PENNY WISE POUND FUELISH

New Measures of Housing + Transportation Affordability

CNT

FEBRUARY 2010

PEOPLE have a variety of reasons for deciding where to live: public safety, quality of schools and other public services, the time it takes to get to work, the mix of amenities nearby like stores and restaurants, and last, but certainly not least, the character and cost of the community. The typical home seeker weighs all of these factors to strike the right balance for his or her family when choosing a community.

In an effort to bring the American dream of homeownership to more people, however, our society has enabled and encouraged growth in places where low land costs deliver relatively inexpensive housing but where sprawling, single-use development adds significantly to the cost of carrying out the daily tasks of getting to work or school, running errands and enjoying an evening out. Unlike house payments, transportation costs are difficult to track because they are paid in disaggregated ways: monthly car payments, semi-annual insurance premiums, weekly fill-up at the pump and periodic maintenance. As a result, Americans only grasp the magnitude of these expenses after committing to a community.

This release of Housing and Transportation (H+T SM) Affordability Index data for 337 metro regions is momentous because it allows people to preview transportation costs for 161,600 neighborhoods in the United States and provides proof that particular patterns of development can significantly reduce household travel costs.

The H+T Index challenges conventional wisdom about affordability and demonstrates that the combined cost of housing and transportation places the vast majority of communities in this country beyond the reach of median income households. Two out of three communities (69%) are considered affordable under the traditional definition of housing costs at 30% of income. That shrinks, however, to just two out of five (39%) when both housing and transportation costs are considered and a 45% affordability benchmark is applied.

The Index also shows that a community's location, character and design are better predictors of overall affordability than household size and income. Compact, walkable, mixed-use communities with convenient access to public transit and employment centers may initially appear expensive because of higher housing costs. But after applying the H+T Index, these places can often make for more affordable living than less dense exurban communities because households can own fewer cars—the single biggest expense in a household transportation budget—and still maintain a high quality of life.

These simple facts suggest that regions need to change the way they plan for and accommodate growth so as to preserve affordability at the household level and sustainability at the regional level. The Index provides a quantitative tool for new federal policy redefining affordability in America that better reflects economic reality and provides an objective basis for regions to make the necessary changes.

Scott Bernstein
President

Kathryn Tholin
Chief Executive Officer

EXECUTIVE SUMMARY

PENNY WISE, POUND FUELISH serves as a guide to CNT's H+T Index (www.htaindex.org), which includes 337 U.S. metropolitan regions. The Index demonstrates that the way in which urban regions have grown in the last half century have had negative consequences for many Americans:

- The number of communities considered affordable drops dramatically in most regions when the definition of affordability shifts from a focus on housing costs alone to one that includes housing and transportation costs;
- Families who pursue a "drive 'til you qualify" approach to home ownership in an effort to reduce expenses often pay more in higher transportation costs than they save on housing thereby placing more, not less, stress on their budgets;
- Residents of "drive 'til you qualify" zones are most sensitive to jumps in gas prices because of the distances they must drive; and
- The longer distances associated with sprawl also translate into more congestion on our highways, less leisure time with families as workers spend more time in their cars getting to and from jobs, and higher greenhouse gas emissions.

The Index reveals that communities with lower housing and transportation costs hark back to development patterns of the 19th and early 20th centuries with more compact construction and a blend of housing, jobs, stores and transit all within walking distance.

The report highlights the financial consequences to households and regions of the two approaches to development. Household savings from residing in a representative compact neighborhood rather than a dispersed community can range from $1,580 per year in Little Rock and $1,830 in Minneapolis to $3,110 in Chicago, $3,610 in Phoenix and as high as $3,850 in Boston—numbers that resonate with families seeking to tighten their belts during difficult economic times.

Regional savings have also been calculated for 12 metro areas using the same representative communities to highlight the aggregate impact if 50% of projected population growth through 2030 could live in more location efficient places. Such cost savings can total $239.8 million in a small region like Charlotte which is expected to almost double its population while San Francisco could register savings of $1.1 billion and Phoenix, $2.1 billion, by changing the way they grow.

The Index demonstrates the need for performance measures rooted in the realities that confront households trying to make ends meet and that regions confront when wanting to balance growth with the cost and quality of life, the amount of Greenfields lost to development, traffic congestion, infrastructure costs, improved economic competitiveness, and reduced carbon emissions. *Penny Wise, Pound Fuelish* concludes with federal policy recommendations to ensure that we build more livable and sustainable communities in the future.

TABLE OF CONTENTS

4 In Search of More Livable Communities

Housing + Transportation: A New Measure of Affordability

Informing Public Policy and Private Decisions

7 Location Efficiency Reduces Transportation Costs

. . . and Location Efficiency Leaves a Smaller Carbon Footprint

9 The Unforeseen Consequences of "Drive 'Til You Qualify"

Blind-sided by Car Costs

Making Housing Transactions More Transparent

12 How the Housing + Transportation Model Works

A Reliable Measure

Public Policy Applications

14 The Value of Location Efficient Communities

Compact Neighborhoods Offer Economic Security

The Opportunity Costs of Sprawl

16 Transforming Federal Policy

Redefine Affordability

Better Integrate Transportation and Land Use Planning

Direct Transportation Investments to Increase Affordability and Economic Competitiveness

Broaden Incentives to Locate Near and Use Transit

Measure to Manage and Improve Affordability and Sustainability

19 CNT's H+T Affordability Index Over the Years and Across the U.S.

IN SEARCH OF MORE LIVABLE COMMUNITIES

IN MARCH 2009, Housing and Urban Development (HUD) Secretary Shaun Donovan and Transportation (DOT) Secretary Ray LaHood gained considerable attention by committing to a partnership that would redefine housing affordability to include transportation costs. Most people, from public officials and bankers to renters and homeowners, define affordability by suggesting that housing costs should consume no more than 30% of a family's income. That measure, however, ignores transportation costs, which vary significantly from place to place within a region—a fact that tenants and buyers in metro areas across the country learn only after moving to a community because this information simply has not existed.

Housing + Transportation: A New Measure of Affordability

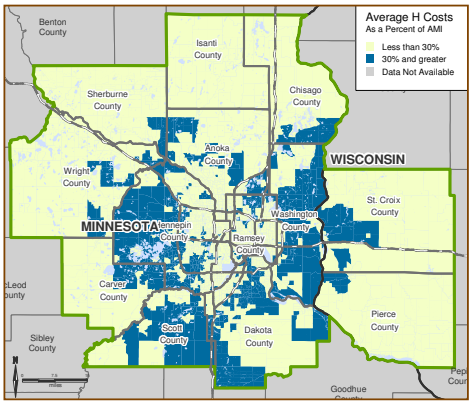
CNT's Housing + Transportation Index addresses this shortcoming by calculating the transportation costs associated with a home's location thereby providing an accurate measure of a community's affordability. Based on data from 337 metro areas, ranging from large cities with extensive transit like the New York metro region to small metros with limited transit options, such as Fort Wayne, Indiana, CNT has found 18% of Area Median Income (AMI) to be an attainable standard for transportation affordability and 15% should be a goal. By combining this 15% level with the 30% housing affordability standard, CNT recommends that 45% of AMI be established as the affordability target for combined housing and transportation costs in the U.S.

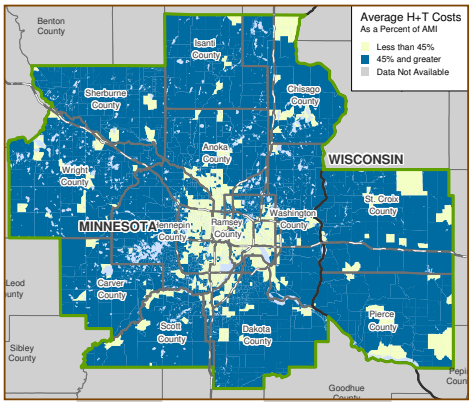
In almost every metro region of the U.S., the number of communities affordable to households earning the AMI shrinks when the conventional definition of housing affordability at 30% of AMI is replaced by the H+T benchmark of 45%. Two out of three communities (69%) are considered affordable under the traditional definition of housing

The H+T Index can be indispensable in assessing whether America's housing and transportation investments will lead to a reduced cost of living for more Americans and more sustainable development for metropolitan areas.

costs at 30% of income. That number, however, drops to two out of five (39%) when housing and transportation costs are combined and a 45% affordability benchmark is applied. This shrinkage eliminates 48,000 communities containing 25.9 million dwellings where the typical resident can afford to live.

Today, the H+T Index includes housing and transportation cost data for the full complement of 337 metro regions identified by the U.S. Office of Management and Budget (1999)—capturing 80% of the U.S. population, covering the places that generate nearly 90% of U.S. Gross Domestic Product (GDP) and touching the vast majority of congressional districts. This expansion of the H+T Index comes at a critical juncture in our nation's history. Faced with the worst economic recession since the Depression, Americans are looking for ways to rein in spending and a more efficient use of resources.





REDEFINING AFFORDABILITY

The number of communities affordable to households earning the area median income shrinks considerably when transportation costs are added to housing costs and the 45% H+T Affordability benchmark is applied. This phenomenon characterizes less populous regions such as Minneapolis-St. Paul as well as larger regions like metropolitan New York.

Data Source: CNT H+T Index

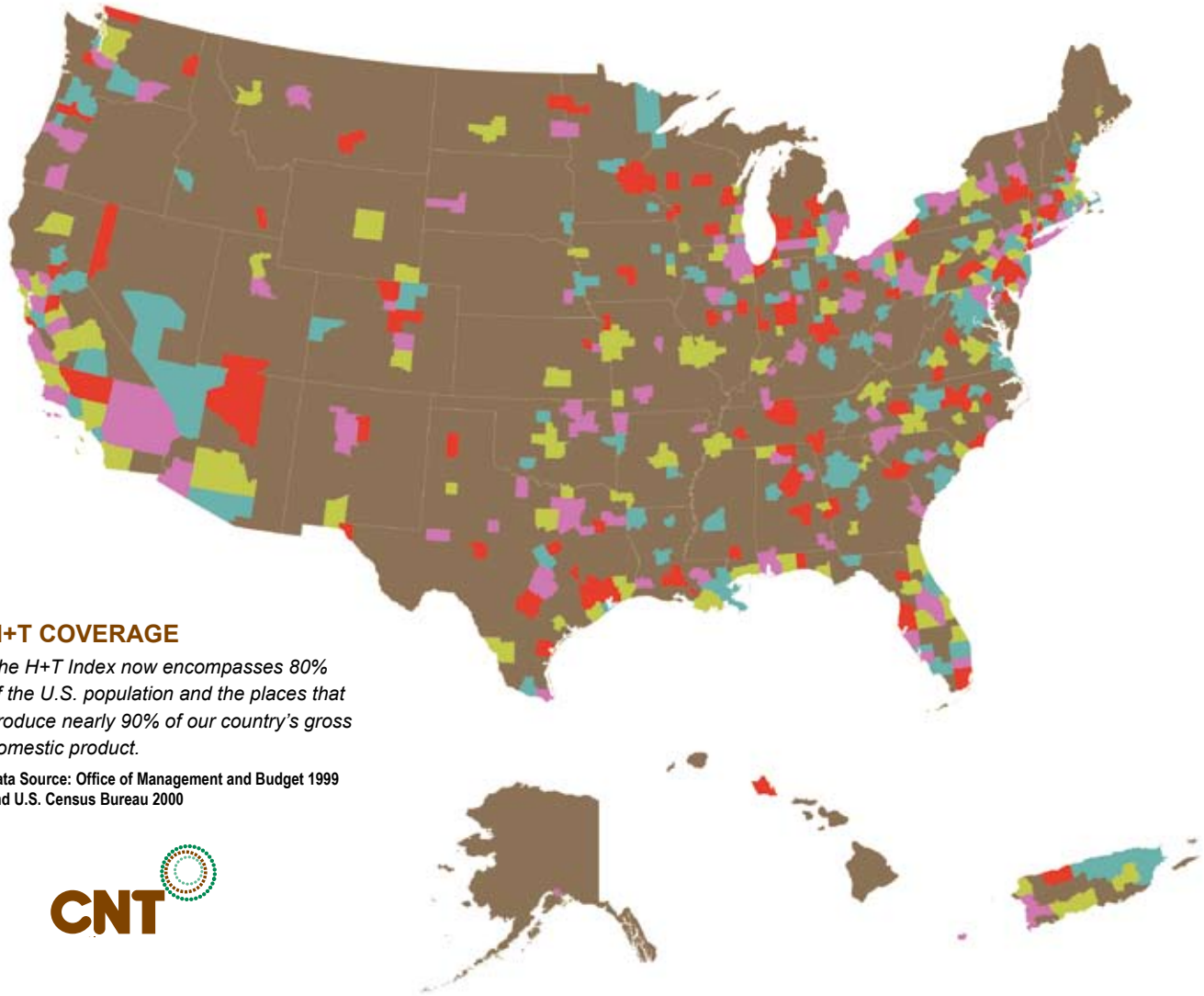
Informing Public Policy and Private Decisions

Federal agencies are testing new strategies to resolve the serious economic, environmental and development challenges that the nation faces. Acknowledging that these challenges require comprehensive solutions, HUD, USDOT, and the Environmental Protection Agency (EPA) have formed an interagency partnership capable of integrating housing, transportation and land use policy to achieve affordability, competitiveness and sustainability.

The number of affordable communities in the U.S. shrinks by 30%, eliminating 48,000 communities, when both housing and transportation costs are considered.

More critical still, the U.S. Congress is beginning to formulate the broad framework of our country's next transportation bill just as the H+T Index becomes universally available for metropolitan areas. The H+T Index can be indispensable in assessing whether America's housing and transportation investments will lead to a reduced cost of living for more Americans and more sustainable development for metropolitan areas.

A clearer understanding of transportation costs by individuals, families, business owners, developers and government officials should affect location, development and travel decisions and lead to more efficient land use patterns and transportation systems. The improved efficiencies will be passed on to households, businesses and governmental entities as cost savings.



H+T COVERAGE

The H+T Index now encompasses 80% of the U.S. population and the places that produce nearly 90% of our country's gross domestic product.

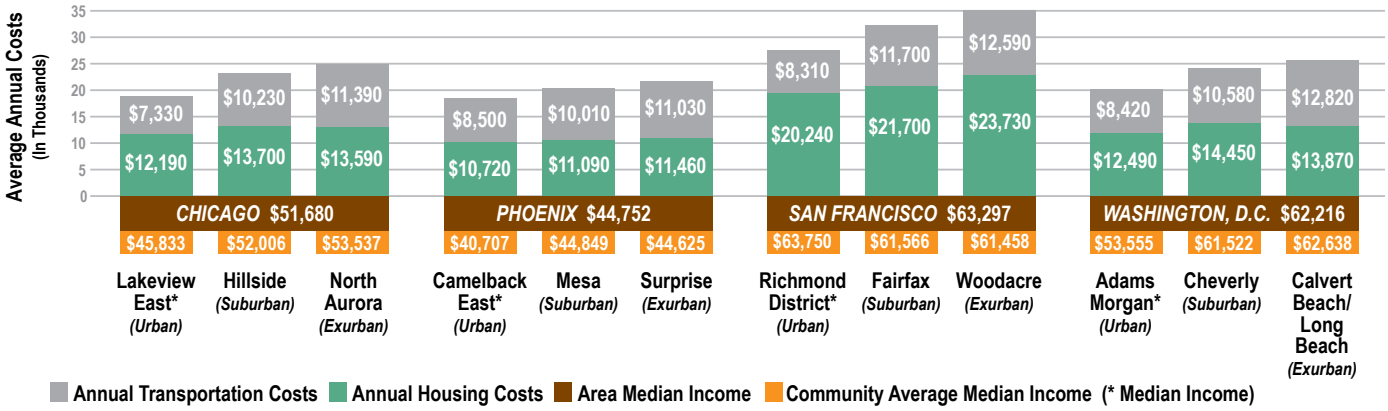
Data Source: Office of Management and Budget 1999 and U.S. Census Bureau 2000

CNT

LOCATION EFFICIENCY REDUCES TRANSPORTATION COSTS

WHILE THE CONCEPT of energy efficiency is a familiar term, "location efficiency" is less well known but has a similar meaning. The H+T Index provides one measure of a place's efficiency by revealing how transportation costs vary between different communities.

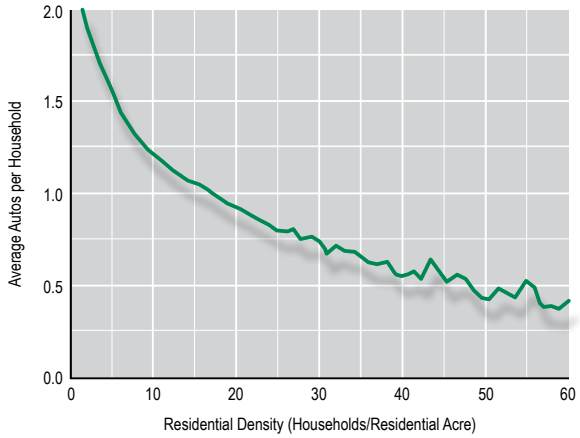
The Index demonstrates that location-efficient neighborhoods—compact, mixed use communities with a balance of housing, jobs, and stores and easy access to transit—have lower transportation costs because they enable residents to meet daily needs with fewer cars, the single biggest transportation cost factor for most households. Conventional transportation models have historically relied on household size and income as predictors of car ownership and miles traveled, but the Index shows that a community's location, character and design are better determinants of overall affordability. Low transportation costs accrue as savings or disposable income for those households that achieve them.



AVERAGE ANNUAL HOUSING + TRANSPORTATION COSTS

Transportation costs vary significantly by community even where housing costs and income are similar. Location efficient communities in the city and inner suburbs consistently register lower combined housing and transportation costs than communities on the urban fringe.

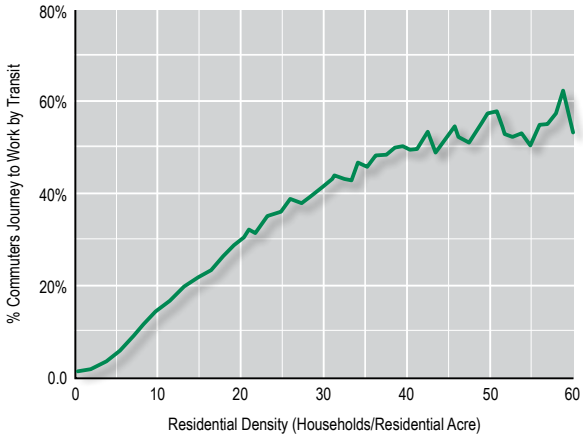
Data Source: CNT H+T Index



AUTO OWNERSHIP DROPS AS RESIDENTIAL DENSITY INCREASES

Data from all 337 metropolitan areas in the H+T Index show that doubling residential density from ten dwellings per acre to 20 per acre reduces average car ownership by slightly more than a quarter vehicle per household. Car ownership represents the single biggest cost in a household transportation budget.

Data Source: CNT H+T Index



TRANSIT RIDERSHIP GROWS AS RESIDENTIAL DENSITY INCREASES

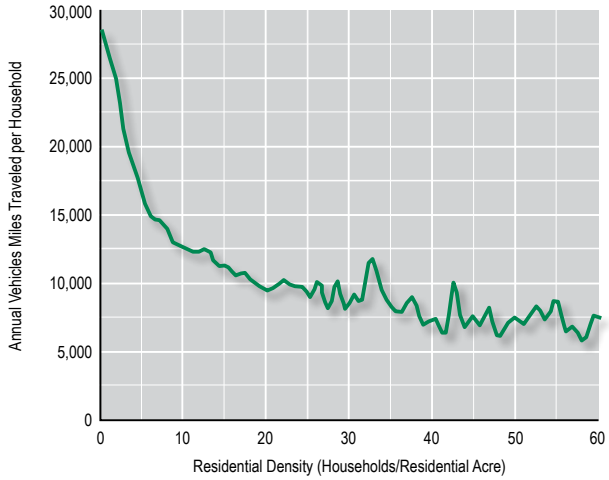
In urban areas with public transit, the percent of commuters that use transit doubles from 15% to 30% of commuters as residential density increases from ten to 20 units per acres, thereby reducing their travel costs and environmental impacts.

Data Source: CNT H+T Index

. . . and Location Efficiency Leaves a Smaller Carbon Footprint

Affordability is but one measure of location efficiency captured by the H+T Index; other measures include modeled Vehicle Miles Traveled (VMT) and greenhouse gas emissions from household auto use. The Index shows that the solutions that make sense to housing activists concerned with affordability, strategies such as increased density, a greater mix of uses, the availability of frequent and reliable transit, and development designs mindful of pedestrians and cyclists, are the same solutions sought by environmental advocates worried about global warming, excessive land consumption and sustainable communities.

While cities generate more carbon dioxide per acre than less dense suburban and exurban communities, their compact, mixed use urban neighborhoods generate nearly 70% less greenhouse gases per household for travel than their suburban and exurban counterparts. In sum, people living in location-efficient places with public transit where transportation costs are most affordable, are also likely to have a smaller carbon footprint from household vehicle travel than people who live in more auto-dependent suburban or urban fringe communities.



RESIDENTS OF MORE COMPACT COMMUNITIES DRIVE LESS

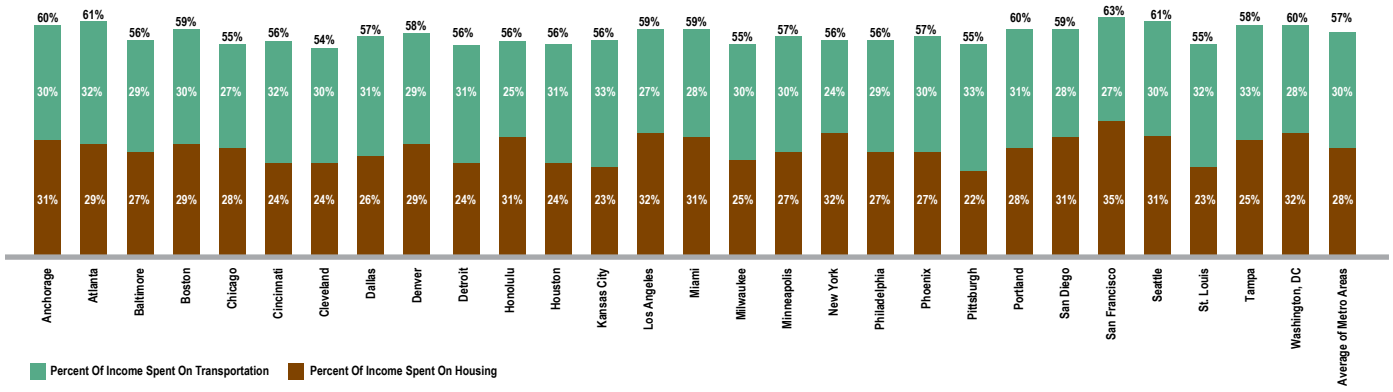
Households in location efficient communities drive fewer miles as a result of lower car ownership, higher transit usage and greater amenities like stores and restaurants within walking distance. Increasing residential density from five to ten units per acre reduces miles traveled per household by 3,930 annually in Massachusetts—a decrease of 24%.

Data Source: Massachusetts Registry of Motor Vehicles 2005-2007

THE UNFORESEEN CONSEQUENCES OF "DRIVE 'TIL YOU QUALIFY"

THE MOVEMENT to increase home ownership of the last decade led more and more people to buy homes on the outermost fringes of U.S. metro areas because they could qualify for mortgages there. This "drive 'til you qualify" phenomenon has had unfortunate consequences for both families and communities.

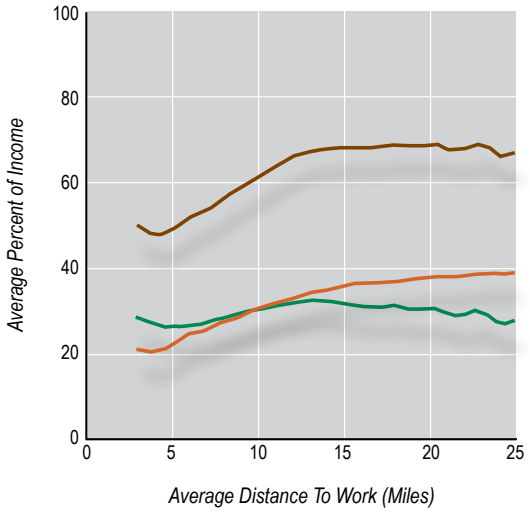
A Heavy Load, CNT's analysis for the Center for Housing Policy, showed that transportation costs of working families, defined as those households earning $20-50,000 annually, can equal or exceed housing costs on the urban fringe. The burden of needing to own one more vehicle per household is severe for these families—vehicle ownership alone averages more than $5,000 per year, while fuel and maintenance can add another $2,000 per vehicle annually. At a fundamental level, such high costs attached to assets that depreciate in value limit the ability of these families to save and build wealth.



TRANSPORTATION COSTS OUTWEIGH HOUSING COSTS FOR WORKING FAMILIES IN MANY REGIONS

Working families in 17 of 28 regions pay more for transportation than they do for housing.

Data Source: CNT H+T Index from *A Heavy Load*, Center for Housing Policy (2006)



PENNY WISE, POUND FUELISH

A study of working families in 28 metro regions shows that increased transportation costs begin to offset savings on the cost of housing when commutes reach a distance of about 10 miles. Families unwittingly shortchange themselves by being economical when it comes to housing costs while taking on incremental travel costs that wipe out those savings.

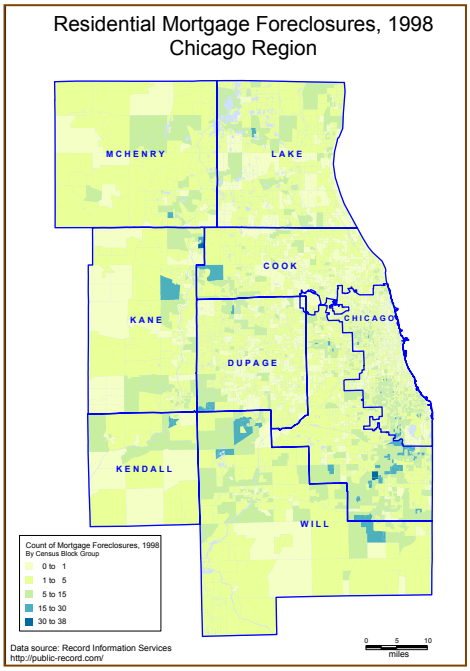
Data Source: CNT H+T Index from A Heavy Load, Center for Housing Policy (2006)

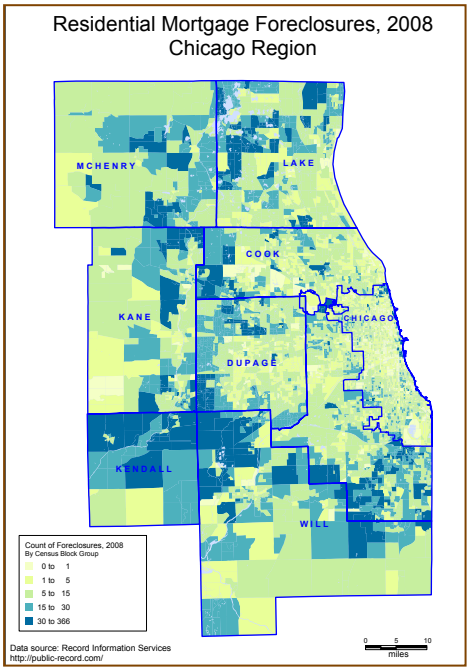
- H + T Burden
- Transportation Burden
- Housing Burden

Blind-sided by Car Costs

Low- and moderate-income households who leave city neighborhoods for affordable housing with better services outside the city unknowingly place themselves at greater risk of losing what is often their greatest asset, their home. A study of working families in 28 metro regions shows that increased transportation costs begin to offset savings on the cost of housing when commutes reach a distance of approximately 10 miles. Not fully understanding this fact, these families find themselves in greater jeopardy as the added burdens of auto ownership and volatile fuel prices aggravate an already tight financial situation.

For exurban communities where the real estate crisis has resulted in a higher foreclosure rate than in the central city, the “drive ‘til you qualify” mentality and the financial strain it places on working families have made an already bad situation worse.





DRIVE ‘TIL YOU QUALIFY FORECLOSURES

Foreclosures in Chicago’s collar counties have grown by 459% from 1998 to 2008 and are highest in the region’s “drive ‘til you qualify” zones.

CNT'S TRANSPORTATION MODEL

	Lakeview East, Chicago, IL	Hillside, IL	North Aurora, IL
Community Type	Urban	Inner Ring Suburb	Exurb
Average Median Income	$45,833	$52,006	$53,537
Average Auto Per Household	1.1	1.7	1.8
% of Workers Taking Transit to Work	43.1%	5.9%	1.2%
Average Annual Vehicle Miles Traveled per Household	10,638	15,657	20,423
Average Annual Transportation Costs	$7,330	$10,230	$11,390
Average Annual Housing Costs	$12,190	$13,700	$13,590
Average Transportation Cost Burden	14.2%	19.8%	22.0%
Average Housing Cost Burden	23.6%	26.5%	26.3%
Average Combined H + T Burden	37.8%	46.3%	48.3%

THE HIGH COST OF EXURBAN AFFORDABILITY

The H+T Index prices the tradeoff between housing and transportation costs that buyers and renters make when deciding where to live. In this example, the city household spends almost $5,500 less per year on the combined cost of housing and transportation than its exurban counterpart.

Data Source: CNT H+T Index

Regions concerned with improving their economic competitiveness in the global market place must add urban form to the real estate agent's mantra of "location, location, location" because a community's location, density and shape dictate whether households at different income levels can afford to live there and regions can grow in a sustainable way.

Making Housing Transactions More Transparent

Historically, the housing affordability portion of the H+T equation has been calculated for prospective homebuyers and renters, while little or no information has been made available regarding associated transportation costs. With a weak economy, escalating fuel costs, and growing concern for fuel consumption and the environment, Americans can no longer afford to ignore the second largest, and for many, the fastest growing, expenditure in their household budget. The H+T Index provides consumers with a reliable source of information that allows them to decide how affordable a community really is.

The H+T Index provides consumers with a reliable source of information that allows them to decide how affordable a community really is.

The H+T Index prices the tradeoff between housing and transportation costs that owners and renters make when deciding where to live. People who choose exurban communities often pay more in increased transportation costs than they save on a mortgage or rent because data simply has not been available and transportation expenses are less obvious since they are paid in small and fractured ways that make them difficult to track.

HOW THE HOUSING + TRANS

WITH ITS H+T INDEX, CNT has introduced a more comprehensive way of thinking about housing and its true affordability at a neighborhood level. By documenting transportation costs associated with a home's location, H+T prices the tradeoffs between housing and transportation costs that buyers and renters make when choosing where to live thereby adding a level of transparency to housing transactions that has not previously existed.

The H+T Index relies on the U.S. Census' Selected Monthly Owner Costs (SMOC) and Gross Rent to arrive at the housing half of the equation. These Census variables include: utility expenses, mortgage payments, rent payments, condominium and other fees, real estate taxes, and premiums for home owners insurance.

Transportation costs are calculated using nine variables, most of which are derived from the 2000 U.S. Census, that are divided between neighborhood (residential density, gross density, average block size, transit connectivity index, job density, and average journey to work time) and household (household income, household size, and commuters per household) characteristics. These variables are used to predict, at a census block group level, three dependent variables – auto ownership, auto use, and public transit usage – from which transportation costs are calculated.

A Reliable Measure

The H+T Index represents a body of research spanning 20 years that has evolved from location efficiency research in the late 1990s to its vetting in 2008 by transportation experts and subsequent publication in the *Transportation Research Record*, the Journal of the Transportation Research Board of the National Academies.

CNT first partnered with the Brookings Institution and later with the Center for Housing Policy to produce three seminal H+T studies that simply but eloquently painted a picture of the tradeoffs that buyers and renters make between housing and transportation expenses when choosing where to live. These studies prompted public and private entities in places as diverse as Southern California, the San Francisco Bay Area, Phoenix, Tucson,

PORTATION MODEL WORKS

Washington, DC, San Antonio, Chicago, Ft. Wayne and Grand Rapids to seek customized H+T analyses for their regions. In a more recent innovation, CNT developed H+T calculators for the Washington, DC and San Francisco Bay areas that give individuals the ability to enter their own household characteristics and housing costs by address and to compare the relative affordability of both housing and transportation costs across these metro regions.

The H+T Index can be accessed by going to www.htaindex.org. The website presents housing and transportation costs, vehicle miles traveled, green house gas emissions and gas price sensitivity data for 337 metro areas as maps, charts and graphs.

$$\text{AFFORDABILITY INDEX} = \frac{\text{HOUSING COSTS} + \text{TRANSPORTATION COSTS}}{\text{INCOME}}$$

CNT'S H+T INDEX: *Transportation costs are added to housing costs and divided by median income to provide a more comprehensive picture of the affordability of a region's housing market.*

Public Policy Applications of Housing + Transportation

The H+T model provides the basis for new policy that directs investments to help achieve greater affordability at the household level and sustainability at the regional level. The U.S. Departments of Transportation, Housing and Urban Development, and the Environmental Protection Agency, for example, have cited the H+T Index as the stimulus for the agencies' Sustainable Communities Partnership. This partnership will "better coordinate federal transportation and housing investments and identify strategies to give American families: more choices for affordable housing near employment opportunities; more transportation options, to lower transportation costs, shorten travel times, and improve the environment; and safe, livable, healthy communities."

Likewise the Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area has officially established a goal of reducing the housing and transportation burden for low and moderate income residents of the region by 10% in its long range transportation plan, *Transportation 2035 Plan for the San Francisco Bay Area.* MTC is in the process of developing decision-making processes for transportation investments that will result in lower household transportation costs. Finally, the Illinois General Assembly is considering an H+T Affordability Statute requiring state agencies to take housing and transportation affordability into consideration when making investments decisions in urbanized areas.

BLOCK GROUP: *A subdivision of a census tract, a block group is the smallest geographic unit for which the Census Bureau tabulates sample data. A block group can consist of anywhere between 600 and 3,000 people but ideally consists of 1,500 people.*

THE VALUE OF LOCATION EFFICIENT COMMUNITIES

BECAUSE HOMES, streets, schools, parks, shopping areas and transit lines—the building blocks of a community—are so enduring, the best chance that cities and regions have to lower housing and transportation costs is by changing where and how they grow. Transportation savings associated with location efficiency can add up quickly for families able to avoid extraordinary expenses.

Compact Neighborhoods Offer Economic Security

The following table highlights potential household and regional transportation savings for sample neighborhoods in these 12 metropolitan areas if 50% of each region's projected new households through 2030 were to move to a compact rather than a dispersed neighborhood comparable to those used as examples. In these cases, a typical household could expect to spend $3,110 less in Chicago and $2,780 less in San Francisco per year on transportation costs by choosing the more compact neighborhood producing savings of 6.0% and 4.4% of median household income respectively. Such measures become all the more important during harsh economic times like the present when families at all economic levels are looking for ways to reduce expenses.

The H+T Index demonstrates the need for performance measures rooted in the realities that confront households trying to make ends meet and that regions face in trying to plan for more livable communities.

Household level savings have been applied to population forecasts for each of these regions to produce a conservative estimate of impacts to the regional economy if 50% of new households from 2000-2030 were to live in more affordable neighborhoods. A fast growing region like Phoenix, for example, could inject $2.1 billion into its local economy annually by better directing its growth while a smaller region like Charlotte, which is expected to double in size, could save an aggregate of $239.8 million annually by 2030.

THE ECONOMIC BENEFITS OF LOCATION EFFICIENCY

The savings associated with living in more compact communities add up quickly for households and regions alike.

Data Source: CNT H+T Index and MPO websites

MPO Region	Sample Dispersed Neighborhood*	Sample Compact Neighborhood*	Difference in Annual Household Transportation Costs**	Difference in Annual Regional Transportation Costs (millions)***
Austin, TX ▶	Round Rock	Old West Austin	$2,310	$716
Boston, MA ▶	Braintree	Somerville	$3,850	$613.5
Charlotte, NC ▶	Sterling	Dilworth	$1,700	$239.8
Chicago, IL ▶	Schaumburg	Oak Park	$3,110	$1,110.2
Cincinnati, OH ▶	Milford	CUF Neighborhood	$3,050	$236.3
Denver, CO ▶	Arvada	Washington Park	$2,240	$661.3
Little Rock, AR ▶	Sherwood	Pulaski Heights	$1,580	$79.9
Minneapolis, MN ▶	Orono	Seward	$1,830	$345.1
Newark, NJ ▶	Butler	Montclair	$2,300	$550.8
Phoenix, AZ ▶	Gilbert	Encanto	$3,610	$2,144.3
Portland, OR ▶	Troutdale	Roseway	$2,230	$492.2
San Francisco, CA ▶	Antioch	Rockridge	$2,780	$1,126.8

*Representative compact and dispersed neighborhoods used to cost out the savings associated with greater efficiency.
**Household savings of the representative compact community over the representative dispersed community.
***Regional savings if 50% of projected household growth through 2030 as listed on the MPO website had H+T savings of the compact over the dispersed community.

The Opportunity Costs of Sprawl

By 2030, the U.S. is expected to add 92 million people or 27.9 million households in the nation's metro areas. If each of these new households could reduce their car ownership by half a vehicle per household below the country's current average of 1.6 and if existing households could reduce car ownership by a quarter vehicle as a result of retrofitting existing neighborhoods and building more transit to serve them, U.S. metro areas would see an infusion of more than $200 billion in aggregate transportation savings per year by 2030.

Our nation will pay a steep price if it continues on its current trajectory:

- ***Household cost of living will continue to increase.*** Transportation costs have grown over the last century from 2-3% of income to 15% under the best of circumstances and as high as 28% in many parts of the country. This price escalation is directly related to decentralized, low density development patterns and a growing reliance on the car and will only worsen as gas becomes scarce.
- ***Livability will diminish.*** Residents will live farther from their jobs, schools and stores and sacrifice leisure time with family to log more miles on their odometers.
- ***Sustainability will be further compromised.*** Regions can ill afford to: pay for the infrastructure investments that sprawl requires, develop land at a rate that exceeds population growth, or add to climate change with increased greenhouse gas emissions from household travel.

These are unacceptable outcomes for a country committed to more transportation choice, equitable and affordable housing, enhanced economic competitiveness, better environmental stewardship, and support for existing communities.

TRANSFORMING FEDERAL POLICY

THE H+T INDEX fills a critical gap in information and has broad implications for public policy and program investments. At its most basic level, the Index highlights the need for:

- *a new standard of housing affordability;*
- *better coordination between housing, transportation and land use agencies and decisions;*
- *public transportation investments to be screened for their impact on the overall affordability of housing projects;*
- *investments in housing developments screened for their impact on household transportation costs;*
- *mass transit investments instead of highway expansions; and*
- *a broader transit oriented development strategy predicated upon a range of housing types and price points.*

Current interest in H+T affordability on the part of the Obama administration presents a unique opportunity to influence federal and state policy as it relates to housing affordability and related public transportation and housing investments. The following policy recommendations represent priorities that should be addressed by federal officials as part of the Partnership for Sustainable Communities.

Redefine Affordability

ADOPT A BROADER DEFINITION OF AFFORDABILITY THAT INCORPORATES TRANSPORTATION AS WELL AS HOUSING COSTS AND SETS A BENCHMARK as the standard definition of and measure for affordability in the U.S. Develop a mechanism to make data available to federal agencies and the public for planning, programming and implementation. The federal government should encourage and support practical applications of the new measure.

ENACT A TRANSPORTATION COST DISCLOSURE ACT that requires home sellers, real estate agents and landlords to disclose the average transportation costs associated with a home's location so that prospective buyers and renters fully understand before they sign a contract how living in that community will affect their household budget.

Better Integrate Transportation and Land Use Planning

ALIGN DISPARATE FEDERAL PLANNING REQUIREMENTS so that cities, counties and regions take transportation costs into consideration as they develop plans and coordinate housing, transportation and land use to achieve greater H+T affordability. Among the plans that should be integrated are the Consolidated Plans required by HUD for the Community Development Block Grant (CDBG), HOME, Emergency Shelter Grants (ESG), and Housing Opportunities for People with Aids (HOPWA) programs, the Regional Transportation Plan (RTP) required of Metropolitan Planning Organizations (MPO) as a condition for federal transportation funds and the State Transportation Improvement Program (STIP).

These integrated plans should ensure that: (1) regions are growing sustainably, (2) transportation investments are screened for their impact on the overall affordability of housing, and (3) investments in housing are screened for their impact on household transportation costs. A key tenet of integrated plans should be to foster household and regional benefits by providing more travel and housing options that are affordable and efficient, while helping people avoid high gas costs and traffic congestion, and reducing public expenditures on new infrastructure in less efficient places.

ESTABLISH A NATIONAL LIVABLE COMMUNITIES FUND to foster planning and development around transit. Regions like Atlanta and the San Francisco Bay Area have already established local funds that encourage communities to plan and zone for the densities and mix of uses around transit corridors that lead to greater affordability and location efficiency. A federal financial entity dedicated to assisting metropolitan regions in such planning and development projects would help bring the economic and environmental benefits of location efficiency to regions across the country.

Direct Transportation Investments to Increase Affordability and Economic Competitiveness

ADJUST FEDERAL TRANSPORTATION ALLOCATION FORMULAS to match population and economic activity as part of a metropolitan program designed to bolster our country's competitiveness. Metropolitan areas account for 80% of the U.S. population and produce 90% of U.S. GDP yet they receive much lower percentages of federal transportation dollars.

Federal funds flow directly to state departments of transportation. For large Metropolitan Planning Organizations (MPO) areas, funds are sub-allocated by federal law. State departments of transportation allocate funds between small MPOs and the rest of the state using formulas that bear little resemblance to demographic and economic indicators. Consequently, current formulas allocate disproportionate amounts to rural areas at the expense of metropolitan regions thereby undermining the nation's economy.

REALIGN FEDERAL TRANSPORTATION INVESTMENTS TO PROVIDE MORE TRAVEL CHOICES within and between regions by modernizing and expanding our rail and transit networks to reduce oil dependence, decrease household cost of living and connect the metro regions that generate most of the country's gross domestic product.

Broaden Incentives to Locate Near and Use Transit

CREATE INCENTIVES AND STANDARD UNDERWRITING CRITERIA FOR TODS so that developers are able to build a broader range of housing types at various price points in transit zones as part of mixed use developments and neighborhoods that allow residents to meet more needs locally.

INSTITUTE ECONOMIC DEVELOPMENT PROGRAMS TO ATTRACT JOBS TO TRANSIT-SERVED LOCATIONS. While the goal of developing more housing in close proximity to transit has received a great deal of attention in recent years, far less attention has been paid to doing the same with jobs. Employment access is one of the factors taken into consideration when people decide where to live. Moreover, the H+T Index reveals that it helps determine a location's transportation affordability and efficiency.

New Jersey's Urban Transit Hub Tax Credit program serves as a model on this front. It has created incentives for employers to locate corporate facilities near mass transportation and freight facilities near freight rail lines that double as commuter corridors to facilitate the use of mass transit by their employees. Heavy rail stations in nine urban municipalities have been designated transit hubs making companies locating within a half mile of the train station and meeting minimum capital investment and job creation thresholds eligible for tax credits equal to 80 to 100 percent of the qualified capital investments made within an eight-year period.

GIVE LOCATION EFFICIENT MORTGAGES (LEM) PARITY with other home loan instruments under federally defined financial services incentives so that they become universally available features of any federally-approved automated underwriting systems. LEMs are mortgages that allow for higher loan to income ratios because a home's location and proximity to transit decreases the owner's transportation costs. Parity would include: a statutory definition of each instrument, an analysis of which alternative underwriting criteria are needed, consumer guidance on the instruments and when they may be appropriate, and a requirement that FNMA and Freddie Mac purchase these instruments. Loan issuers should be required to use a federally adopted H+T Index to determine a home and buyer's eligibility for a LEM.

REQUIRE EMPLOYERS OVER A CERTAIN SIZE TO OFFER PRE-TAX TRANSIT BENEFITS to their employees thereby encouraging more people to use transit and lower their cost of living. The Index clearly illustrates the transportation cost advantages associated with living in communities well served by transit and the federal pre-tax transit benefit adds to these savings by reducing payroll taxes for employees and employers alike. Employees of companies below the threshold should be offered an alternative means to access the benefit so that more transit riders can pay for their fares on a pre-tax basis.

Measure to Manage and Improve Affordability and Sustainability

The H+T Index demonstrates the need for performance measures rooted in the realities that confront households trying to make ends meet and that regions face when wanting to balance growth with: the cost and quality of life, the amount of Greenfield areas lost to development, traffic congestion, infrastructure costs, improved economic competitiveness, and reduced carbon emissions. The fact that the Index is now available for so many places makes it transformative: its broad reach means it can serve as the basis for housing, transportation and land use policy and public and private investment decisions across the country.

CNT'S H+T AFFORDABILITY INDEX OVER THE YEARS AND ACROSS THE U.S.

Location Efficiency: Neighborhood and Socioeconomic Characteristics Determine Auto Ownership and Use

Holtzclaw, Clear, Dittmar, Goldstein and Haas, Transportation Planning and Technology, Vol. 25, 2002

This Natural Resources Defense Council (NRDC) and CNT analysis of auto ownership and mileage per car in the Chicago, Los Angeles and San Francisco metropolitan regions showed that both varied in a systematic and predictable fashion in response to neighborhood urban design and socio-economic characteristics. In all three cases, average auto ownership and the annual distance driven per car were demonstrated to be primarily a function of the neighborhood's residential density, average per capita income, average family size and the availability of public transit.

The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice

Center for Transit Oriented Development and Center for Neighborhood Technology 2006

This groundbreaking report published by the Brookings Institution introduces the Housing plus

Transportation Cost modeling tool and demonstrates how adding transportation costs to the housing affordability equation provides a more accurate picture of the costs assumed by families when choosing where to live. Culling data from the Minneapolis-St. Paul metro area, it illustrates the tradeoffs that households make between convenience, housing costs and transportation costs, and points out that transportation costs depend heavily on neighborhood characteristics and locations in addition to household size and income.

A Heavy Load: The Combined Housing and Transportation Burdens of Working Families

Center for Housing Policy, Center for Neighborhood Technology and University of California, Berkeley 2006

A Heavy Load applies the H+T model to 28 metropolitan areas around the U.S. and focuses in particular on working families, defined as those earning between $20,000 and $50,000 per year, and how their search for lower cost housing yields little, if any, net benefit as savings on housing are redirected toward transportation. While the total H+T burden

remains relatively constant across the 28 metro areas and averages 57% of household income, the split between transportation and housing costs can vary considerably as families try to strike a balance between the two. The report argues for the need to coordinate transportation and housing policies and to promote housing affordability through infill, transit and job development.

Estimating Transportation Costs By Characteristics of Neighborhood and Household

Center for Neighborhood Technology 2008

Published in the prestigious Transportation Research Record, the journal of the Transportation Research Board following a rigorous peer review, this report

describes the statistical model developed to predict household transportation expenditures in a given location based on five independent variables--density, jobs access, neighborhood services, walkability, and transit connectivity. Although presented as a technical discussion, this report makes the real-world policy implications of its application very clear.

Beltway Burden and Bay Area Burden

Urban Land Institute Terwilliger Center for Workforce Housing, Center for Housing Policy and Center for Neighborhood Technology 2009

These studies of H + T costs in the Washington DC and San Francisco metro areas include a comprehensive examination of the 'cost of place' in each region

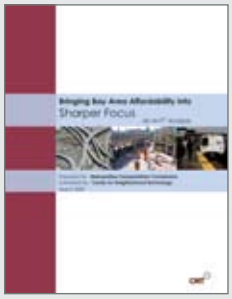
through a jurisdiction-by-jurisdiction look at H+T burdens. The reports reveal that while cost burdens in the regions are diverse, outer-ring jurisdictions with long commutes face the highest transportation costs. Households living at a distance from the city center rely heavily on cars to get

around, which adds to congestion and leaves these families vulnerable to spiking gas prices. The reports conclude that future development along the lines of the past few decades will make achieving H+T affordability particularly difficult, despite extensive, reliable and well-used transit systems. A third report for the Boston area is in process.

Bringing Bay Area Affordability into Sharper Focus

Center for Neighborhood Technology for the Metropolitan Transportation Commission 2009

This report, prepared for the Metropolitan Transportation Commission, analyzes H+T costs in the Bay Area in order to give a comprehensive view of affordability in a housing market that ranks among the most expensive in the nation. Three detailed case studies of representative urban, suburban and exurban communities provide insight into the inequitable distribution of affordability in the Bay Area by highlighting how transportation costs differ between them and include recommendations for improving affordability in each locale.



Windfall For All: How Connected, Convenient Neighborhoods Can Protect Our Climate and Safeguard California's Economy

Transform 2009

Windfall for All details the tremendous personal cost of driving in California, and the potential savings of efficient communities. The report uses CNT data and finds that the 20 percent of residents in the four largest regions — Southern California, San Francisco Bay Area, San Diego and Sacramento — that have very good access to public transportation spend significantly less on transportation each year. If the other 80% of residents were able to spend the same on transportation, they would be spending $31 billion less per year—savings that translate into an average of $3,850 per household each year.

Driving: A Hard Bargain

Center for Neighborhood Technology 2010

This analysis of H+T costs in the Chicago region informs the Chicago Metropolitan Agency for Planning's (CMAP) long range plan, Go to 2040. This report shows how combined housing and transportation affordability varies across fifteen communities with different median incomes and traces the role that location, local transit availability, urban form, density and amenities such as stores within walking distance play in lowering the household cost of living. In an innovation, the Index also models the impact that CMAP's alternative future development scenarios will have on H+T affordability.

ACKNOWLEDGEMENTS

After the initial launch of the Index in 2006, CNT refined and expanded it to its current coverage of 337 metropolitan regions. At CNT, Peter M. Haas, Ph.D., Chief Research Scientist, served as the primary developer of the Index with assistance from the following people over the course of many years' work on location efficiency:

Al Benedict
Scott Bernstein
Harley Cooper
Paul Esling
Jacky Grimshaw
Karen Hobbs
Tim Lang
Bob Lieberman
Carrie Makarewicz
Gajus Miknaitis
Stephanie Morse
Stephen Perkins
Kathy Tholin
Linda Young

María Choca Urban authored this report with editorial reviews and graphic input provided by Scott Bernstein, Nicole Gotthelf, Jacky Grimshaw, Peter Haas, Carrie Makarewicz, Stephanie Morse, Kathrine Nichols, Annette Stahelin, Matt Sussman, Kathy Tholin and Linda Young.

The Rockefeller Foundation supported the Index's expansion from 54 to 337 metro areas as well as production of *Penny Wise, Pound Fuelish*.

DESIGN: John Curry/Smartpill *www.smartpillmedia.com*

PHOTO CREDITS AND LOCATIONS: *Cover: Chicago - Antre/Flickr | Table of Contents: Boston - LBpics/Flickr | Pages 4-5: Portland, Pearl District - Clint Bautz | Page 7: Chicago - Clint Bautz | Page 9: Puente Hills, CA - Mastery of Maps/ Flickr | Pages 12-13 (left to right): Dallas - Dallascaper/ Flickr; Chicago -TheeErin/Flickr; Chicago - Clint Bautz; Atlanta - JamesWillamor/Flickr; Kenosha, WI - Clint Bautz | Page 14: Boston - Rachael Voorhees/Flickr | Page 16: Minneapolis - John Paige | Page 17: Charlotte - JamesWillamor/Flickr | Page 18: Los Angeles - Reconnecting America*

ABOUT THE CENTER FOR NEIGHBORHOOD TECHNOLOGY

The Center for Neighborhood Technology (CNT) is an award-winning innovations laboratory for urban sustainability. Since 1978, CNT has been working to show urban communities in Chicago and across the country how to develop more sustainably. CNT promotes the better and more efficient use of the undervalued resources and inherent advantages of the built and natural systems that comprise the urban environment.

As a creative think-and-do tank, we research, promote, and implement innovative solutions to improve the economy and the environment; make good use of existing resources and community assets; restore the health of natural systems and increase the wealth and well-being of people—now and in the future. CNT's unique approach combines cutting edge research and analysis, public policy advocacy, the creation of web-based information tools for transparency and accountability, and the advancement of economic development social ventures to address those problems in innovative ways.

CNT works in four areas: transportation and community development, natural resources, energy and climate. CNT's two affiliates, I-GO Car Sharing and CNT Energy, enable individuals to adopt a more sustainable lifestyle while decreasing their household expenses in transportation and energy. CNT is governed by an eighteen member board of directors.

CNT is a recipient of the 2009 MacArthur Award for Creative and Effective Institutions.

CNT
Sustainable Communities
Attainable Results
FEBRUARY 2010

2125 WEST NORTH AVENUE CHICAGO, ILLINOIS 60647 773.278.4800 773.278.3840 (FAX)

More information about CNT is available at www.cnt.org.

© 2010 Center for Neighborhood Technology