Location Efficient Affordable Housing for a More Sustainable Asheville

CNT Sustainable Communities Attainable Results

CITY OF ASHEVILLE NORTH CAROLINA

THE ROCKEFELLER FOUNDATION

Center for Neighborhood Technology
in cooperation with The City of Asheville
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About the Center for Neighborhood Technology

CNT's mission is to promote more livable and sustainable urban communities. For over 30 years, the Center for Neighborhood Technology (CNT) has taken a holistic, solution oriented approach that reflects a commitment to both cities and nature. CNT is a creative think-and-do tank that combines rigorous research and analysis with effective actions that offer paths to scale. The organization has tackled a wide range of issues, always with an eye toward simultaneously improving the environment, strengthening the economy, and advancing equity. CNT works across disciplines and issues, including transportation and community development, energy, natural resources, and climate change. CNT has a strong reputation as a leader in promoting urban sustainability—the more effective use of existing resources and community assets to improve the health of natural systems and the wealth of people, today and in the future. CNT is a recipient of the 2009 MacArthur Award for Creative and Effective Institutions. CNT has pioneered map-based tools that enable citizens, communities, service providers, and policymakers to communicate issues, understand needs, and create more effective implementation plans for urban sustainability. More information about CNT is available at www.cnt.org.

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Executive Summary

The location of housing is increasingly understood to affect its affordability, not just due to variation in the cost of land but also because transportation behavior, and hence costs, vary to a significant degree based on neighborhood location and characteristics. The Center for Neighborhood Technology created an online tool called the Housing and Transportation (H+T®) Affordability Index (www.htaindex.org) to estimate this variation within the most populated regions of the country. The Index shows that the low-density, car-dependent development pattern that has dominated our landscapes over the last several decades is not only detrimental to the environment but also more expensive compared to "location efficient" areas where people can meet their needs with fewer cars and fewer miles. In other words, cheaper land may make a house more affordable, but the savings are illusory if additional spending on transportation is required due to the home's location within a car-dependent development pattern.

This tradeoff is of special importance at the lower tiers of the housing market, where demanding price points incentivize the control of development costs (e.g. the cost of land) at the expense of end-user costs such as transportation. However, consumers of lower-priced housing are less able to withstand sudden financial stresses, so a development pattern that imposes a greater degree of car dependence puts them in a precarious position. In a time of stagnant wages, rising energy costs and a tighter consumer credit market, these tradeoffs are increasingly of concern for all Americans, but even more so for members of the working and middle classes. Site selection for lower-priced housing can be most directly influenced for publicly subsidized rental and homeownership units ("affordable housing"), which serve only income-qualified households.

The City of Asheville guides development in general, and the production of affordable housing in particular, in many direct and indirect ways. This study uses the transportation cost model behind the H+T Index to analyze the location efficiency of subsidized units in the Asheville area for which data was readily available, and seeks to understand the market and policy mechanisms that influenced site selection for these units. CNT found that:

- Estimated average household transportation costs are very high relative to income in many parts of Asheville, other municipalities in the County, and the unincorporated parts of Buncombe County, however areas of *relative location efficiency* do exist.
- The City's Housing Trust Fund program is effective in producing units in relatively location efficient areas compared to other sources of affordable housing financing.
- Over two-thirds (71 percent) of Housing Choice Voucher holders reside in ZIP codes where a household's average transportation needs are estimated to cost 29-39 percent of household income; voucher holders who reside in larger units are disproportionately located in these relatively location inefficient areas.
- The City's new emphasis on awarding funds towards multifamily rental projects and smaller units may enable more location efficient site selection, but the positive impacts will be constrained by restrictive zoning.

The report also recommends ways to increase the location efficiency of the area's affordable housing stock going forward:

- Identify narrower thresholds to define location efficiency within municipal boundaries, and incorporate these thresholds into selection criteria and/or award levels in competitive funding programs.

- Underutilized land at higher levels of location efficiency should receive priority attention to identify and overcome obstacles to redevelopment.
- Reform the Unified Development Ordinance to present fewer obstacles to more compact development, or enact zoning overlays as an incremental step.
- The Land Use Incentive policy could better support sustainable development by incorporating a measure of location efficiency into the eligibility requirements or scoring options, and the Sustainability Ordinance should be revised to apply to a ¼-mile buffer area.
- The City and County should coordinate their approaches to growth management, and the County should remove or reduce recently adopted barriers to compact, mixed-used, non-auto dependent development patterns.
- Public outreach on the need for and benefits of sustainable development would help reduce public pressure on Council members to reject development proposals that meet requirements.
- The Housing Consortium should work with the State Housing Finance Agency and other local and State partners to determine how to better encourage location efficient development in the Low Income Housing Tax Credit (LIHTC) program.
- As public units approach the end of their useful life and require replacement, the City should seek to replace them with equally location efficient units.

The City of Asheville has taken significant steps in recent years to overcome the barriers to sustainable development so that its residents can continue to enjoy a high quality of life as the region grows. CNT encourages further efforts of the City's leadership to support a broad, long-term vision for Asheville's future that balances its residents' needs for quality housing and mobility choices with its desire to preserve their relatively low cost of living and beautiful natural surroundings.

About the H+T Index

The H+T Index illustrates the concept of sustainability by translating it into the concept of affordability. People have long been accustomed to thinking about their housing choices in terms of what they can afford within their household budget, often using a rule of thumb of 30 percent of income. The H+T Index adds in the cost of transportation—which for most people is the second-biggest household expense—and shows how transportation costs can vary based on where a home is located because of the underlying development patterns. Looking at both housing and transportation costs together shows more clearly how these different development patterns, in one's own neighborhood as well as across the whole region, are related to the cost of living. Put another way, it shows how one aspect of sustainable development—increased location efficiency—can produce greater affordability.

The H+T Index shows transportation costs estimated at the neighborhood level for hundreds of metropolitan and micropolitan regions across the United States. As a planning tool and performance metric, H+T can be used to promote equitable, sustainable development that leverages existing infrastructure to deliver stronger communities and increased affordability. In the context of affordable housing, H+T can help direct investment to developments that offer tenants additional household savings and convenient access to local amenities and employment.

The H+T Affordability Index relates development patterns to transportation costs using a proprietary model (see Figure 1). Statistical analysis was used to determine how certain neighborhood and household characteristics (left) are related to three aspects of transportation behavior (upper right). Cost factors are then used to calculate total average transportation costs (lower right).[1] The estimated relationships between these factors show that building more compactly, with a mix of land uses, is key to reducing dependence on automobiles—which has measurable impacts on transportation costs. In other words, while it is important to make transit available to people who can't or prefer not to drive, it is equally important to get smarter about the way we build communities.

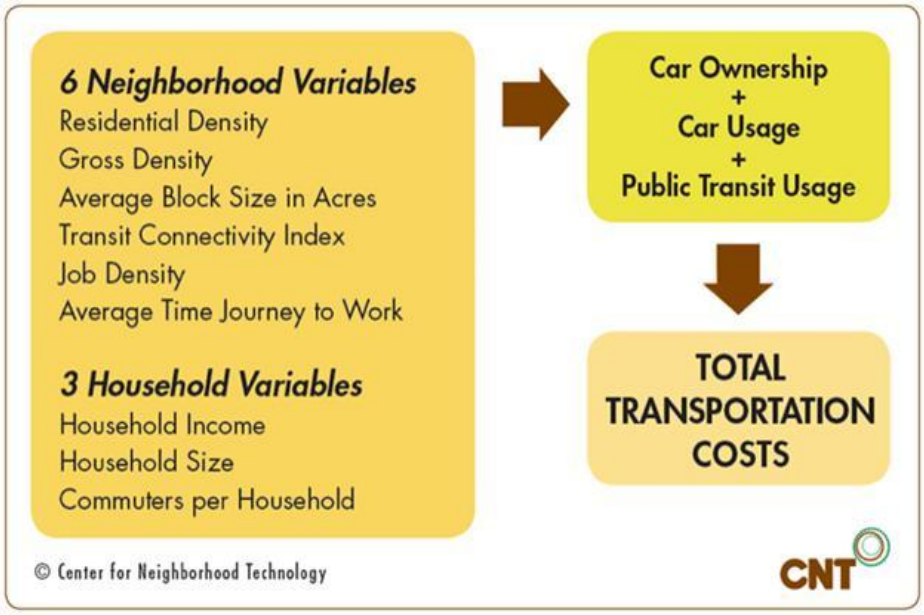


Figure 1: Transportation Cost Model, 2000 H+T Index (Source: Center for Neighborhood Technology)

[1] For more information on the methods behind the H+T Index, please refer to: http://htaindex.org/method.php. This report uses the most recent H+T Index data that was available in fall 2011. The H+T dataset was later updated using 2005–2009 American Community Survey data and released in February 2012 (see http://htaindex.cnt.org).

1. Location Efficiency of Existing Affordable Housing Stock

1.1 Overview

This section analyzes the average transportation costs associated with subsidized affordable housing units available in 2011 for which data could be readily obtained from the City of Asheville and traces market trends that affect the availability and cost of suitable land for affordable housing. Public policies and programs that guide site selection result in the construction of affordable housing units that offer residents an array of location-specific advantages and disadvantages. Places with a location efficient development pattern allow residents to meet their daily needs with fewer trips, shorter distances, and less absolute reliance on private automobiles, with the result that residents of these areas spend less of their income on transportation. Conversely, constructing affordable housing in locations where private automobiles are overwhelmingly necessary to meet basic needs perversely contributes to the financial insecurity of those households.

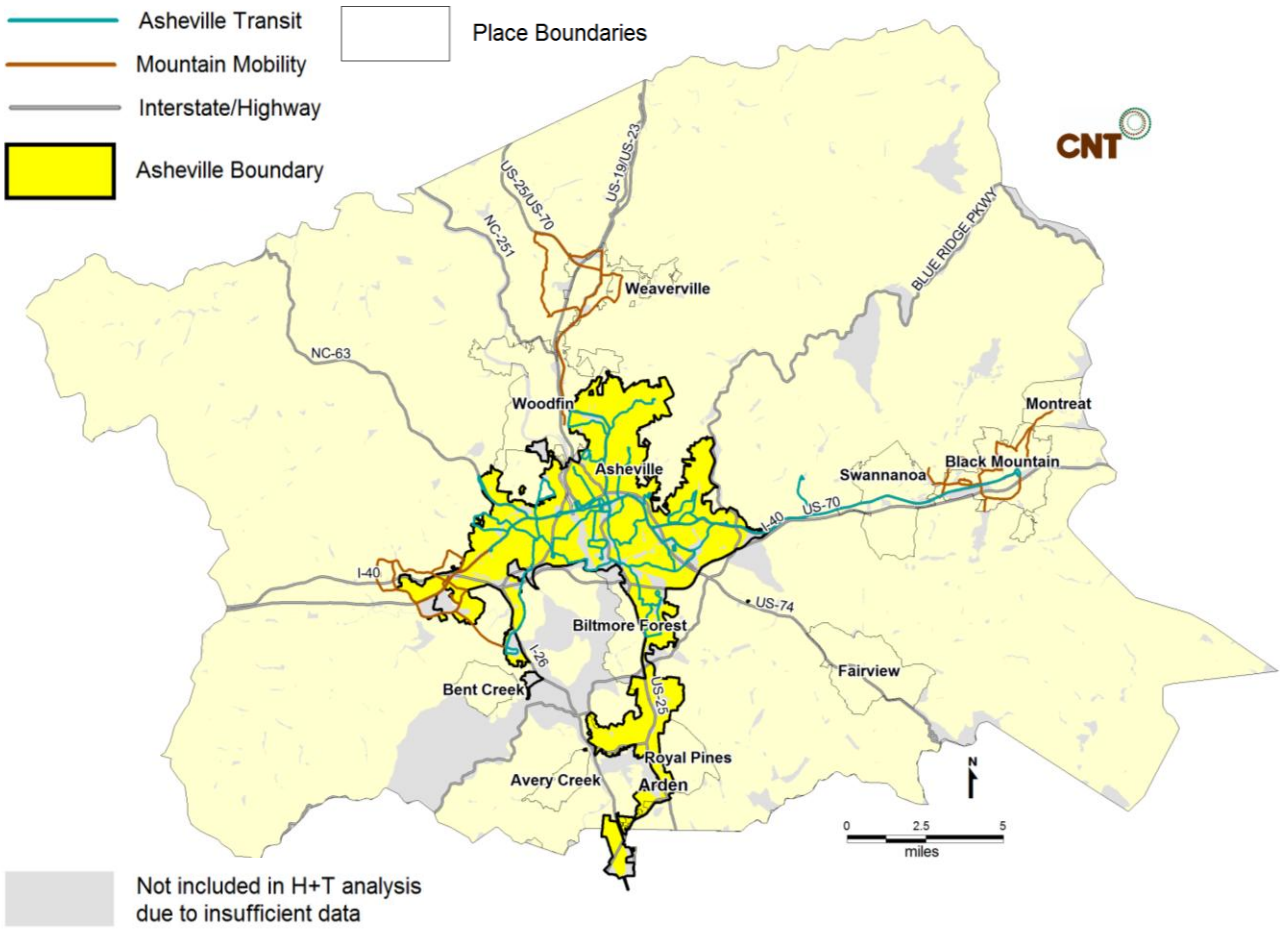


Figure 2: The City of Asheville and Buncombe County, North Carolina (Source: Center for Neighborhood Technology)

1.2 Regional Housing and Economic Trends

The scope of this project is limited to Buncombe County and its municipalities, with a focus on the city of Asheville, but the housing and economic trends discussed here are regional in nature. An extensive highway network facilitates current commuting patterns from throughout the four-county region (comprised of Buncombe, Henderson, Madison, and Transylvania Counties) to the major employment centers along the north-south axis of central Buncombe County. This "Regional Growth Corridor" comprises 30 percent of the four county region's land area but two-thirds of the population and over three-quarters (77 percent) of the jobs.[2] Most regularly scheduled public transit serves city neighborhoods, however some areas of Buncombe County and its municipalities are also connected to Asheville via transit routes, and other areas of the county are served by public on-demand or subscription-based transport service.

Wages in the Asheville region are low, and the economy continues to shift to lower-wage jobs.[3] At the same time, prices in the housing market have remained fairly high following years of upward pressure from cheap credit, demand for vacation homes and the in-migration of retirees. As a result, middle- and lower-income households are facing tighter budgets. According to the 2009 *Asheville Regional Housing Consortium Housing Needs Assessment and Market Study*, between 19 percent and 25 percent of homeowners in the four-county region spend 30 percent or more of their household income on housing, with the highest percentage of burdened households in Buncombe County.

Finances are even more strained for renters: between 36 percent and 46 percent of renters in the four-county area are "rent burdened", meaning that more than 30 percent of household income is spent on rent. Consistent with lower incomes, the same study also indicated a trend towards increased rental tenure in the four-county region from 2000-2007. The housing affordability problem in Buncombe County is illustrated below in Figure 3: a median-income family looking for a home within its means would find average housing costs, whether for rent or a mortgage, unaffordable in many of the county's neighborhoods. This is not an unusual phenomenon across the country because neighborhoods often are developed at, or through market processes evolve to have, narrow cost ranges that are accessible to households in a limited range of the income spectrum.

[2] City of Asheville and the Asheville Regional Housing Consortium, 2010.
[3] Rohe et al, 2010.

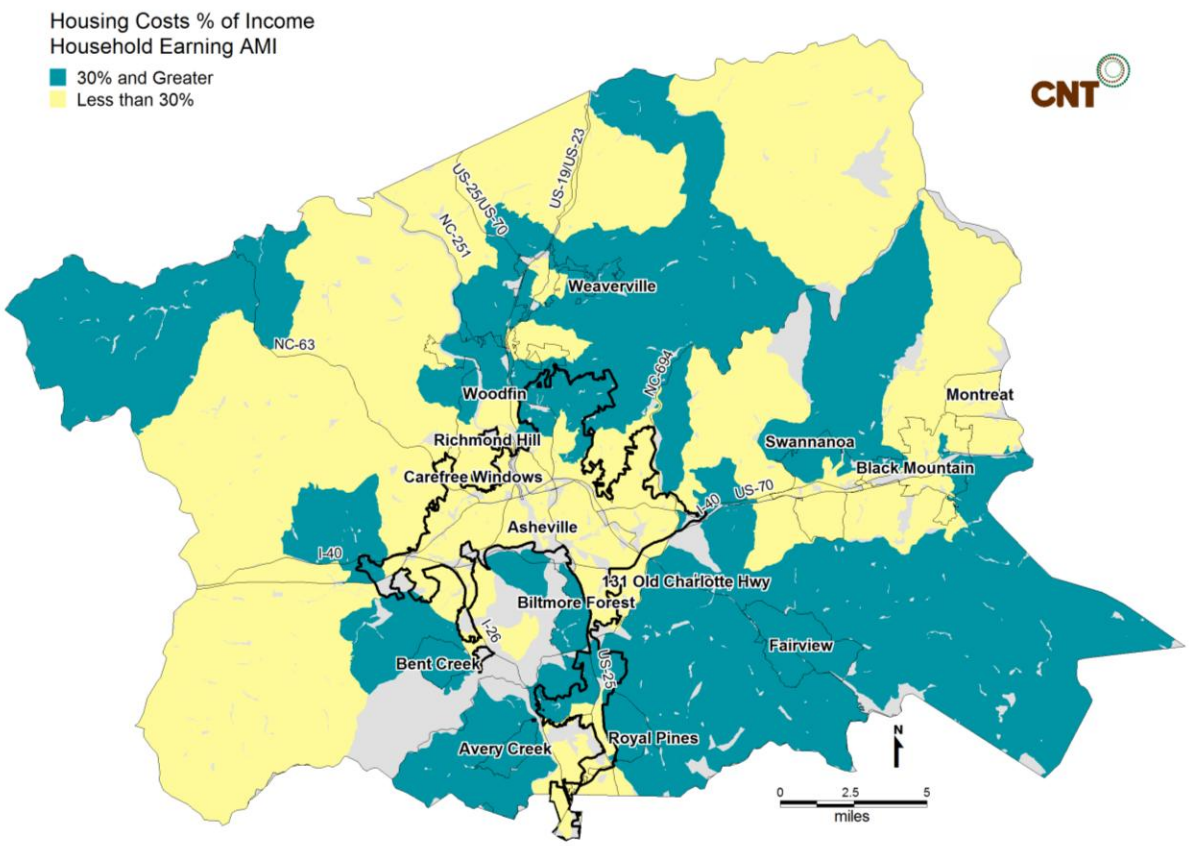


Figure 3: Many Buncombe County neighborhoods were unaffordable to median-income households in 2000 based on average housing costs. (Source: Center for Neighborhood Technology 2000 H+T Index)

Furthermore, comparing Figure 3 with Figure 2, it is clear that large swaths of the county where average housing costs exceed the 30 percent test lack regularly scheduled transit service.[4] Public transit presents for most people the most viable alternative to costly private automobiles for some or all types of trips, so a lack of transit service makes the household cost of living in some areas that much higher. The amount of transit service that currently exists in Asheville and in Buncombe County outside of Asheville is impressive given the geographic challenges and relatively low population density; one challenge of sustainable development over the coming decades will be to help ensure that more areas are built in ways that support transit so that more people have this option. Unfortunately, lack of funding has forced Asheville Transit to reduce services in recent years. Since a higher proportion of renters compared to homeowners lack access to a vehicle for transportation (14 percent and 3 percent, respectively),[5] it is likely that these cuts impact renters more strongly, and lower-income renters the most.

The demand for affordable housing in Buncombe County is far higher than supply, and the gap is expected to continue growing. Looking just at the rental market alone, the Buncombe County needs assessment estimated that over 12,000 households were rent burdened in 2005-2007, while as of 2009

[4] Some of these areas, such as the city's reservoir watershed preserve, are off-limits to development and therefore not a 'neighborhood' in the sense used here. However, most areas in the county can be considered part of the regional housing market.

[5] *Buncombe County Housing Needs Assessment and Market Study*, 2009.

there were just over 5,000 units of subsidized rental housing in the county available to them. The 2009 regional needs assessment estimated that over 14,000 subsidized rental units will be needed by 2020 to meet the rising demand for affordable housing. Meeting this demand would require annual production and/or retention from the date of the report of 1,400 units per year. However, due to funding constraints the annual production target provided in the *2010-2015 Consolidated Plan* is 1,200 units over five years (240 units per year).

Changing household demographics have led to shifts in the demand for specific types of affordable housing. For example, the Housing Authority of the City of Asheville (HACA) reports that only 20 percent of its public housing units are efficiencies or one-bedrooms, but that 42 percent of current tenants and 68 percent of households on the waiting list are one-person households. At the same time, resource constraints support a move toward the production of more rental units than owner-occupied units, as the latter require a higher per-unit subsidy, and toward smaller units rather than larger ones (fewer bedrooms), which helps maximize the number of households that can be served on a given parcel of land.

1.3 Transportation Costs in Buncombe County

A recent UNC-Chapel Hill study highlights the impact on working households of the dual trends of high housing costs and lower wages, pointing out that as workers are forced to live farther and farther out, they spend more time and money commuting to work.[6] In focusing only on work-related trips, however, the authors likely understate the extent of the added cost burden from transportation because commuting comprises only a portion of household trips and mileage. The vast majority of household trips and miles traveled are undertaken not for commuting but for day-to-day activities such as grocery shopping, doctor's visits and entertainment. To the extent that commuting is dominated by single-occupancy vehicles, focusing on the cost of the work commute directs attention primarily to the cost of filling up the gas tank. CNT's model of transportation costs additionally takes into account other real costs such as financing charges, fees, maintenance, and the declining resale value of a vehicle as it is used.

While commuting is the type of trip most often targeted in efforts to reduce road congestion and air pollution, car dependence more broadly—the characteristics of a place that make cars more of a necessity than a choice for most kinds of trips—must be the focus of efforts intended to reduce costs for households. At the same time, addressing car dependence from this broader perspective allows for more comprehensive and long-term solutions to regional challenges such as road congestion and air pollution, as well as to the global challenge of climate change. Location efficient development reduces car dependence for most kinds of trips, with benefits for residents and the larger community alike.

CNT proposes that policies and programs should aim to increase the number of places nationally where combined housing and transportation costs consume no more than 45 percent of median household income. Many areas of Buncombe County and its municipalities currently do not meet this definition of "H+T affordability" – but they can undertake actions that build on the *relative* location efficiency of their neighborhoods to meet a locally-defined H+T affordability goal that is both meaningful and appropriate.

As shown in Figure 4, different areas of Buncombe County exhibit different degrees of car dependence: using neighborhood-level data, CNT estimates that transportation

[6] Rohe et al, 2010.

costs for a median-income household vary between 23 percent and 39 percent of its income, depending on its location (between $693 and $1,176 per month in 2000 dollars).[7] In other words, a family can face very different transportation costs depending on where it lives because the development pattern itself can increase the distances its members have to travel while limiting their range of options for getting around.

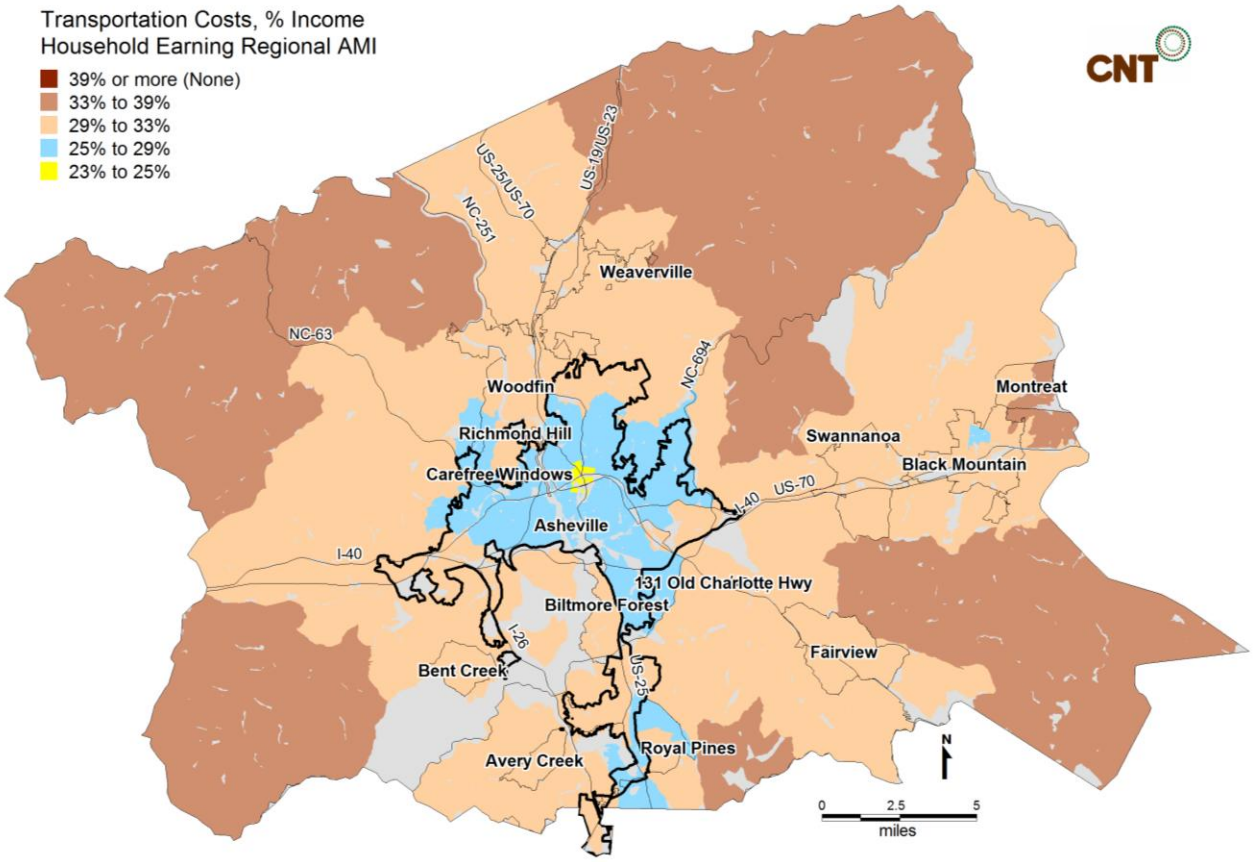


Figure 4: Depending on where it lives, the estimated share of income spent on transportation for a typical (median-income) household in the Asheville region ranges between 23 percent and 39 percent per year. (Source: Center for Neighborhood Technology)

Even more important than the availability and frequency of transit service is a walkable development pattern. Compact, mixed-use neighborhoods and corridors make it possible to undertake many kinds of trips, not just the work commute, without a car. Some relatively location efficient areas lack robust transit service today; guiding development to these areas in the near time makes them more transit-supportive for future investments. For example, Black Mountain, the River Arts District, and the East of the Riverway areas are relatively location efficient for households at the area's median income, even with limited transit service, due to their compact built form and proximity to employment centers. Encouraging walkable, mixed-use development in these areas will support increasingly robust

[7] The 2000 H+T dataset was created using sources available at that time, such as the 2000 U.S. Census, which are now several years out of date. For example, Asheville's area median income as reported in the 2000 Census was $36,179, so 80 percent of AMI was $28,943 and 60 percent of AMI was $21,707. The 2009 H+T dataset, released in February 2012, offers both updated data and expanded geographic coverage but was not yet available at the time of this analysis.

transportation options over the long term, laying the groundwork for a community that can maintain its quality of life and cost of living even as it grows.

Transportation options are even more important for households with incomes below the region's median. As shown in Figure 5, in much of Buncombe County CNT estimates that transportation costs would consume between 33 percent to over 39 percent of earnings for a household earning 80 percent or less of area median income. In other words, if moderate-income residents of affordable housing in these areas spend 30 percent of their income on housing, their combined average cost of housing and transportation represents from 63 percent to over 69 percent of their income.

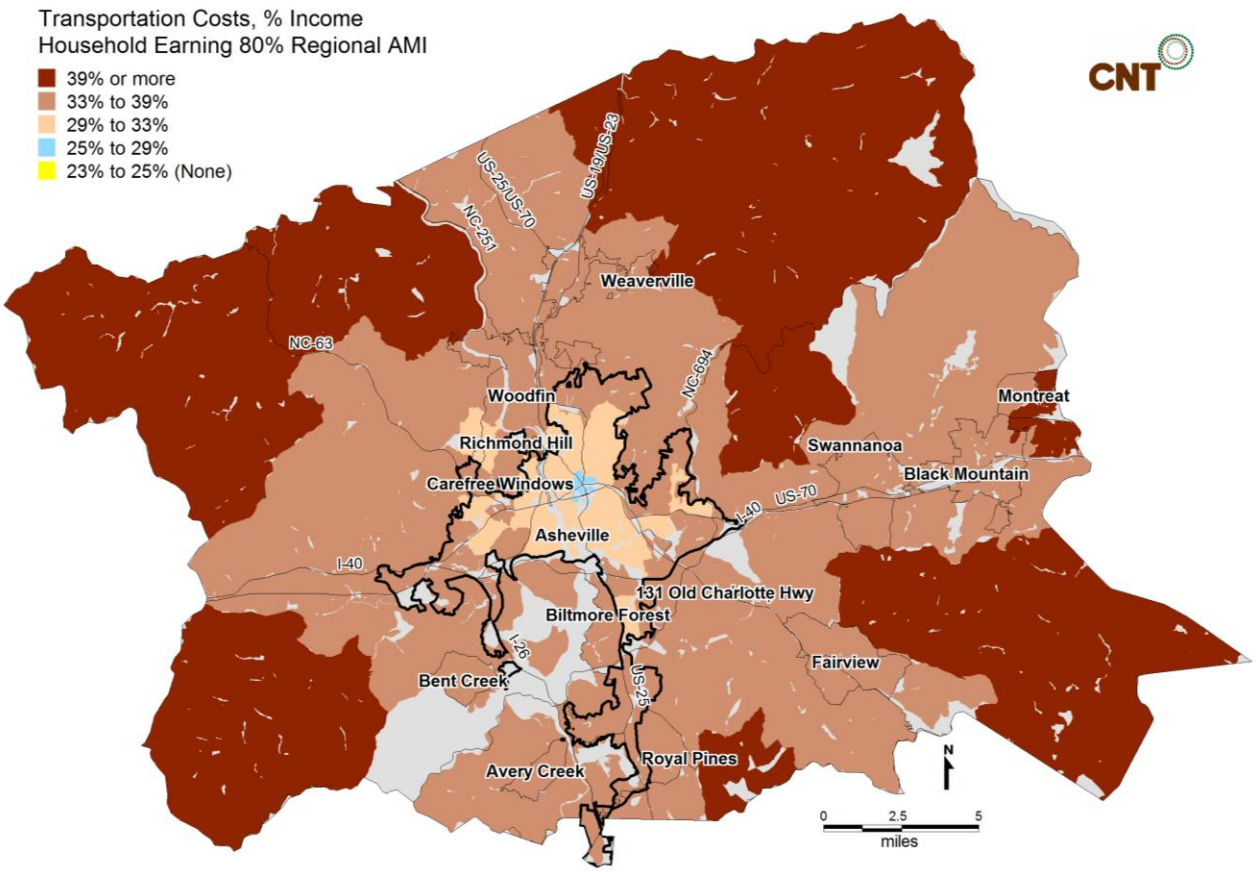


Figure 5: Transportation Cost Burden in Buncombe County for Households Earning 80 percent of AMI. (Source: Center for Neighborhood Technology 2000 H+T Index)

The burden of transportation costs is even more grim for low-income households, represented in Figure 6 as those earning 60 percent of AMI. At this income level, household transportation costs are estimated to consume 29-33 percent of earnings, on average, even in the most location-efficient areas of the county. Options are very limited for these households to meet their housing and transportation needs within their means; families facing these realities will simply have fewer resources available for other necessities such as food and medical needs, and likely must make do with sub-standard housing and/or vehicles.

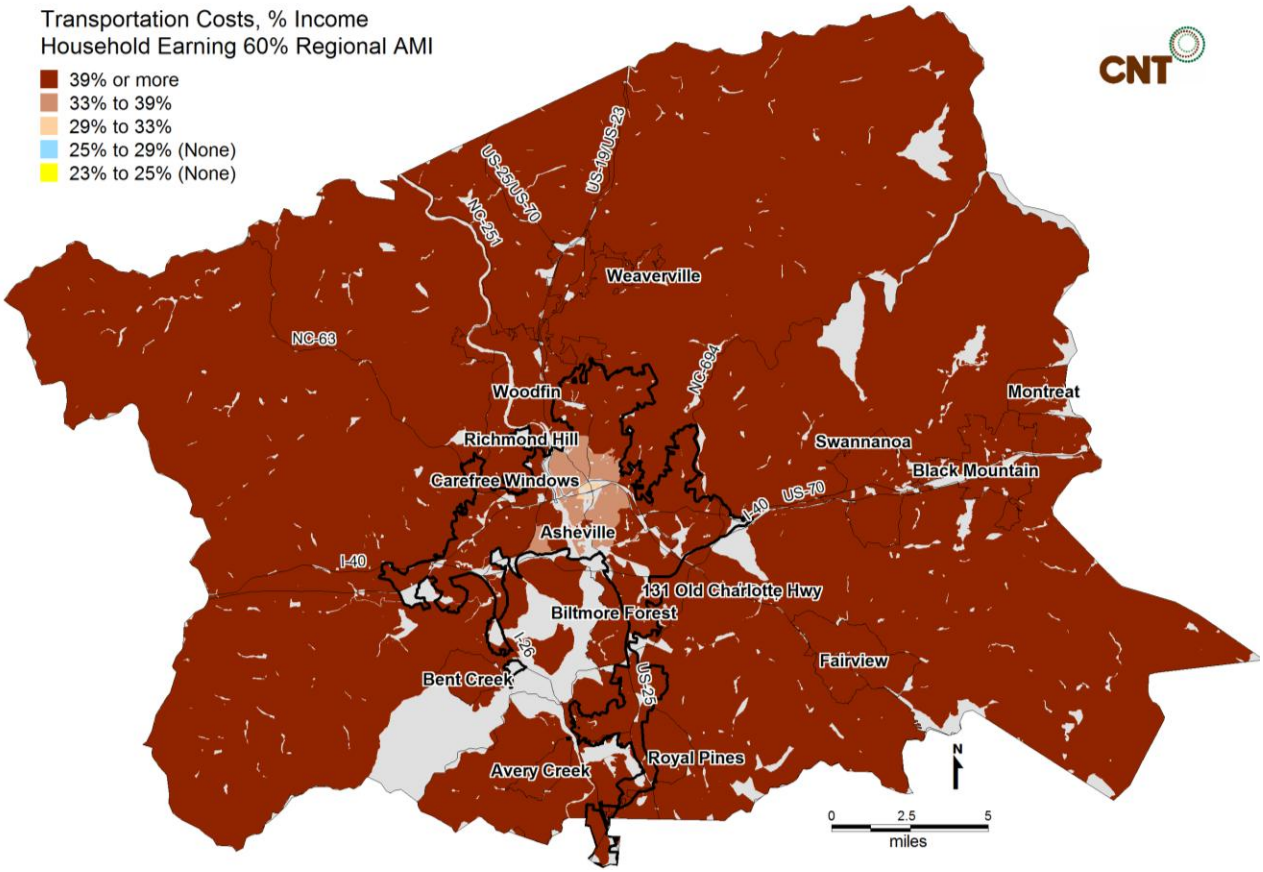


Figure 6: Transportation Cost Burden in Buncombe County for Households Earning 60 percent of AMI. (Source: Center for Neighborhood Technology 2000 H+T Index)

Location efficient neighborhoods and corridors make it far more likely that a household can meet its transportation needs more cheaply, freeing up funds for other necessities. These necessities could include, but ideally would not consist entirely of, any increase in housing costs associated with more compact, mixed-use development. Broader strategies in policy and planning can explicitly aim to increase the location efficiency of existing towns, neighborhoods, and corridors. At the same time, affordable housing policies and programs can benefit residents more comprehensively if they tend to produce units in relatively location efficient places. In other words, plans and policies should reflect the fact that location efficient development patterns create value for people and communities. One challenge in achieving more sustainable development is to find ways to allocate these benefits equitably, ensuring that developers continue to have incentives to construct needed housing units while households enjoy a reasonable cost of living.

The remainder of this study uses the area median income (AMI) as the basis for evaluating transportation costs, both to reflect the wider range of income levels targeted by local and regional affordable housing programs and in order to support more targeted policymaking.

1.4 Factors that Impact Site Selection for Affordable Housing in Asheville

The placement of affordable housing in the region is constrained by geographic barriers, chief among them the scarcity of relatively flat land in a mountainous terrain. Local developers also cite the need for

parcels with adequate public water and sewer service, and the potentially costly challenges of meeting engineering requirements for a given project on regulated land (e.g. steep slopes and floodplains). The difficult terrain is very scenic, however, so the challenge of limited suitable land is further compounded by historically robust demand for vacation homes.

In the city, site selection is highly constrained by the lack of vacant land and limits to residential density imposed by the Unified Development Ordinance (UDO). By limiting the ability to spread costs over more units, the UDO increases the per-unit cost of affordable housing production. In the County, the recently enacted zoning code isolates multifamily developments from single family neighborhoods, and allows developments with more than six units per plot only in the "open use" area, where they are subject to conditional approval. Further analysis would be required to determine the extent to which these designations are likely to hamper the evolution of location-efficient land use patterns in the county, such as compact mixed-use development along transit corridors. As explained in the City of Asheville's Sustainability Management Plan (2009), research suggests that a minimum of six units per acre are required to support bus service; other sources indicate seven to 15 units per acre depending on the type and frequency of transit service. Later portions of this document explore how the City of Asheville and Buncombe County may be able to find ways to work together on this issue to meet broader community and regional goals, including how best to address neighborhood concerns over the long term about progressively more intensive nearby development.

Programs that support the development and retention of affordable housing can also directly or indirectly influence site selection. The largest source of Federal funding for affordable housing development in the city of Asheville is the Low-Income Housing Tax Credit program (LIHTC), for which site selection is guided by the North Carolina Qualified Action Plan (QAP). The QAP has traditionally encouraged suburban greenfield development, as indicated by local stakeholders interviewed for this project, and the potential impact of recent changes to the project selection criteria is unclear.[8] The other major sources of Federal funding are the Community Development Block Grant (CDBG) and HOME programs, for which site selection is largely influenced by the locally-determined priorities of the four-county Consortium's *Consolidated Plan*.[9]

Since 2000 the City has also supported affordable housing development through an annual allocation of general revenues to a Housing Trust Fund (HTF), which are competitively awarded based on locally-determined

> "The cost of housing, while a key element, is not the only condition that needs to be examined when assessing affordability. It is now recognized that transportation costs must be included to determine the affordability of housing. Additionally, rising energy costs, the costs for providing and maintaining infrastructure, the location of jobs, schools and services, the cost of maintaining a clean environment, all affect affordability. Although less tangible, the inter-generational support found in strong neighborhoods, the utility of the housing unit to enable aging in place, the importance placed on health and the accessibility to health care and healthy lifestyles, and other livability factors all affect affordability. When taken together, these elements determine the sustainability of our communities, and are all important factors in community development."
>
> **--From the City of Asheville and the Asheville Regional Housing Consortium Consolidated Strategic Housing and Community Development Plan, 2010-2015**

[8] These are discussed further in section 4.3: Recommendations.

[9] Based on conversations with the City of Asheville, this study does not address LIHTC-funded projects as a separate category because projects funded with LIHTC overwhelmingly receive multiple sources of funding that may carry more restrictive site selection criteria.

priorities. Funds from these various sources are used to subsidize new construction, rehabilitate existing structures, and/or offer downpayment assistance, and can be used for single-family as well as multi-family housing types. Although not used for land banking in the traditional sense, the HTF has been used to purchase land through foreclosure for the purpose of protecting the City's investment and creating a resource for future affordable housing development. The HTF guidelines and scoring were recently revised to prioritize rental units and require a minimum threshold score, which are intended to produce higher-quality projects while maximizing the number of units that can be subsidized.

The Housing Authority of the City of Asheville (HACA) maintains the city's public housing assets and administers the Federally-funded Housing Choice Voucher (HCV) program, both of which comprise a significant proportion of current affordable housing options. Most public housing sites were selected in decades past under programs that no longer exist. The region's HCVs are overwhelmingly portable, though in reality the options are constrained by the amount of the subsidy (which is based on HUD's estimate of Fair Market Rents in the area), and by uneven participation by landlords.

The City directly subsidizes affordable housing development with several policies and programs that help reduce the cost of development. The 2010 Sustainability Ordinance and the 2011 Land Use Incentive policy both make affordable housing projects more feasible. The Sustainability Ordinance provides an immediate benefit to the developer by providing additional density as use by right, while the Land Use Incentive policy provides a significant benefit on the operations side through long term tax incentives. These policies are place-specific (i.e. eligible projects must meet certain location requirements) and are therefore evaluated further in section two of this report, which deals with current incentives to develop in location efficient areas. Finally, a fee rebate program offers a reduction of up to 50 percent of certain fees associated with the development process, and a new sewer/water program aims to reduce the costs of providing these utilities to affordable housing developments. These two programs are not place-specific, and are therefore not evaluated in this report.

Additional affordable housing stock is available in Buncombe County outside of the city of Asheville, developed with the assistance of a Federally (HOME-) funded low-interest loan program, a County fee rebate program (50 percent fee reduction, plus sewer fee reduction possible) and a County trust fund. The loan program awards funds based on a point system, only two of which (of 75 possible) are related to location or site selection; further analysis would be required to determine the extent to which these two points meaningfully differentiate among project proposals. This study only examines affordable housing developments that received funding between 1998-2010 directly from the City of Asheville or the four-county Consortium, or that are managed by HACA.

1.5 Affordable Housing Stock Overall and by Program Type

The City of Asheville provided geocoded data for 3,353 units of housing that received public funding between 1998 and 2010, including public housing, in Buncombe County and its constituent municipalities. Single family units that received assistance for home repair or rehabilitation were excluded from the data set. Although this assistance enabled low-income homeowners to remain in their homes, there was no associated increase in the City's affordable housing stock. The provision of downpayment assistance to new homebuyers through both the CDBG and HOME programs was included in the inventory; however, it should be noted that there is no mechanism in place to determine what percentage of these units have remained affordable over time. Data on Housing Choice Vouchers (HCVs) was addressed separately. Many of the units for which data was obtained are concentrated in the city; most units outside of the city's boundaries are single-family homes. Figure 7 below shows that

affordable housing investments over the 12-year period have increased housing options for lower-income households over a wide geographic area encompassing many different neighborhoods.

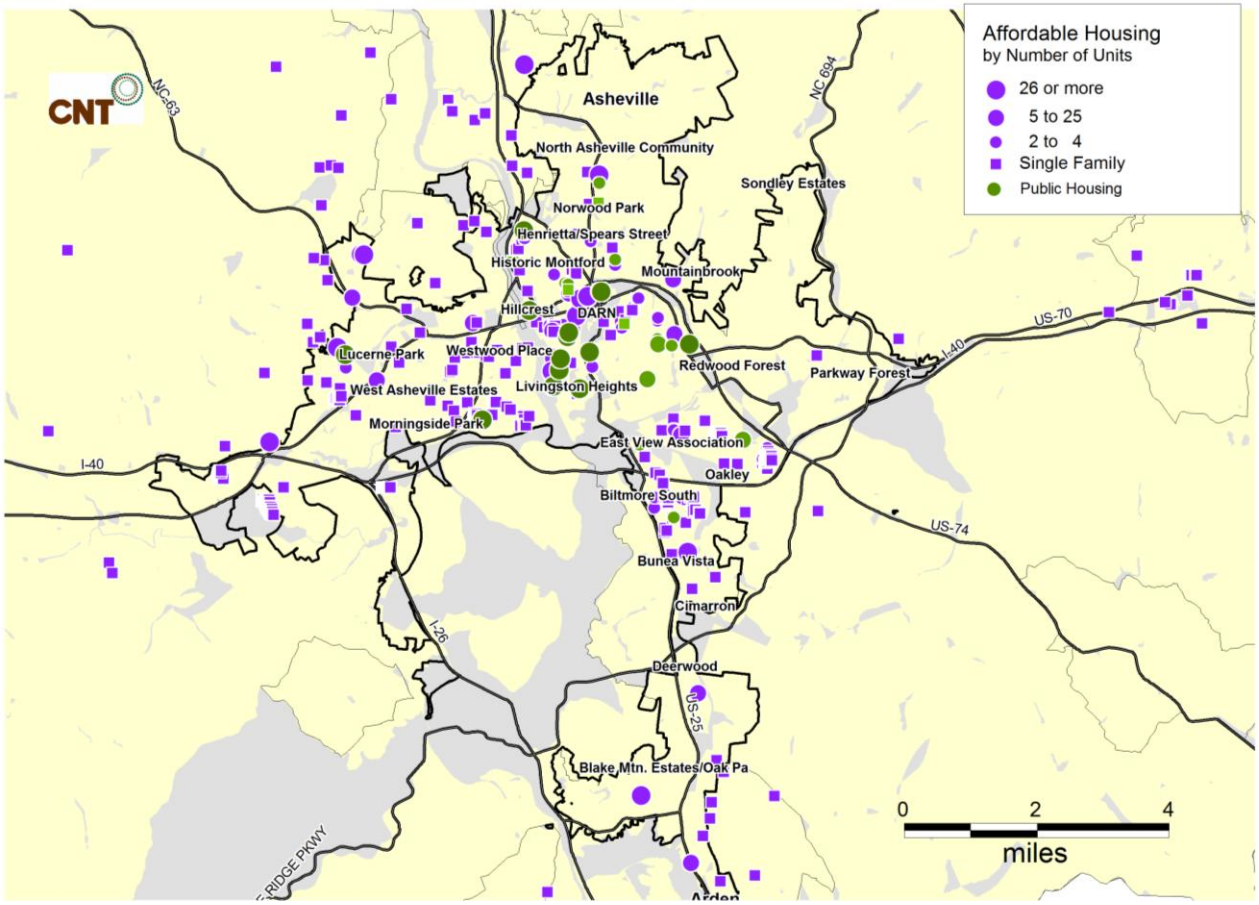
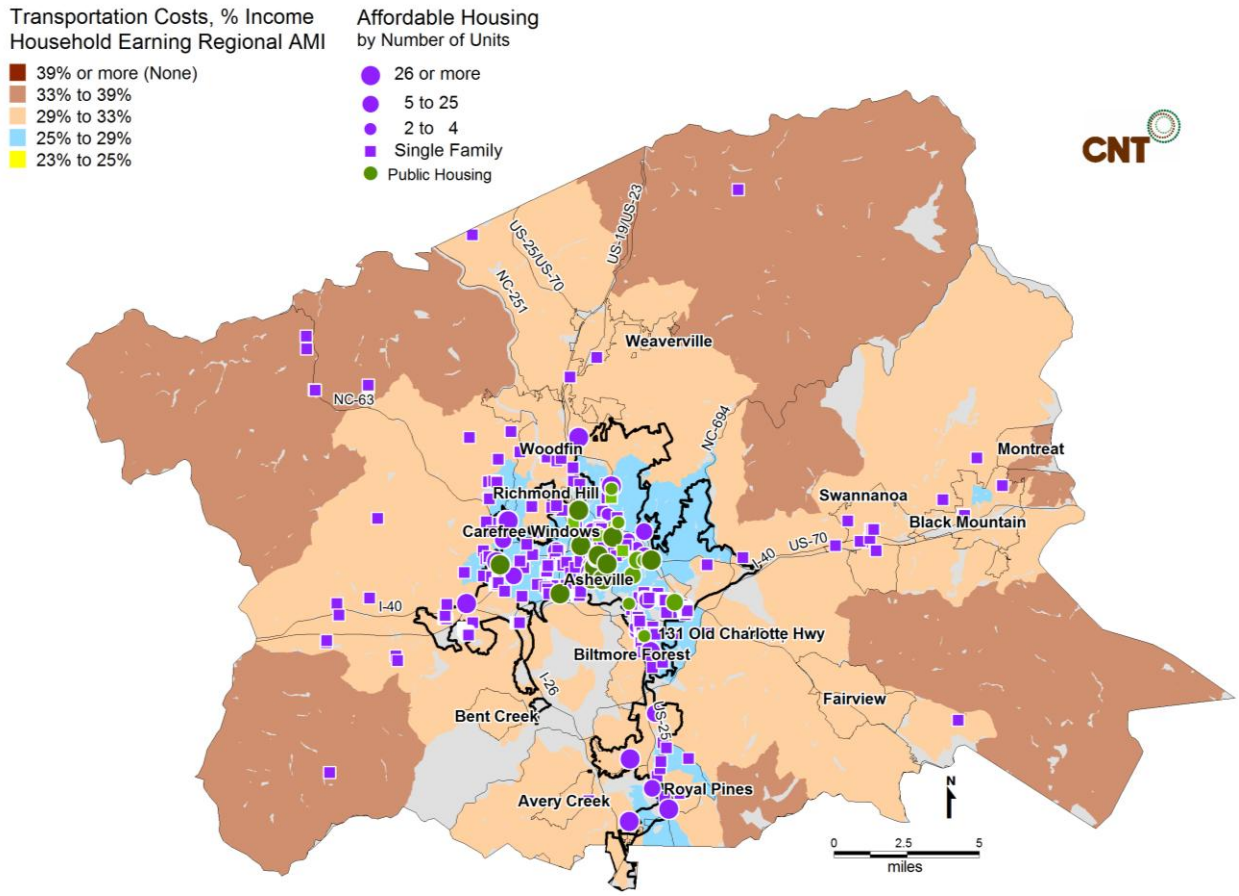


Figure 7: Distribution of affordable housing investments by the City of Asheville and the Housing Consortium, 1998-2010. (Sources: City of Asheville, Housing Authority of the City of Asheville)

However, as shown in Figure 8, only a small proportion of these units (12 percent) are in the most location efficient areas of the county, and even in those areas transportation costs are estimated to consume nearly a quarter of the typical household's budget. The bulk of the units are located in areas where the average transportation cost burden is estimated in the range of 25-29 percent of household income, and another 15 percent were constructed in areas with even higher average transportation costs. Residents of the least location efficient units are estimated to spend 47 percent more on transportation, on average, compared to residents in the most location efficient units. The transportation behavior that underlies these differences includes higher rates of household car ownership and higher rates of driving, which are in turn a function of the development pattern.[10]

[10] Estimated dollar values are based on cost factors specially calculated to represent typical prices and choices. For details on how these cost factors were constructed, see http://www.htaindex.org/downloads/Methods.3.3.11.pdf.



Estimated Household Transportation Behavior and Costs in Areas with Affordable Housing						
Transp. Cost Ranges (% of income)	**# Units**	**% of Units**	**Cars (per HH)***	**VMT (mi/ HH/yr)***	**Transp. Costs (% of income)***	**Transp. Costs ($/month)***
<25	388	12%	1.42	11,811	23	$697
25-29	2465	74%	1.61	17,186	27	$816
29-33	490	15%	1.77	22,445	31	$921
33-39	10	0%	1.92	26,874	34	$1,022
*Weighted by number of units.						

Figure 8: While most of the affordable housing investments were made in central Buncombe County, as shown on the map above, the data in the table shows that only 12 percent of units are located in the most location efficient areas. Household transportation costs are estimated at $697/month, on average, in some areas where affordable housing units were built, and $1,022/month in other areas -- a difference of 47 percent. (Sources: City of Asheville, Housing Authority of the City of Asheville, Center for Neighborhood Technology 2000 H+T Index)

The impact of site selection on the location efficiency of affordable units differs by program. As shown in Figure 9, public housing (PH) represents a large majority of the affordable housing stock at the lower-cost end of the location efficiency spectrum. As this housing approaches the end of its useful life and

requires significant rehabilitation or replacement, the City will face the challenge of maintaining location efficiency while meeting modern standards for quality public housing, e.g. low-rise, scattered-site units.

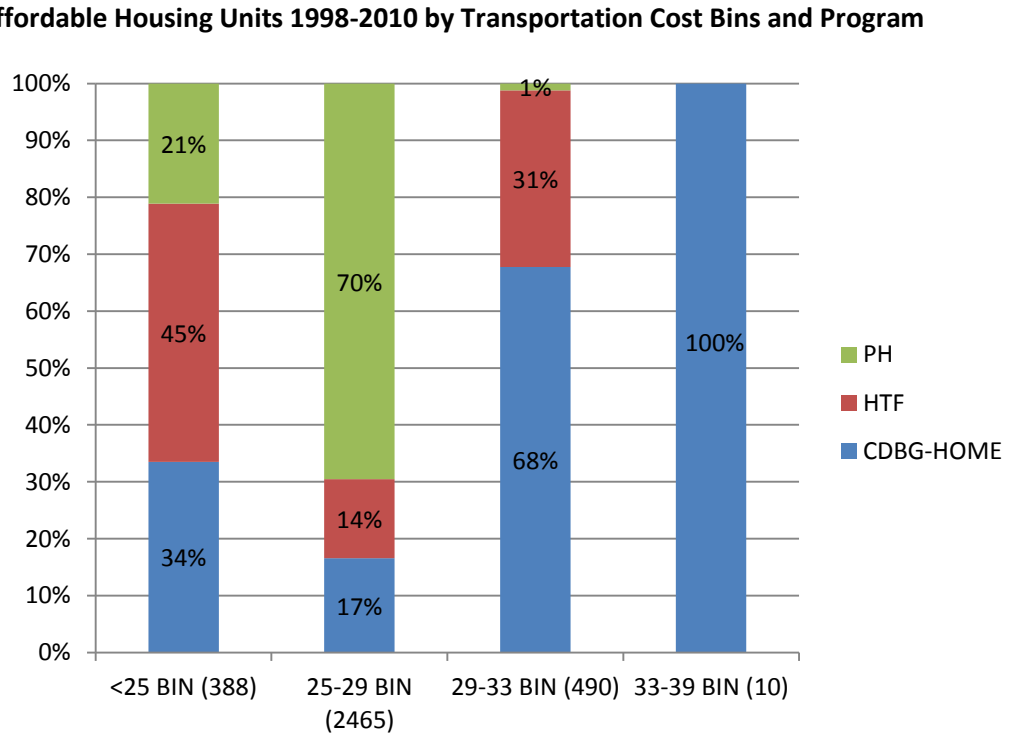


Figure 9: The Housing Trust Fund (HTF) produces a disproportionate amount of the affordable housing available in the *most* location efficient areas of the county, while public housing (PH) comprises the largest share of *relatively* location efficient affordable units and the CDBG-HOME programs fund a disproportionate share of the units produced in location *inefficient* areas. (Source: Center for Neighborhood Technology 2000 H+T Index)

Developments that received both HOME and CDBG financing are grouped together because site selection is guided by the same broad policies and priorities of the four-county Housing Consortium (although each county does determine their own strategic funding priorities to help guide the decision making process). Developments supported by the City of Asheville's Housing Trust Fund (HTF), whether in combination with other sources or not, are classified as HTF projects because awards are based on a separate set of policies and priorities. Indeed, approximately 71 percent of the units classified here as HTF-funded units were also assisted with HOME funds, according to City staff. However, the HTF scoring model expressly prioritizes projects along transit corridors, projects that support increased density, and multi-family properties over single family development (all of which tend to support location efficient development) while HOME requirements are more flexible and therefore used as a sort of gap financing.

Figure 9 confirms that the design of the HTF program supports location efficient affordable housing. HTF units comprise only 20 percent of the total, yet they represent 45 percent of the units that are located in the most location efficient areas. Viewed another way, over three-quarters of HTF-funded units (77 percent) are located in the areas where transportation costs are estimated to comprise 29 percent or less, on average, of the typical household's budget. The HOME program supported many of these projects in addition to others that did not include HTF funds, but the units for which financing

included the HTF ultimately resulted in more location efficient housing stock. While there are likely good reasons behind project selection, members of the Housing Consortium may find it valuable to discuss further whether and how it might be possible to increase the location efficiency of individual project selection within the current overall allocation process.

Put it in the Bank, Not the Tank: Location efficiency is an amenity that offers residents the opportunity to save money they would otherwise spend on transportation. Residents of some neighborhoods spend $352 per month more, on average, than residents of other neighborhoods – that's well over $4,000 per year, a significant cushion in times of economic uncertainty.

The most favorable affordable housing investments in terms of transportation costs are 370 units at six locations: the Griffin Apartments constructed in 2004, the Battery Park senior apartments originally constructed in 1918 and renovated in 2004-05 using CDBG-HOME funds, the Vanderbilt senior apartments originally constructed in 1924 and renovated in 2006 with HTF and CDBG-HOME funds; the Altamont and Woodfin public housing complexes originally constructed in 1923 and 1930, respectively, and renovated in 1971 and 2006; and a single-family home on Biltmore Avenue that received CDBG-HOME funding in 2006. Residents of these neighborhoods on average spend an estimated $695 per month on transportation (23 percent of AMI). The affordable units where residents are expected to have the highest transportation costs are two single-family homes built in 2007 on Sleepy Forest Drive in Leicester. Residents of this neighborhood are estimated to spend $1,047 per household per month, on average, on transportation (35 percent of AMI).

1.6 Type of Project and Size of Unit

CNT also derived estimated average transportation costs for single-family and multifamily projects separately. Multifamily developments tend to be located in more affordable areas compared to single-family developments, as measured by estimated average transportation costs ($818/month versus $876/month, respectively). Public housing units, treated separately, are in the most affordable areas; since most of these units are in multi-family developments, categorizing these units into single- and multi-family would create an even starker contrast. Various sizes of projects within the multi-family category (e.g. 2-4 units versus 26 or more units) showed little variation.

Estimated Household Transportation Behavior and Costs in Areas with Affordable Housing, by Project Type

Project Type and Size	# Projects	# Units	Cars (per HH)*	VMT (mi/ HH/yr)*	Transp. Costs (% of income)*	Transp. Costs ($/month)*
SF (1 unit)	410	410	1.71	19,536	29	$876
MF (> 1 unit)	51	1141	1.61	17,306	27	$818
Public Housing	31	1802	1.59	16,901	27	$805

*Weighted by number of units.

Figure 10: Location efficiency of affordable housing developments by project type (single-family, multi-family, and public housing), as measured by average transportation costs estimated for households earning 100 percent of AMI. (Source: Center for Neighborhood Technology 2000 H+T Index)

The difference between single- and multi-family units was the expected result because transportation behavior and costs as estimated by CNT's model are strongly correlated with density, and density is

highly regulated by zoning codes that tend to segregate single- and multi-family developments. Affordable housing developers interviewed for this project also indicated that capacity requirements for public water and sewer infrastructure to service a development present a significant challenge in site selection for multi-family housing. The capacity of infrastructure could well be correlated with existing zoning too, but further analysis outside the scope of this project would be required to identify any misalignments. For example, a reasonable target for rezoning could be an area where infrastructure capacity would support multi-family housing but current zoning does not.

Comprehensive data on unit size (number of bedrooms) at the address level was readily available only for developments supported by the Housing Trust Fund.[11] Analysis of this data shows that residents of smaller subsidized units benefit more from location efficiency compared to residents of larger units. As noted above, HTF-funded units are disproportionately located in relatively location efficient areas. However, the HTF units that achieve the greatest location efficiency are disproportionately those with one or no bedrooms. As shown in Figure 11, units with one or no bedrooms comprise 44 percent and 9 percent of all HTF-funded units, respectively, but comprise 55 percent and 32 percent, respectively, of the units with the best location efficiency rating. Conversely, two- and three-bedroom units are overrepresented in location inefficient areas.

Estimated Household Transportation Behavior and Costs in Areas with HTF Units, by Unit Size									
				% of Units at Each Cost Level by Size					
Transp. Cost Ranges (% of income)	**# Projects**	**# Units**	**% of Total**	**0BR**	**1BR**	**2BR**	**3BR**	**4BR**	**Totals**
<25	5	176	26%	32%	55%	12%	1%	0%	100%
25-29	66	342	51%	0%	39%	31%	29%	1%	100%
29-33	22	152	23%	0%	44%	32%	24%	0%	100%
Totals	93	670	100%	57	297	175	139	2	*#units*
% of total HTF-funded units of each size				9%	44%	26%	21%	0%	

Figure 11: Location efficiency for HTF-funded units, by size of unit, as measured by average transportation costs estimated at the neighborhood level. (Source: Center for Neighborhood Technology 2000 H+T Index)

Higher land costs together with more favorable zoning in location efficient areas may be encouraging developers to maximize the number of units on a location efficient parcel, which may in turn result in larger-size units being developed in less location efficient areas. Ideally there would be a range of location efficient housing options to serve the needs of families as well as for smaller households such as seniors and single people. However, current documentation of housing needs indicates that smaller-size units are in greater demand relative to supply, so the current emphasis on smaller-size units may be justified.

1.7 Affordable Housing Investments by Period of Funding (1998-2004 vs 2005-2010)

The investments studied in this project were made over a 12-year period (1998-2010) that brought varying economic conditions, levels of resources dedicated to affordable housing, and policies that shape site selection. The sites selected for units reported during the first half of the period (1998-2004)

[11] Unit size data was also provided by HACA for units supported with Housing Choice Vouchers, however due to differences in the scale of data aggregation these are addressed separately in section 1.8 below.

were distributed differently across Asheville's spectrum of location efficiency compared to those reported in the second half (2005-2010). The location efficiency of selected sites shifted from a heavy concentration in the second-lowest grouping of estimated average transportation costs (25-29 percent of income) to greater representation above and below that level.

While these units were produced over several years, the transportation cost model used as a measure of location efficiency reflects a snapshot in time as captured in the 2000 H+T dataset. Any major changes in the physical characteristics that are used to model transportation behavior (such as massive new residential construction in a formerly rural area, or relocation of a major employer to a neighboring county, to name two possibilities) could impact transportation cost estimates. Also, a large share of units (46 percent) were reported during a three-year period from 2005 to 2007, so the conditions that influenced site selection for those three years will disproportionately impact the estimated location efficiency of units produced in the latter period shown below (2005-2010).

Those caveats notwithstanding, on balance it appears that the factors influencing site selection more recently provided more gains than setbacks:

- Of the 622 units produced in the first seven years (1998-2004), 64 percent were located in areas where average household transportation costs are estimated at 25-29 percent of income, while 27 percent were in *more* expensive areas and 10 percent were in *less* expensive areas.
- Of the 794 units produced in the latter six years (2005-2010), a smaller share (36 percent) were located in areas where average household transportation costs are estimated at 25-29 percent of income; however, a larger share were located in both *more* expensive areas (32 percent) and in *less* expensive areas (31 percent).
- The percentage-point shift toward greater location efficiency was larger than the shift toward less location efficiency.

These findings are summarized in Figure 12 below.

Distribution of Assisted Units Among Areas with Different Transportation Costs, by Period				
Transp. Cost Ranges (% of income)	**1998-2004 (622 units)**	**2005-2010 (794 units)**	**Point Gain (Loss)**	
<25	10%	31%	+21	**% of Period**
25-29	64%	36%	(28)	
29-33	27%	32%	+5	
33-39	0%	1%	+1	
Total	100%	100%		

Figure 12: The factors influencing site selection in the latter period provided more location efficiency gains than setbacks compared to the first period. Data does not include public housing units. (Source: Center for Neighborhood Technology 2000 H+T Index)

Several factors could account for this apparent shift. It is possible that as the Housing Trust Fund matured from its establishment in 2000, the City increasingly shifted funding awards to preferred areas that aligned with redevelopment goals in location efficient areas. However, the annual allocation of

revenues to the HTF was cut back markedly during the latter period, which also saw a spike in overall affordable unit production (2005-2007). This means that the HTF was funding a smaller proportion of total units in the latter period. The shift in HTF site selection factors must therefore have been large enough to compensate for the reduced proportion of units that were funded by the HTF, or the shift in factors must have also affected the production of units using CDBG-HOME dollars. As H+T data becomes available for multiple years, there will be a methodologically more robust way to evaluate location efficiency trends over time and better isolate when they occurred, which will help in determining the reasons for any shifts.

1.8 Housing Choice Vouchers

The final component of local affordable housing stock addressed in this study consists of Housing Choice Vouchers (HCVs) funded by HUD and administered by HACA for all of Buncombe County, including the City of Asheville. Eligibility for the HCV program is limited to households earning less than 50 percent of AMI, and 75 percent of vouchers must be assigned to households earning less than 30 percent of AMI. The choice of rental units is constrained by HUD calculations that define the maximum amount of subsidy, and by uneven participation by landlords. HACA provided data on the location of nearly 1,700 rental units in Buncombe County where vouchers were being used in 2011, aggregated to the ZIP code level. H+T data was likewise aggregated using standard weighting methods to estimate the average transportation cost burden shouldered by households in each ZIP code where vouchers are used. To remain consistent with the analysis thus far, costs are modeled for households earning the area median income (AMI); the transportation burden for the low-income population eligible for HCVs is therefore likely higher, as a percentage of income, than depicted here.

Figure 13 below illustrates the difficulty of balancing housing and transportation costs even with a portable rent subsidy. Estimated average transportation costs increase as homes are located farther from the more densely developed residential and commercial core of the county. Less than a third (29 percent) of voucher holders were able to secure a unit in a relatively location efficient area; the rest reside in areas where a household's average transportation needs are estimated to cost 29-39 percent of household income. Larger households, e.g. families with children, are more burdened than other types of households because larger units tend to be located in less location efficient ZIP codes.

Local analyses of the housing market indicate that HUD's calculation of fair market rents (FMRs) plays a role.[12] A 2009 increase helped bring the FMRs closer to actual rent levels for modest housing in the four-county region, but housing in many relatively location efficient areas remains firmly outside the reach of a household with a voucher. The extent of the mismatch will influence the degree to which voucher holders are *de facto* "pushed" elsewhere, including to areas where high transportation costs present a real but less obvious challenge compared to rent costs.

[12] *Housing Needs Assessment and Market Study* (2009)

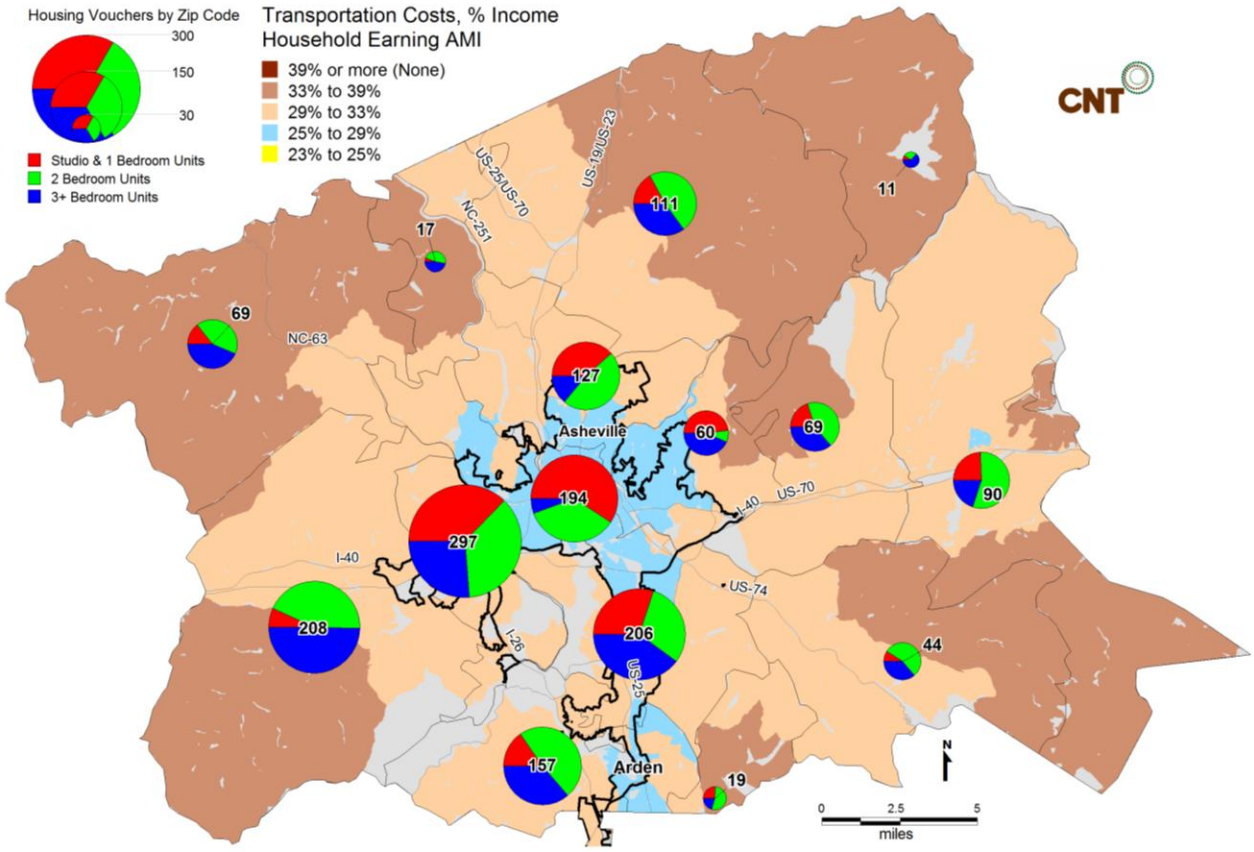


Figure 13: Location efficiency and size of units whose tenants are HCV holders, where estimated average household transportation costs reflect the weighted average for each ZIP code, shown as a percentage of AMI. (Sources: Housing Authority of the City of Asheville, Center for Neighborhood Technology 2000 H+T Index)

2. Opportunity Areas and Current Place-Based Incentives

2.1 Overview and Method

To evaluate the extent to which current policies encourage location efficient affordable housing in areas where development opportunities exist, CNT identified parcels that meet minimum basic requirements for affordable housing development, prioritized them according to their location efficiency, and then evaluated existing policies that encourage or incentivize development in those places.

The City of Asheville's Department of Community Development helped establish selection criteria to identify approximately 60,000 parcels within Buncombe County where affordable housing development could reasonably be considered. Parcels considered potentially developable excluded public forests and other protected areas, zoning districts that prohibit residential development, parcels with incompatible land uses such active landfills, parcels not served by water and sewer infrastructure, and parcels located in a flood plain.

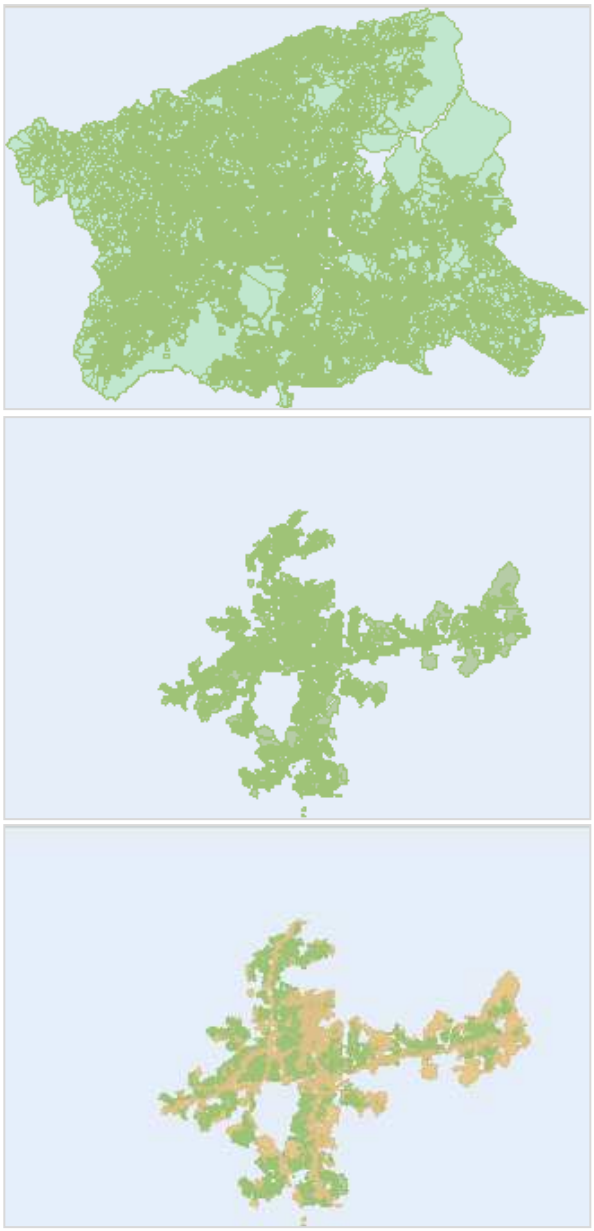


Figure 14: Of all parcels in Buncombe County (top), approximately 60,000 were identified as potentially developable (middle), of which approximately 44,000 meet basic criteria for affordable housing. (Source: City of Asheville)

Of these, approximately 16,000 parcels have one or more of a set of characteristics that may present challenges for affordable housing development, as identified by local affordable housing developers and Community Development staff. For example, steep land that is subject to the City's or County's regulatory protections can increase the complexity and cost of development. The analysis adopted a conservative approach and therefore may understate the availability of development opportunities. Conversely, feasible opportunities are overstated to the extent that other important factors, such as the value of existing buildings, the cost of land, and the width of existing access roads, were omitted from the selection criteria.

CNT reviewed existing plans and policies in effect in the City and County, and worked with City staff to identify four place-based policies to include in this study. Section 2.2 below summarizes key publications that envision the shape of development in the area, as well as specific policies chosen for review due to their role in guiding development to particular places. Section 2.3 shows the results of the parcel screening process described here. The location efficiency of potentially developable parcels was evaluated by calculating weighted average transportation cost estimates for various sub-groups of parcels. The analysis also evaluates the alignment between relatively location efficient developable parcels and current policies that encourage or incentivize development in particular areas.

2.2 Current Plans and Policies that Support Location Efficient Affordable Housing

The City has undertaken significant efforts in policy and planning in the last decade that support more efficient use of land as well as help preserve valuable scenery, watersheds, and air quality, and encourage safer and more equitable development. Various plans and small-scale initiatives constitute a strong foundation for sustainable development more generally, and several recent ordinances have begun to reflect sustainability principles in local policy. However, other, more fundamental policies and key fiscal decisions continue to undermine or contradict these approaches. A major challenge in Asheville at this point is therefore

securing public support for the policies necessary to implement plan recommendations, and doing so within a pro-active time frame that avoids the need for costlier solutions later. Reversing or mitigating the impacts of poorly planned development is far more difficult than setting up an appropriate framework to guide it in the first place. However, the City's current fiscal constraints, while not as dire as in some parts of the country, make it more difficult to dedicate resources to new initiatives.

The City of Asheville Plan 2025, published in 2003, demonstrates a clear awareness of trends that pose a challenge to a continued high quality of life in the region, from which it derives a set of well-articulated smart growth principles and recommendations as well as compelling design concepts. For example, the Plan suggests that the City should "permit and encourage transit-supportive density of 8-16 units/acre minimum along and adjacent to major corridors and transit nodes," by which it means areas within a "five minute walk" of transit stops. This recommendation promotes location efficiency in general with a mutually complementary linkage between land use intensity and supportive transportation. Elsewhere the plan proposes that the City permit duplexes and other low-intensity multi-family housing as a "use-by-right with special requirements" in single-family districts, a small step toward more efficient land use and a fairer housing market. The plan's recommendations also directly address location efficient affordable (subsidized) housing by proposing density bonuses for workforce infill housing and, more broadly, administrative density bonuses for affordable housing in all zoning districts.

These recommendations are key because under the 1997 Unified Development Ordinance (UDO) approximately 50 percent of the land that had been zoned to allow multifamily housing was rezoned to single-family. Much of this land had been zoned to allow up to 16 multifamily units per acre, so the re-zoning to single family and far lower density represented a significant loss for potential location efficient housing. It may prove fruitful for City staff to research the reasons these changes were considered necessary at the time, whether those factors or concerns are still relevant today, and whether they might be addressed differently in these or similar areas. In the meantime, the 2025 Plan's recommendations are a step forward in mitigating the broader impacts of the rezoning, and have led to small but significant positive changes such as greater flexibility in RS-2 zoning districts.

Compared to the 2025 Plan, the City's 2009 Sustainability Management Plan exhibits a stronger commitment to behavior change as a necessary strategy to achieve long-term goals, as well as greater creativity in the approaches to achieve it. Much of its scope is limited to the City's operations, however, because its point of departure is the City's 2007 resolution committing itself to certain greenhouse gas (GHG) emissions targets. Still, implementation of the plan's strategies will likely inform any future actions to reduce GHG emissions in the region. For example, the plan recognizes that the use of electricity and vehicle fuels produce the largest share of GHGs and present many opportunities for reduction, e.g. through a range of transportation demand management (TDM) initiatives that could be expanded to the whole community. The plan also focuses on the role of land use and density in achieving changes in transportation behavior. Since the UDO zoned "much of the city's most developable areas" at low- to medium residential densities, the plan suggests using overlay districts to increase density, reduce or eliminate setback requirements, and expand explicitly mixed-use areas To ensure that the benefits of increased location efficiency are shared across the community, ideally these changes would be accompanied by specific measures to incorporate affordable housing.

In addition to articulating broad plans and principles to guide growth, the City encourages development or re-development in particular areas. For the purposes of this study, the City's Community Development Division identified four such "place-based" strategies that together comprise the bulk of the City's current or recent efforts to guide investment to particular places, and which are therefore of

interest in evaluating the extent to which policies support location efficiency generally and with respect to affordable housing in particular. Two of the strategies apply to all properties in the city that meet certain eligibility requirements, while the other two target specific bounded neighborhoods.

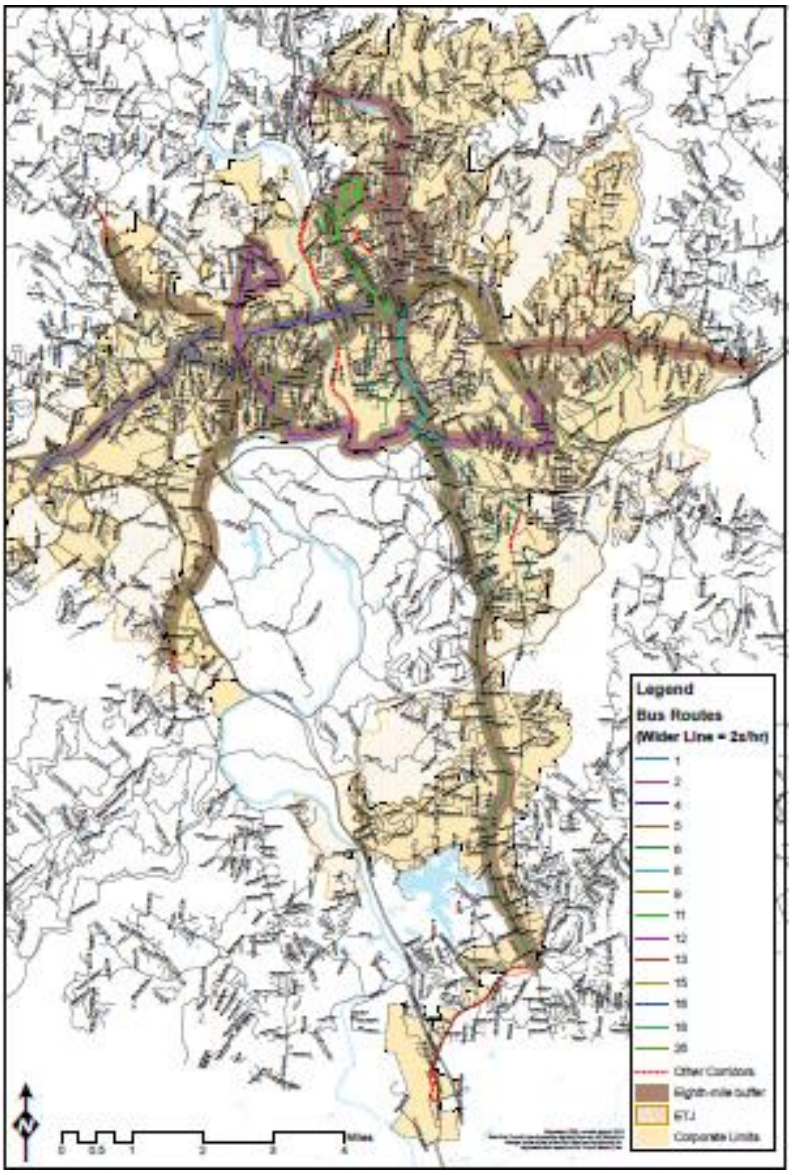


Figure 15: Properties eligible for incentives under the 2010 Sustainability Ordinance are shown shaded in brown. (Source: City of Asheville).

In 2010 the City passed Ordinance 3908 (commonly referred to as the "sustainability ordinance"), which offers developers higher density limits and other valuable regulatory relief for projects located in certain zoning districts and within 1/8 mile of major transit routes.[13] Projects must meet a set of basic requirements—for example there must be at least five residential units—and design standards, beyond which the type and magnitude of the incentives are defined by the extent to which a project meets various program goals (e.g. energy efficiency). Despite its limited geographic scope and somewhat complex rules, at least one affordable housing developer interviewed for this project conveyed enthusiasm about the ordinance because of the "huge" benefit of significantly higher density limits.

A second ordinance, the 2011 Land Use Incentive (LUI) policy, was designed to encourage density and affordable housing along transportation corridors. It offers relief from fees and incremental property taxes, and applies to projects located within ¼ mile of specified major roadways. Projects must include at least two residential units and must meet certain equity and legal liability requirements. The duration of tax increment rebates and the magnitude of fee waivers are both scaled through a system of points that are "earned" primarily for meeting certain affordability and energy efficiency thresholds, with a small award for mixed use and proximity to transit. The maximum theoretical benefit is 100 percent of fees waived and a grant equal to 10 years of incremental City property taxes. Unfortunately for affordable housing developers,

[13] Other stipulations apply, e.g. only projects within the city's boundaries are eligible, and only if 75 percent of the project area is within the 1/8-mile buffer.

projects receiving the maximum 50 percent fee waiver benefit granted under a separate affordable housing policy cannot also score affordability points toward an LUI fee waiver (but may receive a further fee waiver based on other points earned). Moreover, approval of an LUI award requires a public hearing and Council approval, even for smaller projects that otherwise require only administrative review,[14] which subjects already potentially contentious affordable housing projects to further scrutiny and uncertainty. Still, for certain kinds of projects, this policy may help make the numbers work better and reduce the need for other subsidies.

Other efforts to guide development target specific places, rather than all places that meet certain eligibility criteria. In southwestern Asheville around the Burton Street neighborhood, a community-driven revitalization initiative received funding through the U.S. Department of Justice's (DOJ) "Weed and Seed" program from 2006-2011 to address crime, human services, economic development, and physical improvements.[15] Investments in weatherization, downpayment assistance, emergency home repair, and infrastructure provide much-needed improvements to the built environment while also laying the groundwork to ensure that the neighborhood's lower-income residents remain part of the long-term redevelopment success story. Another major focal point of the City's efforts is the 1,100-acre East of Riverway area, an underutilized area close to both downtown and the river where planning efforts are underway to create a desirable, transit-oriented new neighborhood while reserving land for future affordable housing development in a walkable environment close to jobs and amenities. While the incentives to develop in these two areas are not explicit and specific, the City's demonstrated interest in attracting investment there represents a stake that offers developers inherent value.

Beyond the city's borders, Buncombe County has engaged in limited land use planning historically, however residents and officials are aware of growth pressures and exhibit some willingness to guide it: the recent land use plan update (2006) discusses the placement of new sewer infrastructure as a key driver of the extent and location of growth, and highlights the need to set aside sites appropriate for future industrial development. The plan included many positive recommendations regarding appropriate zoning that might be introduced, and the County passed its first county-wide zoning ordinance shortly thereafter (2009). The zoning code defines and supports several levels of development intensity, but the isolation of single-family residential development from other land uses, along with the land use plan's seemingly negative categorization of multifamily residential development, likely presents a long-term obstacle to increased location efficiency. Other kinds of challenges were identified by developers interviewed for this project, who suggested anecdotally that development is difficult in Buncombe County due to limited water and sewer infrastructure as well as by what they perceived as a lack of flexibility on design issues and resistance to multi-unit projects. While infrastructure improvement is clearly a long-term concern, it may prove fruitful for the County to consider whether and how it might address the latter issues in the short term.

The opportunities for affordable housing development are influenced by these broad planning frameworks and place-specific incentive policies, but also by the priorities identified by affordable housing stakeholders. The priorities described in the *Consolidated Strategic Housing and Community Development Plan 2010-2015*, which guides the use of HOME funds in Buncombe County and CDBG

[14] Projects of less than 35,000 square feet or less than 20 residential units qualify as a "Level I" project and are reviewed and approved at the City staff level. Larger projects must be approved by a Technical Review Committee; above 50 units, a project must also be approved by the,Planning & Zoning Commission and the City Council.
[15] Weed and Seed Data Center, http://www.weedandseed.info/, accessed April 2012. The area extends from the French Broad River to Louisiana Avenue and from Patton Avenue to Amboy Road, encompassing 2.24 mi^2.

funds in the city of Asheville,[16] seem compatible with location efficiency both in terms of the types of units (e.g. smaller rental units) and the preferred locations and development patterns (e.g. revitalization areas, higher-density construction along transit corridors, reused grayfields). Explicitly screening sites for location efficiency would directly link the goals of the Plan to sustainable development principles.

2.3 Potentially Developable Acreage and Incentives

Both the city and the county possess a large amount of property that is suitable for further investment, whether measured in terms of parcels or acres. The 60,000 parcels of land in Buncombe County identified for evaluation comprise over 70,000 acres, of which nearly 50 percent met all basic development criteria; as described in section 2.1, the remaining acres have one or more of the characteristics identified as potentially challenging for development. However, the local developers interviewed for this study emphasized that they evaluate every property on its own merits.

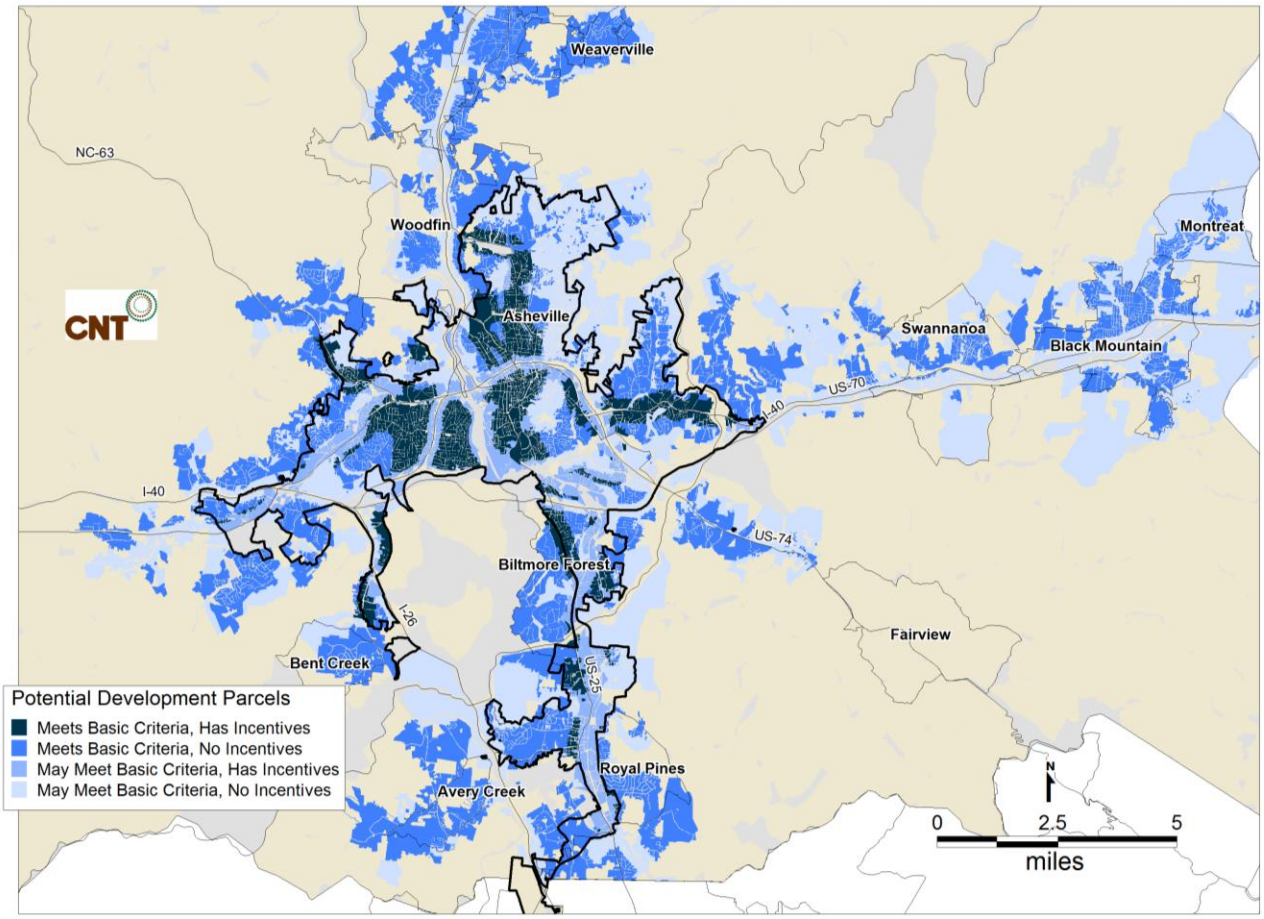


Figure 16: Land that meets or may meet basic criteria for affordable housing development, further categorized by the presence or lack of the four types of development incentives selected for this analysis. (Source: City of Asheville, Center for Neighborhood Technology)

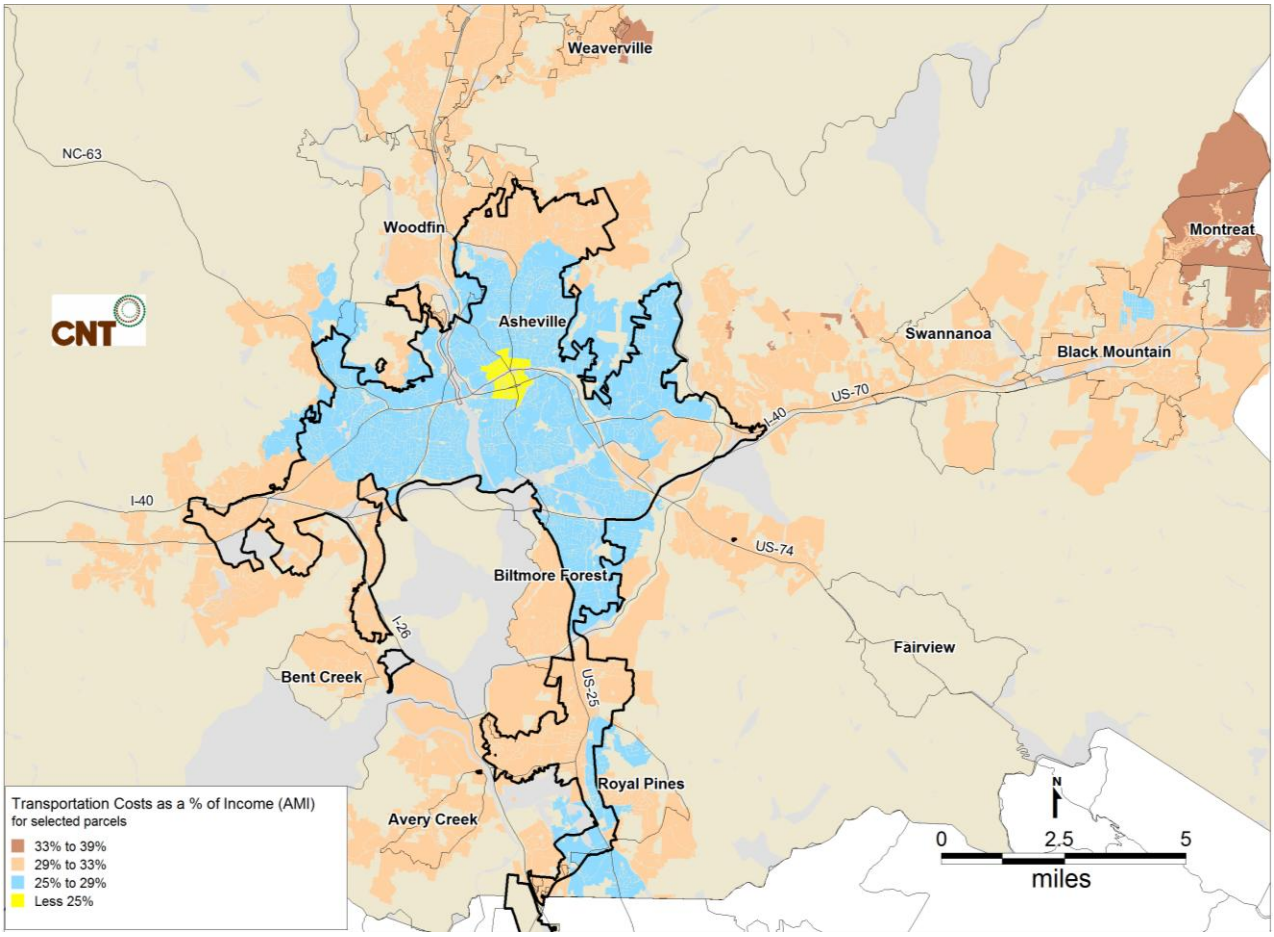
[16] CDBG grants are allocated directly to the City of Asheville, and may be used for a variety of purposes within the city. HOME grants are allocated to the four-county consortium for affordable housing only; the City of Asheville administers the HOME grants (e.g. $2.7 million in 2008) under the advisement of a four-county Board. Note: HOME funds have been cut substantially in recent years. The Consortium allocation for 2012-13 was only $942,529.

Of the approximately 33,000 acres of land that met all basic development criteria, nearly 20 percent are eligible for one or more of the development incentives studied here. Note that much of the acreage along major transportation corridors is eligible for one or more incentives but is also subject to federal noise regulations; this can be clearly seen in Figure 16 in that much of the area designated "May Meet Basic Criteria, Has Incentives" follows major road corridors. Because the City of Asheville manages the four selected incentive programs, one can also clearly observe from the figure that none of the targeted areas are located outside city boundaries. This raises the idea that the County could consider creating sustainable development incentives to encourage growth along existing transportation corridors where supportive infrastructure is in place. City-County discussions on a coordinated approach could prove fruitful in the near term.

CNT also examined the selected parcels/acreage based on the four levels of estimated average transportation costs (location efficiency) used previously in this analysis, as shown in Figure 17 on the next page. Nearly three-quarters of the acreage selected in the screening (over half of the parcels) are located in *relatively location inefficient* areas, shaded in beige and brown, where average transportation costs are estimated to consume 29 percent or more of the typical regional household's income.

Placing affordable housing in these areas presents more of a burden on residents in terms of average transportation costs than elsewhere. Many of these areas have characteristics that may present challenges for development in general (such as hillside protections) and for affordable housing development in particular (such as Federal noise regulations). A significant barrier to affordable housing, however, is presented by the combination of high land costs and zoning regulations that keep density too low for a viable project.

Over 18,000 acres of developable land are located in *relatively location efficient* areas, shaded in blue and light blue. Most of this acreage is located in areas where average transportation costs are estimated to consume 25-29 percent of the typical household's income, while only 309 acres are in the most location efficient areas, in central Asheville, where average transportation costs represent less than 25 percent of a household's income. The scale of this discrepancy points to the need for creating more location efficient areas in general, as well as making more efficient use of the ones that currently exist. Overcoming these challenges is critical because every percentage point of income not spent on transportation saves the region's typical household $362/year. An estimated $1.8 million would be saved if 5,000 people could live in an area where average transportation costs are estimated at 28 percent of income instead of 29 percent, and the savings potential will be higher as gas prices rise.



Transp. Cost Ranges (% of income)	Parcels	Acres	Meets Basic Criteria	May Meet Basic Criteria	Scale of Opportunity	Average Parcel Size
<25	1,135	309	68%	32%	9,508 ac. meets criteria	0.27 ac.
25-29	27,236	17,881	52%	48%		0.66 ac.
29-33	31,031	48,392	48%	52%	23,704 ac. meets criteria	1.56 ac.
33-39	888	3,967	12%	88%		4.47 ac.

Figure 17: The parcels selected in the screening (map) exhibit variable levels of location efficiency. Closer review of the acreage and parcel sizes (table) give an indication of the development opportunities and challenges at each level. (Source: City of Asheville, Center for Neighborhood Technology 2000 H+T Index)

Well over 6,000 of the acres selected for consideration were both vacant and met all basic development criteria. Less than 1 percent of this acreage, however, is in the most location efficient areas, where average transportation costs are estimated to comprise less than 25 percent of the typical household's income. These 18 acres are spread over 97 parcels; with an average parcel size of 0.19 acre, infill development is most likely required. Over three-quarters of these parcels already receive at least one form of development incentive and approximately one-quarter have one or more characteristics that may make development more challenging, such as partial overlap with the floodplain, applicability of either City or County steep slope regulations, and proximity to nuisances. It would be worth

investigating the particular challenges of developing each property for various kinds of appropriate uses to enable the City to tailor incentives to encourage investment on these key parcels.

More broadly, however, the odds are stacked toward inefficient development: more than twice as many development opportunities exist in location inefficient areas than location efficient ones, and parcels at lower levels of location efficiency are significantly larger on average, which can be an attractive attribute. Another attractive attribute for many kinds of development, all things equal, is if land is vacant. Over 15,000 acres of developable land studied here was vacant at the time of this analysis, the vast majority of which (82 percent) was located in relatively location-inefficient areas. Other factors such as existing zoning, density restrictions, the cost of land, and the presence of existing buildings can also discourage development or redevelopment, and likely compound the pull toward relatively location inefficient areas.

All the same, consider that 2,721 acres of Buncombe County land are located in areas where household transportation needs are estimated to cost 29 percent or less of the typical household's income, on average. This presents a substanial opportunity to deliver new units in a relatively location efficient, relatively amenity-rich environment. If only half this acreage were developed at an intensity of 8 units/acre, and a quarter of those units were developed as affordable housing, over 2,700 lower-income households would have a more affordable, relatively location efficient home. As a matter of comparison, the most recent Consolidated Plan states that the Housing Consortium's annual goal for new affordable housing production is 115 units,[17] so the figure calculated here represents 24 years' worth of new units. This comparison is not a suggestion that new affordable housing should not be constructed elsewhere in the region. Indeed, the actual absorption potential of this relatively location efficient vacant land likely extends even farther, measured in years, when considering only the share of the four-county Consortium's resources that are allocated to Buncombe County for new construction.

Even if vacant parcels are generally more attractive to developers, affordable housing is likely to face less opposition as part of redevelopment of underutilized land. For example, Federal level policies are beginning to more actively address the potential of underutilized land for residential redevelopment after any necessary remediation activities are completed. Both the City and the County possess land burdened with the stigma of legacy industrial uses that may be appropriately remediated to levels safe for habitation; the active involvement of community members and stakeholder groups can help ensure that the process is transparent and well understood, and that concerns about health and safety are respected and effectively addressed. Redeveloping underutilized land can also help address concerns about parking requirements, which can be a highly sensitive issue for a developer as well as for a site's neighbors.

Merging the last two figures together also proves instructive. The City of Asheville actively incentivizes development in four major areas: the Weed and Seed area and the East of the Riverway area, and parcels that meet the eligibility and design requirements of the Sustainability Ordinance and/or the Land Use Incentive program. Using estimated household transportation costs as a measure of location efficiency shows that the incentives studied here are generally being targeted to areas that are relatively location efficient (where household transportation costs are estimated at 27.4 percent of income, on average, or $826/month) compared to those that meet the basic development criteria but do not qualify for the incentives (30.1 percent of income, or $909/month). These areas are more

[17] The Consortium also allocates funds for emergency repair, rental assistance, downpayment assistance, and other important activities aside from the construction of new units.

location efficient, on average, than non-incentivized areas as a group, which demonstrates the general alignment of these incentives with sustainability goals.

The development incentives are not totally aligned with location efficiency, however. Over 2,500 acres are eligible to receive development incentives but are located in areas where average transportation costs are estimated to comprise 29 percent or more of the typical household's income. Conversely, and potentially more problematic, there are over 4 times as many acres (10,500) in relatively location efficient areas that are not eligible for any of the development incentives studied here. To be fair, only a small proportion of these are in the ***most*** location efficient areas, of which the majority may have development challenges. In addition, parcels tend to be smaller in the most location efficient areas, and lack of contiguousness may not enable parcel assembly. All the same, the evidence suggests that incentives could be better aligned with location efficiency. Additional work would be needed to identify the extent to which development challenges on the most location efficient properties can be overcome or offset enough to encourage development.

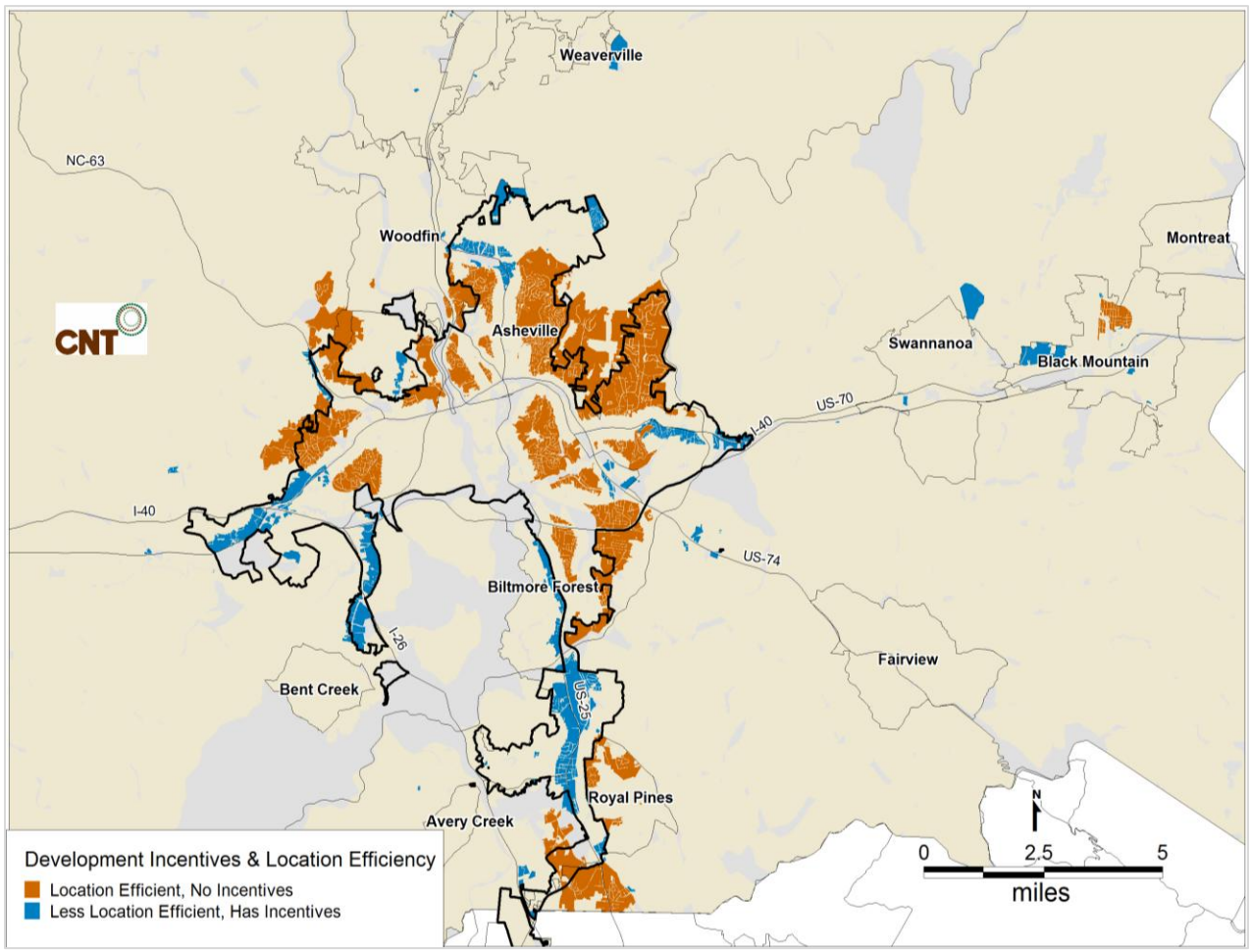


Figure 18: Some relatively location efficient areas are currently not eligible for the development incentives studied here, while some relatively location inefficient areas are eligible. The City and County could work together to determine whether and how development challenges on relatively location efficient properties can be reduced or mitigated. (Source: Center for Neighborhood Technology 2000 H+T Index)

3. Recommendations

The goal of this project was to use CNT's Housing and Transportation Affordability Index to evaluate the location efficiency of existing affordable housing and developable areas, and to define ways that development incentives could be based on this measure. The City of Asheville has taken significant steps in recent years to overcome the barriers to sustainable development so that its residents can continue to enjoy a high quality of life even as the region grows. However, more can be done to reflect the increasing understanding of the impact of location and development patterns on affordability. The following recommendations are designed to help City, County and other regional municipal leaders consider ways that may be appropriate to incorporate location efficiency into plans and policies in the Asheville region.

Reward development in areas that meet more refined location efficiency thresholds within the city.
The Index essentially rates neighborhoods based on the extent to which their physical characteristics support lower household transportation costs. The thresholds that defined various location efficiency levels in this analysis were selected to highlight variation in the built environment characteristics across the county, but could be refined to better highlight the narrower variation within the city. These thresholds could be used as a basis for improving the support of affordable housing in the following ways:

- Projects could be required to meet a minimum location efficiency threshold.
- Bonus points could be awarded to projects located in any area below a certain threshold.
- Applications could receive an additional per-unit subsidy of a certain dollar amount in any area below a certain threshold.[18]
- Phase in expedited approval for projects located in location efficient/affordable areas, for example a pledge to review and approve all projects in priority neighborhoods or along priority corridors within 60 days.

As discussed above, Asheville's Housing Trust Fund already contributes a sizable share of the most location efficient housing. One of these methods could formalize that correlation, and eventually extend it to inform the selection of projects for CDBG funding and for the City's share of HOME funding (the latter subject to approval by the four-county Housing Consortium). Beginning in 2012, the H+T Index will be updated on an annual basis using American Community Survey data (rolling 5-Year averages) instead of decennial Census data, which will enable gradual adaptation of incentives to changing conditions on the ground. H+T values can also be reconfigured into other geographies that may be appropriate, such as zones, contours, or corridors.

Prioritize underutilized location efficient land for greater attention.
Location efficiency is a regional amenity that calls for special attention to ensure that community benefits are maximized and fairly allocated. Underutilized land at higher levels of location efficiency should receive priority attention to identify and overcome obstacles to redevelopment. Some of these

[18] Since individual households' actual choices may vary quite a bit from the modeled behavior and costs generated by the H+T Index, CNT does not recommend offering a dollar-for-dollar subsidy for units based on the estimated reduction in transportation costs in one location versus another. In other words, if household transportation costs are estimated to be $200/month lower, on average, in a location efficient area A compared to less location efficient area B, a subsidy could be defined to encourage development in Area A, but it is not appropriate to define that subsidy to be literally equivalent to $200/month over the projected affordability period of the unit.

areas are already part of the two neighborhood-specific revitalization efforts evaluated here, but there are likely others around which a redevelopment concept could be conceived. In the near term, the slack economy and federal funding constraints will slow progress in both the East of the Riverway and West Asheville areas. However, over the long term, development pressure in these neighborhoods will require protection of affordable housing resources.

Use location efficiency as the basis for incentives in the Sustainability Ordinance.
The existing sustainability ordinance was a valuable step forward in guiding development, but eligibility is based on proximity to high-frequency transit routes, which can be cut back in times of scarce funding. It may make more sense to target multi-family housing to location efficient areas because these take into account transit access as well as intensity of land use, proximity to employment centers, and other factors essential to combined housing and transportation affordability. The ordinance could remove barriers to sustainable development on a broader basis if it used neighborhood- or corridor-based Index scores as an eligibility criterion. CNT further recommends that corridors never be defined using less than a ¼ -mile buffer, which better represents a pedestrian shed and would align the sustainability ordinance with the LUI and the HTF. The ordinance could also be refined with additional encouragement for projects that are located within ¼-mile of a transit stop above those that are merely within the corridor. (Alternatively, if the locations of stops are insufficiently fixed, this refinement could target specific nodes with greater historical permanence.)

Revise the Land Use Incentive policy.
Eligibility under the LUI policy is based on proximity to major roadways, not transit. The policy overlaps somewhat with the sustainability ordinance: some of the specified roadways are also major transit corridors, and extra LUI points are awarded if the project meets the eligibility requirements of the sustainabilty ordinance. However, a transit route along a highway is not a walkable environment, and in lieu of requirements or standards to the contrary, the policy is at risk of simply encouraging more auto-oriented development that does little to increase location efficiency. One rationale for the use of roadways in the eligibility criterion may have been to link eligibility to physical features that are more stationary over a long time horizon. Another possible rationale may have been to incentivize infill development in areas that are considered less desirable due to their proximity to high volumes of traffic. It may be useful to investigate the reasoning behind this construct to determine if the LUI can better support sustainable development by incorporating a measure of location efficiency into the eligibility requirements or scoring options. Generally, CNT recommends using housing and transportation costs combined, i.e. the H+T Index, to evaluate location efficiency; for policies and programs that deal exclusively with subsidized housing, however, transportation costs may be used alone.

Remove barriers to compact, mixed-income development in the Unified Development Ordinance.
Others obstacles to more compact, mixed-use, transit-supportive development could be removed by amending the UDO. While the recent sustainability ordinance and LUI can slowly guide development to many of the places that will support long-term regional sustainability, their impact will be constrained by the development restrictions in the UDO that favor the isolation of single-family residential uses from other uses, which in turn is likely to encourage development to locate ever outward. Some recent changes to expand allowable uses within some single-family zoning districts (RS-2) is a positive step forward, albeit with many associated special requirements, but far more is needed to remove the UDO's formidable barriers to sustainable development. One approach might be to create zoning overlays based on location efficiency tiers (or contours), and to focus initially on corridors. More location efficient areas could be associated with more flexible design standards, such as reduced parking requirements—something that should be generally available to developers rather than just to affordable housing

projects as currently specified in the sustainability ordinance. Furthermore, the rules that guide development could do more to recognize the uneven allocation of risk when a new policy is introduced. Based on feedback received in interviews undertaken for this project, the City may wish to consider matching the financial risks borne by developers who seek to take advantage of a new policy with a greater willingness to approve a development that meets requirements. More public education on the benefits of sustainable development, location efficiency, infill / adaptive re-use, and related topics would help reduce the political risk to Council members whose willingness to support location efficient development may be mitigated by a need to allay constituents' fears.

Coordinate City and County investments using H+T as a primary metric.
Development pressures affect the region as a whole, but the rules that guide development vary considerably. Despite recent efforts to encourage more compact land use patterns in the city, residential growth will continue to move outward in the near term. Buncombe County has laid the groundwork for growth management, however the recently enacted zoning code and design standards seem more designed to ward development away from single-family residences than to attract higher-quality and more efficient development to key areas. The result will be a continued increase in household transportation costs.

Ideally Buncombe County and the City of Asheville would have a complementary and balanced approach to development that would seek to create pockets of location efficiency where none currently exist, for example by targeting investment to areas with existing supportive infrastructure. The H+T Index could provide a unifying metric to measure progress. Since the Index takes into account a variety of factors, not just commuting distance, that affect transportation behavior, it could help reduce the transportation cost burden on households beyond just the stress and expense of a long daily commute. Another opportunity for closer coordination might be a joint Housing Trust Fund, as suggested by the County-City Housing Task Force in 2002. A pilot effort to coordinate funds for affordable housing could deepen the regional approach to housing issues that was begun with the creation of the Consortium, and lay the groundwork for closer coordination and reciprocal learning.

Seek ways to take location into account in the Housing Choice Voucher and LIHTC programs.
Recently announced federal budget cuts make it less likely in the near future that HUD will increase HCV subsidy levels to a level that would allow voucher holders to choose more location efficient areas. However, HACA could assist Buncombe County voucher holders by using location efficiency as a screen to prioritize efforts to recruit and retain landlords to participate in the program. To help the LIHTC program better support sustainable development, the four-county Housing Consortium could work with the State HFA and other local and State partners to suggest reforms to QAP rules that favor sprawl. The QAP has just a few guidelines with an explicit place-based orientation, but these could be made more explicit and consistent by using a measure of location efficiency. Recent changes to the QAP seem designed to encourage lower rates of VMT by scaling some scoring points to the proposed development's proximity to certain types of retail amenities, however there remain significant opportunities to reduce or eliminate suburban bias in the scoring process.

4. Lowering Transportation Costs for All Asheville Area Residents

4.1 Overview

Low-density, auto-dependent development patterns affect everyone's wallets, not just those of people who reside in subsidized housing. To address the broader issues of location inefficient development, the City should renew its attention to Transportation Demand Management (TDM) strategies and seek ways to permeate TDM principles into key municipal functions. The City should encourage experimentation and effectiveness with carefully selected performance indicators and increased regional coordination. More concretely, the City should consider piloting a car-sharing program in conjunction with a large-scale employer such as the State, the County, the University of North Carolina or the hospital.

4.2 Existing Policies and Programs

Increasing numbers of people are commuting into Buncombe County from neighboring counties for work. Traffic congestion is rising, particularly in the county's urbanizing areas, but is not yet perceived by the public as a major policy issue. Meeting the population's long-term transportation needs requires long-term planning, and several factors challenge the standard approach of simply building more roads: difficult terrain, the link between the region's natural beauty and tourism, and a growing awareness of the connection between transportation, air pollution, and climate change. The City has embraced a multi-modal, multi-disciplinary approach to ensuring that mobility needs are met while balancing these other interests, but its effectiveness is constrained by current economic realities and the regional nature of the problem.

Fortunately, there is much to build on. Asheville Transit (AT) operates 21 bus routes on a regular schedule within the city of Asheville and in limited parts of Buncombe County, and Mountain Mobility operates a fleet of over 40 vehicles in Buncombe County through a demand-response service, a subscription service, and three deviated fixed routes. While transit usage remains low relative to the population, a recent shift toward improving reliability and frequency of service along key routes demonstrates the kind of customer orientation that will allow Asheville Transit to maintain its footing as a viable mode of personal transport. Mountain Mobility complements Asheville Transit's service by providing a last-mile function: in addition to offering point-to-point service, it delivers its client base to AT's regularly scheduled fixed routes.

Several current plans and policies also provide a basis on which to build, offering well-researched ideas and case studies of effective strategies in other municipalities to reduce auto dependence. Asheville's 2025 Plan has several recommendations to reduce Vehicle Miles Traveled (VMT), (and hence transportation costs), such as carpooling, vanpooling, parking cash-outs, and improving the bike-friendliness of streets. These "supply side" approaches doubtless help make it possible to choose a car-free trip or car-free lifestyle. More importantly, the Plan explicitly recognizes the important relationship between land use and transportation: it recommends basing transportation investments on robust analysis of projected land use, and implementing a regional program of tradable development rights (TDRs).

The 2025 Plan is supported by several mode-specific plans. The 2005 Pedestrian Comprehensive Plan largely aims to improve the pedestrian infrastructure to make walking an attractive, safe and convenient option for more trips, but also calls for a "comprehensive, multi-modal transportation and congestion management program." The 2008 Bicycling Comprehensive Plan demonstrates a deep understanding of

how to make infrastructure more bike-friendly (e.g. by focusing on linear connections, not just linear miles), as well as a user-focused prioritization strategy based on current usage and functional connectivity. The 2009 Master Transit Plan seeks to increase and maintain ridership among several subgroups of users and potential users, which exhibits a nuanced customer orientation. The Sustainability Management Plan encourages expanded bus service, but also focuses attention on links between modes (park-and-ride lots, a downtown shuttle service) and the connection between land use and transportation (transit-oriented development around dense nodes). Finally, until recently the City hosted a Transportation Demand Management (TDM) program that promoted alternatives to single occupancy vehicles as a means to reduce VMT and nitrous oxide emissions. While funding is no longer available under NCDOT's Public Transportation Division to support the program, the Council of Governments is building on its work by funding a Long Range TDM study[19] of the region.

Buncombe County has potentially complementary efforts underway in the form of a draft Sustainability Plan. At this stage the Plan largely consists of goals, broad strategies and proposed indicators that require refinement before meaningful and workable policies can be designed. Still, the draft Plan clearly represents a great deal of effort to articulate the vision and ideas of a large set of stakeholders, and should be viewed as an asset on which to build.

4.3 Recommendations

Road congestion, air pollution and household transportation costs will continue to rise unless specific and coordinated actions are taken to reduce the share of trips that are made in single-occupant vehicles (SOVs). Broadly, VMT can only be reduced significantly if people live closer to the jobs, schools, shops and other amenities they need, and if other modes of travel become more appealing than SOV travel. Ideally plans and policies would support both in the form of more compact, mixed-use development, and fewer subsidies for SOV travel in the form of free-access highways, free and abundant car parking, and streets that are comfortable to traverse only by car. Clearly the City and County should continue to look for opportunities to focus development close to major activity centers and along major transit corridors, including not just affordable housing but also market-rate housing and commercial, educational and recreational activities. Transportation issues are first and foremost land use issues.

This view is broader than most TDM programs, which introduce a great deal of innovation but tend to limit their focus to the work commute. Location efficiency complements TDM by applying its creative solutions to many kinds of trips. The forthcoming Long Range TDM study may provide a way for the various plans outlined above to be coordinated more strategically. CNT strongly recommends that this study use the framework of location efficiency and avoid the pitfall of just considering the work commute. CNT also recommends that the study include a strategic roadmap that identifies appropriate pilot tests and community engagement, necessary policy changes, funding sources and timelines. Finally, CNT recommends that the study and any plan updates place more emphasis on connecting *destinations* via various modes. An inventory of infrastructure is a useful tool to establish a baseline of currently available assets and their condition, but is far more useful for creating strategies if there is an explicit focus at the outset on identifying the high-use corridors for a given mode of travel. The routes most utilized by automobiles may not represent the best routes by foot or bicycle. The more location-efficient an area is, the more it is likely suited for the latter rather than the former, therefore less automobiles should be allowed to dominate the space.

[19] Council meeting minutes 8/23/11.

As AT assesses the impact of the redesigned transit routes on ridership and operating efficiency, it should consider smaller, complementary improvements to the rider experience that can have a significant impact but which may be within reach for a small city. Bus tracking software, for example, reduces rider uncertainty in many cities, and is increasingly inexpensive as open-source systems are developed. Riders text or call a number to find out how many minutes away the bus is from a given stop, which gives them the power to time the walk or run another errand instead of waiting needlessly. Riders also value being protected from the elements, but are less selective about the specific type of shelter. It may be possible to add an inexpensive awning to an existing building rather than constructing a whole bus shelter, which would provide a high-value, low-cost improvement to the rider experience.

With its history of innovation, the presence of a large student body and its commitment to sustainability principles, the City is well-primed to pilot a car sharing program. The pilot could seek to secure the commitment of several large, centrally located employers to phase in the use of car sharing vehicles to replace fleet cars, and/or to phase fleet cars into car sharing vehicles for use by the community in off hours. Another way to pilot car sharing is to enable local residents to enter their own vehicles into a central registry for hourly rental by other residents. Madison, Wisconsin, has one of several well-known car sharing systems in a smaller city, and examples of peer-to-peer car sharing exist in California, Oregon and Boston.

Finally, a note of caution about data and indicators. Sustainable development is a broad, multi-disciplinary and highly interdependent approach to the hardware and software that produce high-quality communities. As such, it is tempting to lay out a multitude of indicators by which to measure quality of life. Measuring too many things, or measuring them with an inadequate indicator, can make it difficult to articulate a set of coherent strategies that actually produce the desired results. For example, if a community wants to reduce air pollution, it may not be sufficient to simply track the number of people riding transit; ridership is likely to increase simply through population growth, so one's measure should track the increase in the *proportion of all commuters* who ride transit to work and/or for other kinds of trips. CNT recommends the use of the H+T Index as a peformance indicator precisely because it can measure the joint outcome of several complementary policies in way that is meaningful for the general public.

5. Conclusion

Ultimately local stakeholders must determine how best to balance the community's various goals and budgetary realities. In Asheville those interests include the production of affordable housing units for targeted populations; production of units in places that help families keep their cost of living down; encouraging fewer cars on the road; encouraging development of underutilized land; improving the tax base; and stretching scarce revenues. Nothing will be more effective to achieve these goals jointly than a regulated increase in allowable densities. Any policy that requires developers to receive special permissions to increase allowable densities will be an obstacle, and will disproportionately affect smaller-scale operations. Experience shows that people will accept higher density if they get something in return, such as good design and a sense of place. The challenge is to educate stakeholders—residents, elected and appointed officials, and developers—about the benefits that density, mix of land uses, and proximity to jobs and transit can have on household affordability. The H+T Index is one tool that can help policymakers and the populace reach consensus on how to better balance these interests.

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