

# Thinking Outside the Bus

The Housing and Transportation (H+T<sup>SM</sup>) Affordability Index

Connecting Communities Transit Seminar  
Bus Rapid Transit & Transit Oriented Development

Madison, WI  
October 1, 2009

# Affordability & Conventional Wisdom

- Housing should not exceed 30% of household income
- Used by lenders, landlords, consumers, and government
- Drives search for lowest-cost land/housing, regardless of location

# Factoring transportation into the affordability equation

- Transportation costs are second largest expense in household budget = typically 18% of income
- H+T Affordability Index calculates transportation costs at the neighborhood level
- 30% housing + 18% transportation suggest affordable H+T costs should consume no more than 48% of household income

$$\text{Affordability} = \frac{\text{Housing Costs} + \text{Transportation Costs}}{\text{Income}}$$

# Modeling Transportation Costs

## 4 Neighborhood Variables:

Residential density

Block size

Transit Connectivity Index

Job density

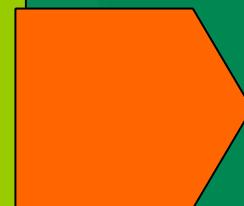
## 4 Household Variables

Household income

Household size

Workers per household

Journey to work (in minutes)



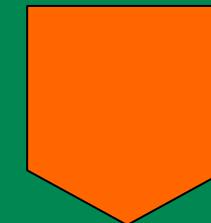
Car Ownership

+

Car Usage

+

Public Transit Usage



Total Transportation Costs

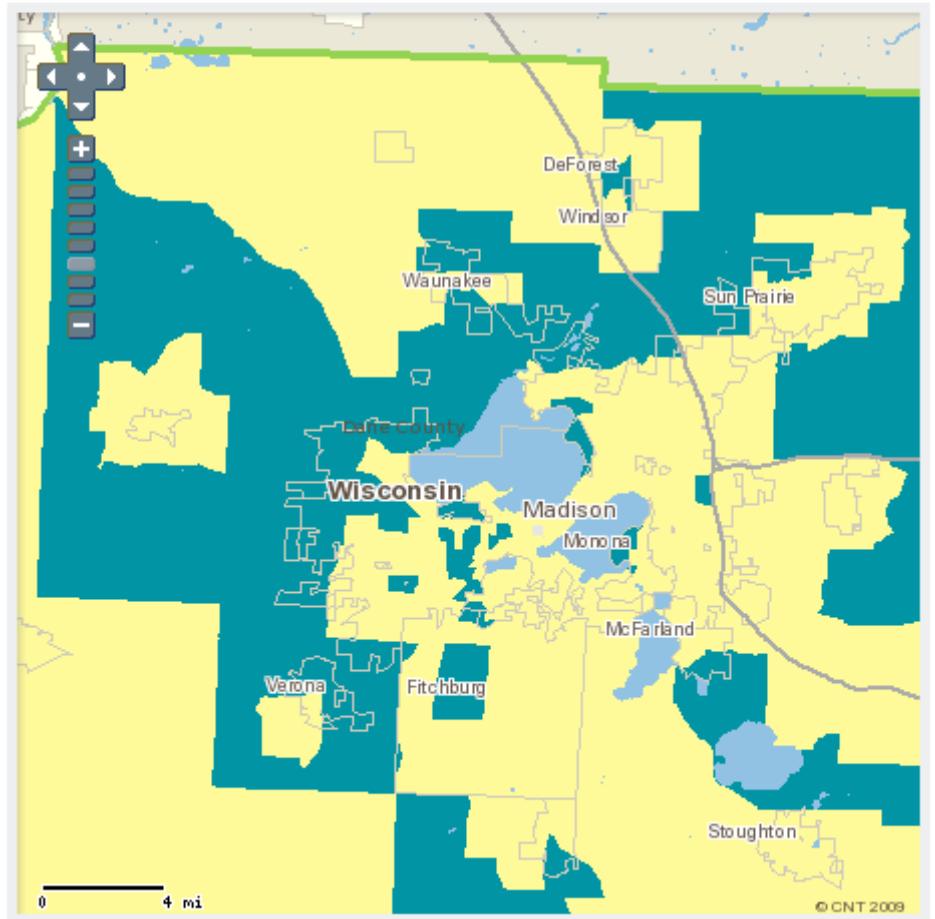
Housing Costs - % Income [CHANGE](#)

Data not available

0 to 30%

30+%

Housing Costs factored as a percent of the Area Median Income has widely been utilized as a measure of affordability. Traditionally, a home is considered affordable when the costs consume no more than 30% of household income.



What does H+T tell us that conventional wisdom doesn't?

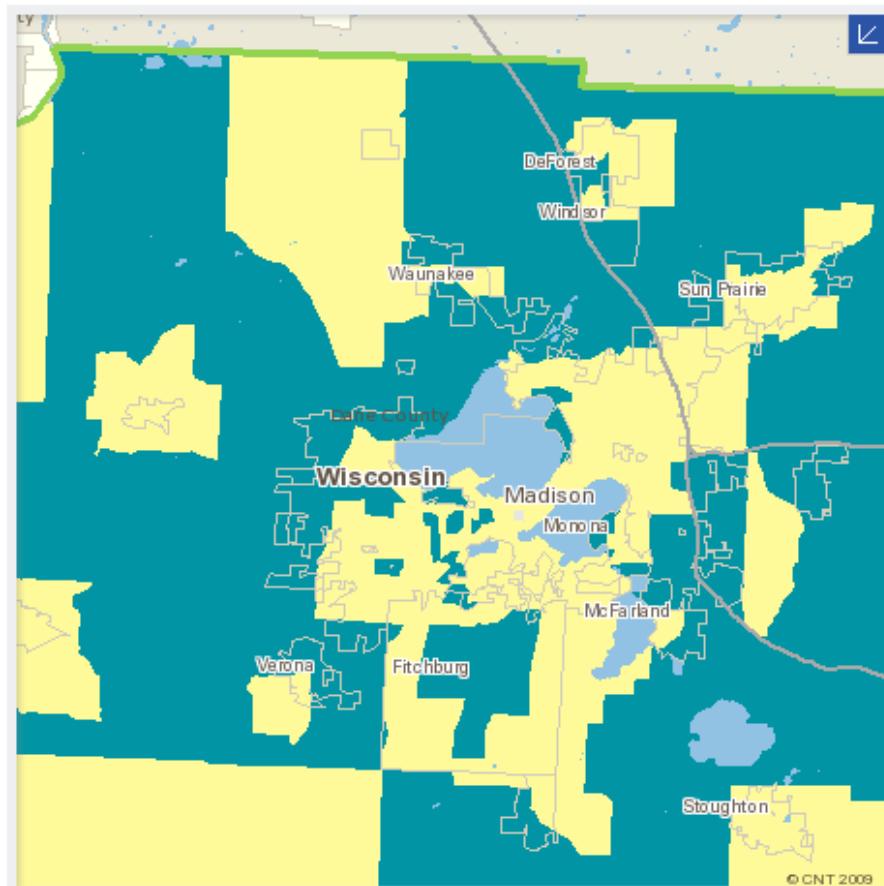
Madison and Dane County look fairly affordable under conventional housing-only definition . . .

**Housing Costs at 30% of Income for Households earning Area Median**

## Housing and Transportation Costs - % Income CHANGE

- Data not available
- 0 to 48%
- 48+%

H+T has been developed as a more complete measure of affordability beyond the standard method of assessing only housing costs. By taking into account both the cost of housing as well as the cost of transportation associated with the location of the home, H+T provides the true cost of housing decisions. Dividing these costs by the **Area Median Income** illustrates the **Cost Burden** placed on the household.



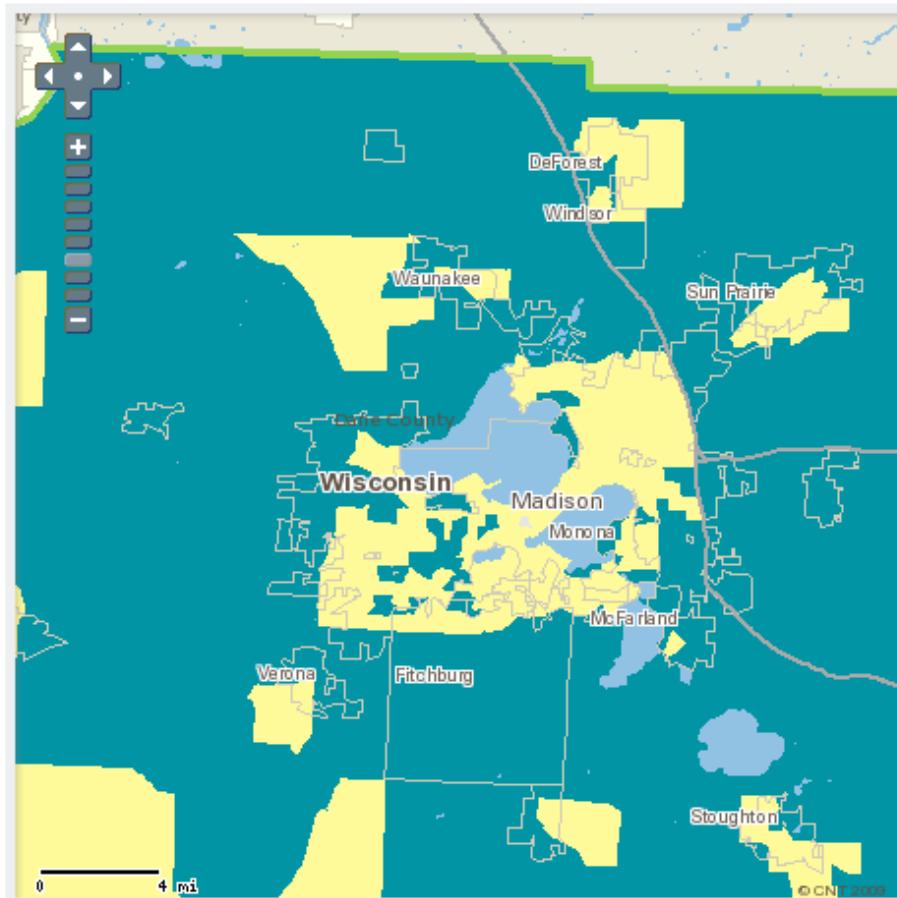
. . . but less so  
through the H+T  
lens

**H+T Costs as  
% of Income for  
Households Earning  
Area Median**

## Housing and Transportation Costs - % Income CHANGE

- Data not available
- 0 to 45%
- 45+%

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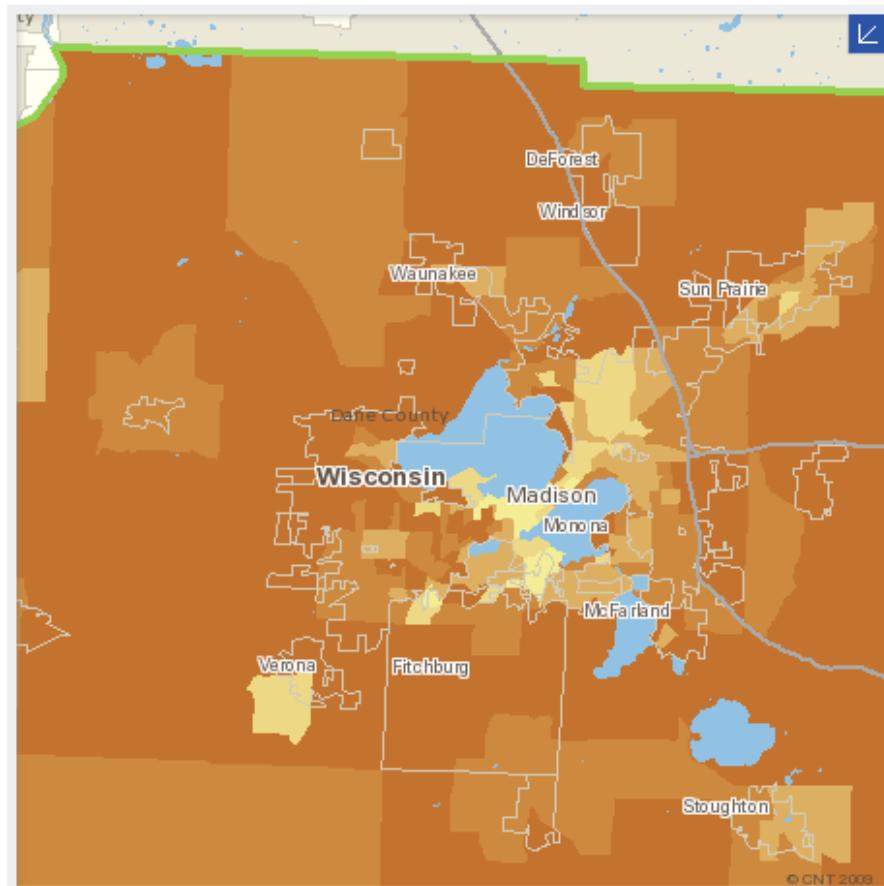
Achieving a goal of 45% H+T affordability further reduces the area that remains affordable

**H+T Costs as % of Income for Households Earning Area Median**

## Average Household Income [CHANGE](#)

- Data not available
- 0 to 32,000 \$/Year
- 32,000 to 42,000 \$/Year
- 42,000 to 53,000 \$/Year
- 53,000 to 69,000 \$/Year
- 69,000+ \$/Year

Average Household Income includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. This value represents the median at the Block Group level. Household income has been determined to be one of the largest determining factors of household Transportation Costs.

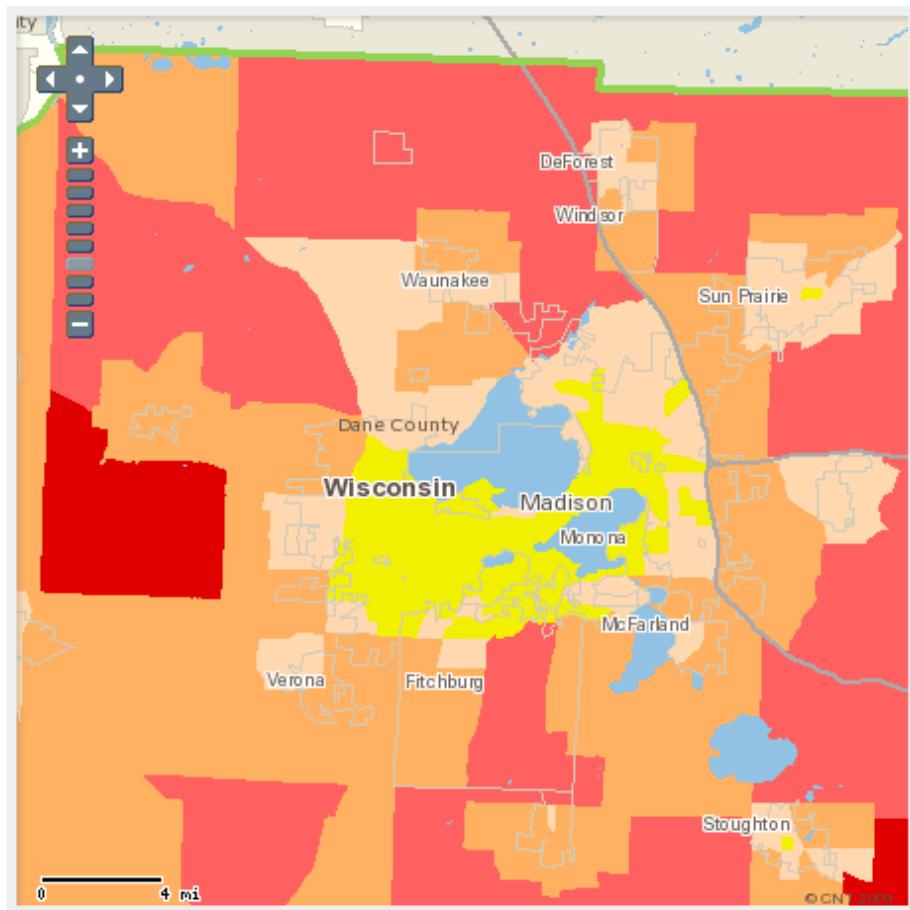


Low and moderate income households concentrated in parts of the city where H+T is most affordable

Monthly Transportation Expenses - 2000 gas [CHANGE](#)

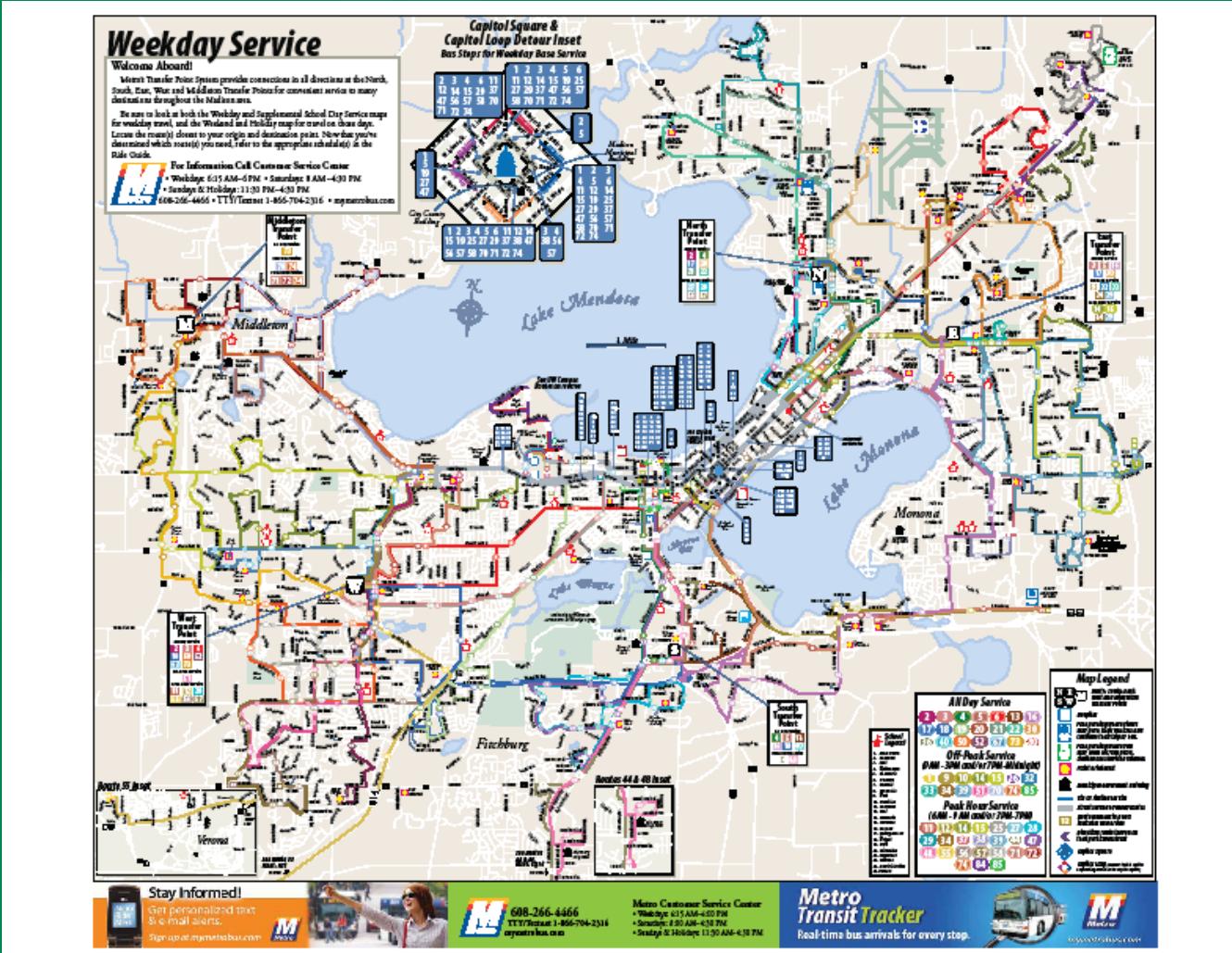
- Data not available
- 0 to 730 \$/Month
- 730 to 800 \$/Month
- 800 to 860 \$/Month
- 860 to 930 \$/Month
- 930+ \$/Month

Household Monthly Transportation Costs are calculated as the sum of Auto Ownership Costs, Auto Use Costs and Public Transit Costs. All values utilized for this calculation are based on 2000 data, including an average gas price of \$1.56

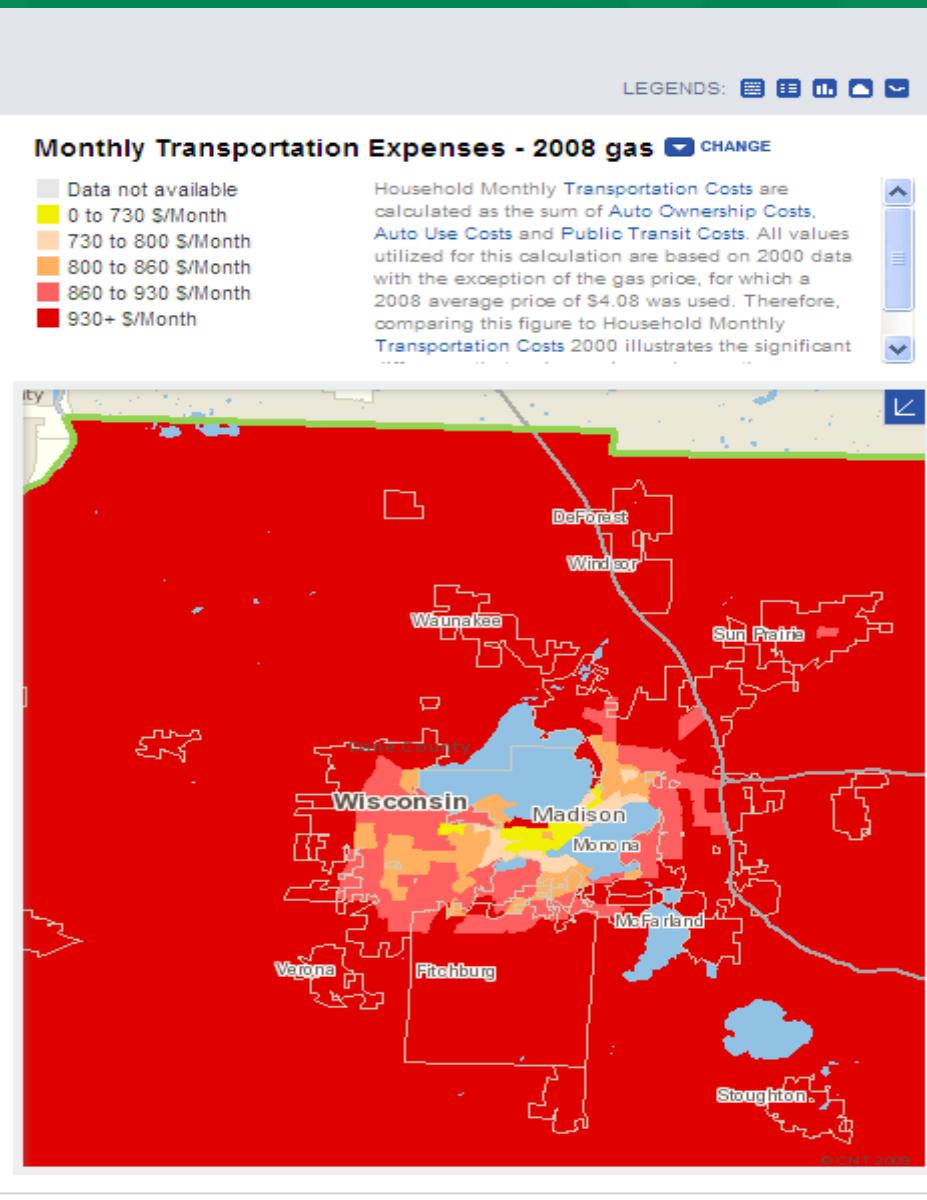


Transportation costs are most affordable in the central part of Madison

# Extensive bus service along with compact design lowers T costs



# BRT and TOD as options for expanding affordability



# Cleveland's Euclid Corridor

## REBIRTH ON EUCLID AVENUE

STEVEN LITT | THE PLAIN DEALER

Over the past century, Euclid Avenue has gone from being Cleveland's most prestigious address to a Main Street riddled by blight. Now, thanks in part to the Greater Cleveland Regional Transit Authority's Euclid Corridor bus rapid transit project, the avenue is rebounding as the backbone of the city's new economy. But while a transformation is in the works, nothing is guaranteed. The national economy, the location of the much-discussed Medical Mart and disruptive highway work by the Ohio Department of Transportation could blunt the multibillion-dollar reinvestment now gathering momentum. Shown below is an overview — by no means exhaustive — of construction projects in the Euclid Corridor zone.

### What's driving the development?

Observers say Euclid Avenue and adjacent blocks are benefiting from a "perfect storm" of positive factors including:

- The rising price of gasoline, which is encouraging dense, pedestrian-oriented development around the RTA bus line.
- Federal and state historic-preservation tax credits have made it viable for developers to renovate many early 20th-century buildings downtown.
- Continued growth at the city's big medical centers and at Cleveland State and Case Western Reserve universities.
- The bottoming-out of local real estate prices, now viewed by lenders and developers as a bargain in comparison with prices in more expensive cities.
- Demand for new, in-town housing, driven by the steady influx of hospital employees and spin-off industries, plus the growing back-to-the-city movement among retirees and empty-nesters.

**What are the possible roadblocks?**

Despite the momentum under way, the rebirth of Euclid Avenue could be threatened by other factors:

- A looming recession and tightening of credit among lenders could slow the recovery along Euclid, but won't stop it, developers say. Housing developers say they're optimistic they will find the capital they need.
- The Ohio Department of Transportation's \$1.5 billion reconstruction of the downtown Inner Belt could impose a 15-year tourniquet on the city's main traffic artery and strangle property values. Developers say that's a critical need to maintain the flow of traffic. "Our politicians have to figure out how to mitigate the impact," says one developer.
- The proposed Medical Mart and new convention center could damage the city for decades if located in Midtown near the Cleveland Clinic. The projects would bleed energy from the existing business district and undercut decades of investment there, developers and planners say.



Public Square to Inner belt (\$1.3 billion)	
1	Arcade/Hyatt Regency hotel
2	\$15 Euclid Ave. garage
3	East 4th Street
4	Colonial Arcade renovation
5	668 Euclid Avenue
6	Ameritrust complex
7	Cleveland Athletic Building, 1001-1021 and 1101 Euclid Avenue
8	Avenue District
9	Carter Manor
10	Idea Center
11	Hanna Theatre
12	CSU law school renovation
13	CSU arts complex
14	College town development
15	CSU student center
16	CSU garage and RTA transit center
17	CSU main classroom building
18	Trinity Cathedral annex
19	CSU administrative complex
20	CSU recreation center
21	CSU Fern Tower renovation
22	CSU new student housing
23	CSU College of Education building
24	Woodhaven townhouses

Midtown (\$87.3 million)	
24	Myers University Club
25	Northeast Ohio Regional Sewer District headquarters
26	Centers for Families and Children
27	Cleveland Midtown Innovation Center
28	4600 Euclid Avenue
29	Victory Lofts building
30	Baker Motor Car building
31	Aldi supermarket
32	Erie Square apartments
33	Church of Latter-day Saints
34	Woodhaven townhouses

University Circle (\$3 billion)	
35	Cleveland Clinic; various projects
36	Cleveland Clinic; various projects
37	Global Cardiovascular Innovation Center
38	Park Lane apartments
39	Stokes VA hospital
40	John Jay High School
41	Cleveland Museum of Art
42	Cleveland Museum of Natural History
43	Shafrazi Planetarium
44	Hawken School
45	Cleveland Botanical Garden
46	Mandel Center for Nonprofit Organizations
47	Peter B. Lewis Building
48	Cleveland Institute of Music
49	Cleveland Hearing and Speech Center
50	University Hospitals
51	Museum of Contemporary Art Cleveland
52	University Arts and Retail District
53	Village at 115
54	Wolstein Research Center

SOURCES: Historical Society of Northeast Ohio; Cleveland State University; Midtown Cleveland Inc.; Cleveland Clinic; University Circle institutions

MAP BY KEITH BROWN | THE PLAIN DEALER



METROPOLITAN POLICY PROGRAM

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

By Center for Transit-Oriented Development and Center for Neighborhood Technology

This brief describes a new index, for the first time, linking housing and transportation choices. This brief explains how to create the Affordability Index index in a seven-county area. It also discusses the usefulness of this tool at the transportation and housing levels for families in each of four different metropolitan areas. It includes suggested policy recommendations in the housing market and land use arenas at the local, state, and national levels.

The Housing and Transportation Index measures the trade-off between the costs of living in a neighborhood and the savings that come from proximity to schools, jobs, and transit. The index is available for every transit-oriented neighborhood in more than 200 metropolitan areas across the country. It shows which neighborhoods have the best mix of housing and transportation options, and it provides a way for policy makers, leaders, and citizens to evaluate the impact of their policy and investment decisions.

### I. Housing and Transportation

The cost of living for the largest housing areas is often understood as the cost of a home. However, the cost of transportation, which is a significant part of the family budget, has become increasingly central to family budgets, given their choices to live

## A HEAVY LOAD:

The Combined Housing and Transportation Burdens of Working Families



October 2006

## Bringing Bay Area Affordability into Sharper Focus

An H+T<sup>SM</sup> Analysis

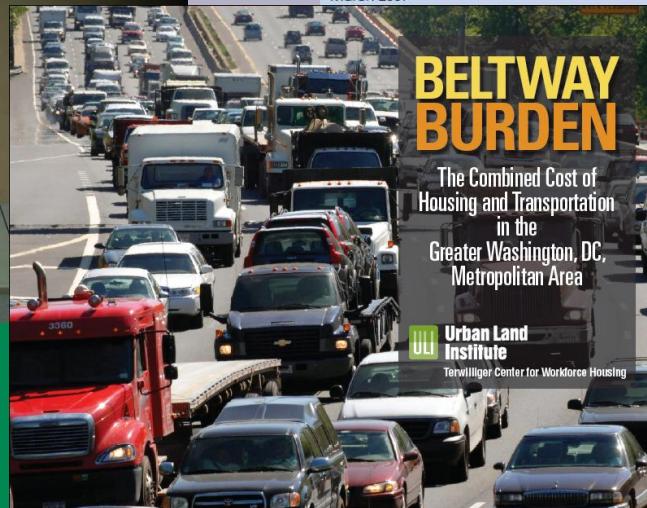


Prepared for: Metropolitan Transportation Commission  
Submitted by: Center for Neighborhood Technology  
March 2009

## BELTWAY BURDEN

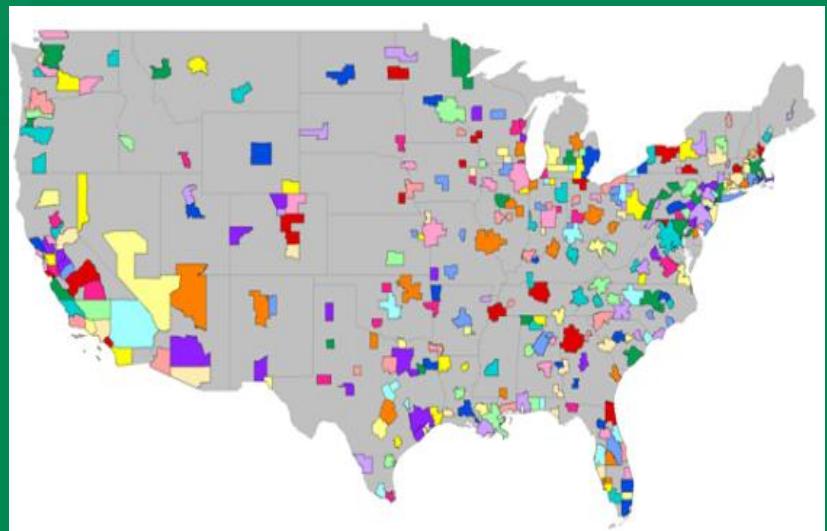
The Combined Cost of  
Housing and Transportation  
in the  
Greater Washington, DC,  
Metropolitan Area

ULI Urban Land  
Institute  
Terwilliger Center for Workforce Housing



# Coming soon to a neighborhood near you

- H+T expanding from 54 to 337 metros: <http://htaindex.org>
- White paper synthesizing H+T with public investments in housing & transportation
- Individual calculator produced for Washington DC and in development for Bay Area

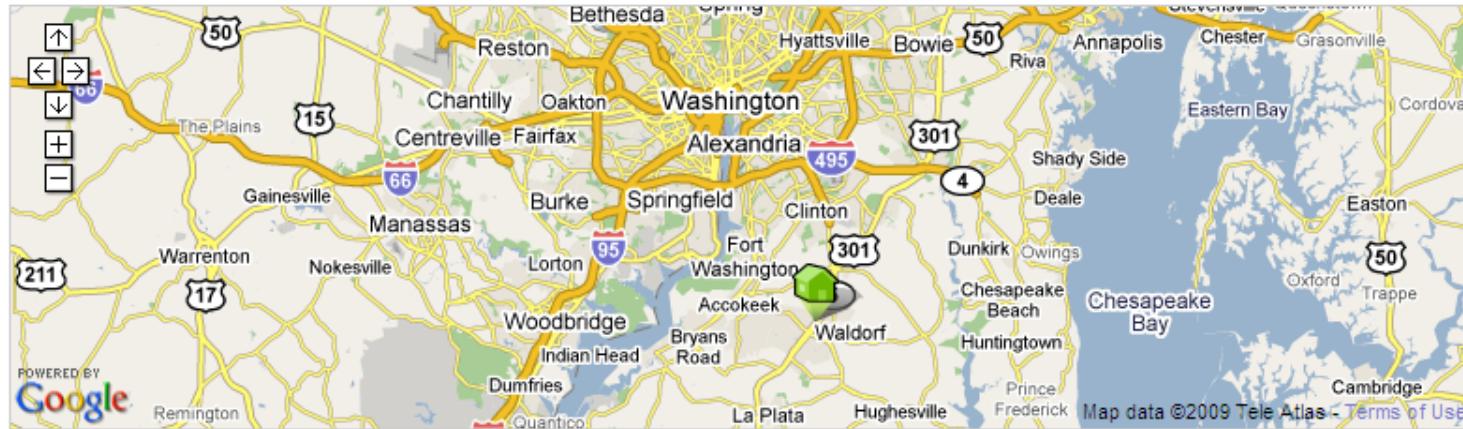


# DC Individual Calculator

## Housing + Transportation Calculator



[Introduction](#) | [Calculator](#) | [Help](#)



Map data ©2009 Tele Atlas - [Terms of Use](#)

### Comparing Your Locations

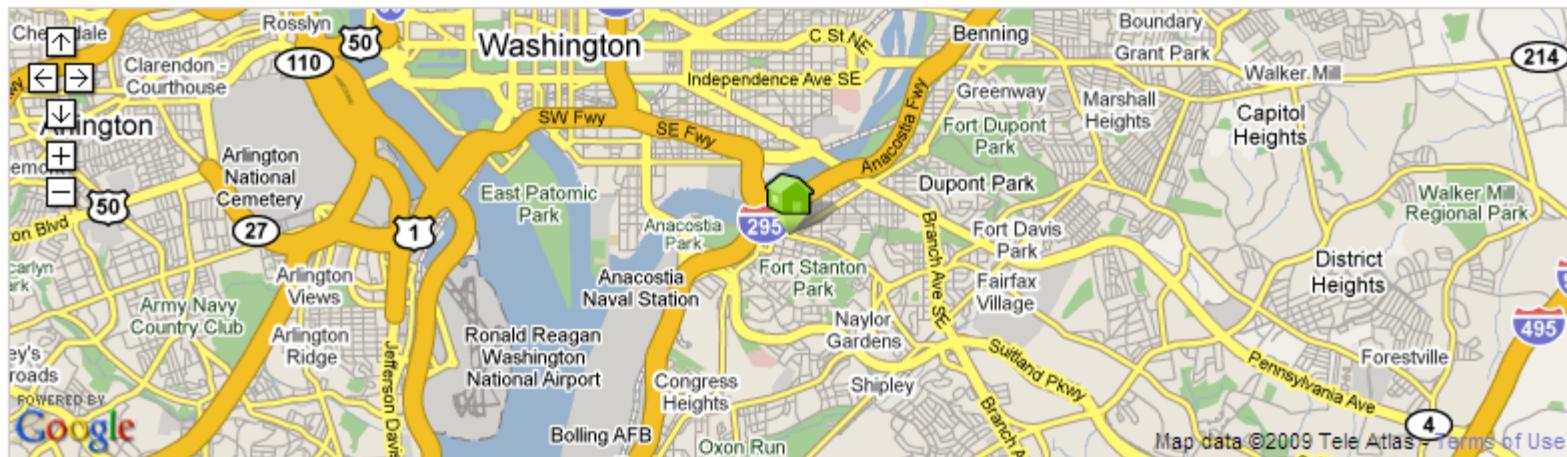
[Show Comparison Columns](#)

Waldorf, MD, USA	Your Household
<a href="#">Default Profile</a> <a href="#">Copy</a>   <a href="#">Delete</a>	<a href="#">SHOW MORE ▾</a>
Annual Transportation Costs:	\$13,649
Annual Housing Costs: (For Mix of Owners and Renters)	\$14,196
Annual Housing and Transportation Costs:	(53% of Inc.) \$27,845
Transit Connectivity:	Low
* Residential Household Density:	Low
Job Accessibility:	Very Low
Average Block Size:	Large

# Housing + Transportation Calculator



[Introduction](#) | [Calculator](#) | [Help](#)



## Comparing Your Locations

[Show Comparison Columns](#)

Anacostia, Washington, DC 20020, USA

Your Household

[Alternate Profile](#) [Copy](#) | [Delete](#)

[SHOW MORE ▾](#)

Annual Transportation Costs:

\$9,581

Annual Housing Costs: (For Mix of Owners and Renters)

\$13,416

Annual Housing and Transportation Costs:

(61% of Inc.) \$22,997

Transit Connectivity:

High

Residential Household Density:

Medium

Job Accessibility:

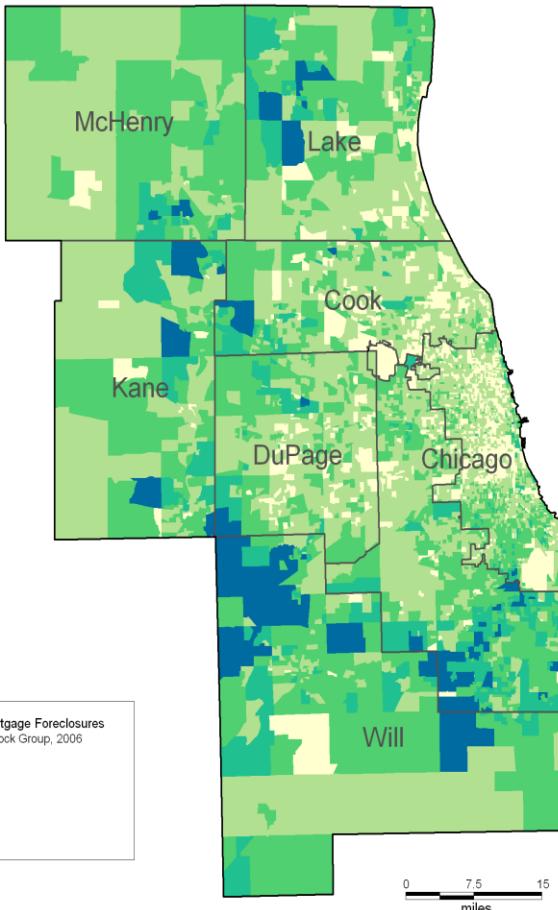
High

Average Block Size:

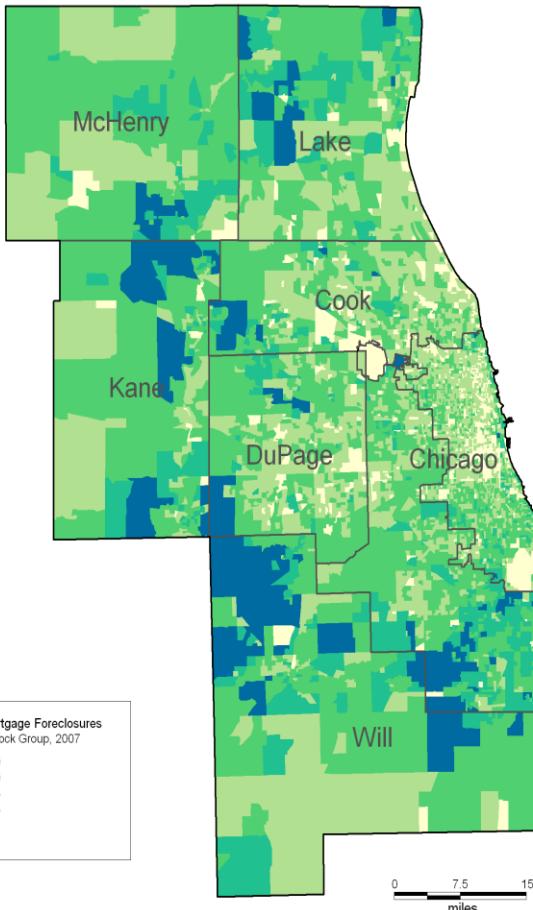
Very Small

# Housing Affordability/Neighborhood Stabilization

Recent Residential Mortgage Foreclosures  
Chicago Region, 2006



Recent Residential Mortgage Foreclosures  
Chicago Region, 2007



# H+T Index applications

- Research
- Policy
- Planning for growth, transit, and affordability
- Advocacy
- Lending/mortgage qualification
- Individual households

# Summary

- H+T: a more complete picture of affordability
- Many places less affordable than they appear
- New avenues towards affordability—BRT and TOD
- Expanding coverage, greater visibility, increasing embrace of principles by policymakers

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