



# Aging in Place, Stuck without Options:

Fixing the Mobility Crisis Threatening  
the Baby Boom Generation

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Transportation for America (T4 America) is the largest, most diverse coalition working on transportation reform today. Our nation's transportation network is based on a policy that has not been significantly updated since the 1950's. We believe it is time for a bold new vision — transportation that guarantees our freedom to move however we choose and leads to a stronger economy, greater energy security, cleaner environment and healthier America for all of us. We're calling for more responsible investment of our federal tax dollars to create a safer, cleaner, smarter transportation system that works for everyone.

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# I. Executive Summary

The baby boom generation is the largest in U.S. history, with more than 77 million people born between 1946 and 1964.<sup>1</sup> Baby boomers are also unique because they came of age during the unprecedented economic expansion that followed World War II, which helped fuel the rise of new suburban communities and increased reliance on the automobile. At the same time, the Federal Government initiated the largest infrastructure project in U.S. history with the construction of the Interstate Highway system. Whereas previous generations tended to live in close proximity to employment centers, new suburban housing developments required frequent, long-distance trips by automobile. With the support of substantial federal funding, metropolitan regions developed vast road networks to connect people to employment, healthcare, recreation and friends and family. Automobiles became an essential component of daily life as opposed to a luxury.

Only a small percentage of Americans move after they reach retirement age, according to demographic researchers, meaning most will “age in place” in neighborhoods where daily activities require frequent car trips. With rising life expectancies, America’s largest generation will also be the oldest ever. Inevitably, aging experts note, a large share will find that their ability to navigate by vehicle diminishes or disappears over time. These millions of older adults will need affordable alternatives to

driving in order to maintain their independence as long as possible.

Many seniors will rely on relatives or friends to take them around, and a smaller number will move to places where services and activities are close by. Pedestrian-friendly streets and recreational trails built with seniors in mind will help older Americans get around safely and remain active, regardless of where they live. But only adequate public transportation services can assure that older adults are able to travel as often or as far as they would like, without worrying about inconveniencing others.

Absent access to affordable travel options, seniors face isolation, a reduced quality of life and possible economic hardship. A 2004 study found that seniors age 65 and older who no longer drive make 15 percent fewer trips to the doctor, 59 percent fewer trips to shop or eat out, and 65 percent fewer trips to visit friends and family, than drivers of the same age.<sup>2</sup> A 2002 study in the American Journal of Public Health found that men in their early 70s who stop driving will need access to transportation alternatives, such as public transportation, for an average of six years; women in the same age group will, on average, need transportation alternatives for ten years.<sup>3</sup> A 2008 survey by AARP found that 85 percent of older Americans were either extremely

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1 Coughlin, Joseph F. (2009) “Longevity, Lifestyle, and Anticipating the New Demands of Aging on the Transportation System” Public Works Management & Policy Volume 13 Number 4 301-311

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2 Bailey, Linda (2004), “Aging Americans: Stranded without Options” Surface Transportation Policy Project, Washington, D.C.

3 Foley, Daniel, Heimovitz, Harley, Guralnik, Jack and Dwight Brock “Driving Life Expectancy of Persons Aged 70 Years and Older in the United States” American Journal of Public Health, August 2002, Vol 92, No. 8

concerned or very concerned about rising fuel prices, leading many to look toward other forms of transportation or to reduce their travel.<sup>4</sup>

Whether seniors have access to transportation options depends both on where in the country they live, as well as where they reside within a metropolitan region. To gauge the emerging transportation issues for aging Americans, Transportation for America commissioned the Center for Neighborhood Technology (CNT) to analyze the adequacy of public transportation service for 241 metropolitan areas with a population of 65,000 or more (See the methodological appendix for a complete list of those metro areas where digitized transit data was not available at the time of the study). The analysis considered the total number of public transit lines and stops – bus routes and rail and ferry stations – in a given location, as well as the number of seniors living in that area in 2000, and their likely numbers in 2015. Within the communities examined in this report more than 11.5 million Americans 65 and older lived with “poor” transit access in 2000. If most seniors get their wish to “age in place,” by 2015, our analysis shows that this figure will increase to more than 15.5 million older Americans, meaning a substantial majority of that population will be faced with declining mobility options. We do not make specific projections beyond 2015, because they are less likely to be accurate. However, the aging in place phenomenon will continue until well beyond 2030, when the last baby boomer turns 65.<sup>5</sup>

4 Skufca, Laura. (2008), “Is the Cost of Gas Causing Americans to Use Alternative Transportation?” AARP, Washington, D.C.

5 United States Census Bureau, “Population under age 18 and 65 and older: 2000, 2010, and 2030” data available at the <http://www.census.gov/population/www/projections/projectionsagesex.html>

## Defining Poor Transit Access

This report ranks metro areas by the percentage of seniors with poor access to public transportation in 2015. Poor transit access is defined for each metro size category to allow for a fair comparison and avoid holding small metro areas to the same standard for transit service and access as large metro areas. For a typical senior, poor access to transit is defined as the average number of bus, rail, or ferry routes within walking distance of their home. For each metro size category, poor access is defined as follows:

- For a metro area with fewer than 250,000 residents, a typical senior with poor transit service has access, on average, to less than .8 bus, rail, or ferry routes;
- For a metro area with between 250,000-1 million residents, a typical senior with poor transit service has access, on average, to fewer than 1.1 bus, rail, or ferry routes;
- For a metro area with between 1-3 million residents, a typical senior with poor transit service has access, on average, to fewer than 1.7 bus, rail, or ferry routes;
- For a metro area with 3 million or more residents, a typical senior with poor transit service has access, on average, to fewer than 1.9 bus, rail, or ferry routes;
- For the New York metropolitan area, a typical senior with poor transit service has access, on average, to fewer than 11.7 bus, rail, or ferry routes

Table 1 shows the total increase in older Americans with poor transit access for each metropolitan size category. While the most significant percentage increase occurs in communities with fewer than 250,000, the greatest in absolute numbers is in communities of 1 to 3 million. Even the New York metropolitan region, which has the most extensive transit access of any area, is estimated to add 101,159 seniors with poor transit access by 2015.

The demographic shifts taking place in America are unprecedented. In a 2003 study, Sandra Rosenbloom of the Brookings Institution, found that 79 percent of seniors age 65 and older live in car-dependent suburban and rural communities.<sup>6</sup> The growth in automobile-reliant suburban areas has been supported and encouraged in large measure by Federal investments, programs and regulations over the last several decades. The sheer scale of the transportation challenges presented by the aging of our largest demographic cohort requires a national response, particularly given the fiscal constraints facing local communities. Federal leadership and

investment in a variety of transportation projects and programs will be essential to help communities provide for the mobility needs of an aging America.

The current drafting of the next transportation bill provides Congress an historic opportunity to ensure that older Americans are not stranded without adequate and affordable travel options. As Congress rewrites and updates surface transportation programs this year, decision-makers should ensure the legislation includes the following:

- Increased dedicated funding for a variety of forms of public transportation such as buses, trains, vanpools, specialized transit and ridesharing – including support for operations and maintenance for services essential to seniors in both urban and rural areas.
- Transit should continue to receive funding from federal motor fuel receipts deposited into the Highway Trust Fund, and public transportation should receive a fair share of any new revenues.

<sup>6</sup> Rosenbloom, Sandra (2003) "The Mobility Needs of Older Americans: Implications for Transportation Reauthorization" Brookings Institution, Washington, D.C.

Table 1:  
Number of Seniors with Poor Transit Access by Metro Size Category

Metropolitan Size Category	Number of Seniors 65 + with Poor Transit Access in 2000	Number of Seniors 65-79 with Poor Transit Access in 2015	Increase from 2000 to 2015
Less than 250,000	1,017,080	1,343,056	325,976
250k to 1 million	3,076,054	3,907,936	831,912
1 to 3 million	4,536,571	6,041,513	1,504,942
3 Million or more	2,450,143	3,685,341	1,235,198
New York, NY	461,305	562,464	101,159

- Provides funding and incentives for transit operators, nonprofit organizations, and local communities to engage in innovative practices such as coordination among existing programs and services, public-private partnerships, expansion of outreach and education programs for seniors, and the wider deployment of “intelligent transportation” technology that has the ability to help make transport systems more efficient and customer-friendly.
- Encourages state departments of transportation, metropolitan planning organizations, and transit operators to involve seniors and community stakeholders in developing plans for meeting the mobility needs of older adults.
- Ensures that state departments of transportation retain current authority under federal law to “flex” a portion of their highway funds for transit projects and programs. This flexibility is essential for states to respond to their unique transportation needs and avoids locking them into “one-size-fits-all” expenditure requirements.
- Includes a “complete streets” policy to ensure that streets and intersections around transit stops are safe and inviting for persons of all ages and abilities.

The federal government must take the lead in spurring innovation and coordination and providing some of the financial resources necessary to meet the mobility needs of older Americans. Failure to act quickly will lock in a future that leaves millions of seniors isolated and without options.

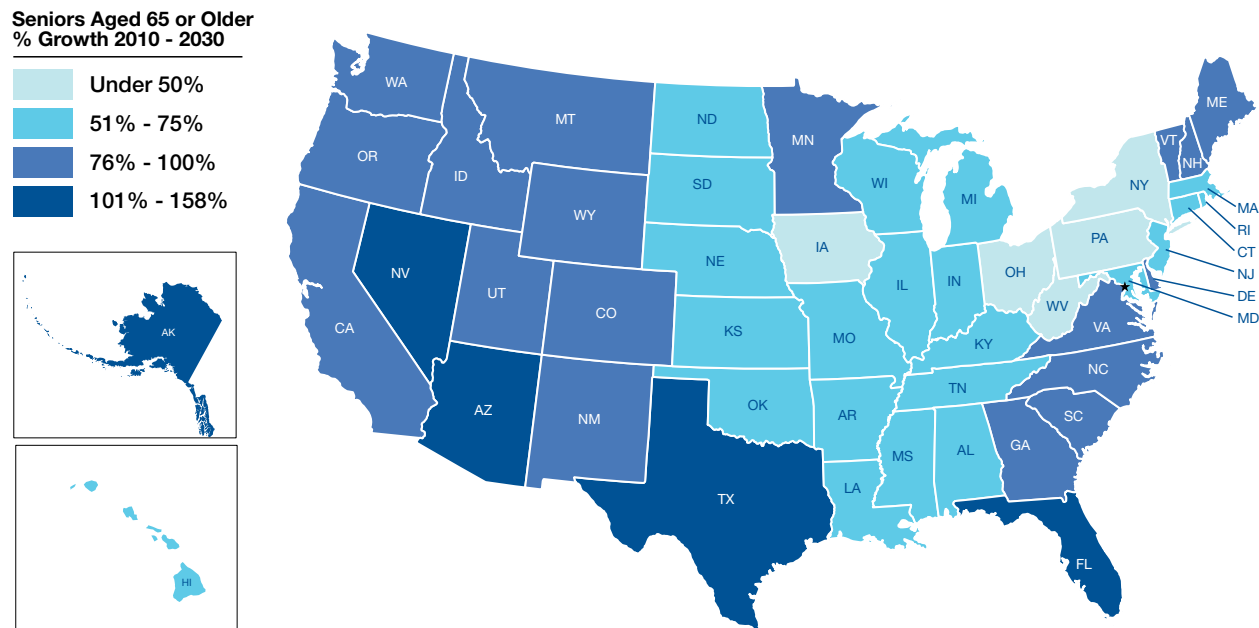
Most importantly, addressing the needs of older adults through increased transportation options will result in greater opportunity and access for all Americans.

## II. Aging in Place, and Implications for Transportation

The baby boom generation is the largest in U.S. history.<sup>7</sup> In 2011, the first wave will turn 65, with the last baby boomers not reaching 65 until 2030. Moreover, members of this generation are expected to live well into their 80s, signaling unprecedented demographic changes that will last for decades. The metropolitan rankings presented in this report are only the leading edge of a demographic phenomenon that will have substantial consequences for our nation’s surface transportation system.

According to data from the U.S. Administration on Aging, the percentage of the U.S. population age 65 and older increased by more than 12.5 percent from 1999 to 2009.<sup>9</sup> U.S. Census Bureau data indicate that the number of Americans age 65 and older will increase to more than 71 million by 2030 – when the senior population will reach its peak.<sup>10</sup> This will elevate seniors from 12 to 20 percent of the nations total population.<sup>11</sup> As Figure 1 illustrates, this trend will continue across the country, with some states experiencing dramatic increases in their senior population by 2030.

Figure 1: Projected Growth of Seniors Age 65 or Older, 2010-2030<sup>8</sup>



7 Op. cit. 1

8 Op. cit. 5

9 U.S. Administration on Aging, “A Profile of Older Americans: 2010” Available at [http://www.aoa.gov/aoaroot/aging\\_statistics/Profile/index.aspx](http://www.aoa.gov/aoaroot/aging_statistics/Profile/index.aspx)

10 Op. cit. 5

11 Ibid.

## The Need for Affordable Public Transportation

Aging is a major life transition that typically means leaving the workforce and living on a fixed income that either does not vary over time or rises modestly to cover a portion of annual inflation. Unfortunately, aging can lead to poverty. According to Census Bureau data for 2010, a single person age 65 and older lives in poverty if he or she has an annual income below \$10,458. For a two-person household, the poverty threshold rises to only \$13,195.<sup>1</sup> In 2009, slightly less than nine percent of older Americans (more than 3 million) fell below the poverty line, making access to affordable public transportation crucial.<sup>2</sup> However, poverty alone does not fully capture the need for affordable transportation alternatives. Many low-income seniors, while above the national poverty line, nonetheless struggle daily to cover the costs of food, housing and transportation. Research by AARP has found that fully 20 percent of seniors,<sup>3</sup> or more than 6.9 million are low-income.<sup>4</sup>

Financial planners typically recommend that retirees have an income replacement rate of between 70 and 90 percent of pre-retirement earnings. However, it is projected that one-third of baby boomers will not have sufficient retirement income to replace even 50 percent of their preretirement earnings.<sup>5</sup> For low-income baby boomers, Social Security will represent 60 percent of their household income during retirement – compared to only 32 percent for high-income baby boomers.<sup>6</sup> While Social Security represents a large percentage of household income for low-income retirees, the dollar amount is quite low. In fact, the median Social Security benefit for low-income adults age 62 and older is only \$6,400 per year.<sup>7</sup> Living on a fixed income makes owning an automobile challenging and increases the need for affordable alternatives. AAA (formerly the American Automobile Association) reports in “Your Driving Costs 2011” that the average annual cost of owning an automobile and driving between ten and fifteen thousand miles ranges from \$7,600 to \$8,700. These estimates are based on an average fuel cost of only \$2.88 per gallon and will increase as fuel costs continue to fluctuate.<sup>8</sup> For a senior living at or below the poverty line as defined by the Census Bureau (\$10,458 for a single person), the average cost of owning an automobile would consume 78 percent of income. For low-income seniors as defined by AARP (\$15,697 for a single person), the cost of owning an automobile would consume 51 percent of income.

1. Census 2010 “Preliminary Estimate of Weighted Average Poverty Threshold for 2010,” U.S. Bureau of the Census, Washington, D.C., Available at <http://www.census.gov/hhes/www/poverty/data/threshld/10PRELIMINARY.xls>

2. U.S. Administration on Aging “A Profile of Older Americans: 2010” Available at [http://www.aoa.gov/aoaroot/aging\\_statistics/Profile/index.aspx](http://www.aoa.gov/aoaroot/aging_statistics/Profile/index.aspx)

3. Butrica, Barbara, Toder, Eric and Desmond Toohey (2008), “Boomers at the Bottom: How Will Low-Income Boomers Cope in Retirement?” Available at [assets.aarp.org/rgcenter/econ/inb158\\_boomers.pdf](https://assets.aarp.org/rgcenter/econ/inb158_boomers.pdf)

4. For the purposes of this research report, AARP defines “low-income” as seniors 67 and older with an income at or below the 20th percentile of the income distribution of their respective birth cohort.

5. Op. cit. 3

6. Ibid.

7. Ibid.

8. AAA (2011) “Your Driving Costs 2011” Available at [www.aaaexchange.com/Assets/Files/201145734460.DrivingCosts2011.pdf](http://www.aaaexchange.com/Assets/Files/201145734460.DrivingCosts2011.pdf)



## Aging in Place

**After age 55, the vast majority of Americans stay put: Only about 5 percent change residences, and fewer than 2 percent move between states each year.**<sup>12</sup> That trend is expected to continue, based on the preferences expressed in surveys by AARP and others. In 2010, AARP carried out a large-scale survey of adults age 45 and over. More than 85 percent of respondents strongly or somewhat agreed with the following statement: “What I’d really like to do is stay in my current residence for as long as possible.”<sup>13</sup> Among seniors age 65 and older, the percentage strongly or somewhat agreeing with the statement increased to 88 percent. In fact, older adults today are less likely to move after they retire than seniors were 30 years ago.<sup>14</sup>

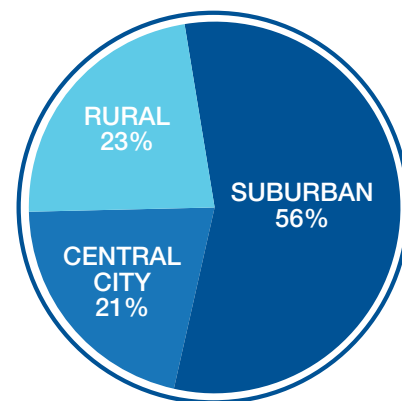
As a result, millions of Americans are aging in place, creating what some researchers describe as “naturally occurring retirement communities.”<sup>15</sup> The Congressional Research Services notes that these communities are a challenge for transportation and social service providers because they were “not designed with the provision of services to older persons in mind,” including access to adequate public transportation.<sup>16</sup>

In fact, a new report by the National Association of Area Agencies on Aging (n4a), “Maturing of America II,” found that transportation issues have emerged as a more dominant concern for communities across the

nation in the past five years. When asked to identify the “top three challenges your community faces in meeting the needs of or planning for older adults,” local governments ranked transportation as their second highest concern, right after financial issues.<sup>17</sup> Five years earlier, transportation was not in the top three.

Where are these naturally occurring retirement communities emerging? Figure 2 illustrates that more than three-quarters of older adults are aging in suburban, exurban or rural areas. William Frey of the Brookings Institution notes that today’s seniors were “the first to move to the burgeoning suburbs during the postwar period, and raised baby boomers there as the first truly ‘suburban generation.’”<sup>18</sup> The population of older Americans is growing now in those suburbs, not from a massive influx of seniors, but because of the tendency to age where they already reside. This phenomenon will exacerbate an already problematic mismatch between future demand for transportation options and existing transit services.<sup>19</sup>

Figure 2: The Geographic Distribution of Americans Age 65 and Older<sup>20</sup>



12 Frey, William H. (2007), “Mapping the Growth of Older America: Seniors and Boomers in the Early 21st Century” The Brookings Institution, Washington, D.C.

13 Keenan, Teresa A. (2010), “Home and Community Preferences of the 45+ Population” AARP, Washington, D.C.

14 Op. cit. 6

15 Colello, Kirsten J. (2007) “Supportive Services Programs to Naturally Occurring Retirement Communities” Congressional Research Service, available through the following link [aging.senate.gov/crs/aging15.pdf](http://aging.senate.gov/crs/aging15.pdf)

16 Ibid.

17 “Maturing Of America – Communities Moving Forward For An Aging Population,” (Maturing of America II), n4a, Met Life, 2011. [http://www.n4a.org/files/MOA\\_FINAL\\_Rpt.pdf](http://www.n4a.org/files/MOA_FINAL_Rpt.pdf)

18 Op. cit. 12

19 Ibid.

20 Op. cit. 6

## U.S. Department of Transportation Support for Rural Transit and Persons with Disabilities

According to the Research and Training Center on Disability in Rural Communities, a research institute at the University of Montana, approximately 40 percent of all rural residents live in the nation's 1,200 counties that offer no public transportation services.<sup>1</sup> The Federal Transit Administration provides funding through three programs to support rural transit and transportation services for persons with disabilities.

- **Section 5310 – Transportation for Elderly Persons and Persons with Disabilities** program provides funding to states for the capital costs of providing services to older adults and persons with disabilities. Typically, vans or small buses are available to support nonprofit transportation providers. SAFETEA-LU, the current surface transportation law, authorized \$674 million over six years. This program provides funding for both urban and rural areas.
- **Section 5311 - Rural Area Formula Program** provides funding to maintain and improve public transportation systems in rural areas and small towns. A portion of these funds is dedicated to the Tribal Transit Program (TTP), which provides direct federal grants to Indian tribes to support public transportation on Indian reservations. SAFETEA-LU authorized \$2.2 billion over six years.
- **Section 5317 - New Freedom Program** provides funding to transit agencies to expand the mobility options available to people with disabilities, beyond the requirements of the Americans with Disabilities Act (ADA). SAFETEA-LU authorized \$339 million over six years. This program provides funding for both urban and rural areas.

The demand for rural transit is substantial and growing. The American Public Transportation Association (APTA) reports that ridership for small urban and rural transit systems grew by 20 percent between 2002 and 2005.<sup>2</sup> The next surface transportation authorization must significantly increase funding for each of these programs in order to meet the needs of rural Americans and persons with disabilities.

1. Research and Training Center on Disability in Rural Communities, "Rural Facts: Inequities in Rural Transportation"  
<http://rtc.ruralinstitute.umt.edu/Trn/TrnInequitiesFact.htm>

2. APTA, "Public Transportation: Benefits for the 21st Century"

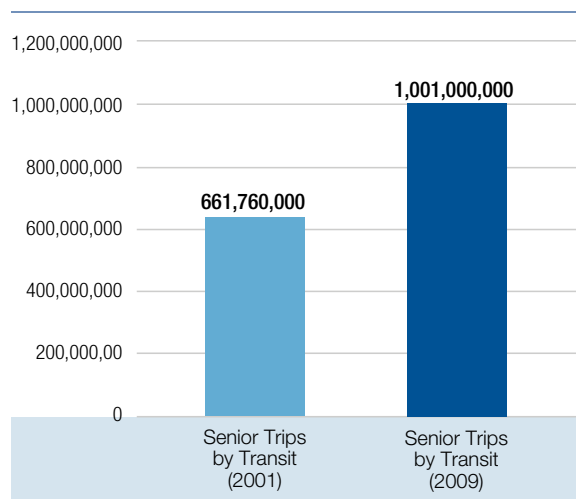
## Transportation: A prerequisite for aging in place

The baby boom generation has high expectations for remaining active and mobile in retirement. According to a 2003 survey of adults ages 43-57 by the Rehabilitation Institute of Chicago, nearly 80 percent of respondents believe they will see no “serious limits on their activity until after age 70” and close to 50 percent believe they will remain “active and going strong over age 80.”<sup>21</sup> These expectations, however, run counter to research that shows more than 20 percent of seniors age 65 and older – nearly 7 million people – do not drive at all.<sup>22</sup>

A 2002 study in the American Journal of Public Health found that men in their early 70s who stop driving will need access to transportation alternatives, such as public transportation, for an average of six years; women in the same age group will, on average, need transportation alternatives for ten years.<sup>23</sup> The typical American adult makes 3.4 trips per day, or more than 1,200 per year.<sup>24</sup> Thus, as millions of baby boomers cease driving, they will need access to adequate transportation alternatives in order to successfully age in place.

Research by AARP has revealed that seniors are increasingly taking more of their trips<sup>25</sup> on public transportation.<sup>26</sup> In 2009, seniors accounted for 9.6 percent of the more than 10.3 billion trips taken on public transportation in the United States.<sup>27</sup> This figure will likely increase as the senior population grows to more than 71 million by 2030.<sup>28</sup> Data from the National Household Travel Survey presented in Figure 3 shows that seniors made **328 million additional trips** by transit in 2009 compared to 2001.<sup>29</sup>

Figure 3: Total Number of Trips by Seniors on Public Transit 2001-2009<sup>30</sup>



21 Rehabilitation Institute of Chicago (2003) “Baby Boomers Expect to Beat the Odds with More Active, Longer Lives” Available at, <http://www.ric.org/aboutus/mediacenter/press/2003/1210a.aspx>

22 Op. cit. 2

23 Op. cit. 3

24 Lynott, Jana and Carlos Figueiredo (2011) “How the Travel Patterns of Older Adults Are Changing: Highlights from the 2009 National Household Travel Survey” AARP Public Policy Institute, Washington, D.C.

25 The Bureau of Transportation Statistics defines a trip as travel by one person in any mode of transportation. For example, BTS would calculate two household members traveling together in one car are counted as two person trips. Additional information is available at the following link: [http://www.bts.gov/programs/national\\_household\\_travel\\_survey/pre\\_and\\_post\\_9\\_11\\_data\\_documentation/appendix\\_e/html/index.html](http://www.bts.gov/programs/national_household_travel_survey/pre_and_post_9_11_data_documentation/appendix_e/html/index.html)

26 Op. cit. 24

27 Dickens, Matthew (2011) “2011 Public Transportation Fact Book,” American Public Transportation Association, Washington, D.C.

28 Op. cit. 9

29 Calculations based on data from Lynott, Jana and Carlos Figueiredo (2011) “How the Travel Patterns of Older Adults Are Changing: Highlights from the 2009 National Household Travel Survey” AARP Public Policy Institute, Washington, D.C.

30 Op. cit. 24

Between 2001 and 2009, the number of older Americans who do not drive increased by 1.1 million.<sup>31</sup> While 88 percent of older adults continue to drive at age 65, by the time they reach age 75, that share has dropped to 69 percent.<sup>32</sup>

In addition to public transportation, local communities must focus on accommodating more trips by walking. Walking provides the link that connects a senior at home with the public transportation system. However, crumbling or absent sidewalks, poorly marked intersections, inadequate time to cross large intersections and a lack of benches for resting presents significant challenges to older Americans. Without a safe and supportive space that enables people to walk,

seniors will struggle to reach public transportation stops and other destinations. Naturally, such safety improvements benefit children and other adults, as well.

Seniors show a strong preference for communities that support walking and provide public transportation. Recent survey research by AARP found that 70 percent of respondents age 65 and older agreed that being near where they want to go, such as grocery stores, doctor's offices, the library and social or religious organizations, was extremely or very important.<sup>33</sup> In addition, 51 percent agreed that it was extremely or very important to be able

31 Op. cit. 24

32 Ibid.

33 Keenan, Teresa A. (2010), "Home and Community Preferences of the 45+ Population" AARP, Washington, D.C.

## Access to Transit Can Make All the Difference

A two-week snowstorm in Portland, Oregon last winter rendered most streets all but impassable. As Ann Niles, 68, considered how to get to a scheduled treatment for her recently diagnosed leukemia, she was relieved that the streetcar was available. "It turned out I didn't have leukemia. I had something else, and needed a completely different treatment," she says. "Because of the streetcar, I was able to proceed with the new treatment right away."

Ann and her husband Philip are grateful for the opportunity to live in an area of Portland with many options for getting around. It was one of the reasons they relocated from Minnesota to Oregon. They were fortunate that the streetcar line, which opened in 2001 and runs between Nob Hill and Portland State University, was able to take them uptown to their doctors and downtown to shops and favorite destinations closer to their home in the Pearl District, a former industrial area now bursting with art galleries and restaurants, lofts and new condominiums. "Since the streetcar opened," Ann Niles says, "the neighborhood has completely taken off. ...The streetcar helped create the neighborhood we want to live in."

Source: AARP Bulletin. "Streetcar Revival: Why more than 40 U.S. cities are revisiting trolleys to provide clean, convenient public transit," by Christie Findlay. April 2010. [www.aarp.org/home-garden/livable-communities/info-03-2010/streetcar\\_revival.html](http://www.aarp.org/home-garden/livable-communities/info-03-2010/streetcar_revival.html)

to walk easily in their community.<sup>34</sup> Among older adults, walking accounts for the second largest share of total trips (8.8 percent).<sup>35</sup> However, the majority of seniors and baby boomers are living in communities that were not designed for easy and safe walking or biking. The lack of safe and appropriate walking or biking infrastructure creates real dangers for seniors. In fact, older adults perceive poor sidewalks, the absence of resting places and dangerous intersections as barriers to walking.<sup>36</sup>

34 Moreover, the same AARP survey found that the importance of walking and being near transit increased for lower-income seniors. Fifty-three percent of seniors with incomes below \$25,000 thought ease of walking was extremely or very important compared to 45 percent for seniors with incomes between \$50,000-\$75,000. For proximity to transit, these figures were 29 and 14 percent respectively.

35 Op. cit. 24

36 Stowell Ritter, Anita, Audrey Straight, and Ed Evans, (2002), "Understanding Senior Transportation: A Report and Analysis of a Survey of Consumers Age 50+" AARP Public Policy Institute, Washington, D.C.

From 2000-2007, people age 65 and older accounted for 22 percent of pedestrian fatalities,<sup>37</sup> though they represent only 12.6 percent of the total population.<sup>38</sup> In addition, during this same period, seniors age 75 and older accounted for 13 percent of pedestrian fatalities<sup>39</sup> even though they make up just 6.1 percent of the total population.<sup>40</sup>

In many communities, older Americans have developed ways of meeting their transportation needs when driving is no longer an option. A common strategy is ride-sharing. Research by

37 Transportation for America (2011), "Dangerous by Design 2011: Solving the Epidemic of Preventable Pedestrian Deaths." Available at <http://t4america.org/resources/dangerousbydesign2011>

38 U.S. Census Bureau, American Community Survey, Detailed Table "B01001. Sex by Age - Universe: Total Population"

39 Op. cit. 37

40 Op. cit. 38

## Access to Transit Can Make All the Difference

Rosie Weisberg wakes up 25 traffic-congested miles away from her job at the University of Miami, where she helps oncology patients find transportation to and from treatment. While many of her South Dade neighbors grimace at the prospect of navigating gridlock, Rosie looks forward to starting her day by sharing jokes and fellowship with her friends on Miami-Dade Transit's Route 252, who call themselves "The 252 Breakfast Club." According to Rosie, "Riding the bus saves me about \$500 wear and tear on my car each year. Instead of fighting traffic, every morning I get to chat and play and bond with friends that will last me a lifetime."

After arriving to work, Rosie tackles a very stressful job helping patients, many of them seniors, find transportation to and from lifesaving therapies such as radiation. "Without public transportation infrastructure, I have no idea how my many patients would be able to get here," she says. "For me, public transit is fun. For my clients, it's a matter of life and death." Most patients rely on what's called, "paratransit," a service that most county bus systems in Florida provide to seniors and the disabled community.

*This story comes from the Florida Public Transit Association <http://www.floridatransit.org> and its "I am for Transit" campaign <http://www.im4transit.org>*

AARP found that nearly 20 percent of respondents age 75 to 79 used ride-sharing as their primary means of travel.<sup>41</sup> This number rises to 40 percent for respondents age 85 or over.<sup>42</sup> Nearly half of older adults cited “feeling dependent” and “imposing on others” as either small or large problems with ride-sharing.<sup>43</sup> Some communities have developed grassroots membership organizations to deliver programs and services to make daily living easier for people – such as transportation, handyman services and social activities. The most heavily used service offered by these organizations is transportation – most often to and from doctor’s appointments.<sup>44</sup> These membership organizations underscore the importance of transportation options and help to ensure that older adults do not become isolated and unable to access critical services. Public officials and transportation planners must begin to think creatively about how to combine standard fixed-route service with these alternative programs.

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41 Op. cit. 36

42 Ibid.

43 Ibid.

44 AARP “Neighbors Helping Neighbors: A Qualitative Study of Villages Operating in the District of Columbia,” Available at <http://assets.aarp.org/rgcenter/il/dcvillages.pdf>

### III. Ranking Metropolitan Regions

As millions of baby boomers age in place, the mismatch between transportation demand and transit services will become significantly worse. Overall, within the communities analyzed in this report more than 11.5 million Americans 65 and older live with poor access to public transportation, and by 2015, it is estimated that at least 15.5 million more will live with poor transit access.

This report ranks metropolitan areas based on the percentage of seniors age 65-79 who are projected to have poor transit access in 2015. All metropolitan areas have been grouped into five categories based on population size and then ranked within those categories to avoid unfair comparisons between large urban areas such as Chicago, IL with much smaller areas like Greensboro, NC. The five size categories are as follows: (1) less than 250,000; (2) 250,000-1 million; (3) 1-3 million; (4) 3 million or more; and (5) the New York metropolitan region. The New York metro was treated as its own category due to its size and uniquely robust transit system.

Rankings are based upon the projected share of seniors with poor access to transit in 2015. The

analysis of each metro area captures both the extent of transit service and the percentage of seniors with access to that service.

Table 2 shows how the total number of seniors with poor transit access would change by metro size category, assuming that the population aged 50-64 in 2000 has aged in place and transit service remains the same. (For the 2015 projection, the population 65 and older in 2000 was not included, so the numbers could potentially be even higher). These results confirm that across the nation, and regardless of metro size, more seniors will find themselves without adequate public transportation. Even New York, which has the most extensive transit access of any metro area, will have 101,159 additional seniors with poor access in 2015.

The metropolitan rankings in Table 4 present a sobering picture of stranded seniors unable to find adequate and affordable alternatives to driving. In the worst case among large metros, without taking action, Atlanta, GA will find that 90 percent of its seniors – more than 500,000 residents – will face shrinking mobility options as they age in areas

Table 2: Number of Seniors with Poor Transit Access by Metro Size Category

Metropolitan Size Category	Number of Seniors 65 + with Poor Transit Access in 2000	Number of Seniors 65-79 with Poor Transit Access in 2015	Increase from 2000 to 2015
Less than 250,000	1,017,080	1,343,056	325,976
250k to 1 million	3,076,054	3,907,936	831,912
1 to 3 million	4,536,571	6,041,513	1,504,942
3 Million or more	2,450,143	3,685,341	1,235,198
New York, NY	461,305	562,464	101,159

with little or no public transit, and where car use is a must. The results for medium-sized and smaller metros mirror those of larger areas. For instance, 88 percent of seniors in Kansas City – more than 230,000 residents – will face poor access and 100 percent of seniors in Hamilton-Middletown, OH and Hagerstown, MD will also have inadequate

mobility options. As discussed in Section II, baby boomers are not likely to make either intra- or inter-regional moves in order to gain better access to transit services.<sup>45</sup> Appendix 2 contains the full rankings by metro size category.

45 Op. cit. 12

Table 3: Metropolitan Rankings by Percentage of Seniors Age 65-79 with Poor Transit Access in 2015\*

		Percentage of Seniors Age 65-79 with Poor Transit Access in 2015	Total Number of Seniors Age 65-79 with Poor Transit Access in 2015
<b>NEW YORK METROPOLITAN AREA</b>			
1	New York, NY	41	562,464
<b>METROPOLITAN AREAS 3 MILLION AND OVER</b>			
1	Atlanta, GA	90	503,543
2	Riverside-San Bernardino, CA	69	278,305
3	Houston, TX	68	372,346
4	Detroit, MI	68	445,743
5	Dallas, TX	66	295,445
<b>METROPOLITAN AREAS 1-3 MILLION</b>			
1	Kansas City, MO-KS	88	230,023
2	Oklahoma City, OK	86	136,571
3	Fort Worth-Arlington, TX	85	199,226
4	Nashville, TN	85	151,995
5	Raleigh-Durham-Chapel Hill, NC	80	127,931
<b>METROPOLITAN AREAS 250,000-1 MILLION</b>			
1	Hamilton-Middletown, OH	100	47,977
2	Montgomery, AL	99	47,980
3	Hickory-Morganton, NC	95	54,961
4	Augusta-Aiken, GA-SC	90	64,200
5	Fort Pierce-Port St. Lucie, FL	89	49,206
<b>METROPOLITAN AREAS LESS THAN 250,000</b>			
1	Waterbury, CT	90	31,144
2	Greenville, NC	87	14,823
3	Houma, LA	87	24,160
4	Merced, CA	86	21,468
5	Jacksonville, NC	85	12,331

\* Rankings are based on an analysis conducted by the Center for Neighborhood Technology (CNT). Poor transit access was determined using the Transit Access Index (TAI).



By 2015, the number of seniors with poor transit access will have increased by 35 percent since 2000, from 11.5 to 15.5 million in the metro areas analyzed in this report. Without action to improve transportation services, that number will continue to grow well beyond 2030, when the last of the baby boomers turns 65. To address the mobility needs of seniors, communities, local elected officials and planners must confront the assumption that people would always be able to rely on the automobile as their primary mode of transport. Congress, likewise, must provide leadership and enact a robust reauthorization of the nation's surface transportation law that addresses these needs.

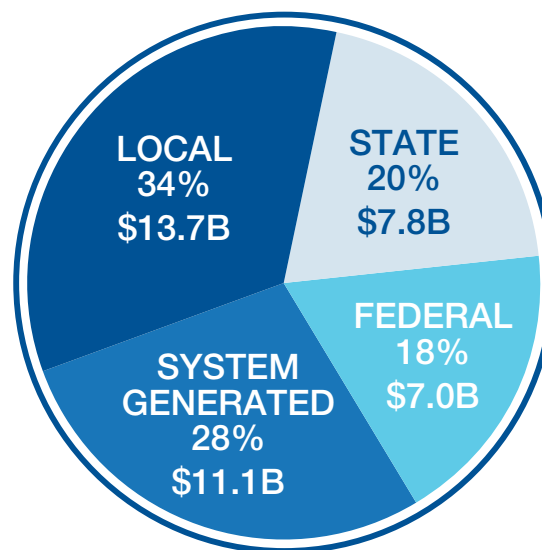
## IV. Implications for Federal Policy

In 2011, the first wave of baby boomers will turn 65, ushering in major demographic changes that will last for decades. In fact, the last baby boomers will not turn 65 until 2030 and are expected to live well into their eighties. The metropolitan rankings presented in this report are only the leading edge of a much larger demographic phenomenon that will have substantial consequences for our transportation system. Millions of seniors will need affordable alternatives to driving. Absent options such as public transportation, aging seniors will find themselves isolated and at risk for loneliness,<sup>46</sup> poor health<sup>47</sup> and economic hardship. Without additional planning, service coordination and substantial investments in projects and services, millions of seniors will endure a significant decline in quality of life.

Expanding the reach of adequate public transportation will require substantial leadership and aid at the national level. In 2004, according to the Congressional Research Service, a total of \$39.5 billion was allocated toward transit service in the United States. This included \$28.4 billion from public funds and \$11.1 billion from system-generated revenues. Federal aid accounted for one in five dollars available for public transit, a significant share but one that does not begin to

meet growing needs, particularly in these fiscally-constrained times for local and state governments. However, federal funds accounted for only 18 percents of all transit revenues.<sup>48</sup> Without increased investment, states and metropolitan areas will find themselves locked into inadequate systems that leave millions of seniors without options, as projected by the analysis in this report.

Figure 4: Share of Transit Funding by Source



46 AARP, (2010), "Loneliness Among Older Adults: A National Survey of Adults 45+" Available at [http://www.aarp.org/personal-growth/transitions/info-09-2010/loneliness\\_2010.html](http://www.aarp.org/personal-growth/transitions/info-09-2010/loneliness_2010.html)

47 Erin and Linda Waite, (2009), "Social Disconnectedness, Perceived Isolation, and Health among Older Adults" Journal of Health Social Behavior; 50(1): 31-48 Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2756979/pdf/nihms-133647.pdf>

48 Mallett, William J., (2008), "Public Transit Program Funding Issues in Surface Transportation Reauthorization" Congressional Research Service, Washington, D.C.

## Policy Recommendations

In the next transportation bill, Congress has an historic opportunity to ensure that older Americans are not stranded without adequate and affordable travel options. As Congress rewrites and updates the federal transportation bill this year, decision makers should ensure the legislation including the following:

- Increased dedicated funding for a variety of forms of public transportation such as buses, trains, vanpools, specialized transit and ridesharing – including support for operations and maintenance for services essential to seniors in both urban and rural areas.
- Transit should continue to receive funding from federal motor fuel receipts deposited into the Highway Trust Fund, and public transportation should receive a fair share of any new revenues.
- Provides funding and incentives for transit operators, nonprofit organizations, and local communities to engage in innovative best practices such as mobility management, programmatic coordination, public-private partnerships, and the widespread deployment of technology such as intelligent transportation systems.
- Encourages state departments of transportation, metropolitan planning organizations, and transit operators to involve seniors and the community stakeholders in developing plans for meeting the mobility needs of seniors.

- Ensures that state departments of transportation retain their current authority under federal law to “flex” a portion of their highway funds for transit projects and programs. This flexibility is essential for states to respond to their unique transportation needs and avoids locking them into “one-size-fits-all” expenditure requirements.
- Includes a “complete streets” policy to ensure that streets and intersections around transit stops are safe and inviting for people of all ages and abilities.

Taken together, these recommendations will provide transportation operators, planners and communities with the funding and programmatic support to begin meeting the needs of older Americans.

## V. Metropolitan Transit Access Case Studies

In order to show the impacts of an aging baby boom population, this section presents maps for seven metropolitan areas. Each map is color-coded at the Census block group level to show both the intensity of public transportation – whether “poor,” “moderate” or “good” levels of service – and the density of seniors. The case study maps define the three levels of senior population density as follows:

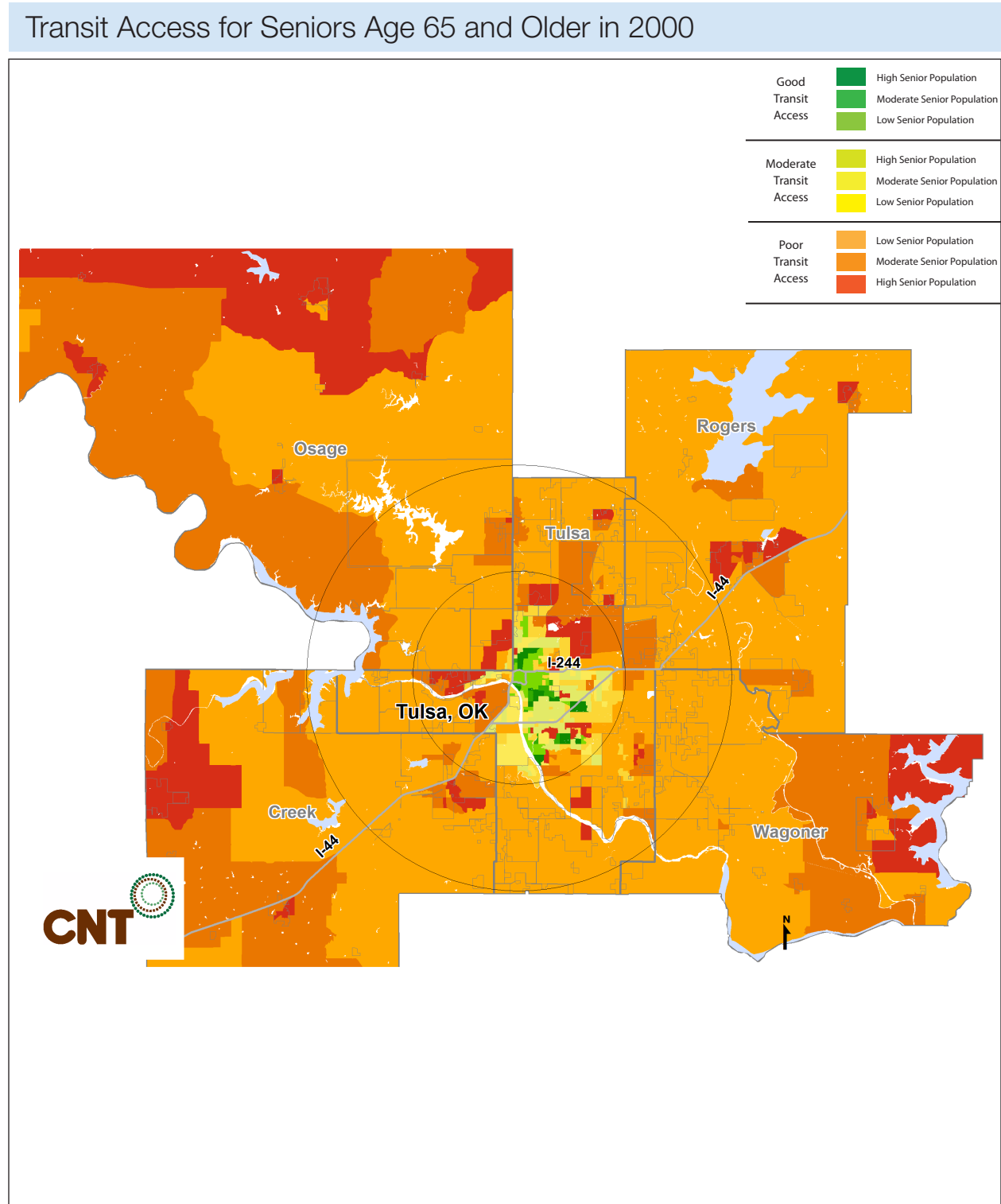
Table 4: Senior Population Density  
for Case Study Maps

Senior Population Levels	Senior Percentage of the Block Group Population
Low Senior Population	<12%
Medium Senior Population	≥12% to <16%
High Senior Population	≥16%

By combining both variables into one scale, these maps show how “aging in place” creates a dramatic mismatch between transit services and senior demand. The first map for each case study overlays the population over 64 with areas of poor transit access in the year 2000. The second map shows the population age 65-79 projected to have poor transit access in 2015.

## Tulsa, Oklahoma in 2000

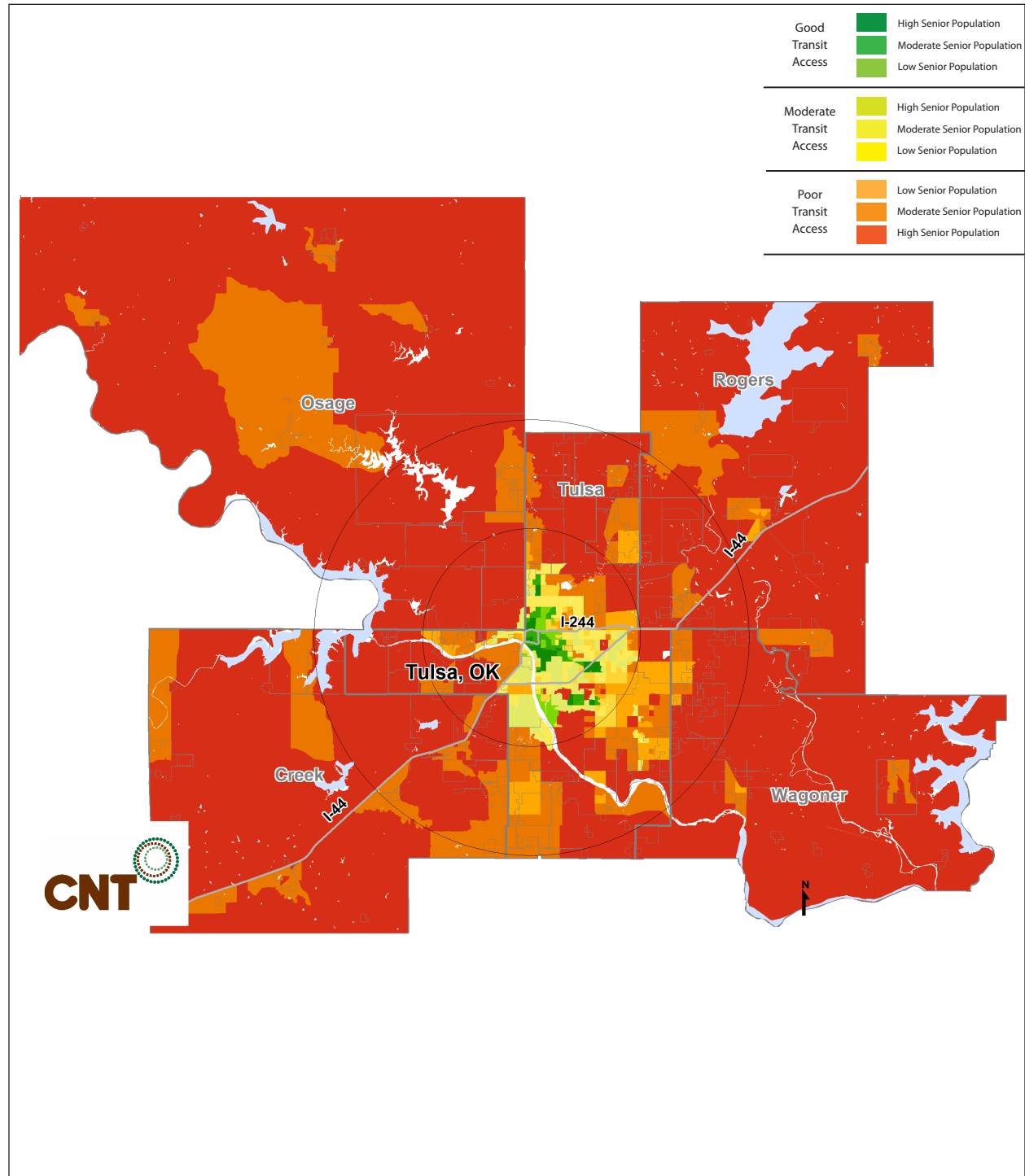
Tulsa is a mid-sized city with a population of less than one million. In 2000, 27 percent of seniors age 65 and older living in urban areas had poor transit access, while 98 percent of seniors living in the suburban or exurban areas had poor transit access.



# Tulsa, Oklahoma in 2015

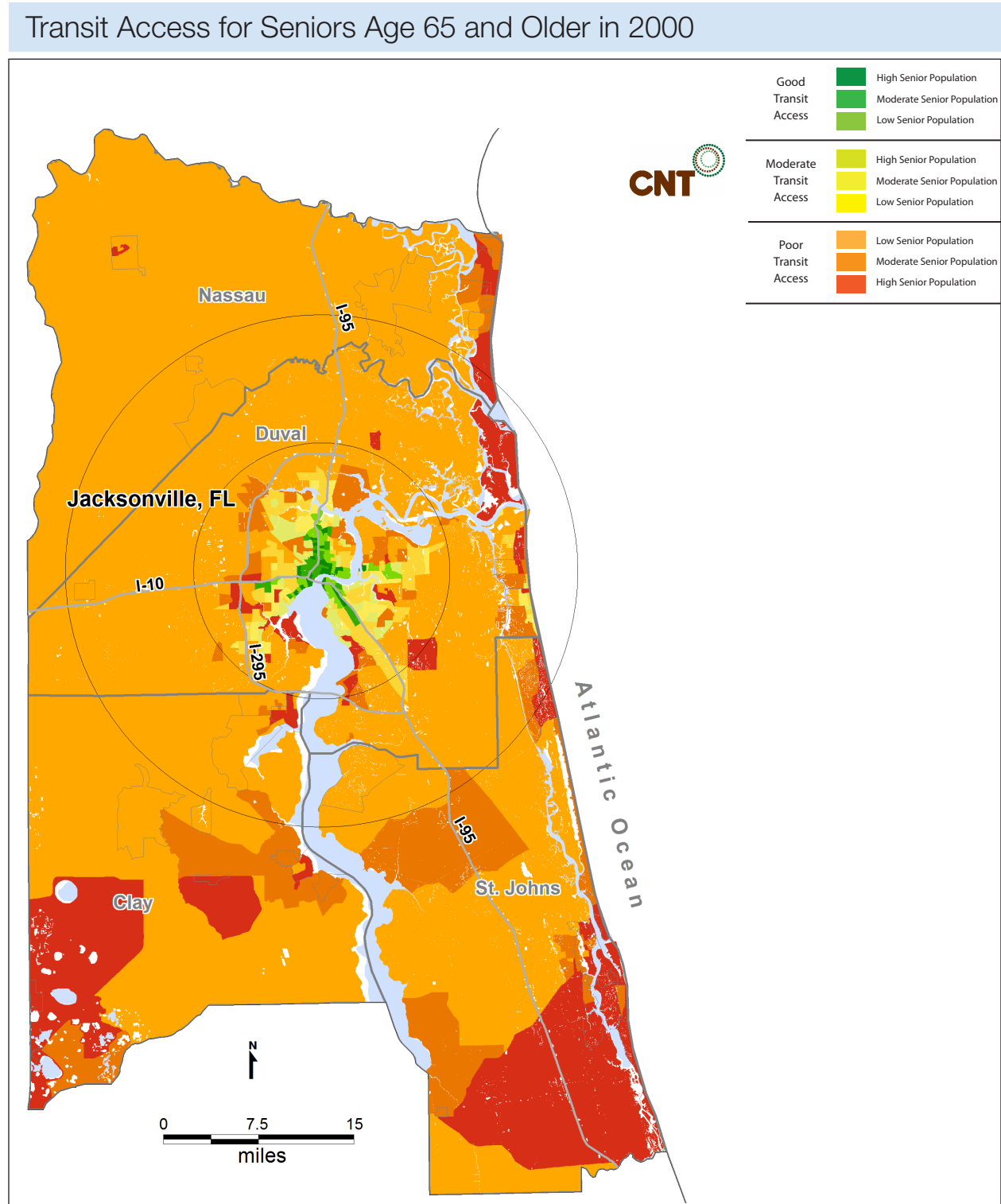
As this map shows, the share of the population likely to see mobility options shrink with time grows rapidly across metro Tulsa, as indicated by the change from orange to red. By 2015, more than 25,000 additional seniors are expected to live in areas with poor access to public transportation.

Transit Access for Seniors Age 65-79 in 2015



# Jacksonville, Florida in 2000

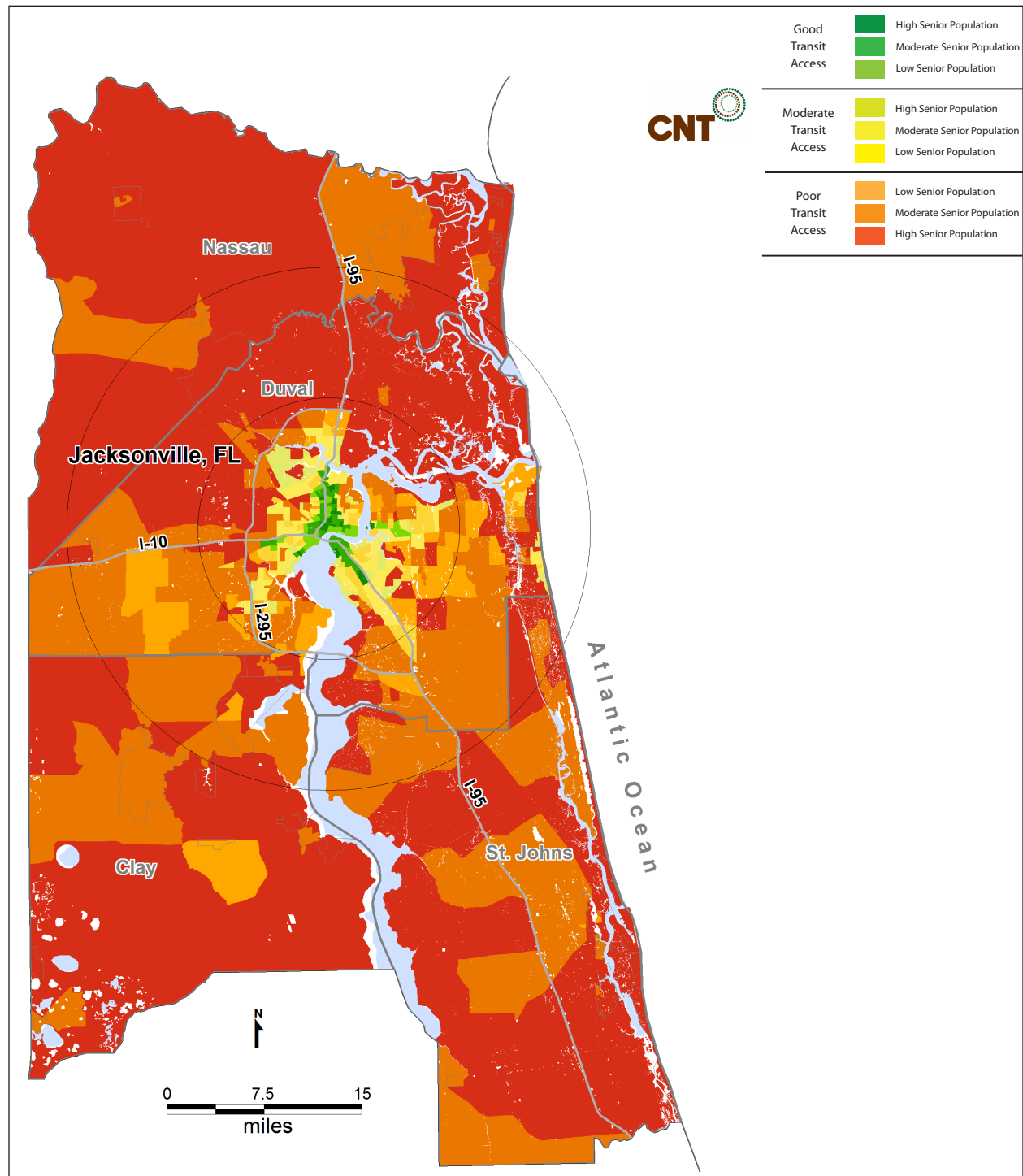
Jacksonville is a metropolitan area of more than 1 million residents. In 2000, 44 percent of urban seniors age 65 and older had poor access to transit, while 96 percent of suburban and exurban seniors had poor access.



# Jacksonville, Florida in 2015

As baby boomers age in place, senior access to transit becomes worse over time as indicated by the change from yellow to orange and orange to red. In 2015, transit access for urban seniors is projected to worsen with 53 percent facing poor transit access. At the same time, 96 percent of suburban and exurban seniors will have poor access.

Transit Access for Seniors Age 65-79 in 2015

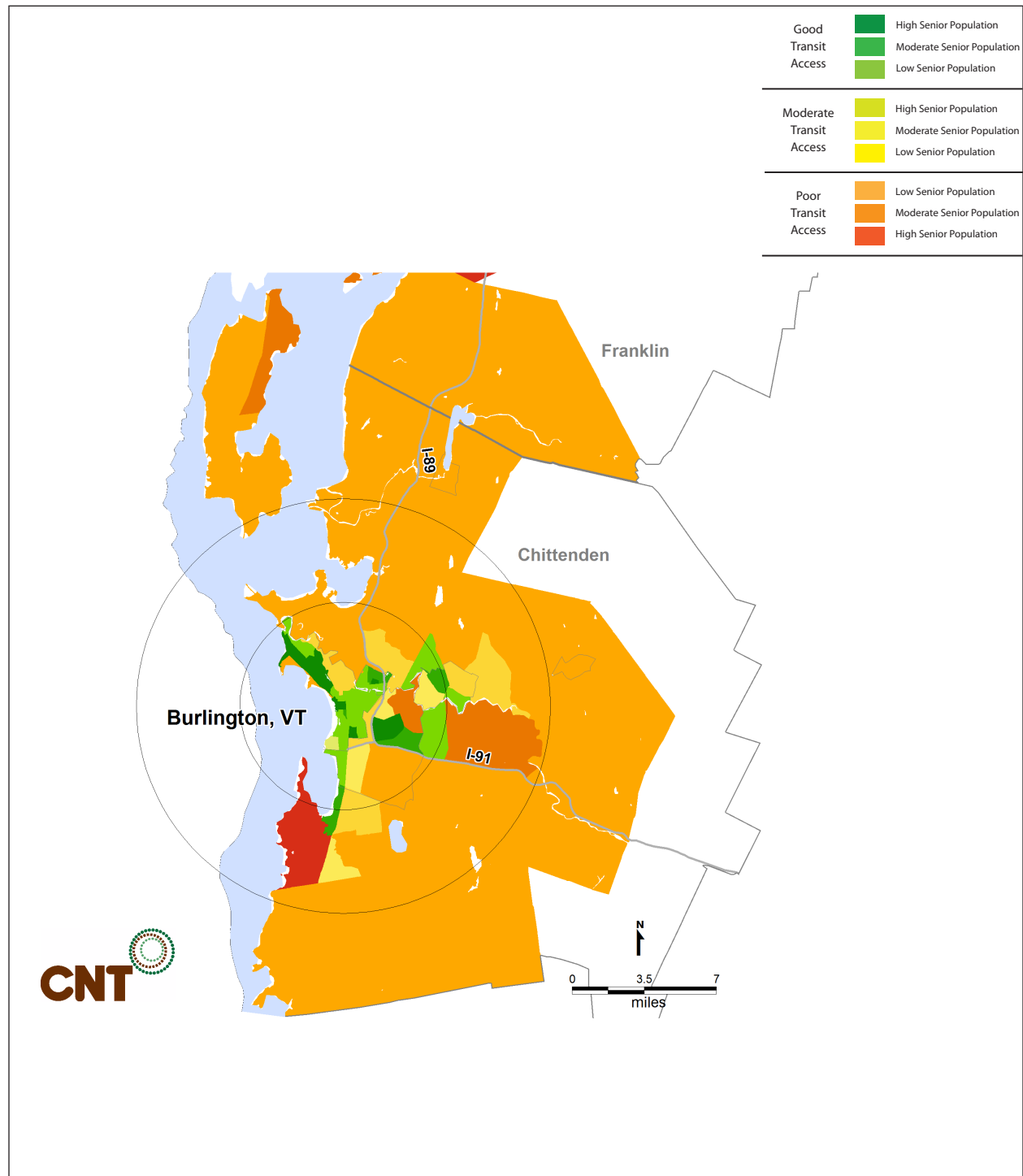




# Burlington, Vermont in 2000

Burlington is a metropolitan area of fewer than 250,000 people. In 2000, 9 percent of urban seniors age 65 and older had poor transit access, while 87 percent of suburban and exurban seniors suffered poor access.

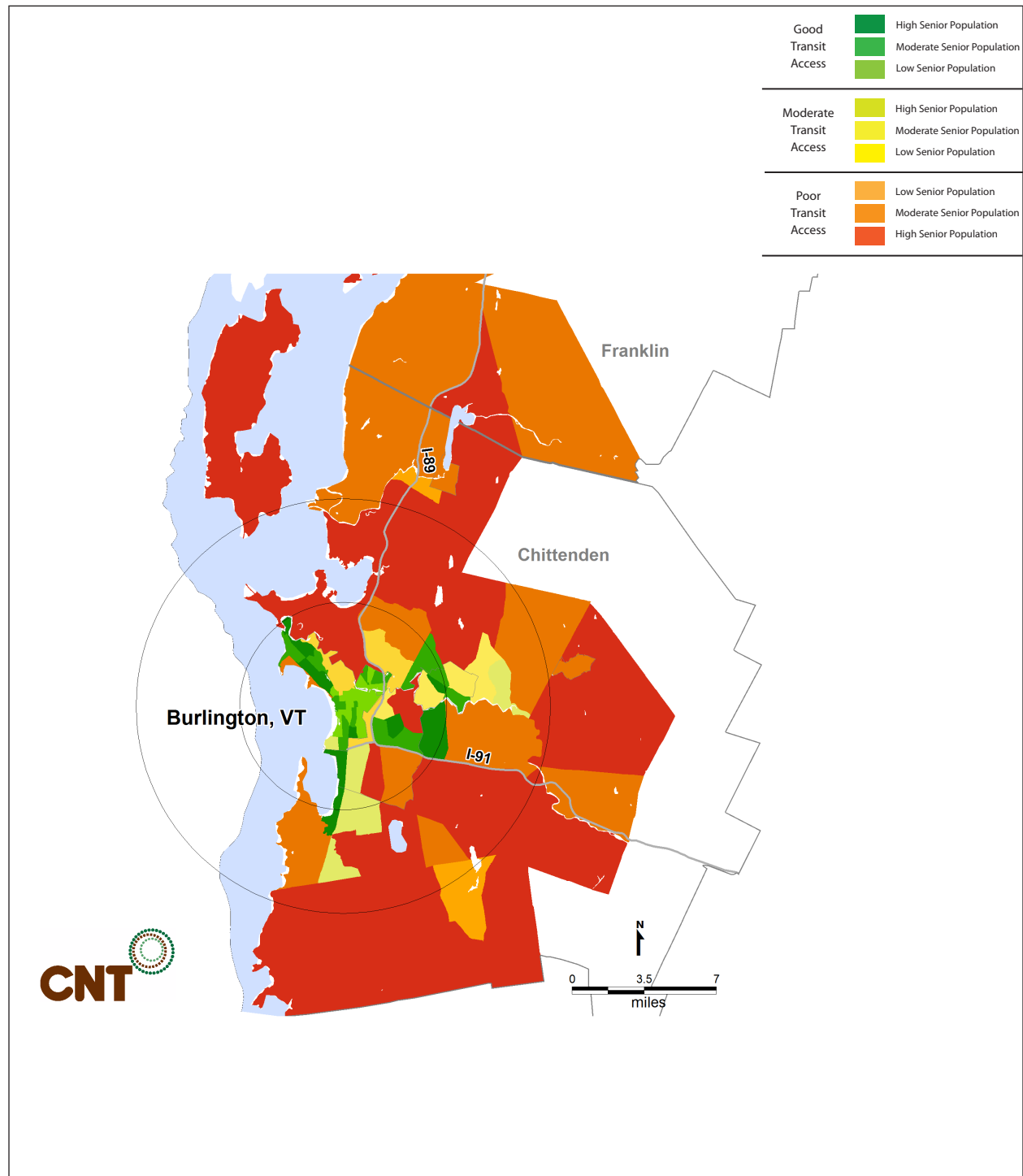
Transit Access for Seniors Age 65 and Older in 2000



## Burlington, Vermont in 2015

By 2015, the share of urban seniors age 65-79 with poor transit access will have increased to 18 percent. At the same time, the share of seniors in suburban and exurban areas with poor transit access will have decreased slightly to 84 percent. Even with this slight percentage improvement, the overall transit access for the area worsens. In total, the senior population with poor access is projected to increase by 5,753.

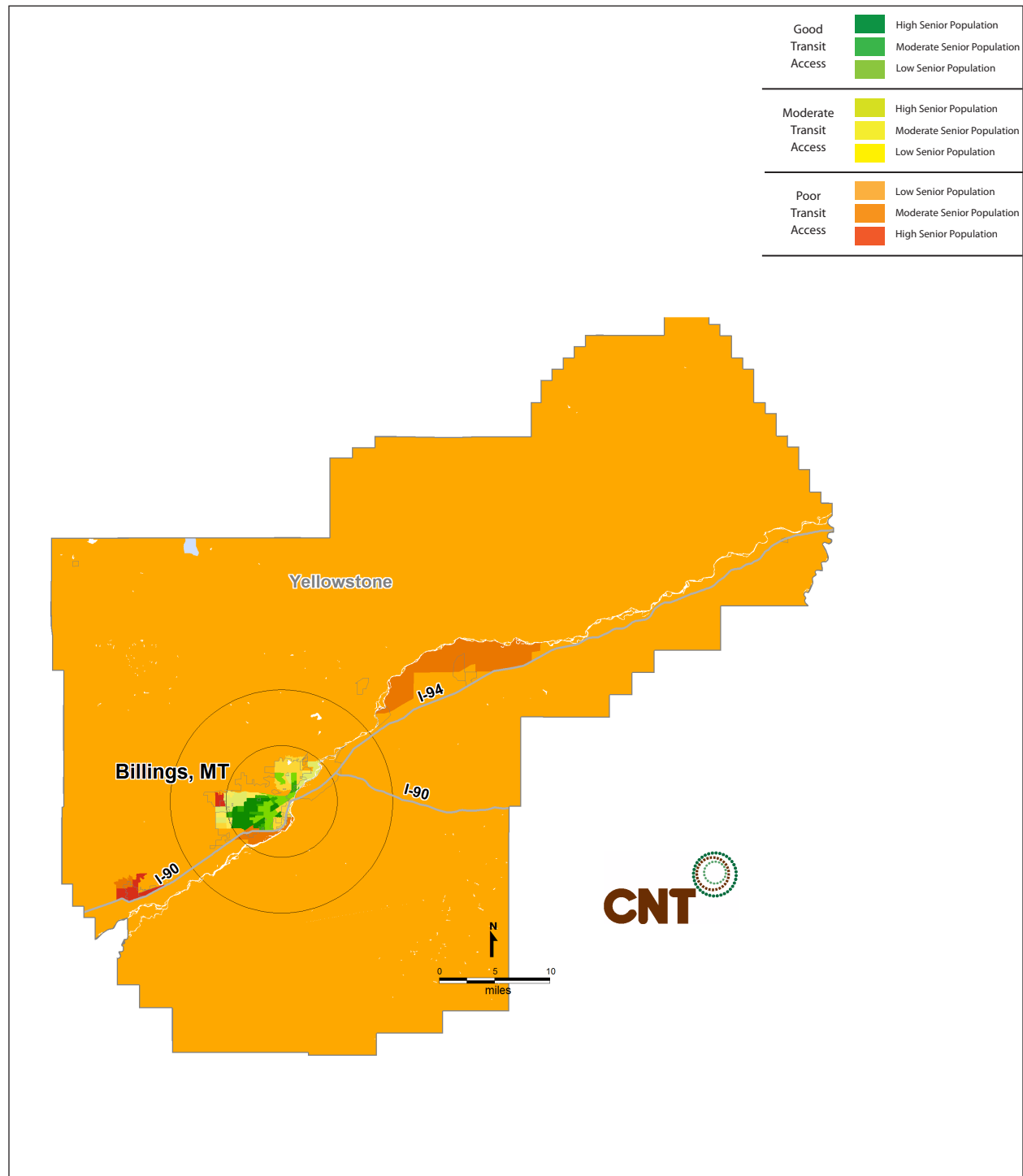
Transit Access for Seniors Age 65-79 in 2015



## Billings, Montana in 2000

Billings is a metropolitan area of fewer than 250,000 people. In 2000, 4 percent of urban seniors age 65 and older had poor transit access, while 80 percent of suburban and exurban seniors suffered poor access.

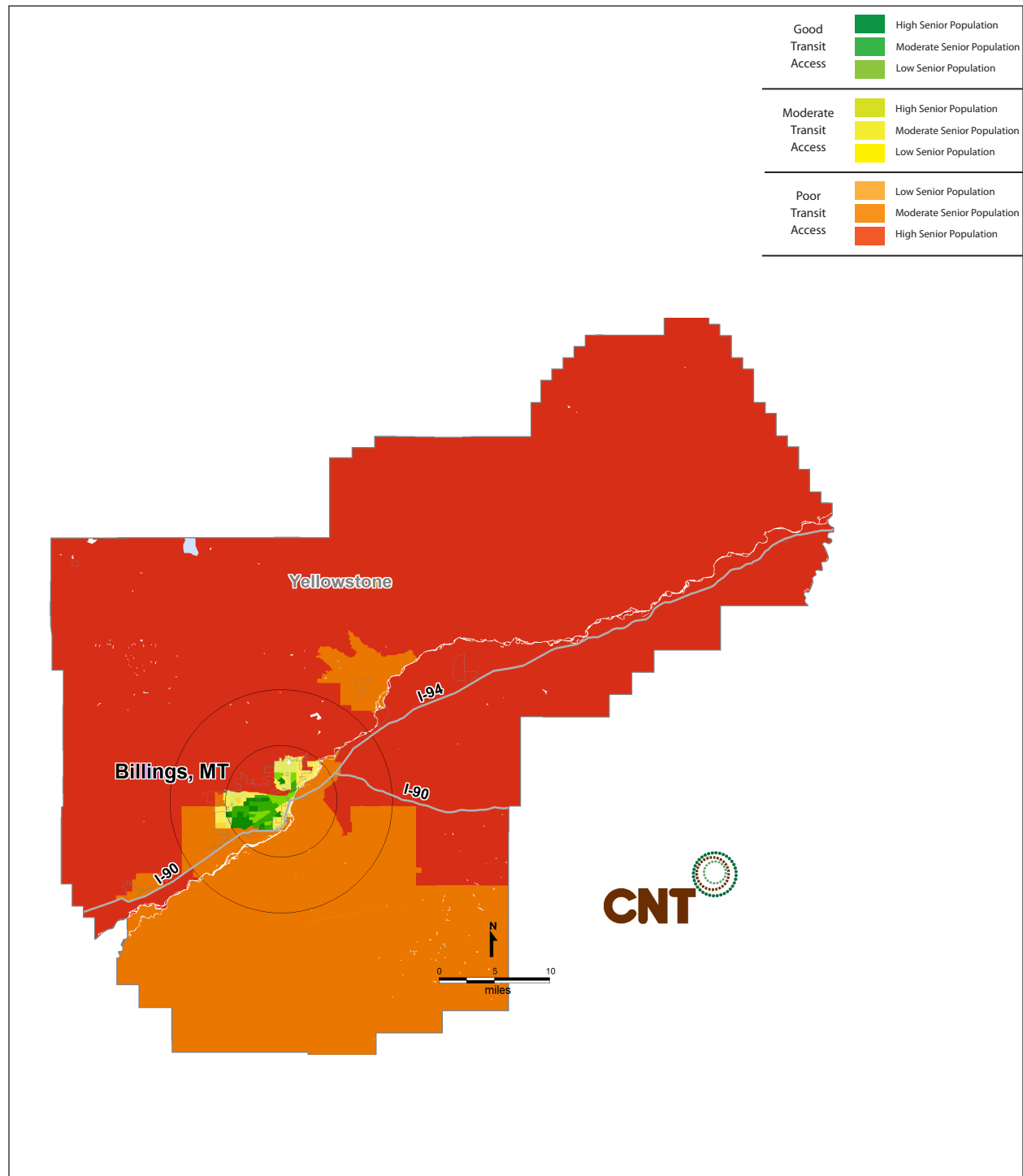
### Transit Access for Seniors Age 65 and Older in 2000



## Billings, Montana in 2015

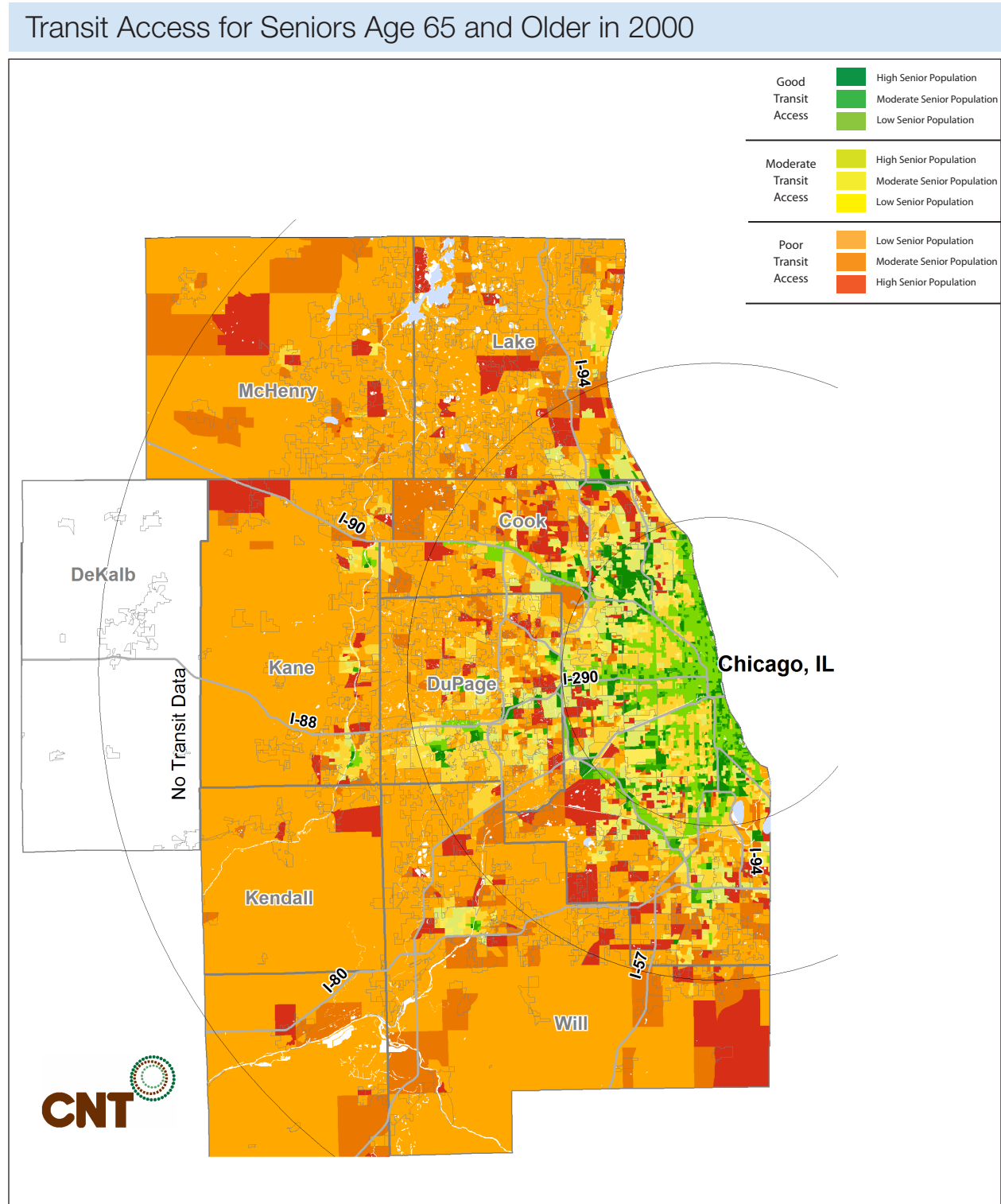
By 2015, the share of urban seniors age 65-79 with poor transit access will have increased to 8 percent. At the same time, the share of seniors in suburban and exurban areas with poor transit access will have increased to 87 percent. In total, the senior population with poor access is projected to increase by 2,893.

### Transit Access for Seniors Age 65-79 in 2015



# Chicago, Illinois in 2000

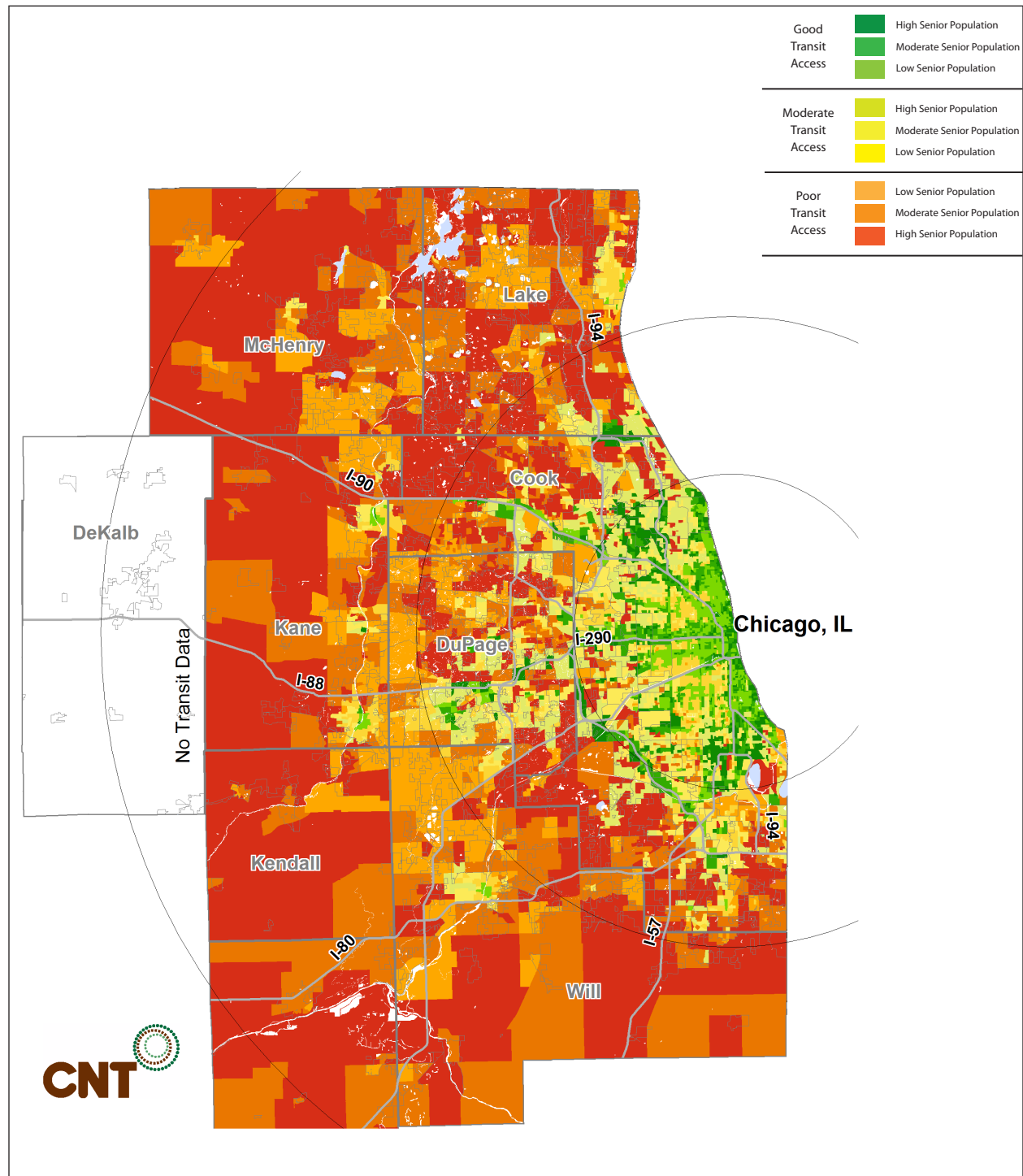
Chicago is a metro region of more than 8 million. In 2000, 7 percent of urban seniors age 65 and older had poor access to transit, while 61 percent of suburban and exurban seniors faced poor access.



# Chicago, Illinois in 2015

By 2015, 6 percent of urban seniors age 65-79 are projected to have poor transit access, while the percentage of suburban and exurban seniors with poor transit will rise to 66 percent. The total number of seniors with poor access is projected to increase by 153,550 by 2015. Moreover, a significant portion of the metro area changes from yellow and orange to red, signaling a greater density of seniors with poor transit access.

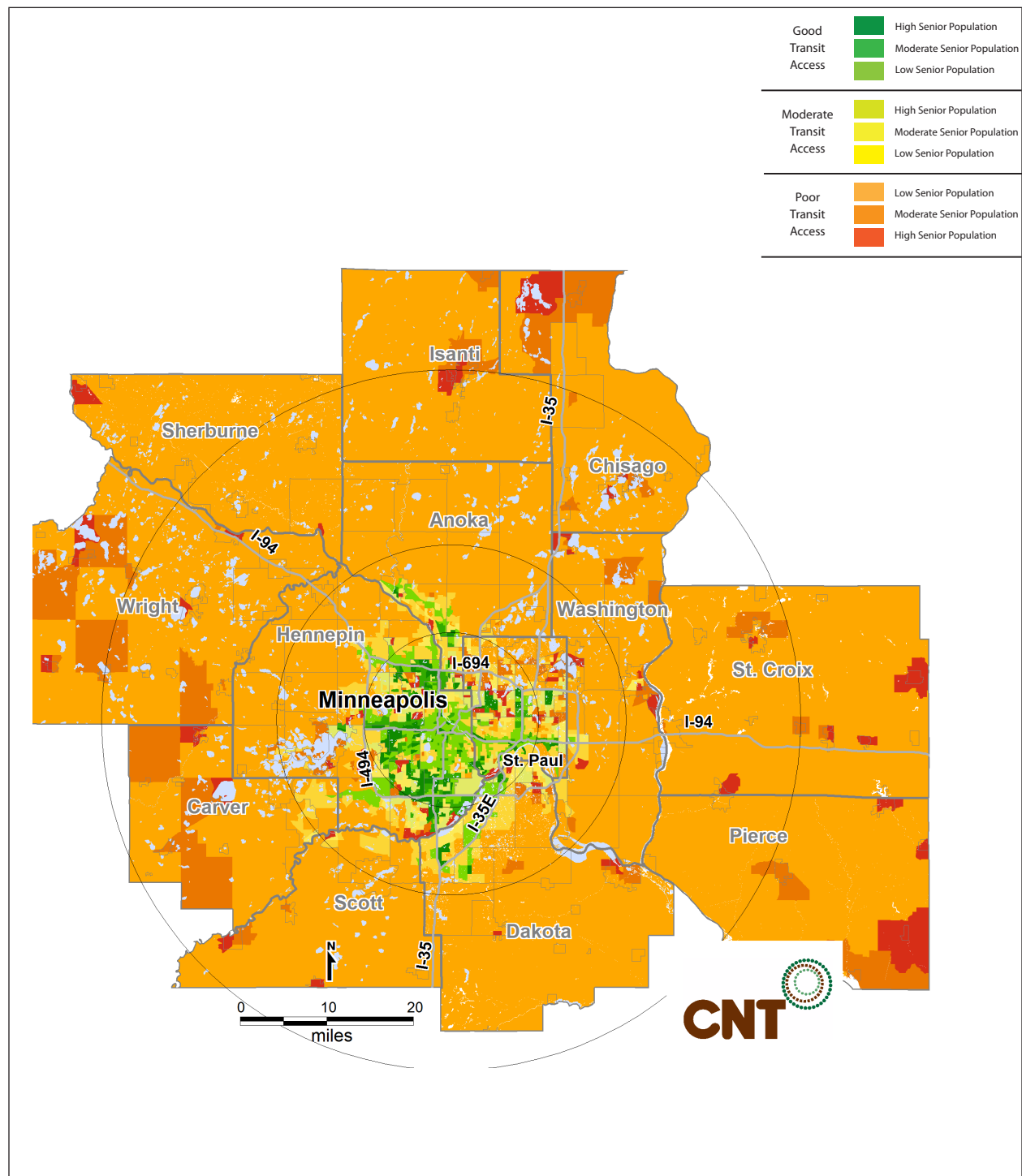
Transit Access for Seniors Age 65-79 in 2015



# Minneapolis, Minnesota in 2000

Minneapolis is a metro region with nearly 3 million residents. In 2000, 10 percent of urban seniors age 65 and older faced poor transit access, while 64 percent of suburban and exurban seniors had poor transit access.

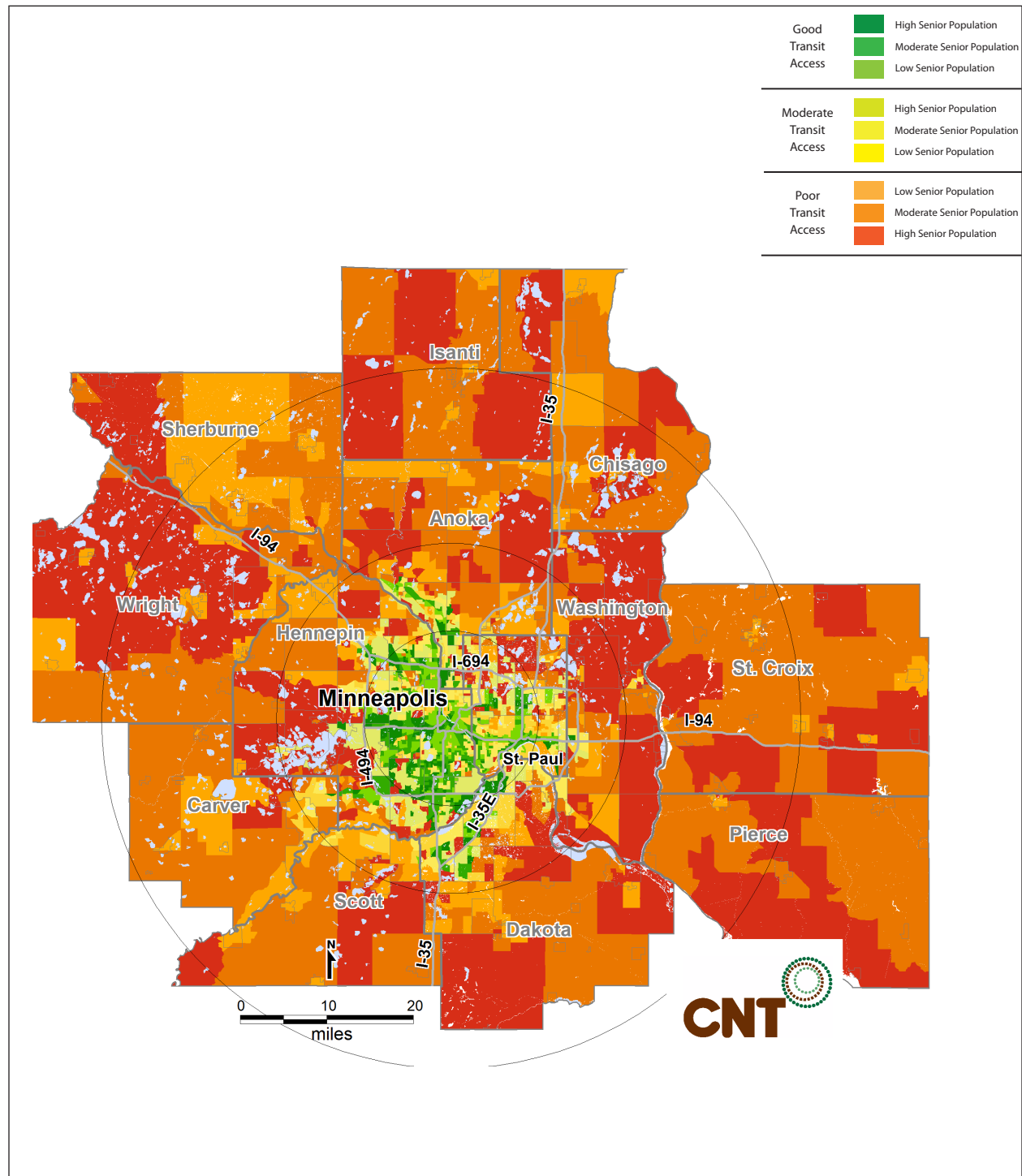
Transit Access for Seniors Age 65 and Older in 2000



## Minneapolis, Minnesota in 2015

The percentage of urban seniors age 65-79 with poor transit access is projected to increase slightly to 11 percent by 2015, while the suburban and exurban seniors with poor transit increases to 69 percent. Overall, the number of seniors with poor access is projected to increase by 84,800.

Transit Access for Seniors Age 65-79 in 2015

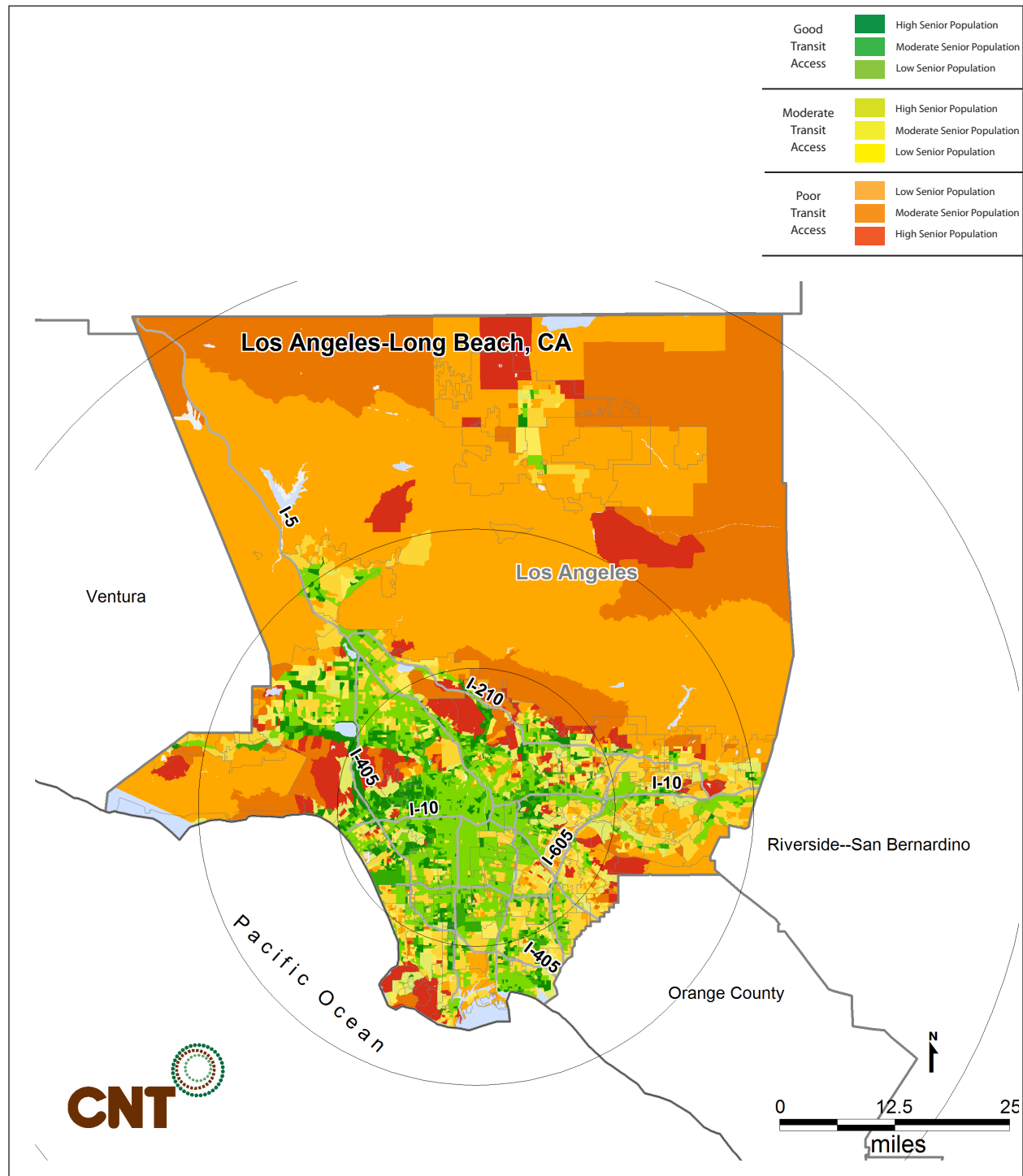




# Los Angeles, California in 2000

The Los Angeles metro region has more than 9.5 million residents. In 2000, 9 percent of urban seniors age 65 and older faced poor transit access. At the same time, 23 percent of suburban and exurban seniors had poor access.

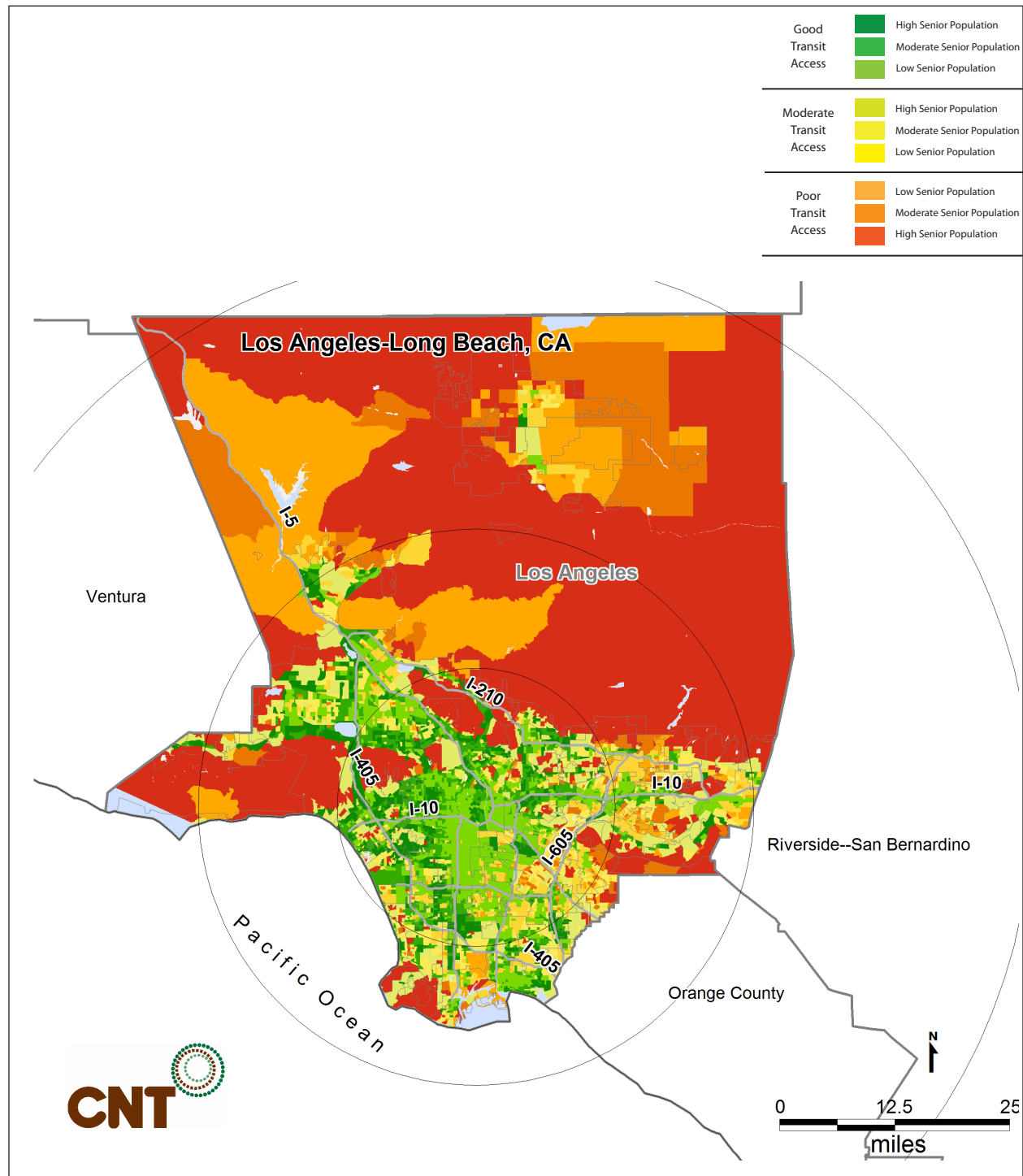
Transit Access for Seniors Age 65 and Older in 2000



# Los Angeles, California in 2015

In 2015, the urban senior population with poor transit access is projected to remain at 9 percent. The percentage of suburban and exurban seniors age 65-79 with poor transit access will increase to 27 percent. The total increase in seniors with poor transit access is projected to be 67,982.

Transit Access for Seniors Age 65-79 in 2015



## VI. Best Practices to Improve Accessibility

Despite few options for older adults to take advantage of transit services in many communities, some regions have implemented programs that successfully address the needs of seniors. This section presents five best practices. When combined with additional funding for core fixed-route transit services, these practices can ensure that more older adults are able to remain independent and able to access essential services, friends and family and the greater community.

- A. Strengthen coordination of federal, state, and local transportation programs through better planning and service integration
- B. Promote mobility management
- C. Create communities for all
- D. Improve safety
- E. Encourage the development of community-based transportation programs

### A. Improve Coordination of Programs

According to the U.S. Government Accountability Office, 62 federal programs fund transportation services primarily for older adults, people with disabilities and low-income individuals.<sup>49</sup> Sixteen

of these are identified as being regularly used to fund transportation services. With multiple local, state and federal agencies managing each of these programs, redundancy and duplication of services is common. A lack of coordination among the various programs and agencies also can make it difficult for transit riders to understand and access service.<sup>50</sup> States and regions have begun to address the need for greater coordination by integrating specialized transit and human services transportation into local planning efforts. Federal transportation policies already tie the use of three federal sources of transportation funding (Job Access and Reverse Commute, Section 5310, and New Freedom) to the development of local Coordinated Public Transit Human Services Transportation Plans. And, a real opportunity exists to build upon these initial efforts by ensuring that plans are both regularly updated and identify specific opportunities to better coordinate services and programs, and that older adults, persons with disabilities, and low-income individuals are involved in the planning process.

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49 Siggerud, Katherine Government Accountability Office, Acting Director, Physical Infrastructure Issues, "Transportation- Disadvantaged Populations - Many Federal Programs Fund Transportation Services, but Obstacles to Coordination Persist," Available at <http://www.gao.gov/new.items/d03698t.pdf>

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50 Ibid.

## Best Practices: Coordination of Programs

Effectively coordinated transportation services can improve service productivity and reduce costs by eliminating overlapping, duplicative and inefficient operations. Arrowhead Transit, which is based in Virginia, Minnesota, is an agency that has achieved these myriad benefits through effective coordination.



Arrowhead Transit is the primary public transit and social service transportation provider for seven counties, including Aitkin, Carlton, Cook, Itasca, Koochiching, Lake and St. Louis. Founded in 1974, Arrowhead receives Federal Transit Administration Rural Area Formula Program (Section 5311) funds, which help to cover the operating costs of transit providers in communities with populations lower than 50,000. Arrowhead has developed a highly successful coordinated set of public transportation services that allow for route deviation, dial-a-ride, demand/response and subscription routes. Arrowhead Transit provides these services with 55 accessible buses. In 2004, Arrowhead provided more than 350,000 trips across the three different service types at a per-trip cost of \$7.63.

Arrowhead Transit attempts to co-mingle clients from different services if their trips are ride shareable. Moreover, Arrowhead effectively meets resident needs by coordinating its services with a pool of volunteer drivers. When Arrowhead is unable to schedule an eligible trip on one of their transit routes or dial-a-ride services, they will use a volunteer driver (or reimburse family or friends at a lower rate).

The Minnesota Department of Transportation estimates that without the coordinated services offered by Arrowhead Transit, local social service agencies and municipalities would have to pay an additional \$4.1 million for an equivalent number of trips from private operators.

Minnesota Department of Transportation (2006) "Minnesota Public Transit – Human Service Transportation Coordination Case Study"  
<http://www.coordinatetransit.org/reports/mncoordstudy/documents/0-FullCoordinationStudy.pdf>

## B. Utilize Mobility Management

Mobility management emphasizes providing a more comfortable and convenient “family of transportation services.”<sup>51</sup> While not a new concept, many states have been slow to identify the full range of travel options, services and modes available to each community. Seventy-five percent of local governments reported in the Maturing of America II survey that mobility management is not available in their community.<sup>52</sup> This approach features multiple transportation providers offering diverse services, rather than traditional transit agencies which typically use a single operator to deliver all services. According to United We Ride:

Mobility managers serve as policy coordinators, operations service brokers and customer travel navigators. As policy coordinators, mobility managers help communities develop coordination plans, programs and policies and build local partnerships. As brokers, they coordinate transportation services among all customer groups, service providers and funding agencies. And, as travel navigators, they work with human service agencies and/or workforce centers that coordinate the travel and trip planning needs of individuals who receive human service program assistance.<sup>53</sup>

Current and potential customers would greatly benefit from a single, user-friendly source of personalized information about transportation options and their use. A mobility management approach provides a one-stop center that promotes more effective use of limited resources. This includes computer-aided dispatch (CAD) and automatic vehicle locations (AVL), rerouting of vehicles to meet passenger needs.

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51 United We Ride (2007) “Mobility Management,” Available at [http://www.unitedweride.gov/Mobility\\_Management\\_Brochure.pdf](http://www.unitedweride.gov/Mobility_Management_Brochure.pdf)

52 “Maturing Of America – Communities Moving Forward For An Aging Population,” (Maturing of America II), n4a, Met Life, 2011. [http://www.n4a.org/files/MOA\\_FINAL\\_Rpt.pdf](http://www.n4a.org/files/MOA_FINAL_Rpt.pdf)

53 Op. cit. 51

## Best Practices: Mobility Management

Ride Connection, a non-profit community organization operating in close collaboration with the Portland area public transit operator, TriMet, has helped the agency trim its ADA paratransit costs by nearly \$2 million. Ride Connection provides administrative functions and utilizes volunteers as well as paid drivers, but actual trips are delivered by their collaborative partners, community agencies that provide rides for persons with disabilities and seniors without alternative transportation.



Ride Connection's non-profit status allows the organization to obtain funding sources not available to public agencies, such as foundations, corporations and individuals. The organization's Ride Connection's Service Center provides a personalized trip planning system that is easy to access and addresses the individual travel needs of each customer channeled through one central number.

Travel Training through a collaborative program between the region's four public transit operators, including TriMet and Ride Connection promote independent travel of older adults and people with disabilities by providing access to information, training and support. Further, Ride Connection supports transportation programs and services such as shuttles to shopping centers and other services in urban, rural and suburban areas as well as a coordinated volunteer driver program.

Ride Connection <http://www.rideconnection.org>

## C. Design Communities For All

One of the most important factors affecting the range and accessibility of transportation alternatives is the built environment. AARP defines a livable community as “one that has affordable and appropriate housing, supportive community features and services and adequate mobility options. Together, these facilitate personal independence and engagement of residents in civic and social life.” Communities for all are designed to meet the needs of residents of all ages with easy access to a range of services and land uses. States and regions have begun to locate facilities and services targeted to older adults in areas where a range of travel options are available.

## Best Practices: Designing Communities for All

In 2003, Transportation Alternatives initiated the Safe Routes for Seniors campaign, aiming to encourage senior citizens to walk more by improving the pedestrian environment in New York City. Funded by the New York State Department of Health's Healthy Heart program, this was the first program of its kind to address the unique needs of older pedestrians and consider the role of street design in maintaining good cardiovascular health in old age.

With information gathered from dozens of site visits, interviews, surveys and workshops with seniors across the city, Transportation Alternatives developed design recommendations to be adopted as standards to make streets safe for seniors. Designing streets specifically for seniors takes the regulations of the Americans with Disabilities Act (ADA) one step further to accommodate sensory changes that occur as people age. Some of these features are as follows:

- The street should be as flat as possible, with minimal convexity for drainage and a smooth transition from the curb to the street.
- Large streets should have median refuge areas with benches, plantings and shelters.
- All bus stops near senior centers should have shelters and benches. Bus stops on excessively wide streets should have bus bulbs.
- Drivers should be prohibited from turning during the first 10 seconds of a traffic signal phase. This time is needed by seniors to ascend the curb and begin a safe crossing unobstructed by turning vehicles.
- Drivers should be required to stop 15 feet before intersections by moving the stop bar away from the crosswalk and placing a tactile surface on the stop bar. To further protect elderly pedestrians, where appropriate, the crosswalks should be built up or "raised" to line up with the curb to reduce speeds.
- On busy commercial streets and bus routes, all curbs should be extended into the crosswalk to create better sightlines for pedestrians and drivers.
- On streets where there is more space than is needed to move traffic, the street should be put on a "road diet" where lanes or parts of lanes are reclaimed for wider sidewalks, planted medians and/or bicycle lanes.

Taken together, these design features and traffic management policies have the ability to keep seniors active, healthy and independent.

Information in this section was taken directly from Transportation Alternatives' website, <http://www.transalt.org/campaigns/pedestrian/safeseniors>



## D. Improve Transportation Safety

Advances in roadway design for older adults can reduce the incidences of vehicular accidents and prolong the years in which older adults can drive. In the year since increasing the size of their street signs, repainting median strips, installing larger and brighter stoplights, upgrading walk lights and adding left-turn lanes along one busy street, Detroit saw a 35 percent drop in injury crashes for drivers age 65 and older and a four percent drop for drivers age 25 to 64.<sup>54</sup>

Walking is the second most frequent mode of transportation among older adults.<sup>55</sup> Better signalization, signage, speed management and markings are needed, especially in areas or at intersections frequented by older adults. Greater use should be made of “smart” signals, which detect pedestrians in crosswalks. More extensive traffic calming, which can reduce speed and lessen the opportunity for serious conflict with vehicles, is also required. Ensuring connectivity along city streets that link neighborhoods to bus stops encourages use of public transit for persons with disabilities.

The ‘Complete Streets’ model supports the creation of livable communities and policies and has been adopted by over 200 jurisdictions and 24 states. According to the National Complete Streets Coalition, by adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability or mode of transportation.”<sup>56</sup>

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54 AARP, (2004), “The Policy Book: AARP 2004 Public Policies,” AARP, Washington, D.C.

55 Op. cit. 24

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56 National Complete Streets Coalition,  
<http://www.completestreets.org>

## Best Practices: Improving Transportation Safety

After decades of rapid growth that focused almost exclusively on speeding traffic, Charlotte, North Carolina officials decided they needed to rethink their street design guidelines. Prior to the adoption of complete streets principals in the Urban Street Design Guidelines, Charlotte had no bicycling routes, an incomplete sidewalk network, little connectivity and too many cul-de-sacs. The result was a system that did not work for all road users.



In the early 2000s, the Charlotte Department of Transportation began creating a street network designed to meet the needs of cars, buses, pedestrians and cyclists. The goal was a balanced, multi-modal system that accommodated all segments of the population and all modes of transportation. In order to achieve this goal, Charlotte created a new street classification system with five new street types, ranging from the most pedestrian friendly to the most auto-oriented. Moreover, the new design guidelines called for a well-connected street grid that moved away from funneling traffic to major arterials, leaving users little route choice.

Through this process, Charlotte has created a built environment that accounts for the needs of pedestrians, creating a safer transportation system for both seniors and all users. From pedestrian signalization, complete sidewalk networks, bulb-outs and traffic calming measures, Charlotte has substantially improved residential mobility and safety.

By the end of 2009, the City had completed 16 complete streets projects, with 18 more in the works. In addition, eleven intersections have been modified and ten others are in the planning stage. Charlotte now has 50 miles of bike lanes and fifteen projects with new sidewalks. Above all, Charlotte has put in place the policies that will guide planners and developers for decades to come.

*Barbara McCann and Suzanne Bynne, Editors (2010) "Complete Streets: Best Policy and Implementation Practices" American Planning Association, National Complete Streets Coalition and the National Policy and Legal Analysis Network to Prevent Childhood Obesity*

## E. Develop Community-Based Transportation Programs

In addition to expanding public transit systems to fully address the mobility needs of older adults, communities can also support the creation of community-based programs, such as volunteer programs, flex-routes, service routes and deviated fixed-routes that can be tailored to local community needs.

Senior-friendly shuttles, jitneys or circulators to shopping centers and medical facilities, and local services such as flexible route services can address some of the needs for short notice or spontaneous travel that are difficult using paratransit reservations. They can help address the travel needs of seniors who no longer drive but are not ADA paratransit-eligible. Further, they may also accommodate riders with wheelchairs or shopping carts more easily than conventional transit services. Community-based programs may offer hugely beneficial services, such as driver-assistance with grocery bags, that are not normally associated with conventional transit systems.

## Best Practices: Develop Community- Based Transportation Programs

TRIP (Transportation Reimbursement and Information Program) originated as a senior transportation program in Riverside, California. It evolved into a model for programs across the country, designed as a low-cost, low-maintenance, customer driven approach for providing transportation to older adults. The model works in rural as well as urban and suburban communities. Examples where TRIP is now serving older adults include Kansas City; Crystal Lake, IL; Marin County, CA; and Mystic Valley, MA.

In Riverside, as of 2009, TRIP provided 1.4 million miles of service, in a service area of 7,200 square miles. They served 583 passengers at a cost per ride of just \$4.96.

TRIP is different than most transportation services because it does not recruit drivers, schedule rides, own vehicles, or charge fees. In the TRIP model, riders recruit their own drivers, who are usually friends and neighbors. Both riders and drivers convey documentation to a sponsor. Reimbursement is given to the riders, who then give it to their drivers. Its three basic elements (sponsor, riders, and drivers) interact in a manner that results in administrative efficiency and cost effectiveness. The mutual-agreement scheduling method creates the possibility of 24/7 availability for travel to mutually agreed on destinations.

The TRIP model provides transportation for older adults who do not drive and have no public services available where they live or to needed destinations, or are unable to use the public services that do exist. It is easy for sponsors to start up; attractive to volunteers and empowers riders to ask for rides from people they know without feeling like they are asking for charity.



TRIPtrans <http://www.TRIPtrans.org>

## VII. Conclusion

Over the next twenty years, the number of Americans age 65 and older will increase to more than 71 million – growing from 12 to 20 percent of the total population.<sup>57</sup> For this reason, policymakers and planners ought to focus on developing new and innovative approaches to meet the changing transportation needs of an aging America. Moreover, Congress must set a vision for America’s transportation future that provides for an array of transportation alternatives.

The pending reauthorization of federal surface transportation programs represents an unparalleled opportunity to support states and communities as they develop solutions for an aging baby boomer generation. A more robust network of public transportation services – from trains, buses, vanpools and specialized transit – cannot alone meet all the future transportation needs of an aging population, but it will undoubtedly be a crucial piece of the puzzle. Without federal leadership, it is unlikely that local communities will have sufficient resources to develop solutions for older Americans. Now is the time for policymakers to prioritize resources that allow the growing population of older adults to maintain mobility and a high quality of life.

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57 Op. cit. 9

# Appendix 1: Methodology

The Transit Access Index (TAI) was developed by the Center for Neighborhood Technology (CNT) as a measure of transit access in metropolitan areas. Transit levels are based on the access and intensity of transit in a given Census block group.<sup>58</sup> Access is captured by a quarter mile buffer around each bus stop, a half mile buffer around each rail station, and a half mile buffer around each ferry; intensity is based on the number of lines and stops that serve the Census block group. For a given Census block group, the index accounts for the fraction of land area within walking access to a transit route and the number of lines available.

For the sake of comparison across the different metropolitan size areas and their respective transit systems, the metropolitan areas were categorized according to their population. The New York metropolitan area was considered as a category by itself, since it is so different from other metropolitan regions, in both population density and transit access. The following five size categories were analyzed:

Table 1: Metropolitan Size Categories and Number of Metros Included in the Rankings

Metropolitan Size Category	Count
66,000 to 250,000	93
250,000 to 1 million	89
1 to 3 million	47
3 Million or more	11
New York City	1

## Measuring Transit Access

Within these metropolitan size categories, the Transit Access Index (TAI) was grouped into three categories called poor, medium and good transit access levels. For each region, three categories were constructed for Census Block Groups with transit access, called poor, medium and good. Each category represents roughly one-third of the population within that metropolitan size category that has transit access. Block groups with no transit access were added to the poor category.

Both rail and bus data were used in this calculation. However, since the bus data collected could be route or stop based, a linear regression analysis was conducted to define the coefficients that could be applied to the bus route and stop data so they could be examined together. The regression analysis revealed that the stop data could be multiplied by a coefficient of 1.54 so it could be used compatibly with the bus route data. Once the block groups

58 The Census Bureau presents demographic data for various geographic levels. The smallest geographic unit is the Census block and the largest in the United States. Census blocks are typically small – sometimes including just one urban city block. The Census Bureau groups these blocks together into Census block groups, with an optimal size of 1,500. The color-coded case study maps are based on Census 2000 data down to the block group level.

were identified as having poor, medium or good transit service, the total senior population in each block group was calculated.

The total population, the population for persons 50 to 64 years, and persons 65 and older are based on 2000 Census Block Group data where CNT was able to collect transit data.

The TAI calculates the number of bus routes and train stations within walking distance (¼ mile and ½ mile respectively) for households in a given block group. The TAI value represents overall transit opportunities available to households in a given block group, but does not reflect the frequency or service levels of these opportunities. When the transit opportunities are less than 1, the TAI refers

to the fraction of land area within the block group that has one route that is within walking distance.<sup>59</sup>

The range of TAI scores in a category is reported (minimum and maximum value), as well as the average of each category. The transit availability values differ across the different size metropolitan categories, which is indicative of the transit service available in larger versus smaller urban areas. For example, in metropolitan areas that have less than

59 For Madison, WI, Flagstaff, AZ, and Las Vegas, NV, CNT was only able to collect partial fixed-route transit service data. In these three instances, both the number and percentage of seniors with poor transit access are based on those Census block groups where there was accurate and complete transit data. For these metro areas, there may be other seniors with poor transit access, however, including the entire metro area in the calculations would have likely skewed results. Therefore, the results presented here are a conservative estimate of the transit access of senior populations in Madison, WI, Flagstaff, AZ, and Las Vegas, NV.

Table 2: Metropolitan Categories and Transit Access Index Ranges

Metropolitan Size Category	Transit Availability Opportunities	Minimum Transit Availability	Maximum Transit Availability	Average Transit Availability
Less than 250k	Poor	≥0	<0.8	0.1
Less than 250k	Medium	≥0.8	<2.9	1.8
Less than 250k	Good	≥2.9	<85.8	8.6
250k to 1 million	Poor	≥0	<1.1	0.2
250k to 1 million	Medium	≥1.1	<3.8	2.3
250k to 1 million	Good	≥3.8	<154.2	11.2
1 to 3 million	Poor	≥0	<1.7	0.4
1 to 3 million	Medium	≥1.7	<4.4	2.9
1 to 3 million	Good	≥4.4	<302	11.9
3 Million or more	Poor	≥0	<1.9	0.5
3 Million or more	Medium	≥1.9	<5.7	3.5
3 Million or more	Good	≥5.7	<253.7	14.6
New York, NY	Poor	≥0	<11.7	4.9
New York, NY	Medium	≥11.7	<25.5	17.2
New York, NY	Good	≥25.5	<347.7	60.4

250,000 persons the average transit availability is 8.6 routes or stops within walking distance compared to a metropolitan area with 3 million or more persons where the average transit availability is 14.6.

## Case Studies

Seven metropolitan areas were selected to examine transit access in more detail, and how that relates to seniors and future senior populations. The metropolitan areas represent a range of population sizes:

Table 3:  
Case Study Metropolitan Areas

Metropolitan Areas	Size Category
Burlington, VT	Less than 250k
Billings, MT	Less than 250k
Tulsa, OK	250k to 1 million
Chicago, IL	3 Million or more
Jacksonville, FL	1 to 3 Million
Minneapolis, MN	1 to 3 Million
Los Angeles	3 Million or more

Two maps were created for each of the case studies, showing the relationship between transit access and the concentration of persons between the ages of 50 and 64, and the concentration of persons 65 and older. The percentage of persons in the total population age 50 to 64 years and 65 years and older are defined as:

Table 4:  
Senior Density Thresholds

Senior Density	Percentage
Low Senior Population Density	<12%
Medium Senior Population Density	≥12% to <16%
High Senior Population Density	≥16%

The seven metropolitan case studies discussed in the report reference the urban and suburban/exurban geographic distribution of seniors with poor transit access. Urban, suburban, and exurban areas were defined by their distance from the central business district (CBD). Moreover, the threshold distance is different for each metro size category in order to ensure an accurate assessment of metro regions of varying sizes. Table 5 provides the definition of urban, suburban, and exurban

Table 5: Urban, Suburban & Exurban Definitions

Metropolitan Size Category	Definition
3 Million or more	Suburban: 15 to 30 miles
	Exurban: 30 miles or more
	Urban: Less than 15 miles from CBD*
1 to 3 Million	Urban: Less than 10 miles from CBD
	Suburban: 10 to 20 miles
	Exurban: 20 miles or more
250,000 to 1 Million	Urban: Less than 10 miles from CBD
	Suburban: 10 to 20 miles
	Exurban: 20 miles or more
Less than 250,000	Urban: Less than 5 miles from CBD
	Suburban: 5 to 10 miles
	Exurban: 10 miles or more

\*Central Business District



## Metro Areas excluded from the analysis due to inaccurate or lacking data

Corvallis, OR	Cedar Rapids, IA
Great Falls, MT	Myrtle Beach, SC
Jonesboro, AR	Clarksville-Hopkinsville, TN-KY
Victoria, TX	Fort Smith, AR-OK
Pine Bluff, AR	Olympia, WA
Rapid City, SD	Green Bay, WI
Dubuque, IA	Bremerton, WA
Lewiston-Auburn, ME	Brazoria, TX
Elmira, NY	Lubbock, TX
Jackson, TN	San Luis Obispo-Atascadero-Paso Robles, CA
Missoula, MT	Galveston-Texas City, TX
Kokomo, IN	Naples, FL
Gadsden, AL	Santa Cruz-Watsonville, CA
Kankakee, IL	South Bend, IN
San Angelo, TX	Columbus, GA-AL
Sherman-Denison, TX	Dutchess County, NY
Hattiesburg, MS	Erie, PA
Anniston, AL	New London-Norwich, CT-RI
Goldsboro, NC	Evansville-Henderson, IN-KY
Lawton, OK	Utica-Rome, NY
Auburn-Opelika, AL	Fayetteville-Springdale-Rogers, AR
Sharon, PA	Huntington-Ashland, WV-KY-OH
Wausau, WI	Peoria-Pekin, IL
Alexandria, LA	Reading, PA
Altoona, PA	Beaumont-Port Arthur, TX
Steubenville-Weirton, OH-WV	Newburgh, NY-PA
Dothan, AL	Santa Barbara-Santa Maria-Lompoc, CA
Jamestown, NY	Spokane, WA
Yuba City, CA	Flint, MI
Punta Gorda, FL	Des Moines, IA
Florence, AL	Bridgeport, CT
Rocky Mount, NC	Melbourne-Titusville-Palm Bay, FL
Decatur, AL	Lexington, KY
Monroe, LA	Columbia, SC
Terre Haute, IN	Stockton-Lodi, CA
Wheeling, WV-OH	Ann Arbor, MI
Joplin, MO	Youngstown-Warren, OH
Jackson, MI	Baton Rouge, LA
Yuma, AZ	Harrisburg-Lebanon-Carlisle, PA
Benton Harbor, MI	Knoxville, TN
St. Cloud, MN	Tacoma, WA
Topeka, KS	Omaha, NE-IA
New Bedford, MA	Seattle-Bellevue-Everett, WA
Medford-Ashland, OR	Nassau-Suffolk, NY
Elkhart-Goshen, IN	

## Appendix 2. Metropolitan Rankings

The rankings provided in this section are based on the anticipated percentage of seniors age 65-79 with poor transit access in 2015, assuming that the population aged 50-64 in the 2000 has aged in place and transit service remains the same. (For the 2015 projection, the population 65 and older in 2000 was not included, so the numbers could potentially be even higher).

### New York City

Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
New York, NY	562,464	41

### Metropolitan Areas with 3 Million or More People

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
1	Atlanta, GA	503,543	90
2	Riverside-San Bernardino, CA	278,305	69
3	Houston, TX	372,346	68
4	Detroit, MI	445,743	68
5	Dallas, TX	295,445	66
6	Phoenix-Mesa, AZ	247,977	56
7	Philadelphia, PA-NJ	350,621	46
8	Boston, MA-NH	231,944	45
9	Washington, DC-MD-VA-WV	308,029	41
10	Chicago, IL	449,207	39
11	Los Angeles-Long Beach, CA	202,181	17

### Metropolitan Areas with 1-3 Million People

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
1	Kansas City, MO-KS	230,023	88
2	Oklahoma City, OK	136,571	86
3	Fort Worth-Arlington, TX	199,226	86
4	Nashville, TN	151,995	85
5	Raleigh-Durham-Chapel Hill, NC	127,931	80
6	Greensboro-Winston-Salem-High Point, NC	155,993	79
7	Indianapolis, IN	181,073	79

## Metropolitan Areas with 1-3 Million People (cont.)

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
8	Charlotte-Gastonia-Rock Hill, NC-SC	170,815	79
9	Grand Rapids-Muskegon-Holland, MI	111,882	78
10	Jacksonville, FL	127,958	77
11	Norfolk/Virginia Beach-Newport News, VA-NC	147,285	69
12	Rochester, NY	116,565	69
13	St. Louis, MO-IL	259,889	67
14	Middlesex-Somerset-Hunterdon, NJ	118,315	67
15	Hartford, CT	124,240	67
16	West Palm Beach-Boca Raton, FL	114,539	66
17	Cincinnati, OH-KY-IN	153,142	64
18	Columbus, OH	135,826	63
19	Memphis, TN-AR-MS	97,539	61
20	Tampa-St. Petersburg-Clearwater, FL	228,724	60
21	Orlando, FL	138,751	58
22	Providence-Fall River-Warwick, RI-MA	101,163	57
23	Austin-San Marcos, TX	82,456	56
24	Cleveland-Lorain-Elyria, OH	189,794	54
25	Baltimore, MD	211,401	53
26	New Orleans, LA	104,198	52
27	Las Vegas, NV-AZ	132,498	52
28	Milwaukee-Waukesha, WI	110,254	51
29	Portland-Vancouver, OR-WA	141,215	50
30	Buffalo-Niagara Falls, NY	87,954	49
31	Minneapolis-St. Paul, MN-WI	190,633	47
32	Newark, NJ	145,415	46
33	Pittsburgh, PA	169,016	44
34	Fort Lauderdale, FL	97,221	41
35	Sacramento, CA	97,228	41
36	San Antonio, TX	85,450	39
37	Louisville, KY-IN	62,505	39
38	San Diego, CA	142,315	39
39	Orange County, CA	129,852	33
40	Bergen-Passaic, NJ	70,832	32
41	Denver, CO	91,892	31
42	Salt Lake City-Ogden, UT	40,058	26
43	Oakland, CA	65,304	18
44	Miami, FL	57,150	17
45	San Jose, CA	35,316	15
46	San Francisco, CA	34,349	12
*	Monmouth-Ocean, NJ	137,762	77

\* In these metropolitan areas one or more of the transit providers do not have their system data digitized in geographic information system (GIS) format. This missing data is unlikely to change the overall picture for that region dramatically; however, these metro areas have been removed from the ranking because of this uncertainty.»

## Metropolitan Areas with 250,000-1 Million People

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
1	Hamilton-Middletown, OH	47,977	100
2	Montgomery, AL	47,980	99
3	Hickory-Morganton, NC	54,961	95
4	Augusta-Aiken, GA-SC	64,200	90
5	Fort Pierce-Port St. Lucie, FL	49,206	89
6	Biloxi-Gulfport-Pascagoula, MS	49,322	88
7	Lafayette, LA	45,657	86
8	McAllen-Edinburg-Mission, TX	51,859	85
9	Ocala, FL	38,905	85
10	Brownsville-Harlingen-San Benito, TX	33,463	83
11	Allentown-Bethlehem-Easton, PA	82,746	82
12	Chattanooga, TN-GA	63,315	81
13	Huntsville, AL	42,813	80
14	Mobile, AL	67,693	80
15	Lakeland-Winter Haven, FL	60,956	78
16	Macon, GA	36,772	77
17	Fort Wayne, IN	54,718	76
18	Birmingham, AL	106,221	76
19	Charleston-North Charleston, SC	60,796	75
20	Fort Collins-Loveland, CO	25,927	74
21	Little Rock-North Little Rock, AR	65,251	74
22	Richmond-Petersburg, VA	110,428	72
23	Jackson, MS	43,540	72
24	Gary, IN	69,435	71
25	Fayetteville, NC	25,283	71
26	York, PA	44,232	71
27	Pensacola, FL	45,624	71
28	Lancaster, PA	48,903	70
29	Kalamazoo-Battle Creek, MI	45,989	69
30	Springfield, MO	32,233	67
31	Tallahassee, FL	25,161	66
32	Canton-Massillon, OH	44,131	66
33	Worcester, MA-CT	47,998	65
34	Charleston, WV	28,538	65
35	Tulsa, OK	79,347	65
36	Akron, OH	68,375	64
37	Wichita, KS	47,046	64
38	Scranton-Wilkes-Barre-Hazleton, PA	65,440	63
39	Lawrence, MA-NH	36,284	63
40	Binghamton, NY	25,191	63
41	Killeen-Temple, TX	20,815	62
42	Shreveport-Bossier City, LA	35,832	61

## Metropolitan Areas with 250,000-1 Million People (cont.)

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
43	Boise City, ID	34,239	60
44	Springfield, MA	51,650	60
45	Lansing-East Lansing, MI	38,442	60
46	Syracuse, NY	65,091	60
47	Daytona Beach, FL	51,107	58
48	Fresno, CA	66,357	58
49	Rockford, IL	32,352	57
50	Lowell, MA-NH	24,897	57
51	Bakersfield, CA	44,161	54
52	Albany-Schenectady-Troy, NY	74,478	54
53	Appleton-Oshkosh-Neenah, WI	26,438	53
54	Modesto, CA	30,722	53
55	Salem, OR	26,440	53
56	New Haven-Meriden, CT	43,171	52
57	Savannah, GA	22,156	52
58	Atlantic--Cape May, NJ	28,574	50
59	Tucson, AZ	62,126	49
60	Davenport-Moline-Rock Island, IA-IL	28,257	49
61	Provo-Orem, UT	14,846	48
62	Fort Myers-Cape Coral, FL	38,810	47
63	Reno, NV	25,190	46
64	Ventura, CA	49,556	46
65	Wilmington-Newark, DE-MD	39,287	45
66	Toledo, OH	38,658	43
67	Corpus Christi, TX	22,161	42
68	Albuquerque, NM	44,514	42
69	Eugene-Springfield, OR	19,140	39
70	Colorado Springs, CO	26,624	38
71	Lincoln, NE	12,022	37
72	Salinas, CA	18,318	36
73	Trenton, NJ	18,238	34
74	Boulder-Longmont, CO	13,495	33
75	Santa Rosa, CA	22,862	30
76	Anchorage, AK	10,554	30
77	Vallejo-Fairfield-Napa, CA	20,636	27
78	Madison, WI	10,739	26
79	El Paso, TX	13,738	16
80	Honolulu, HI	15,286	12
81	Jersey City, NJ	2,207	3
*	Brockton, MA	35,085	91
*	Dayton-Springfield, OH	87,489	57
*	Greenville-Spartanburg-Anderson, SC	151,395	99

## Metropolitan Areas with 250,000-1 Million People (cont.)

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
*	Johnson City-Kingsport-Bristol, TN-VA	79,300	90
*	Saginaw-Bay City-Midland, MI	57,192	89
*	Sarasota-Bradenton, FL	75,224	70
*	Stamford-Norwalk, CT	31,579	54
*	Visalia-Tulare-Porterville, CA	22,570	50

\* In these metropolitan areas one or more of the transit providers do not have their system data digitized in geographic information system (GIS) format. This missing data is unlikely to change the overall picture for that region dramatically; however, these metro areas have been removed from the ranking because of this uncertainty.»

## Metropolitan Areas with Less Than 250,000

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
1	Waterbury, CT	31,144	90
2	Greenville, NC	14,823	87
3	Houma, LA	24,160	87
4	Merced, CA	21,468	86
5	Jacksonville, NC	12,331	85
6	Tuscaloosa, AL	18,867	83
7	Barnstable-Yarmouth, MA	25,049	83
8	Johnstown, PA	31,325	82
9	Wilmington, NC	34,734	82
10	Glens Falls, NY	16,808	80
11	Longview-Marshall, TX	25,659	80
12	Mansfield, OH	23,435	80
13	Sumter, SC	11,590	79
14	Lake Charles, LA	20,406	76
15	Eau Claire, WI	15,846	75
16	Lima, OH	17,324	75
17	Parkersburg-Marietta, WV-OH	20,094	75
18	Florence, SC	15,008	74
19	Portsmouth-Rochester, NH-ME	27,464	74
20	Fort Walton Beach, FL	19,588	74
21	Athens, GA	13,793	73
22	Lynchburg, VA	26,921	73
23	Dover, DE	13,517	73
24	Asheville, NC	27,987	72
25	Danbury, CT	26,276	72
26	Redding, CA	20,525	72
27	Nashua, NH	21,017	72
28	Panama City, FL	17,111	70
29	Las Cruces, NM	15,789	70
30	Charlottesville, VA	16,123	69

## Metropolitan Areas with Less Than 250,000 (cont.)

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
31	Waco, TX	19,488	69
32	Bloomington-Normal, IL	9,858	69
33	Texarkana, TX-Texarkana, AR	13,686	69
34	Danville, VA	13,242	68
35	Vineland-Millville-Bridgeton, NJ	14,855	68
36	Tyler, TX	17,848	67
37	State College, PA	11,197	66
38	Yakima, WA	19,547	66
39	Albany, GA	11,134	66
40	Columbia, MO	10,802	66
41	Portland, ME	24,355	66
42	Greeley, CO	15,385	65
43	Duluth-Superior, MN-WI	25,042	64
44	La Crosse, WI-MN	11,079	63
45	Santa Fe, NM	16,592	60
46	Pocatello, ID MSA	5,881	59
47	Bangor, ME	8,079	59
48	Chico-Paradise, CA	17,503	58
49	Muncie, IN	10,661	58
50	Burlington, VT	13,791	57
51	Flagstaff, AZ-UT MSA	4,071	57
52	Springfield, IL	18,171	57
53	Gainesville, FL	15,673	56
54	Sheboygan, WI	9,261	56
55	Roanoke, VA	22,634	56
56	Grand Forks, ND-MN	6,858	56
57	Racine, WI	15,483	54
58	Manchester, NH	15,362	54
59	Waterloo-Cedar Falls, IA	10,108	54
60	Owensboro, KY	7,648	53
61	Williamsport, PA	10,131	53
62	Wichita Falls, TX	9,453	51
63	Abilene, TX	8,220	50
64	Pittsfield, MA	7,180	50
65	Fitchburg-Leominster, MA	9,810	48
66	Sioux Falls, SD	10,734	48
67	Amarillo, TX	14,305	48
68	Bellingham, WA	11,586	47
69	Champaign-Urbana, IL	9,753	46
70	St. Joseph, MO	6,872	46
71	Bloomington, IN	8,451	46
72	Lafayette, IN	9,939	45

## Metropolitan Areas with Less Than 250,000 (cont.)

Ranking	Metropolitan Area	Population 65 to 79 with Poor Transit Access in 2015	Percentage of Population 65 to 79 with Poor Transit Access in 2015
73	Cheyenne, WY	5,534	45
74	Casper, WY	4,463	44
75	Bismarck, ND	5,936	43
76	Decatur, IL	8,006	43
77	Lawrence, KS	4,525	42
78	Fargo-Moorhead, ND-MN	8,902	41
79	Pueblo, CO	8,867	41
80	Iowa City, IA	5,226	41
81	Grand Junction, CO MSA	7,455	40
82	Billings, MT	7,661	39
83	Richland-Kennewick-Pasco, WA	10,319	38
84	Bryan-College Station, TX	5,077	37
85	Odessa-Midland, TX	11,342	36
86	Sioux City, IA-NE	5,944	35
87	Rochester, MN	5,967	34
88	Laredo, TX	3,482	17
89	Yolo, CA	3,606	17
*	Cumberland, MD-WV	13,826	79
*	Hagerstown, MD	20,735	100
*	Janesville-Beloit, WI	18,900	82
*	Kenosha, WI	19,373	95

\* In these metropolitan areas one or more of the transit providers do not have their system data digitized in geographic information system (GIS) format. This missing data is unlikely to change the overall picture for that region dramatically; however, these metro areas have been removed from the ranking because of this uncertainty.>