages.
5. In the LRSP, Table 10 shows pedestrian collisions ages 55–75 within 2 blocks of senior facility at 23% and more than 2 blocks at 77%. See also pages 37–38 for mitigations strategies.
6. The newly revised bus system provides better on time service with flexibility in destinations.
7. Three routes now serve Merrill Gardens, but bus stop access is limited by few access points from the campus.
8. While transit planning is based on efficient operations, the people that use the system have a say in the final outcome.

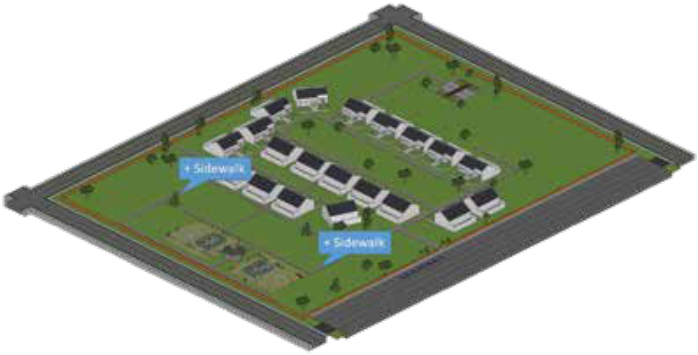
Key take-aways from desktop site visit

1. The community appears to be well-resourced with trees, greenspace and sidewalks.
2. The community is fully fenced in with limited locations for residents to exit and enter.
3. Surrounding streets have average sidewalk space and minimum width bike lanes, along two- and four-lane roads.
4. Intersections are not designed well for pedestrian crossings.

9/15 Merrill Gardens Overall AMI score: 9 of 15

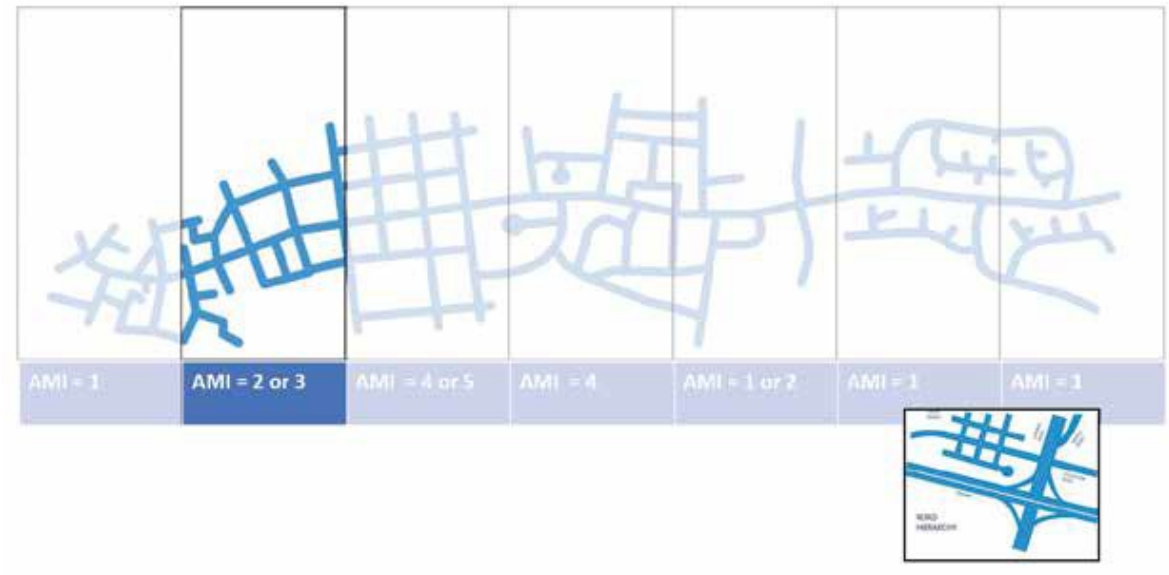
4	2	3
On-site AMI	Permeability	Nearby AMI

On-site AMI of 4



Permeability of 2

Nearby AMI of 3



19
25

Merrill Gardens rating for older adult community-focused AMI: 19 of 25

Based on a review of the documents listed below.

1. Active Transportation Plan, Summer 2020
2. Bus Stop Improvement Plan, Fall 2021
3. Local Road Safety Plan, Spring 2022

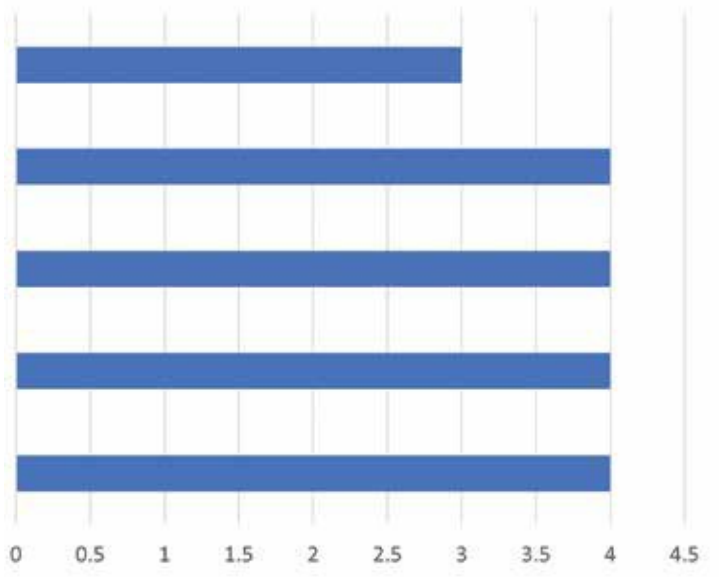
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

The community has a sidewalk network.

Existing Conditions

Permeability

Fences and gates surround the community.

Nearby AMI

Wider sidewalks and a bike lane help buffer pedestrians from motor vehicle traffic on Suey Crossing Road.

Intersection of Suey Road and E. Donovan is a four-way stop with parallel bar crosswalk instead of high visibility crosswalk.

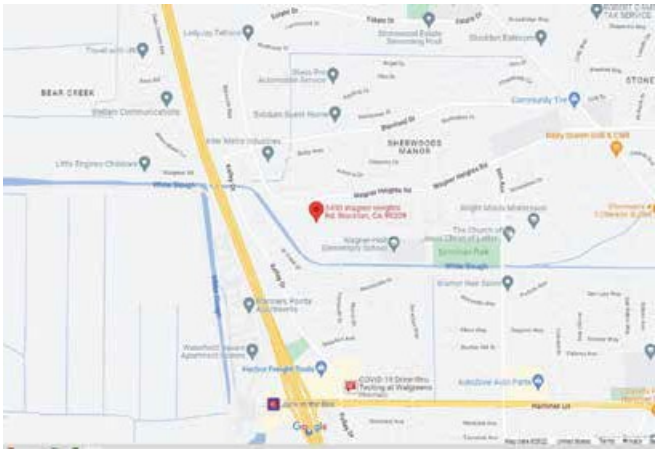
Awkward intersection at bus stops. Planned project will address this.

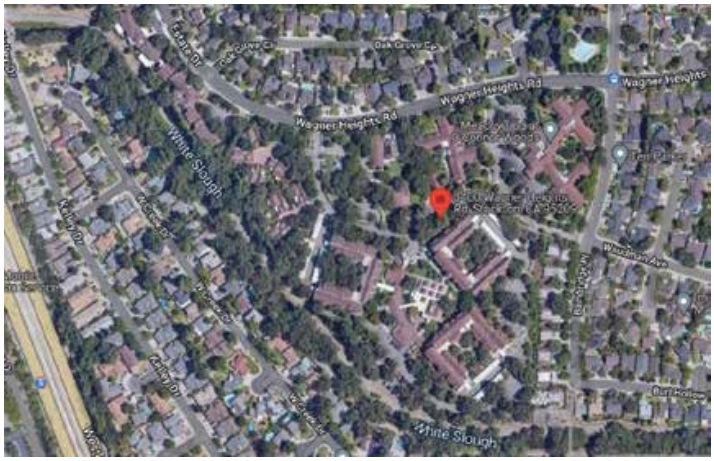
community profile

O'Connor Woods

3400 Wagner Heights Road, Stockton, CA 95209

https://oconnorwoods.org/





Entrance seen via Google Street View

Background

- O'Connor Woods is on 34 acres, nestled in a larger residential neighborhood. It has 3 independent living buildings, 2 sets of 14 independent living cottages, 2 assisted living buildings, 2 memory care buildings, and a 100-bed skilled nursing facility.
- The community includes a health clinic, a fitness Center, a dog park, and a swimming pool.
- The campus' walking ways and paths include a 2-mile perimeter trail, all with adjacent lamp posts. There are also about 100 memorial benches.
- The main entrance to the campus is used for entering and exiting. This is a new entrance; the older entrance is used for exiting only. Both entrances are gated and have security cameras.
- There is one bus stop along the block with the community's front entrance and a bike lane on Wagner Heights Road.

Project Involvement

Stockton City staff interviewed

Resident Services Supervisor interviewed

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from city staff:

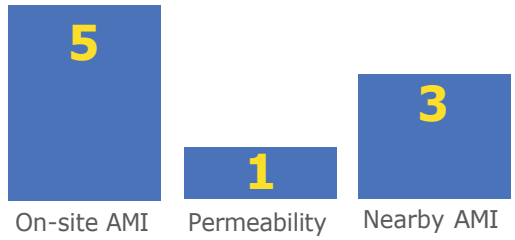
1. The City uses the 2017 Bike Master Plan as a beginning place, adding or modifying it as new development takes place.
2. Safety is the top driver of active mobility infrastructure projects.
3. All new developments and in-fill projects must have pedestrian and bicycle networks that are connected to the surrounding networks.
4. The City is not bashful about getting developer-build active mobility infrastructure, as it is known for its commitment to this type of infrastructure.
5. While the City has not been mindful of integrating active mobility facilities into older adult communities, this project is making them more aware.

Key take-aways from Resident Services Supervisor, desktop site visit, survey results:

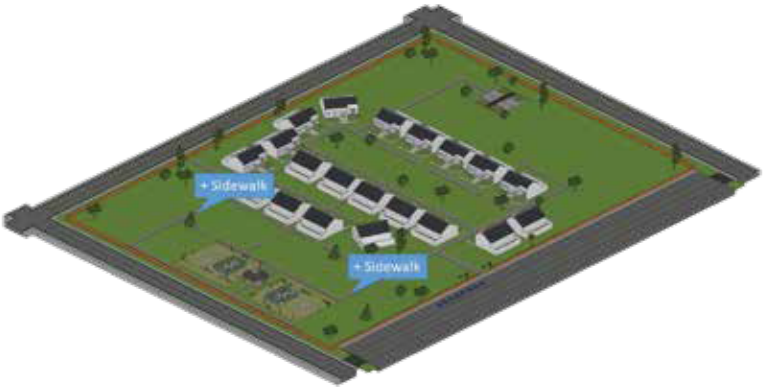
1. Many residents walk on campus; some rigorously, others more casually. Only one current resident cycles.
2. Some residents don't want to walk much or at all, affecting where events are planned. It can be difficult to encourage these residents out of their apartments to walk, even to the dining room. They will either eat in their apartment or drive to the dining room.
3. Those completing the survey indicate they use the outdoor space for exercise and socializing; however the resident services supervisor's observation is that due to discomfort from extreme temperatures, residents prefer to be indoors.
4. The outdoor lamp posts do not provide sufficient lighting for on campus and in parking lots.
5. On-campus motorists exceed the posted 10 MPH limit, which can create safety concerns when residents walk in the street or cross at locations other than crosswalks.
6. In general, the campus is comfortable and aesthetically pleasing, given the trees and green space.
7. Motor vehicle speeds on Wagner Heights Road are of concern when residents leave the campus when driving.

9
15

O'Connor Woods Overall AMI score: 9 of 15

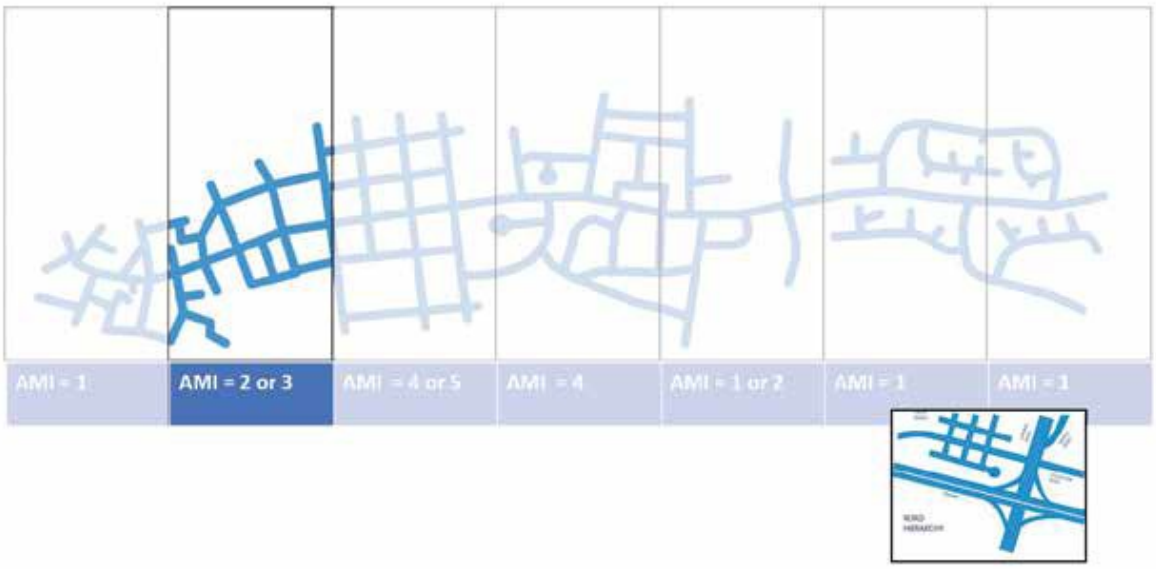


On-site AMI of 5



Permeability of 1

Nearby AMI of 3



7
25

Stockton rating for older adult community-focused AMI: 7 of 25

Based on a review of the documents listed below.

1. Bicycle Master Plan Update
2. Greater Downtown Active Transportation Plan

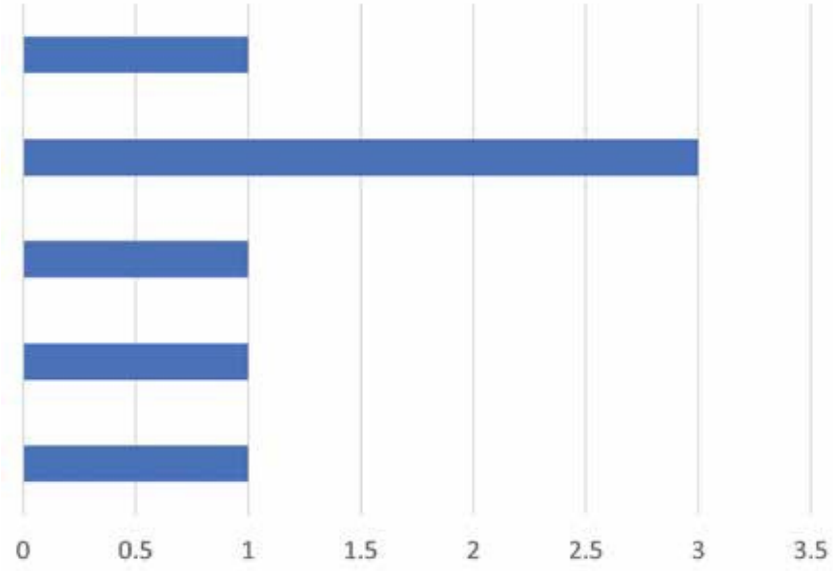
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

The community has a complete sidewalk network, a 2-mile walking path, and plenty of trees and greenspace. The campus walking map is used here due to outdated Google earth images.

Existing Conditions

Permeability

Gate close to assisted living residences provides an exit point.

Fence around community limits permeability.

Pedestrian bridge across White Slough may provide access at southwest portion of community.

Nearby AMI

Narrow sidewalks and wide intersections at closest intersection to main entrance.

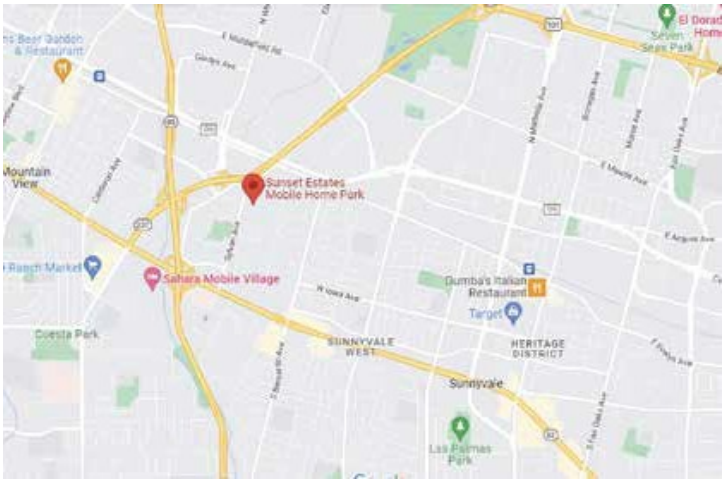
Narrow sidewalks and bike lane along Wagner Heights near Memory Care facility.

community profile

Sunset Estates Mobile Home

433 Sylvan Ave #44, Mountain View, CA 94041

https://kpi.sitemanager.rentmanager.com/



Entrance seen via Google Street View

Background

- The community is comprised of 144 housing units and a resident population of 200 to 250.
- Its location in the southeast quadrant of highways 85 and 237—limits easy access by walking or bicycling to destinations north and west.
- A community park is within walking distance, but grocery stores, medical facilities, drug stores, department stores, restaurants, etc., are typically north and west, beyond highways 85 and 237.
- Sylvan Avenue has sidewalks, a bike lane on each side, parking on the side opposite Sunset Estates, and two motor vehicle travel lanes.
- One bus route serves the community, with 30-minute headways.
- The area is primarily residential with another age-restricted mobile home community is just north of Sunset Estates and rental apartments nearby.

Project Involvement

Mountain View city staff interview

Sunset Estates resident interviews (property manager declined)

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

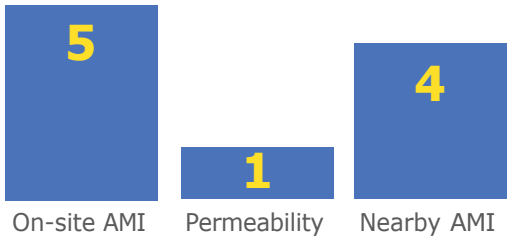
Key take-aways from city staff interview:

1. The city's three processes for determining infrastructure projects provides a way for older adult mobility needs to be included.
2. The AT Plan underway will include an Equity and Inclusion focus, including older adults.
3. Precise Plans, such as the one for El Camino Real, within walking distance of Sunset Estates, includes supportive infrastructure and use access for pedestrians, bicyclists, and transit riders, while not specifically mentioning older adults.
4. The City is working to increase the quality and number of bicycling facilities; bringing to 100% the number of streets with sidewalks (currently at 96%) and continue its transit service.

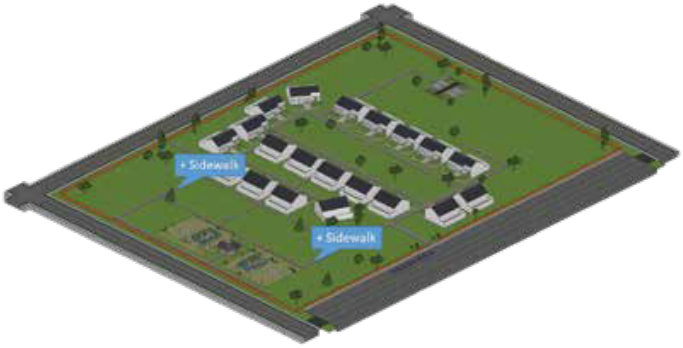
Key take-aways from older adult community interview, desktop site visit, survey results:

1. Some residents use the bus to go shopping and get to other destinations.
2. Many walk once or twice a week for exercise and daily needs.
3. Identified improvements include better lighting inside and outside the community; sidewalk repair and maintenance.
4. Driving or riding with another driver is a common way to get around.

10/15 Sunset Estates Overall AMI score: 10 of 15

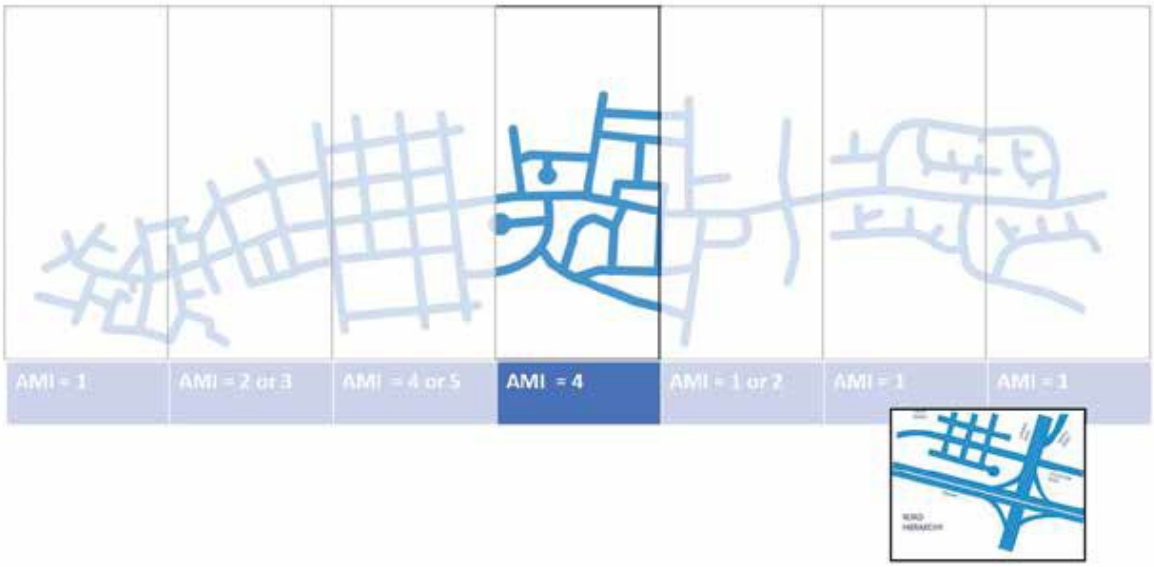


On-site AMI of 5



Permeability of 1

Nearby AMI of 4



16
25

Mountain View rating for older adult community-focused AMI: 16 of 25

Based on a review of the documents listed below.

1. Vision Zero Action Plan and Local Road Safety Action Plan
2. El Camino Real Precise Plan
3. El Camino El Monte Draft Complete Streets Checklist
4. Pedestrian and Bicyclist Crashes by quarter

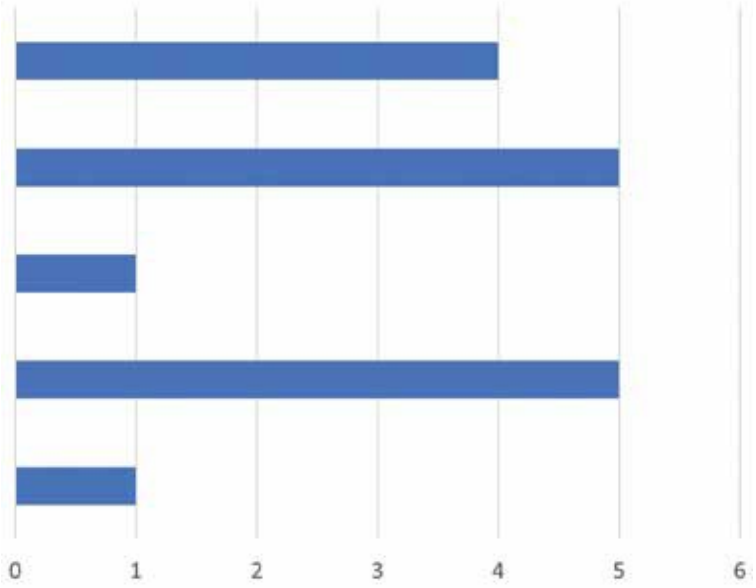
Project selection includes projects adjacent to older adult communities

Project prioritization includes additional points for older adult communities regardless of household income or race

Analysis of older adult-specific pedestrian or bicyclist crashes

Older Adult Communities identified as generator; senior center identified as activity center

Engagement, including representative for older adults on project advisory committee (such as from a Senior Center or Office of Aging)



Existing Conditions

Onsite AMI

Slow and shared streets serve Sunset Estates residents.

Existing Conditions

Permeability

Sunset Estates has one way in and out, on Sylvan Avenue.

Fence around Sunset Estates does not include access for pedestrians to Acalanes Drive to the east.

Bus stop in front of Sunset Estates does not have immediate access for resdients, instead requiring them to walk in and out of the entrance a half-block away.

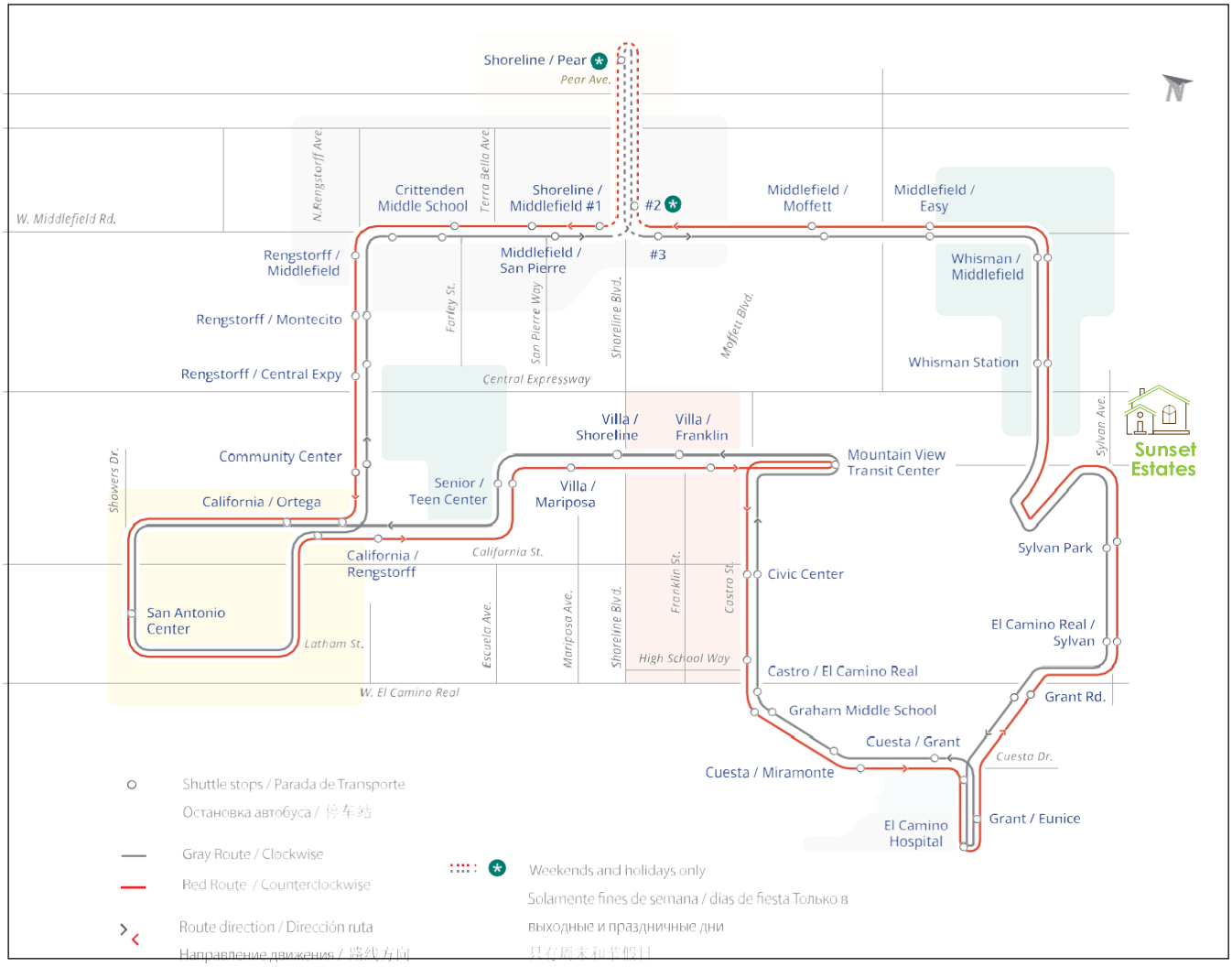
Nearby AMI

Sidewalks with street trees leading to high visibility crosswalks provide access to nearby Sylvan Park.

Crosswalk at south end of Sylvan Park.

Nearest medical offices and other retail within a half mile and on south side of El Camino Real and Sylvan Avenue requires crossing a wide a busy street.*

** Of note: This intersection is designated as a Neighborhood Corner in the El Camino Royall Precise Plan and as such will have more pedestrian-friendly crossing features.*



Community Shuttle provides 30-minute service to Sunset Estate residents from bus stops indicated.

Of note: The free Mountain View Community Shuttle route links downtown and the San Antonio Shopping Center with a stop at the Mountain View Senior Center, in addition to 50 other stops around the City. It operates from 10:00 a.m. to 6:00 p.m. seven days a week…. the free Shuttle service does not necessarily travel to important destination areas where seniors reside. (2019 State of Mountain View Senior report, page 18.)

Other information

Mobility is important for Mountain View older adults, including those living in Sunset Estates

Every other year, the Mountain View Senior Advisory Committee asks older adults living in the city to share information about different aspects of their lives. A survey covers topics such as household make-up, mobility (e.g., transit use and pedestrian safety concerns), social interaction, and importantly – how 'age friendly' this community is. While the 2021 report is being finalized, it is helpful to look at some findings from the 2019 report.

- About half of those taking the survey find Mountain View to be age-friendly.
- The need to be mobile for daily activities, remain healthy, and have a social life is important. In fact, several respondent noted the importance of transportation for their social life.

- Traffic congestion and pedestrian safety at intersections were hot topics.
- 62% of those completing the survey do not have a plan for when they won't be able to drive.

It is clear from the 2019 State of Mountain View Seniors report that mobility is key.

Relevant excerpts from the report include:

…About 80 percent of the participants said they use a personal car for everyday transportation, 6 percent use the Community Shuttle, 44 percent walk, and 13 percent bike where they want to go. For occasional transportation, 10 percent use a personal car, 17 percent depend on relatives, 43 percent use public transportation, 39 percent use Uber, Lyft, or a taxi, 14 percent use the Community Shuttle, 28 percent walk and 17 percent bike. 73 percent said they never use VTA for transportation; 24 percent said they sometimes use it; 5 percent said they use Caltrain several times a week; 40 percent said they use It sometimes, and 55 percent said they never use it. The transportation limitations prevent some seniors from doing ordinary things: 14 percent of the participants reported transportation issues sometimes limited them from seeing friends, from running errands, from going out, or from volunteering.

Delivery services were helpful to 65 percent of the participants: 15 percent used Amazon, 12 percent used Walmart, 14 percent used eBay, 4.3 percent used Safeway, 10 percent used restaurant delivery services, and small numbers used other delivery services…

…The respondents were attentive to exercise. Of those who exercised once a week or more, 67 percent did walking or hiking, 34 percent used a gym, 17 percent did biking, 11 percent swam, and 36 percent did other types of exercise…

Above are from page 3

…After age 65, many seniors are on a year-to-year basis with their drivers' licenses, which can be removed any time the Department of Motor Vehicles feels it is appropriate. A doctor can recommend removal of the driving privileges, one's immediate family members can request it, or the person him/herself can do so. However, once one can no longer drive, the senior needs alternate modes of transportation, whether that is a ride from a friend or relative or reliance on public transportation. This includes rides to and from medical appointments, the grocery store, the movies, civic events, and many other things access to which most non-seniors take for granted. Many seniors begin to feel like they are prisoners in their own homes…

Above is from page 6

…Another recommended target addresses age-friendly vehicles which have the attention of local businesses developing driverless cars and providing bicycles for use in the City. Finally, one of the recommended targets addresses the need to provide information regarding how to use public transportation and the range of transport options available. The Outreach Mobility Management Center does frequent presentations at the Senior Center to familiarize seniors with trip planning, buses, and sign-up procedures for their services….

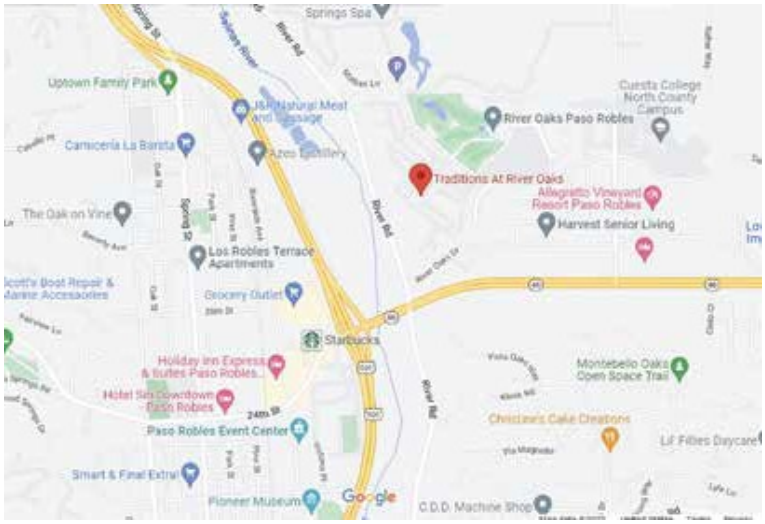
Above is from page 27

community profile

Traditions at River Oaks

680 The Esplanade, Paso Robles, CA 93446

https://trad.clubexpress.com/



Entrance seen via Google Street View

Background

- The community includes 202 acres, with 210 homes (mix of active adult, conventional, and medium density). This includes 9.8 acres of commercial, 6.49 acres of parks, open space, and a golf course; and 10.5 acres of a school.
- Resident population—562
- It is located in the northeast corner of state route 46 and the 101, just east of N. River Road.
- A second edition of Traditions at River Oaks is under construction, doubling the community's size .
- Current and prospective homeowners are considered 'portfolio' buyers, given market prices.

Project Involvement

Paso Robles city staff interview (retired staff person)

Resident and former community board member

Resident Survey

Active Mobility Infrastructure (AMI) Plans and Planning

Key take-aways from city staff and developer:

1. City staff did not specifically engage older adult communities in developing the Bicycle and Pedestrian Master Plan (BPMP, 2018) but tried to connect with all demographics through workshops and other techniques.
2. Selected projects tend to focus on easy fixes for school access.
3. The City tends to use an opportunistic approach to getting AMI through development and redevelopment,, as well as applying for state and federal grants.
4. Neighborhood and area plans include connectivity needs.
5. The community conforms to the City's Borkey Specific Plan and city subdivision ordinance. The Borkey Area Specific Plan, which covers just under 770 acres comprised of six planning areas intended for residential single family, low-density residential single family, commercial services, public facilities and agriculture.
6. The Senior Parking Program provides close-by parking in downtown areas for residents 65+.

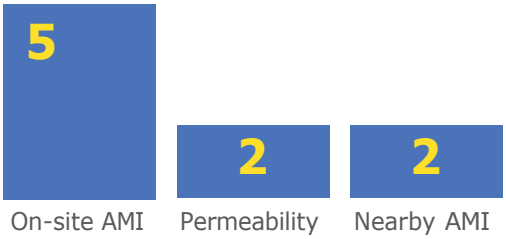
Key take-aways from resident (former board member), desktop site visit, survey results:

1. People move to the community primarily for the physical activity features such as the swimming pool, the sidewalk network, and the greenways trail.
2. Most people walk to the pool, given the small geographic community size and sidewalk presence. Many residents have a regular walking buddy. Some residents walk to the nearby park.
3. Many residents bike within the community, while some use the adjacent trail, in spite of the poor connection to it (especially given the topography -- go down to get to it; and up to get back home). A bike path or multiuse trail separated from the roadway is also needed. Some residents have cruisers and bike around town. Others belong to riding groups outside the community, given the strong bicycling community among older Paso Robles residents.
4. One of the benefits of staying with the community is from the spontaneous and informal socialization, i.e., you see others walking and stopping to chat.

The number and placement of benches encourages socializing. There is also adequate lighting for walking at night. People walking within the community can offer assistance for those who fall, which would not be the case walking or cycling outside the community.

5. The community is gated, with two vehicle entrances and six key controlled pedestrian gates.
6. The community's Helping Hands Committee assists residents with wellness needs.
7. There is one restaurant nearby, but grocery stores are quite a distance away with no usable bike path between the community and downtown.

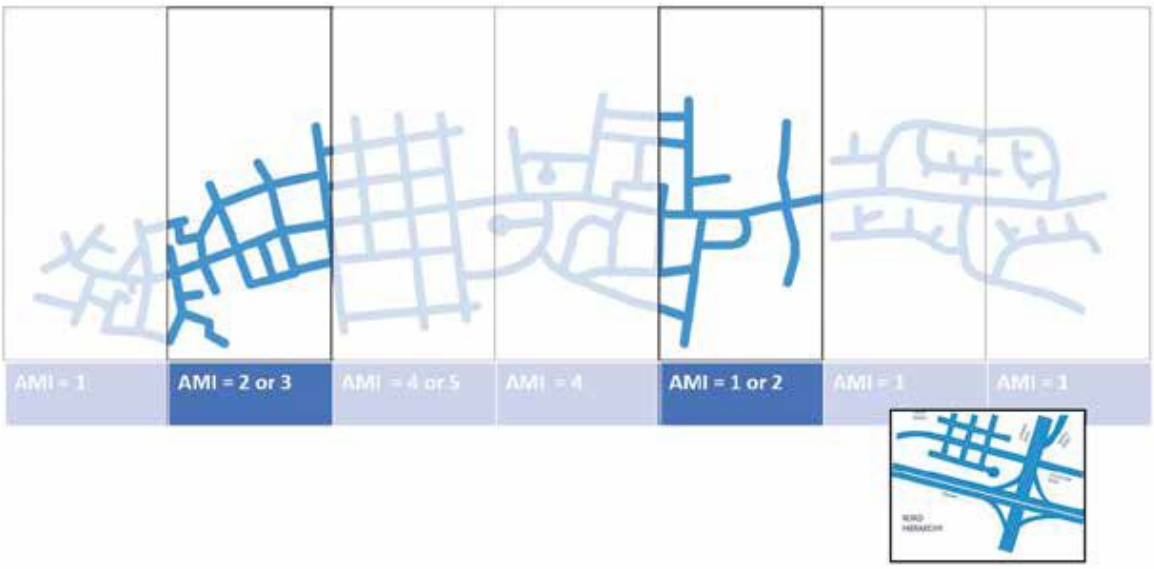
9/15 Traditions at River Oaks Overall AMI score: 9 of 15



On-site AMI of 5

Permeability of 2

Nearby AMI of 2

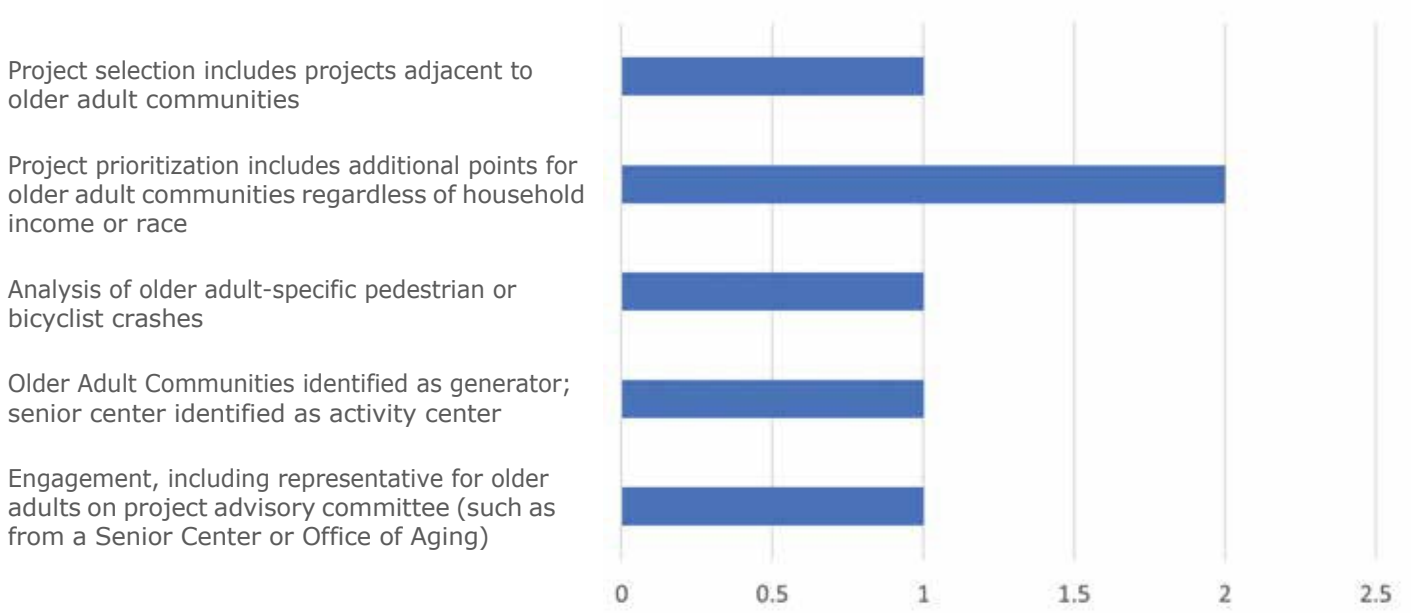


6
25

Paso Robles rating for older adult community-focused AMI: 6 of 25

Based on a review of the documents listed below.

1. Bicycle and Pedestrian Master Plan, December 2018
2. General Plan Circulation Element Update, 2019



Existing Conditions

Onsite AMI

The community has a complete sidewalk network, a greenway and a pool – all of which residents use extensively.

Existing Conditions

Permeability

One of two gates with motor vehicle access, in addition to people walking and cycling.

Fence around community which limits permeability may be a desired feature.

One of the key controlled pedestrian gages.

Nearby AMI

Nearby River Road offers little for people walking and cycling.

Sidewalks along Buena Vista Drive south and north of River Oaks Drive end when the community ends.

The intersection of River Oaks/Dallons Drive and Buena Vista is stop-controlled. The far side northbound bus stop may be for Cuesta College in the intersection's northeast corner.

community profile

Villa del Sol Senior Living

1311 W Battles Road, Santa Maria, CA 93458

https://villaeasy.com/?utm_source=GMB&utm_medium=organic

Entrance seen via Google Street View

Background

- Merrill Gardens is a tiered living community of studio, one- and two-bedroom apartments.
- The community offers residents transportation options but does not appear to foster active mobility outside the community.

Project Involvement

Santa Maria City staff interviewed

Property Manager interviewed

Resident Survey

Note: The community board of directors declined to participate in the survey. However, based on information about safety of AMI near this community provided by City staff, we are profiling the community.

Active Mobility Infrastructure (AMI) Plans and Planning

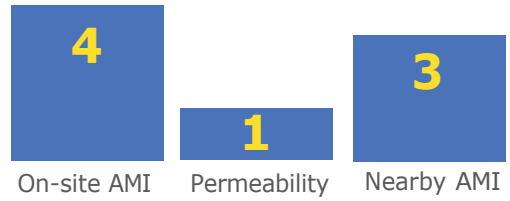
Key take-aways from city staff:

1. The City's Active Transportation Plan (ATP) is supplemented by Local Road Safety Plan (LRSP, April 2022) which identified issues such as mid-block and intersection crashes.
2. There are no ATP recommendations at or near older adult communities in Santa Maria, even though most are located on roads identified as high stress.
3. The ATP equity and inclusion focus includes 75+ adults for 'low mobility' (per SBCAG definition).
4. Survey results in the LRSP, Figure 4 shows walking and biking have the highest modal safety concern for all ages.
5. In the LRSP, the high injury network for all modes (maps 14–17) shows higher risks for Villa del Sol mid-block and at intersections.
6. In the LRSP, Table 10 shows pedestrian collisions ages 55–75 within 2 blocks of senior facility at 23% and more than 2 blocks at 77%. See also pages 37–38 for mitigations strategies.
7. The newly revised bus system provides better on time service with flexibility in destinations.
8. While transit planning is based on efficient operations, the people that use the system have a say in the final outcome.

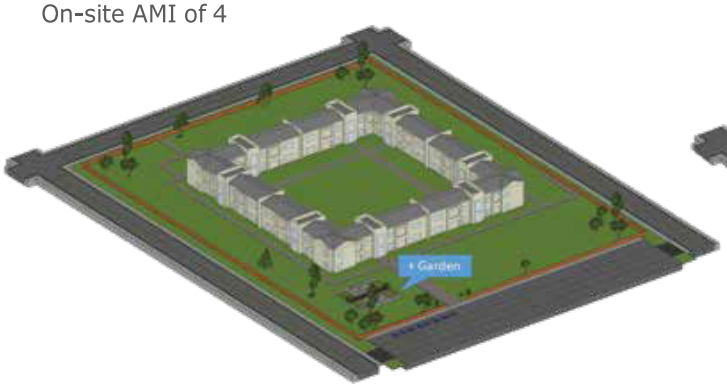
Key take-aways from desktop site visit:

1. The community is designed for easy access on foot on campus.
2. The community is fully walled with only one way in and out. There are several places where pedestrian access to adjacent streets could provide walking opportunities.
3. Sidewalk and bicycling networks along adjacent streets are higher stress due to roadway width and posted speed limit.
4. Intersection upgrades such as shorter crossing distances could make pedestrian crossings easer.

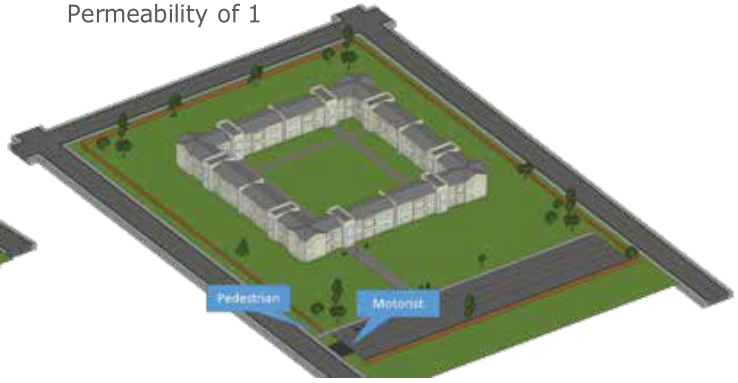
8/15 Villa del Sol
Overall AMI score: 8 of 15



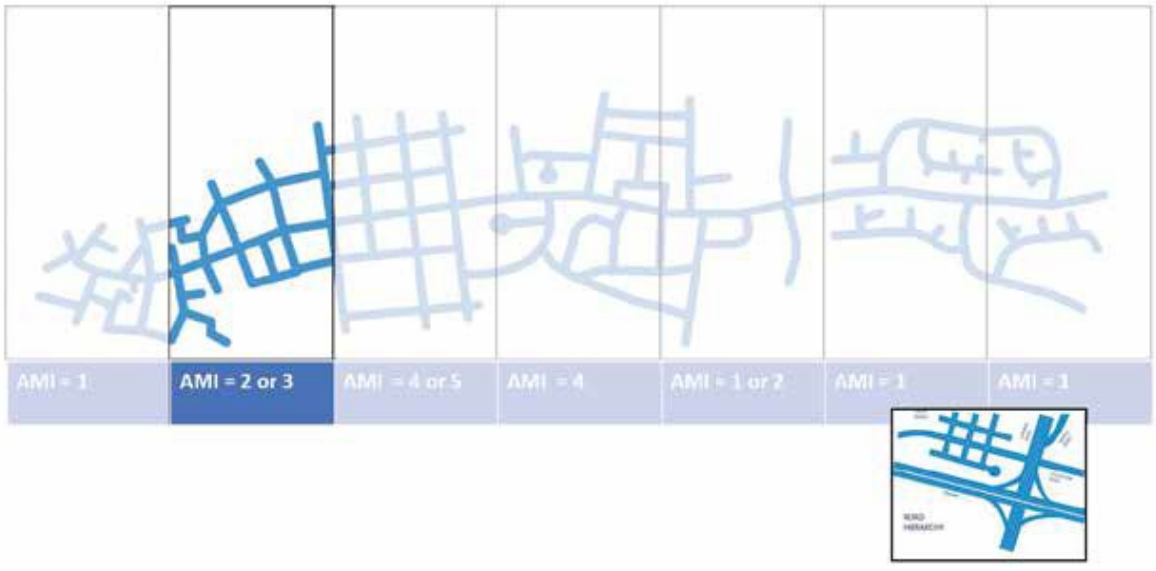
On-site AMI of 4



Permeability of 1



Nearby AMI of 3

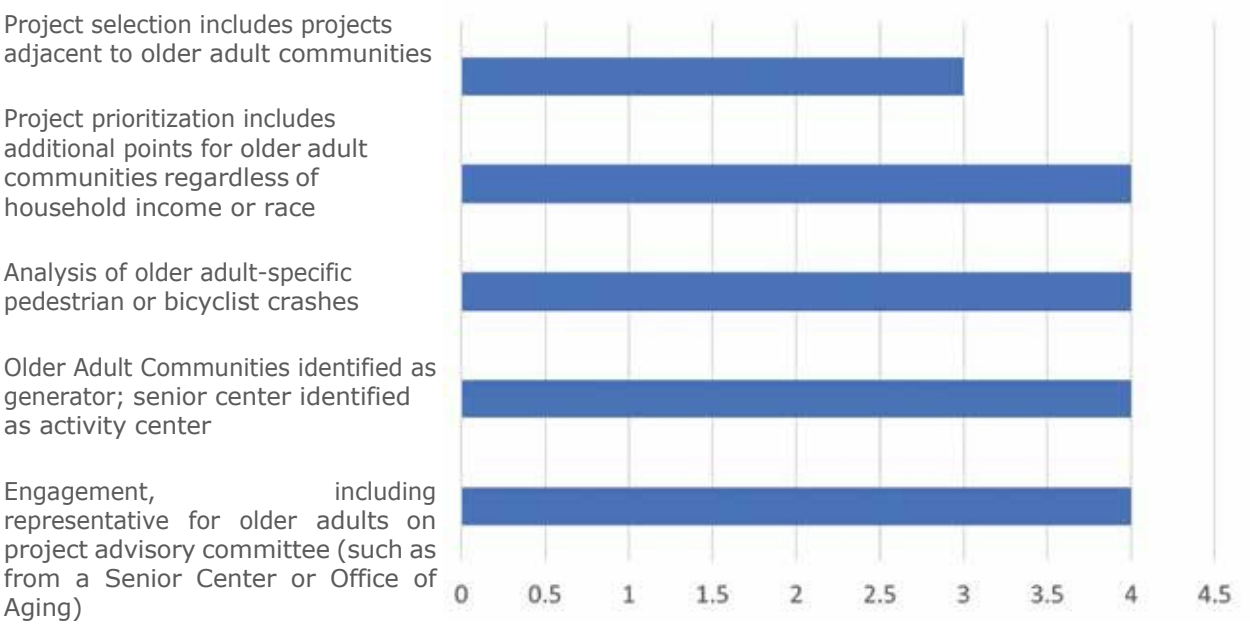


19
25

Rating for older adult community-focused AMI: 19 of 25

Based on a review of the documents listed below.

1. Active Transportation Plan, Summer 2020
2. Bus Stop Improvement Plan, Fall 2021
3. Local Road Safety Plan, Spring 2022



Existing Conditions

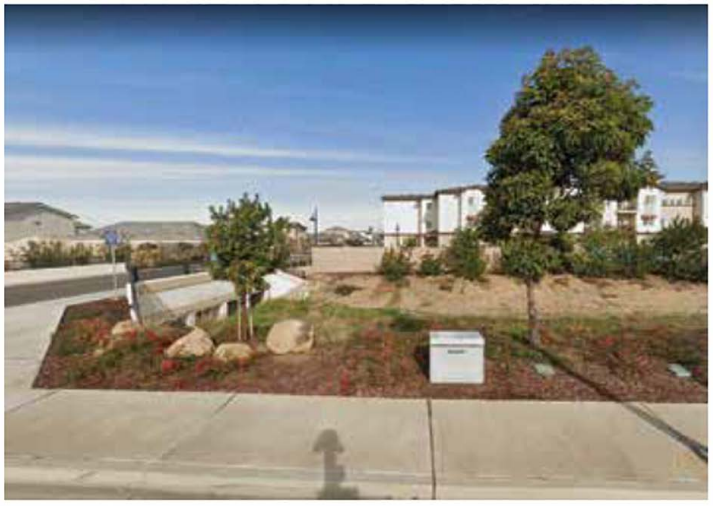
Onsite AMI

The community has a sidewalk network periodic crosswalks.

Sidewalks connect across community front to back.

Existing Conditions

Permeability



Wall and gates surround the community.

Wall limits access to neighboring streets and park.

Nearby AMI

Minimum width sidewalks and bike lane along Battle Road lead to large intersection. LRSP identifies crashes at this intersection and mid-block.

Blosser Road's wide ROW includes a center median and sidewalks, bike lanes on each side.

Appendix 2: Resident Survey, online version

The following pages are a download from the online survey platform, Alchmer, used for the resident survey. As such, it includes all of the internal skip logic and other actions to move respondents through the survey. The survey required respondents to affirm their age, acknowledge their understanding of the project, and agree to participate, then download the project description and consent form.

Resident Survey for Older Adult Living Community Study

Enhancing Older Adults' Mobility in Active Living and Tiered Living Communities

Page description:

Informed Consent Form for Research Involving Human Subjects
California State Polytechnic University, Pomona

You are being invited to participate in a research study, which the Cal Poly Pomona Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. This form is designed to provide you - as a human subject/participant - with information about this study. The investigator or his/her representative will describe this study to you and answer any of your questions; you are entitled to a copy of this form. If you have any questions about your rights as a subject or participant, complaints about the informed consent process of this research study or experience an adverse event (something goes wrong), please contact the Research Compliance Office within Cal Poly Pomona's Office of Research at 909.869.4215. More information is available at the IRB website, http://www.cpp.edu/~research/irb/index.shtml

Project Title: Enhancing Older Adults' Mobility in Active Living and Tiered Living Communities
Protocol Number: IRB-22-10
Principal Investigator: Yongping Zhang (phone number: 9098692632; e-mail: yongpingz@cpp.edu)

Page exit logic: Skip / Disqualify Logic
IF: #1 Question "**Please let us know that you are 18 years or older and agree to participate. If you decide not to participate you will be exited from the survey. Thank you.**" is one of the following answers ("No, and exit the survey")**THEN:**
Disqualify and display:
Visit SoWeCan.net to learn more about the project.
Redirect to: www.sowecan.net/

What is this study about?

This study involves research into how to enhance older adults' mobility in the older adult community in which you live. You will be given a series of multiple-choice questions and incomplete sentences with a few alternatives appearing below the incomplete sentences. You are to select the one alternative you think makes the sentence the most informative. There will be 22 to 26 questions, depending on your answers. You may work at your own pace. Our experience has been that these procedures have taken people between 10 to 12 minutes to complete. These multiple choices and open-ended questions are fairly simple terms and sentences, and we do not anticipate you experiencing any discomfort or other negative feelings when responding to items in this study.

Your participation in this study is completely voluntary. Should you decide to discontinue participation, you may do so without penalty. You may also skip any item you do not wish to complete. Your participation in this study may help researchers and city planners understand the existing issues and make improvements. We are not asking you to place your name anywhere in the questionnaire, so your participation is anonymous. None of your answers can be directly traced back to you.

Should you have any further questions, please feel free to contact the study's principal investigator, Dr. Yongping Zhang, an Associate Professor in the Civil Engineering Department. His cellphone number is (626) 623-0321, and his e-mail address is yongpingz@cpp.edu

Statement of project understanding

I have read the above information and am aware of the potential risks and complications. I fully understand that I may withdraw from this research project at any time or choose not to answer any specific item or items without penalty. I also understand that I am free to ask questions about techniques or procedures that will be undertaken. I am aware that there is no compensation for my participation. Finally, I understand that information obtained about me during the course of the study will be kept anonymous and cannot be traced.

LOGIC Show/hide trigger exists.

1. **Please let us know that you are 18 years or older and agree to participate. If you decide not to participate you will be exited from the survey. Thank you.** *

- ○ Yes
- ○ No, and exit the survey

Click here to download a copy of this Informed Consent Form.

LOGIC Hidden unless: #1 Question "**Please let us know that you are 18 years or older and agree to participate. If you decide not to participate you will be exited from the survey. Thank you.**" is one of the following answers ("No, and exit the survey")

Thank you for considering taking part in the study of older adult communities. We understand that you have decided not to complete the survey.
If you'd like to learn more about the study, visit our website at **So We Can: *Infrastructure that Matters for Older Adults*.**

(untitled)

Tell us a little bit about yourself

2. FOR PROJECT TEAM ONLY:
If entering a paper survey, enter the name of the older adult community

- Claremont Manor
- Allen-Temple Arms
- O'Connor Woods
- Allen Temple Arms
- Hummel Cottages
- Encina Royale
- Traditions at River Oaks
- Sunset Estates
- Chet Dotter

3. Who is answering this survey?
This question is needed, some residents may need assistance in answering the survey, especially if caregivers and family members are responsible for assisting with the resident's mobility. *

- ○ Myself
- ○ A family member
- ○ A non-family member caregiver
- ○ A staff member of the older adult living community

4. In which section of the older adult community do you live?
Some older adult communities are tiered, in that they have independent, assisted, memory, and nursing care. *

- Independent
- Assisted
- Memory Care
- Nursing Care
- Other - Write In (Required)

5. Please indicate your age group

- under 65
- 65 to 69
- 70 to 74
- 75 to 79
- 80 and over

6. Which statement best describes your gender?

- Woman
- Man
- Other
- Prefer not to answer

7. Which household income range best fits you?

- Less than $25,000
- $25,000 to $49,999
- $50,000 to $74,999
- $75,000 to $99,999
- $100,000 or more
- Prefer not to answer

The next two questions ask about your race. Depending on your race, you will be asked to answer one or two questions.

LOGIC Show/hide trigger exists.

8. Are you of Hispanic, Latino, or Spanish origin?

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin (for example Salvadoran, Dominican, Columbian, Guatemalan, Spaniard, Ecuadorian, etc.
- Prefer not to answer

VALIDATION Max. answers = 1 *(if answered)*

LOGIC Hidden unless: #8 Question "Are you of Hispanic, Latino, or Spanish origin?" is one of the following answers ("No, not of Hispanic, Latino, or Spanish origin")

9. What is your race?

- [ ] White, for example German, Irish, English, Italian, Lebanese, Egyptian
- [ ] Black or African American, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.
- [ ] American Indian and Alaska Native alone
- [ ] Native Hawaiian and Other Pacific Islander alone
- [ ] Chinese
- [ ] Filipino
- [ ] Asian Indian
- [ ] Vietnamese
- [ ] Korean
- [ ] Japanese
- [ ] Other Asian, for example Pakistani Cambodian, Hmong, etc.
- [ ] Native Hawaiian
- [ ] Samoan
- [ ] Chamorro
- [ ] Other Pacific Islander, such as Tongan, Fijian, Marshallese, etc.
- [ ] Two or more races
- [ ] Prefer not to answer

10. What is your education attainment?

- Less than high school
- High school or equivalent
- Some college or Associate's Degree
- Bachelor's or Advanced Degree
- Prefer not to answer

11. Which question best describes your living status?

- I live alone
- I live with my life partner
- I live with a roommate
- I live alone, but my life partner is in nursing or memory care
- Other - Write In (Required)
- Prefer not to answer

(untitled)

LOGIC Show/hide trigger exists.

12. Click all the purposes for which you walk listed below

Check all that apply

- [ ] Exercise
- [ ] Socialization
- [ ] Daily errands
- [ ] To walk my dog
- [ ] Volunteer commitments, classes or other education activities
- [ ] To get to entertainment venues
- [ ] I am not a regular walker

LOGIC Hidden unless: #12 Question "Click all the purposes for which you walk listed below *Check all that apply*"

13. In the past month, how often have you walked for any of the reasons listed in the prior question?

- ○ Nearly every day
- ○ Once or twice a week
- ○ Three or 4 times a week
- ○ Other - Write In (Required)

LOGIC Hidden unless: #12 Question "Click all the purposes for which you walk listed below *Check all that apply*" is exactly equal to ("I am not a regular walker")

14. Tell us why you are not a regular walker

Check all that apply

- [ ] I cannot walk independently or without a cane, walker, etc.
- [ ] I do not have the strength or stamina to walk very much
- [ ] I have concerns about falling
- [ ] The place I live does not have sidewalks or paths I feel comfortable using
- [ ] None of the places I go are within a comfortable walking distance for me
- [ ] I am concerned about my personal safety
- [ ] I don't have anyone to walk with
- [ ] Other - Write In (Required)

*

LOGIC Show/hide trigger exists.

15. Do you run, jog, or do fast (or brisk) walking?

- ○ Yes
- ○ No
- ○ I used to but no longer do so

LOGIC Hidden unless: #15 Question "Do you run, jog, or do fast (or brisk) walking?" is one of the following answers ("I used to but no longer do so")

16. Why did you stop running, jogging, or fast walking?

Check all that apply

- [ ] I no longer have the physical ability to do this
- [ ] I have a chronic condition that made me stop
- [ ] I switched to regular walking
- [ ] I switched to bicycling
- [ ] After I moved to this community, I realized that the layout, etc., isn't conducive to it
- [ ] I just got tired of it
- [ ] Other - Write In (Required)

*

LOGIC Show/hide trigger exists.

17. Click on all the reasons listed below that you bicycle

Check all that apply

- [ ] Exercise
- [ ] Socialization
- [ ] Daily errands
- [ ] Volunteer activities, classes and other learning activities
- [ ] To get to entertainment venues
- [ ] I no longer bicycle
- [ ] I am not interested in bicycling

LOGIC Hidden unless: #17 Question "Click on all the reasons listed below that you bicycle *Check all that apply*" is one of the following answers ("Exercise","Socialization","Daily errands","Volunteer activities, classes and other learning activities")

18. In the past month, how often have you cycled for any of the reasons listed in the prior question?

- ○ Nearly every day
- ○ Once or twice a week
- ○ Three or 4 times a week
- ○ Other - Write In (Required)

LOGIC Hidden unless: #17 Question "Click on all the reasons listed below that you bicycle *Check all that apply*" is one of the following answers ("I no longer bicycle","I am not interested in bicycling")

19. Click all the reasons you do not bicycle regularly

Check all that apply

- ☐ I do not have a bicycle, a working bicycle, or have one that works for me
- ☐ I do not have the balance or strength to bicycle
- ☐ I am simply not interested in bicycling
- ☐ There are no bike lanes or pathways where I live
- ☐ The places I go are not within a comfortable bicycling distance for me
- ☐ I don't have anyone to bicycle with
- ☐ Other - Write In (Required)

*

(untitled)

LOGIC Show/hide trigger exists.

20. Do you walk, jog, bicycle, etc. within the older adult community in which you live?

- Yes
- No

LOGIC Hidden unless: #20 Question "Do you walk, jog, bicycle, etc. within the older adult community in which you live?" is one of the following answers ("Yes")

21. Why do you walk or bicycle within the older adult community in which you live?

Check all that apply

- It's just easier than going elsewhere
- There are people close-by if I need help
- Benches are handy for resting and visiting with neighbors
- There is enough light for walking at dawn and dusk
- I don't travel very far, so this is just the right distance
- There are no easy connections to places I go in areas surrounding the older adult community in which I live
- I enjoy the park spaces or gardens within the older adult community in which live
- Other - Write In (Required)

*

LOGIC Hidden unless: #20 Question "Do you walk, jog, bicycle, etc. within the older adult community in which you live?" is one of the following answers ("Yes")

22. You've identified reasons that you walk or bicycle within the older adult community in which you live. Are there things you don't like or wish could be different?

LOGIC Hidden unless: #20 Question "Do you walk, jog, bicycle, etc. within the older adult community in which you live?" is one of the following answers ("No")

23. Why don't you walk or bicycle within the older adult community in which you live?

Check all that apply

- [ ] I cannot get enough distance because there aren't enough sidewalks
- [ ] I'm concerned there won't be someone to help me if I need help
- [ ] There are no or not enough places for me to sit if I need to rest
- [ ] There is not enough light for walking at dawn and dusk
- [ ] I like to have a destination when I walk or bicycle, such as going to the store, and there are none in my community
- [ ] There are no easy connections to surrounding areas where I like to go
- [ ] There is not much of a network of sidewalks or pathways in or immediately around my older adult community
- [ ] Other - Write In (Required)

*

(untitled)

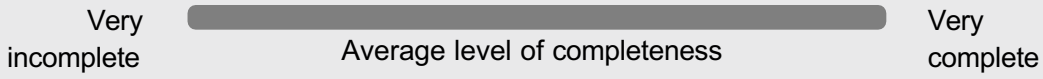
VALIDATION Min = 1 Max = 5

24. Use the sliding bar below to indicate how complete the network of sidewalks, trails, pathways, etc., are within and around the older adult community in which you live, based on the following definitions:

Very incomplete = usually need to travel out of my way or walk in the road or parking lots

Average level of completeness = can get to some places, but about half the time go out of my way

Very complete = rarely travel out of my way to get where I am going or travel in the road or through parking lots



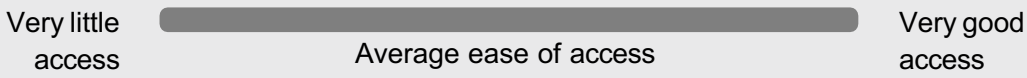
VALIDATION Min = 0 Max = 5

25. Use the sliding bar below to indicate how easily existing connections to areas surrounding the older adult community in which you live provide access to you, based on the following definitions:

Very little access= only one or two points of access, which are primarily for people driving.

Average ease of access = at least one access point on each side of the community, primarily for drivers.

Very good access = many points of access for people on foot, bikes, or driving; no restrictions



26. What is one thing you would like to change within the older adult community in which you live that would make it more likely you will walk or bike or make it easier to do so?

27. What is one thing you would like to change in the areas around the older adult community in which you live that would make it more likely you will walk or bike or make it easier to do so?

(untitled)

LOGIC Hidden unless: #1 Question "**Please let us know that you are 18 years or older and agree to participate. If you decide not to participate you will be exited from the survey. Thank you.**" is one of the following answers ("No, and exit the survey")

Thank you for considering taking part in the survey. We respect your decision not to participate in the survey.

(untitled)

LOGIC Show/hide trigger exists.

28. For what purposes do you use public transit?

Check all that apply

- [ ] Socialization
- [ ] Daily errands
- [ ] Volunteer commitments, classes or other learning activities
- [ ] To get to entertainment venues
- [ ] Other - Write In (Required)

*

- [ ] I don't use public transit

LOGIC Hidden unless: #28 Question "For what purposes do you use public transit? *Check all that apply*" is one of the following answers ("Socialization","Daily errands","Volunteer commitments, classes or other learning activities","To get to entertainment venues","Other - Write In (Required)")

29. In the past month, how often have you used public transit for any of the reasons listed in the prior quesion?

- ○ Nearly every day
- ○ Once or twice a week
- ○ Three or 4 times a week
- ○ Other - Write In (Required)

LOGIC Hidden unless: #28 Question "For what purposes do you use public transit? *Check all that apply*" is one of the following answers ("I don't use public transit")

30. What are the reasons you don't use public transit?

Check all that apply

- [ ] There is no public transit near my community
- [ ] Access to the stop is difficult or doesn't feel safe
- [ ] The service doesn't go where I need to go or when I need to travel
- [ ] It's too expensive
- [ ] Other - Write In (Required)

*

31. What one thing would you like to change that would make it more likely you will use transit or make it easier to do so?

(untitled)

32. Use the table below to tell us what do you use a motor vehicle for?

	I drive a car or ride with someone else in their car	I use a ridesharing service	I don't usually travel in a motor vehicle
Socialization	☐	☐	☐
Daily errands	☐	☐	☐
Volunteer activities, classes or other educational activities	☐	☐	☐
To get to entertainment venues	☐	☐	☐
Other reasons	☐	☐	☐
I don't drive or use ridesharing	☐	☐	☐

Thank You!

Thank you for taking our survey. Your response is very important to us.

Appendix 3: OAC Staff Interview Questions

The project team used the following standard set of questions for interviews with OAC staff. Information from these interviews was expanded through a desktop review of the community and surrounding areas and a review of other mobility information available online.

1. Briefly describe the campus layout, circulation, and connections.
2. What options for travel to destinations outside the community are available?

    [ ] Walking

    [ ] Bicycling

    [ ] Public transit

    [ ] Accessible public transit or dial a ride

    [ ] Community-provided van service to predetermined destinations

    [ ] Contract with Lyft or Uber (resident pays cost)

    [ ] Other

3. Tell us more about some of the travel options for residents
4. What have you observed or know about residents who walk, jog, or cycle?
5. What do you feel works well for mobility for residents on campus?
6. What changes would make on-campus mobility work better?
7. What works well for connections to areas surrounding the campus?
8. What changes would increase the mobility of surrounding areas more useful for residents?

Appendix 4: City Staff Interview Questions

The project team used the following standard set of questions for interviews with city staff. In most cases, the project team interviewed one staff member only, however the three city staff members participated in Stockon interview and two separate interviews were conducted with staff from Santa Maria and Santa Barbara County. Information from these interviews was expanded through a review of other mobility information available online and documents referenced by city staff.

1. Key take-aways from conversation (completed after interview)

1: _____

2: _____

3: _____

4: _____

5: _____

6: _____

2. Documents and other resources

Document or resource name	Document or resource URL

3. For which of the following activities do you have a mobility master plan or strategic plan?

[ ] Bicycle

[ ] Pedestrian

[ ] Transit

[ ] Trails

[ ] Other

4. What other mobility master plan/s do you have?

5. What type of planning for older adults' mobility does your jurisdiction have?

6. Do you have an older adult master plan or something similar?

[ ] Yes

[ ] No

[ ] It's in development

[ ] I don't know

[ ] Our aging department is working on that

[ ] Other - Write In (Required)

7. Who can answer this question?

8. What do your subdivision regulations include about active transportation facilities in older adult communities?

[ ] Same requirements as for all-ages residential communities

[ ] Different requirements than all-ages residential communities

[ ] I don't know

[ ] Other - Write In (Required):

_____

9. How are the requirement different?

10. Who is the best person to talk with about the subdivision requirements?

11. Does your jurisdiction have an equity and inclusion focus in its transportation and recreation planning?

( ) Yes

( ) No

( ) We are developing this focus

( ) Other - Write In (Required):

_____

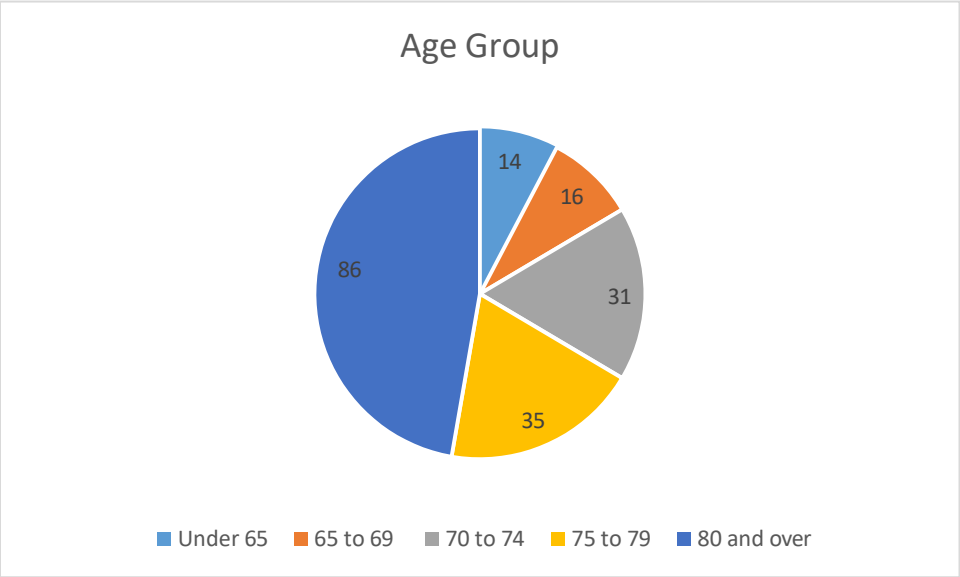
12. Please describe the focus you use or are developing

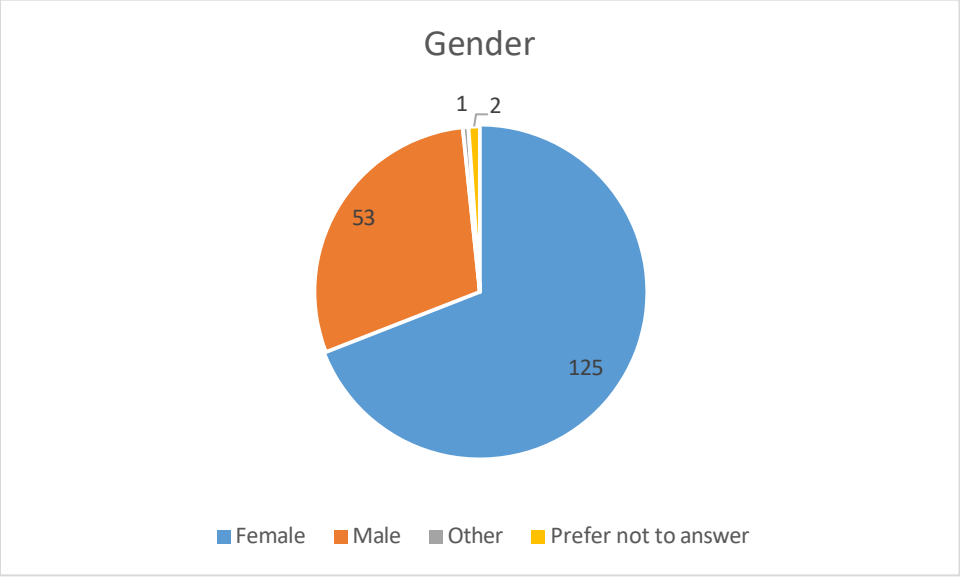
13. Why do you not have an equity and inclusion focus?

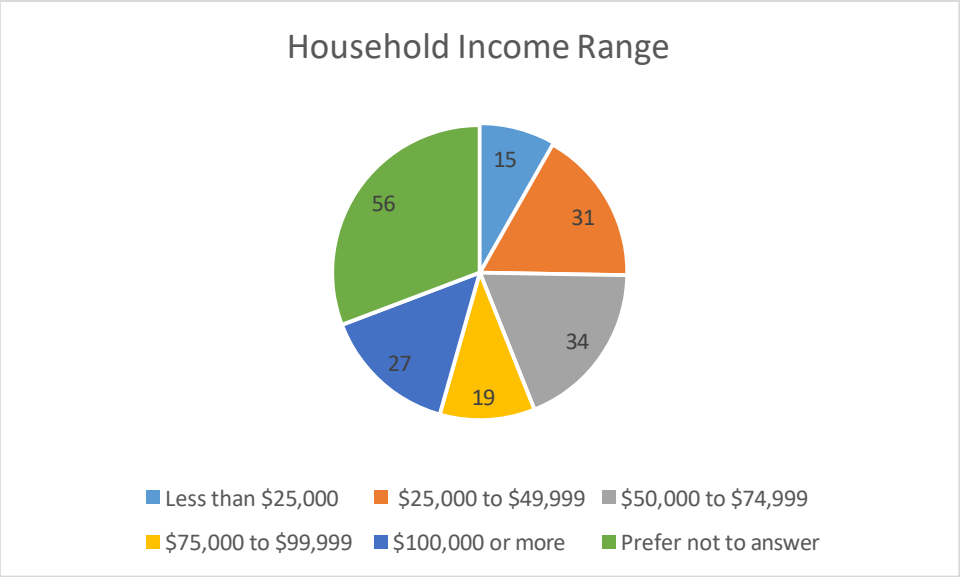
14. Open-ended questions and answer

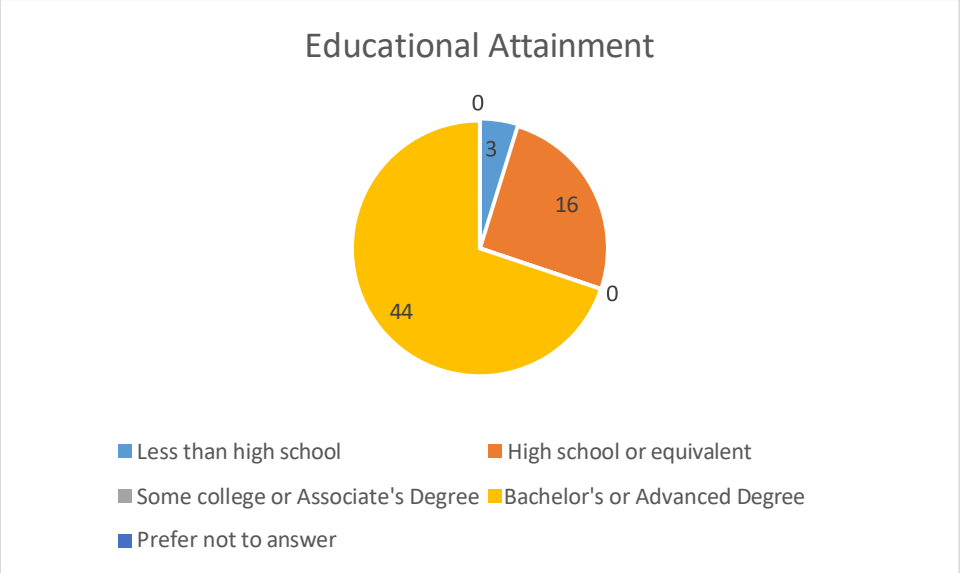
15. On a scale of 1 to 10, how well do you feel your jurisdiction's policies are in addressing the mobility needs of older adults? Why?

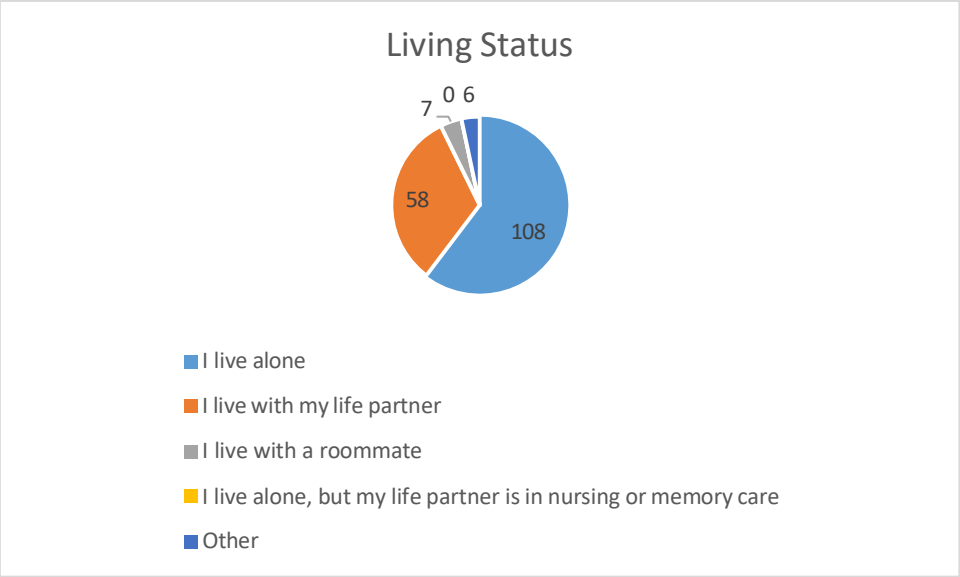
Appendix 5: Visual Presentation of Data Variables in the Study

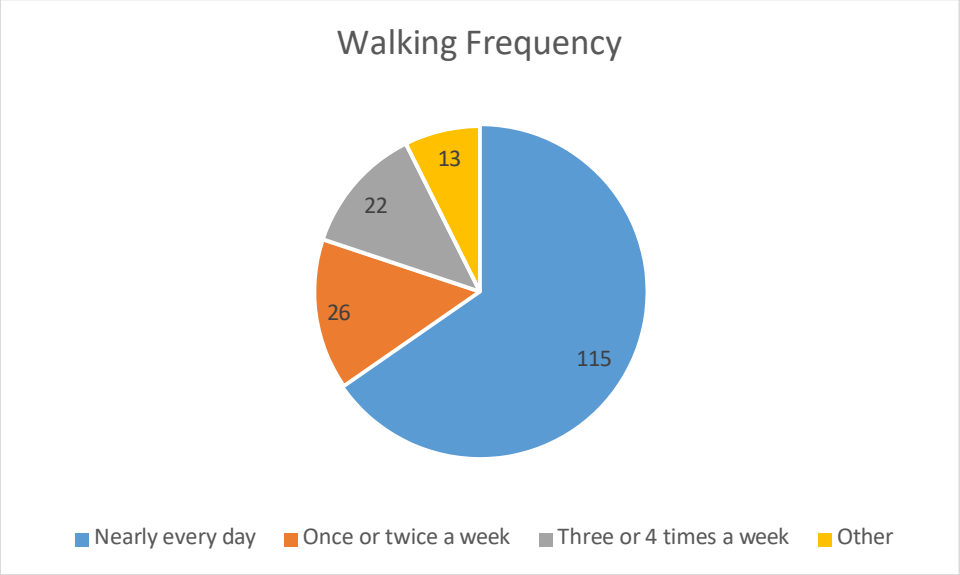




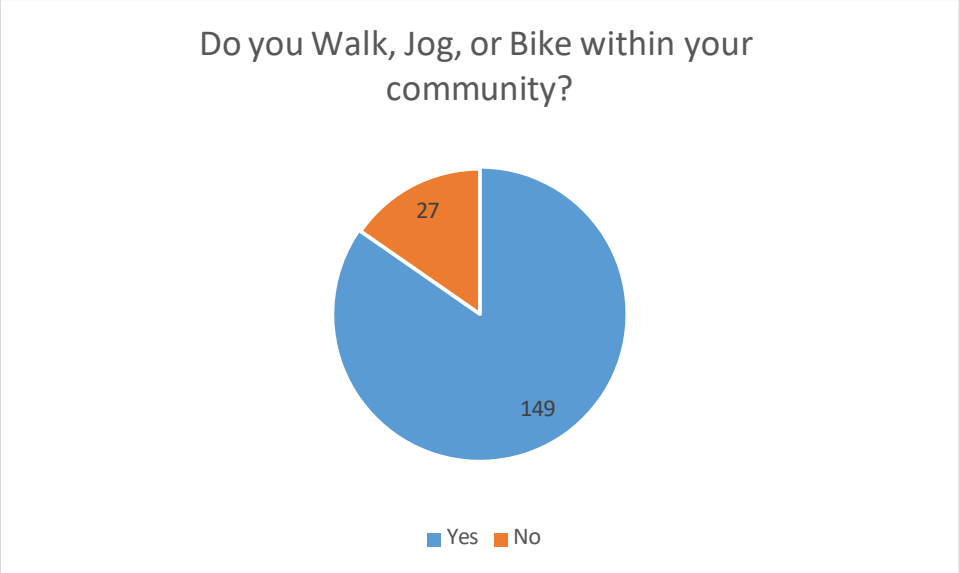

Household Income Range
15
31
34
19
27
56
Less than $25,000
$25,000 to $49,999
$50,000 to $74,999
$75,000 to $99,999
$100,000 or more
Prefer not to answer

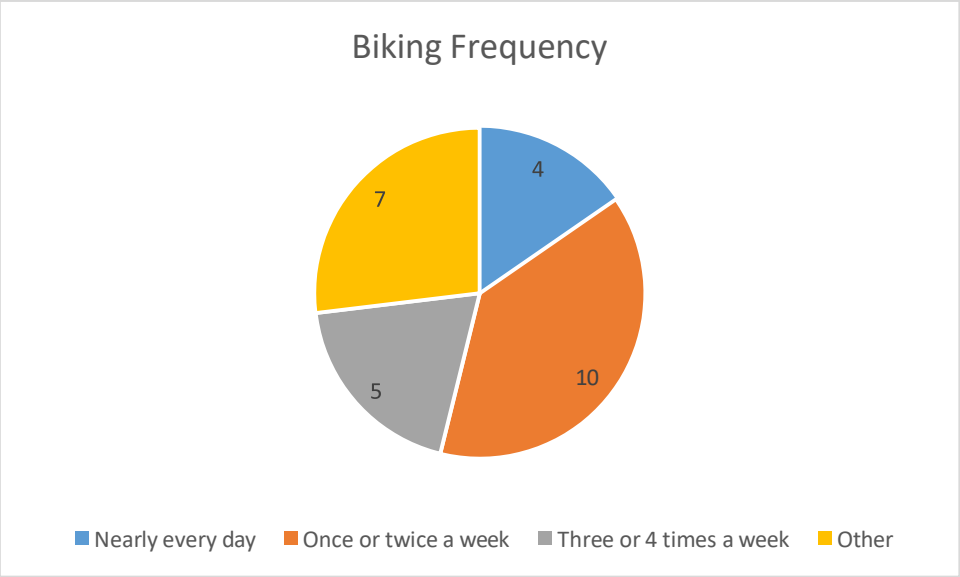

Educational Attainment
0
3
16
0
44
Less than high school
High school or equivalent
Some college or Associate's Degree
Bachelor's or Advanced Degree
Prefer not to answer

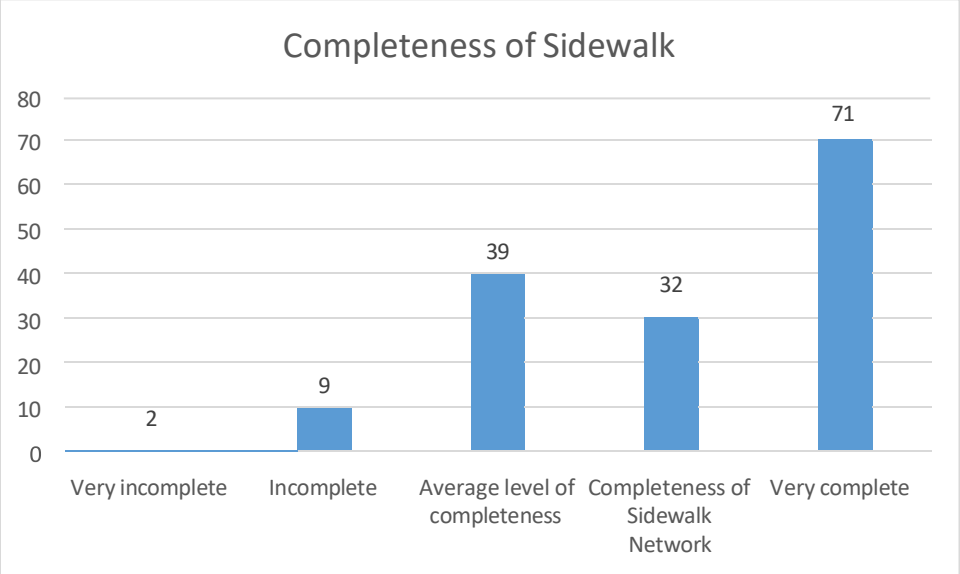

Living Status
7
0
6
58
108
I live alone
I live with my life partner
I live with a roommate
I live alone, but my life partner is in nursing or memory care
Other

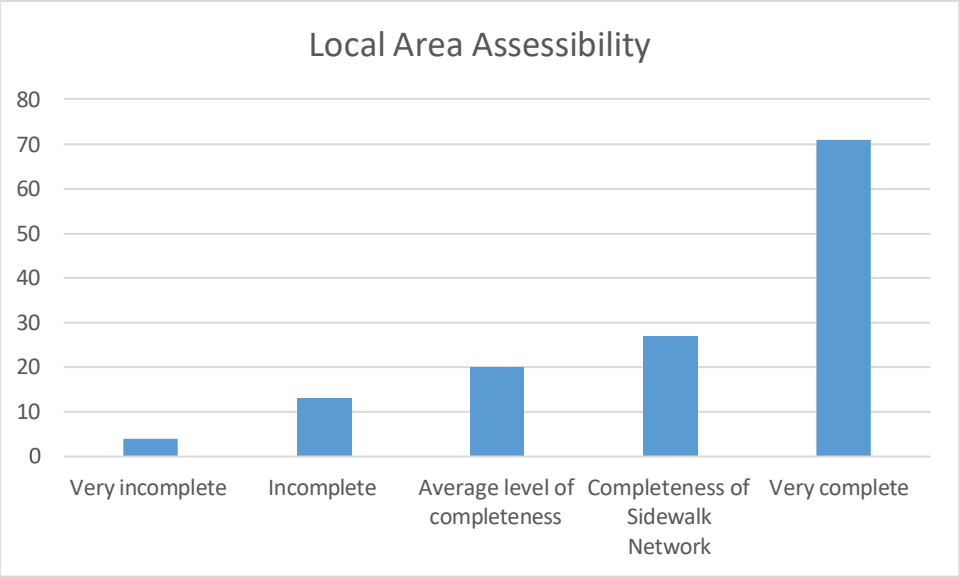

Walking Frequency
13
22
26
115
Nearly every day
Once or twice a week
Three or 4 times a week
Other


Brisk Walking
42
43
92
Yes
No
I used to but no longer do so


Do you Walk, Jog, or Bike within your community?
27
149
Yes
No


Biking Frequency
4
10
5
7
Nearly every day
Once or twice a week
Three or 4 times a week
Other


Completeness of Sidewalk
80
70
60
50
40
30
20
10
0
2
9
39
32
71
Very incomplete
Incomplete
Average level of completeness
Completeness of Sidewalk Network
Very complete


Local Area Assessibility
80
70
60
50
40
30
20
10
0
Very incomplete
Incomplete
Average level of completeness
Completeness of Sidewalk Network
Very complete

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