

Aging in Place and Walkable Urbanism

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This project analyzes the service areas of Aging-in-Place Villages in Portland. Several factors are examined that may influence older Village residents' ability to get around easily and safely on foot as well as their access to services and community resources considered relevant for their physical, mental, and social well-being.

The results help Village planners identify and compare particular strengths and weaknesses, such as service

gaps. Information will support the Planning Teams' decisions regarding potential partners, volunteer recruitment and management, as well as efficient resource-sharing strategies among different Villages and associated organization, Villages Northwest. The findings may be of interest to other entities as well, such as the Age-Friendly Portland initiative, involved neighborhood associations, Portland Department of Transportation, etc.

Exploring Service Accessibility with Disaggregated Population Data.

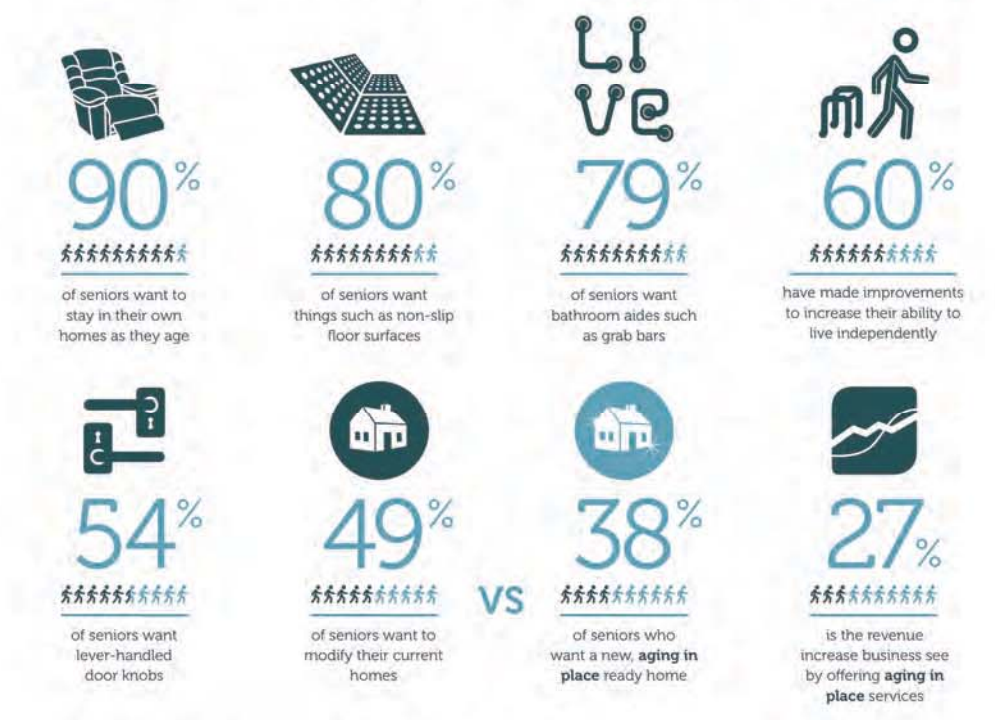
What is an Aging-in-Place Village?

Aging in place can be defined as "the ability to live in one's own home and community safely, independently, and comfortably, regardless of age, income, or ability level" (www.cdc.gov/healthyplaces/terminology.htm).

In the face of the demographic transition, communities need to prepare for the changing needs of residents entering the older age groups who wish to remain in their homes as long as they possibly can. "Villages" are grassroots organizations that help their members to age in place by connecting them with volunteer and professional services within a geographically defined "service area."

Aging in Place Statistics

FROM YOUR FRIENDLY NEIGHBORHOOD BRANDING FIRM / Aging in place is the ability for the elderly to continue to live in their own homes for as long as possible.



10% of the \$214 billion home improvement industry is dedicated to aging in place.

Three Elements of Aging in Place



Housing with proper features, size and modifications that allow independent living.



Communities with services that seniors need that are walkable and feature transit.

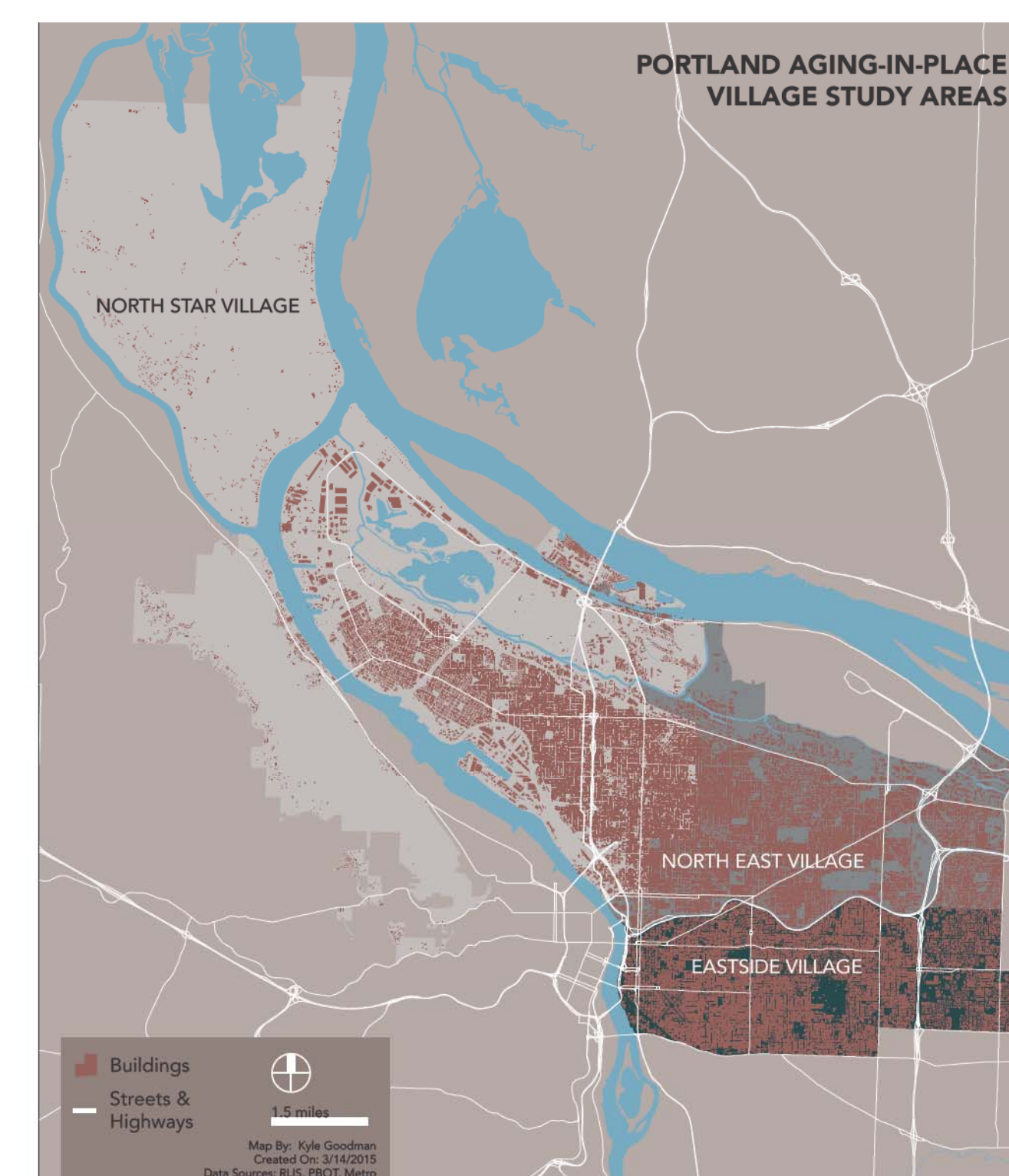


Healthcare and other services that provide seniors with continued health and wellness.



Methodology and Data

Our study area includes three Aging-in-Place Villages for which defined GIS boundaries were created. Key services, such as businesses and medical clinics, were mapped out within the study area. We looked at how much of the population in three different Portland Villages resides within a 1/4 and 1/8-mile walking distance inside census block groups. To account for inaccuracies of aggregated census data, the population data were disaggregated to residential buildings only; larger buildings were assigned a higher number of residents. This project is a pilot project aimed at providing the framework for accessibility analyses for relevant services for a certain target population.



Study Area (Village boundaries)	Walking Environment	Accessibility to services and community resources
Metro RLIS: - Neighborhoods - Streets Other: - Village boundaries	Metro RLIS: - Street center lines & intersections - Trails	Metro RLIS: - Business Database Other: - Meal sites - NAICS Business codes

Analysis and Results

In order to analyze the population's walkable access to services, Census data at the block group level was disaggregated to the residential buildings of each of the block groups with the study area. Buildings were clipped to the study area with non-residential buildings filtered out, and a spatial join of the buildings to the block group. A figure of people per building (PPB) was calculated using the formula:

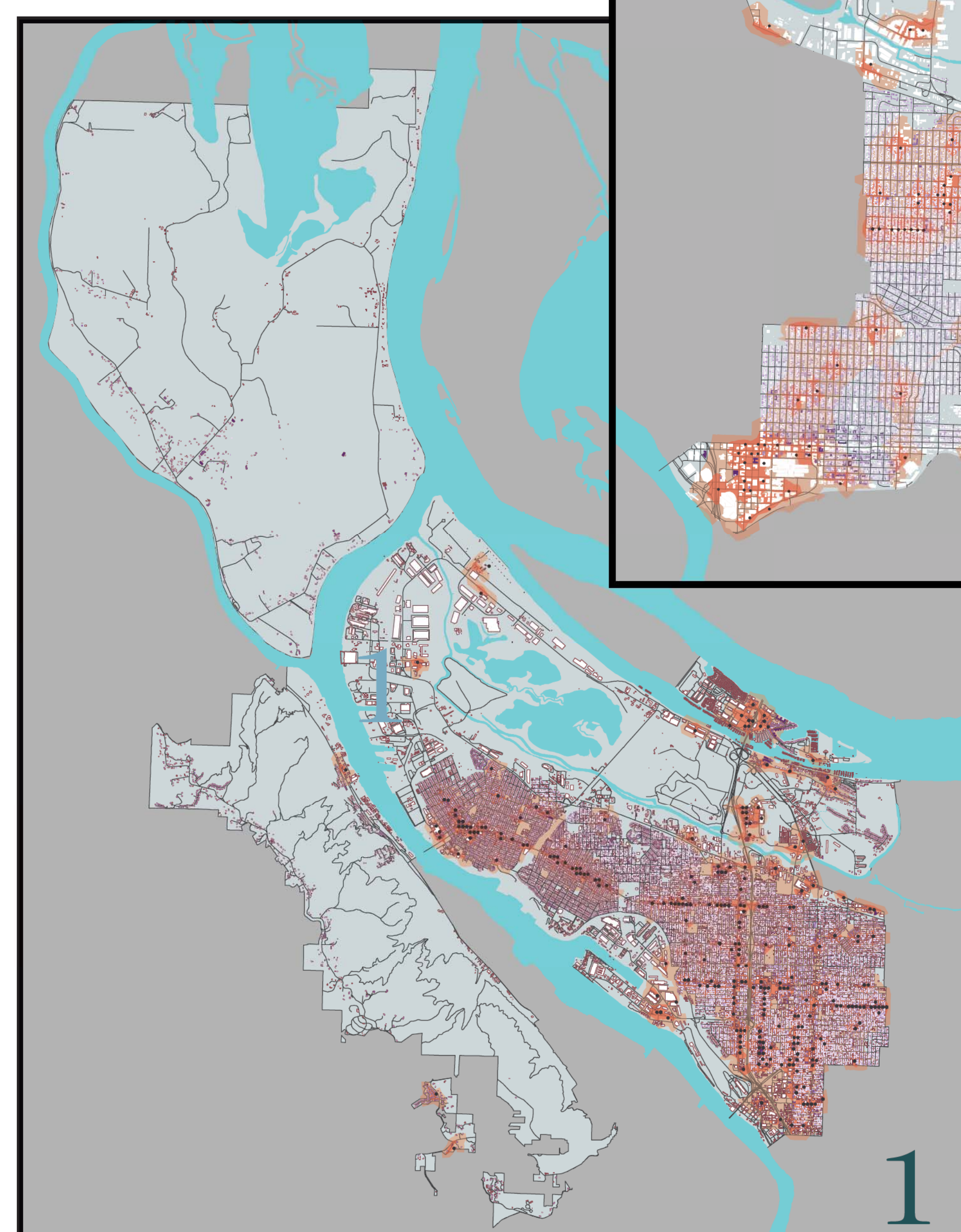
PPB:
(building area/total building area per block group) * block group population

Next, a network for service area analysis was created from Portland's streets GIS layer. Using NAICS business data, store locations were mapped including restaurants, grocery stores, and other meal services. While this project only looked into access to food, the same analysis could be used on any number of different services. A walkshed of 1/4 and 1/8 of a mile from each of the service locations were calculated using ArcGIS' Network Analysis toolset. Finally, a ratio of the total population within these walksheds were calculated.



Map Legend

- Water Bodies
 - Village Study Areas
 - 1/8 Mile Walkshed
 - 1/4 Mile Walkshed
 - Relative Population Density (PPM)
 - Streets and Highways
 - 1/2 Miles
- Maps By: Kyle Goodman & Iris Wernher
Created On: 3/15/15
Data Sources: RLIS, Metro, PBOT



North East Portland's Aging-in-Place Village is more compact compared to the North Star Village with more of its area covered by residential and commercial landuse. Major corridors such as Sandy, 82nd Ave, Cully, and Halsey. The junction between I-205 and I-84 forms a large barrier to the connectivity of the North East Village.

The North Star Village has the greatest extent, stretching from the Rose Quarter and Forest Park in the south to the market garden farms on Sauvie Island. Services are clustered around Williams, MLK Blvd, Interstate, Lombard, and the St. John's downtown.

Service coverage in the East Side Village is well distributed thanks to a number of commercial, mixed-use corridors that form the backbone of neighborhoods within the village. Services cluster around the corridors of 82nd Ave, Stark, Burnside, Division, and Hawthorne.

Conclusions

Results 1: Disaggregation Method

An important finding in this project is that there are differences in the estimated number of people who are being served by a particular business, that is, who live in 1/4-mile walking distance to that service (in our example: food services), depending whether aggregated census data are used or data disaggregated to residential buildings.

Example: North Star Village TRBG # 0040024 (result map 4): If we only look at the aggregated census data to estimate the population served by food services, the estimated number of people is 483, which equals 42% of the total population in this area (483/1,157). If we use the disaggregated population data, we see that 445 (38%; 445/1157) of people are being served.

Results 2: Percentage of people living in 1/4-mile walking distance to food services (using the disaggregation method)

- North Star Village: 68% (68,721/101,726) of the population is within 1/4 walking distance of a food service.
- North East Village: 63% (83,717/130,817) of the population is within 1/4 walking distance of a food service.
- East Side Village: 80% (116,619/145,429) of the population is within 1/4 walking distance of a food service.