A Closer Look

Bay Area Housing and Transportation Affordability

November 2009

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Bay Area Housing and Transportation Affordability:
A Closer Look

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About CNT

The Center for Neighborhood Technology (CNT) was founded in 1978 to research, adapt and test new community revitalization strategies relevant to urban communities, especially strategies that harnessed the environmental and economic value of the more efficient use of natural resources. Over the years, CNT has worked to disclose the hidden assets of the Chicagoland economy and urban areas more broadly; demonstrate the multi-bottom line benefits of more resource-efficient policies and practices; and show how the value of what we demonstrated could be captured to benefit communities and their residents inclusively. CNT's work, especially in the areas of energy, transportation, materials conservation and housing preservation, helped fuel a generation of community development institutions and learning, garnering us a reputation as an economic innovator and leader in the field of creative sustainable development.

CNT serves as the umbrella for a number of projects and affiliate organizations, all of which help the organization fulfill its mission: to promote the development of more livable and sustainable urban communities. CNT's transportation work is focused on using transportation assets to serve both the environmental and economic development goals of regions and communities. CNT works to boost demand for clean, efficient and affordable mass transit; increase the supply of traditional and non-traditional mass transit services; disclose the linkages between transportation costs and housing affordability; create model value-capture mechanisms that take advantage of the intersection of efficient transportation networks with community economic development programs; and promote policy initiatives that increase public participation in investment decisions and make more resources available for sustainable investments.

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

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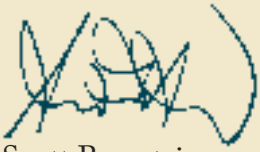
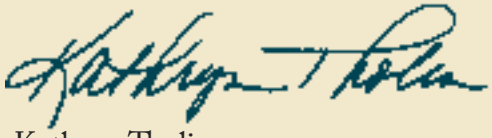


Scott Bernstein
President



Kathryn Tholin
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Bay Area Housing And Transportation Affordability: A Closer Look

In developing the San Francisco Bay Area's long-range Transportation 2035 Plan, the Metropolitan Transportation Commission (MTC) pursued a performance objective to reduce the combined cost of housing and transportation as a share of household income by 10 percent from today's level for low- and moderately low-income households. The objective was set out of concern that these families find it increasingly difficult to make ends meet given rising housing and transportation costs in the region. The burden of high housing and transportation costs affects people's ability to accumulate savings and create wealth, and keeps low- and moderately low-income workers from finding housing in proximity to their jobs, further exacerbating the toll of high housing and transportation costs.

PHOTO: MTC ARCHIVES

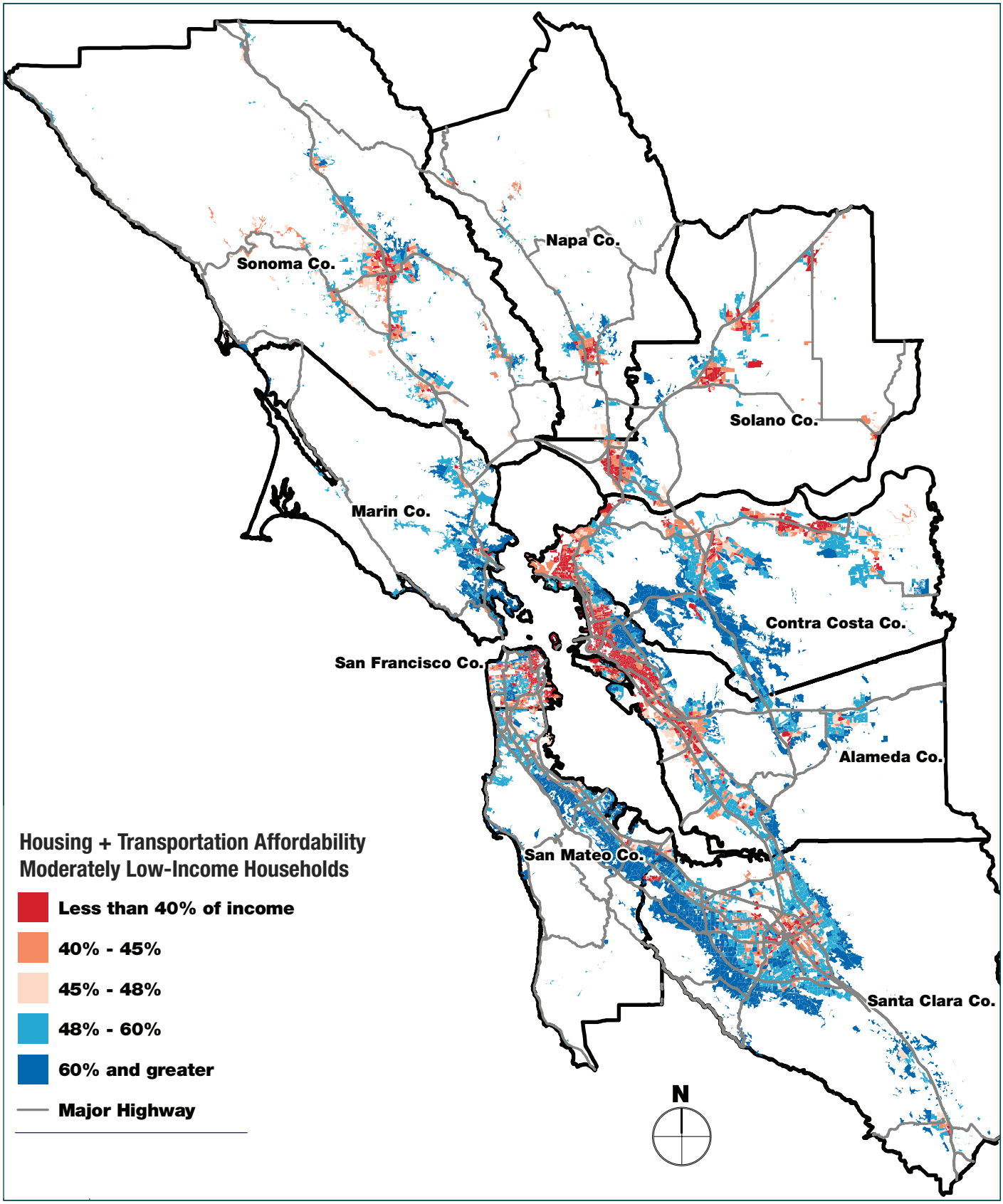
Finding that investments in transportation infrastructure alone did little to impact affordability over the 25-year timeframe of the Transportation 2035 Plan, MTC asked the Center for Neighborhood Technology (CNT) to prepare a neighborhood-scale Housing + Transportation Affordability Index (H+T^{SM} Index) Study. This analysis was intended to better understand — at a detailed, neighborhood level — variations in housing and transportation affordability based on location, and to begin to frame how the region might address this challenge going forward. This report summarizes the findings produced by that analysis.

CNT introduced the H+T Affordability Index in 2006 as a tool to document the cost of housing and its true affordability by calculating the transportation costs associated with a home's location. While traditional measures of affordability focus only on housing costs as a share of income, the H+T Affordability Index prices the tradeoffs that buyers and renters make between housing and transportation expenses when choosing where to live. CNT recommends that the combined cost of housing and transportation consume no more than 48 percent of a household's income. This recommendation is derived by adding the conventional definition of housing affordability at 30 percent of income to the 18 percent of income that the average household spends on transportation costs.

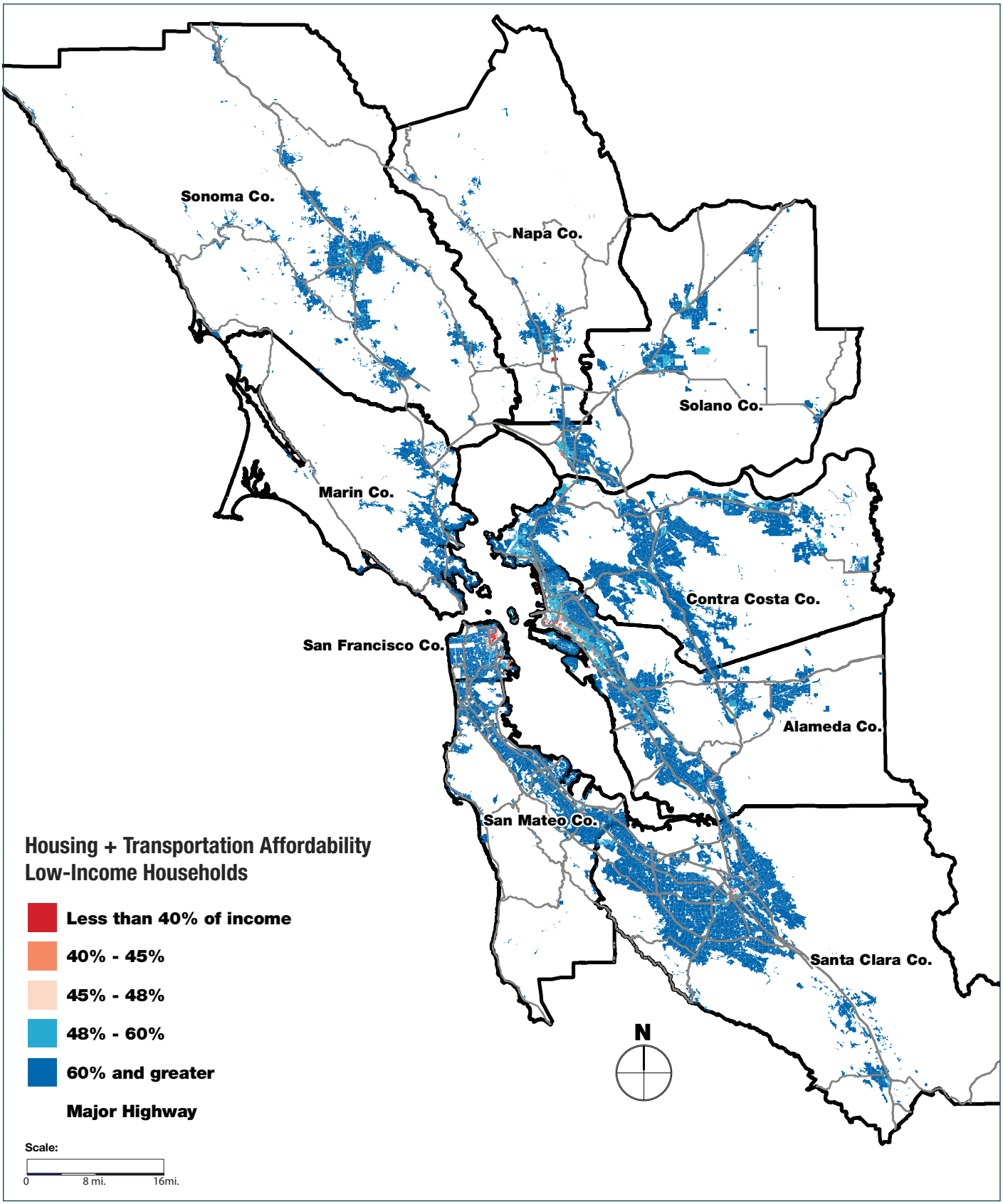
Key Findings

Identifying Affordable Communities

- **For moderately low-income households** earning between $35,000 and $60,000 per year in 1999, some portions of the Bay Area look affordable when viewed from the conventional perspective that housing costs consume no more than 30 percent of income. Almost 1.2 million dwelling units (49 percent of the region's occupied stock) are located in neighborhoods with average housing costs fitting this definition mostly in the inner East Bay and North Bay. Much of San Francisco and San Jose, on the other hand, appear to be unaffordable to these households.



Map E-1: About 1.2 million housing units are located in communities affordable to moderately low-income households ($35,000 to $60,000 per year).



Source: MTC, U.S. Census, colorbrewer.org, Center for Neighborhood Technology, 2009

Map E-2 (above): Low-income households in the Bay Area earning $35,000 per year have very few options for keeping their combined housing and transportation costs below 48 percent of income. Only 94,000 (4 percent) of the region's housing units are located in neighborhoods affordable to low-income households.

- However, a slightly different picture emerges when the region is screened for housing plus transportation (H+T) affordability for moderately low-income households (see Map E-1). Although the H+T view captures an additional 50,000 residential units which are considered affordable under the H+T definition, these additional units are concentrated in a smaller number of communities, limiting where these families can choose to live.
- **For low-income households** earning less than $35,000 per year in 1999, the combined cost of housing and transportation places the vast majority of Bay Area municipalities beyond their reach (Map E-2). Only 94,000 of the region's housing units (less than 4 percent of the region's total) are located in neighborhoods affordable to low-income households; these neighborhoods are mostly concentrated in eastern San Francisco and parts of Oakland, placing even greater constraints on where low-income families can choose to live compared to the options available to higher-income families.

Transportation Cost Factors

- Household transportation costs average $10,219 annually in the Bay Area but are lowest in the region's urban core and along transportation corridors.
- Volatile gas prices most affect the household finances of residents living in the exurbs, where people often live far from work and drive the most miles per year per household. Gas prices also disproportionately affect urban households located in more auto-dependent neighborhoods.

PHOTO: MINESWEEPER, WIKIPEDIA COMMONS

PHOTO: PETER BEELER

- At an average annual cost of $5,000 per vehicle, car ownership constitutes the single biggest expense within most households' transportation budgets and covers only auto payments and insurance, not gas or repairs.

Tracking and Addressing Affordability

- One effective way to monitor H+T affordability over time is to track production of affordable housing specifically located near major transit stations and hubs. Currently production is tracked only by municipality.
- CNT estimates that if just one quarter of the homes permitted between 1999 and 2006 provided transit access adequate to enable their occupants to reduce their car ownership by one car (for example, going from two cars to one car, or one car to zero cars), $132.5 million in disposable income would have been created for these households in reduced car ownership costs alone.
- Both housing and transportation costs vary by location. Therefore, solutions to address H+T affordability concerns should be tailored to local conditions.

The report concludes with three community case studies that illustrate how location and urban form influence housing and transportation affordability trade-offs in the region, drawing attention to the disproportionate burden low-income and moderately low-income families may bear in taking on higher transportation costs when seeking out lower-cost housing. The case studies also exemplify how transportation costs vary by location and conclude that solutions to address H+T affordability concerns should be tailored to local conditions.

I. The Challenge of Making Ends Meet in the Bay Area

Residents of the San Francisco Bay Area are saddled with the highest housing costs in the nation. Although the region's transportation costs are relatively affordable and improve the cost of living in Bay Area communities, the combined cost of housing and transportation places the vast majority of municipalities beyond the reach of the region's low-income and moderately low-income households.

According to the Association of Bay Area Governments (ABAG), the nine-county Bay Area is projected to add 2.3 million new residents between 2000 and 2035, increasing the population 34 percent from 6.8 million to 9.1 million. Any region seeking to compete in today's global economy must ensure that it has an adequate and broadly distributed supply of housing affordable to low- and moderate-income workers as well as transportation options at various price points for moving workers around the region. Making new homes affordable and locating them so that transportation costs are also affordable poses a considerable challenge for a metropolitan area already strained by these costs.

PHOTO: PETER BEELER

In developing the region's long-range Transportation 2035 Plan, the Metropolitan Transportation Commission (MTC) pursued a performance objective to reduce the combined cost of housing and transportation as a share of household income by 10 percent from today's level for low- and moderately low-income households (those households making less than $60,000 per year in 1999 dollars, or the region's approximate median income). Subsequent technical analysis of the plan revealed that investments in transportation infrastructure had little impact on housing and transportation affordability in the year 2035 relative to alternative land use or pricing policy scenarios, and also suggested that housing and transportation affordability varied considerably throughout the region, as housing costs, transportation costs and household income levels all differ by location.

To frame a more comprehensive and strategic approach to addressing this regional affordability objective, MTC asked the Center for Neighborhood Technology (CNT) to prepare a Housing + Transportation Affordability Index (H+T^{SM} Index) analysis for the Bay Area. This analysis focuses especially on low- and moderately low-income families, out of concern that these households in particular find it increasingly difficult to make ends meet given cost escalations in both the housing and transportation sectors.

CNT introduced the H+T Affordability Index in 2006 as a tool to document the cost of housing and its true affordability by calculating the transportation costs associated with a home's location. While traditional measures of affordability focus only on housing costs, the H+T Affordability Index prices the tradeoffs that buyers and renters make between housing and transportation expenses when choosing where to live, making the true cost of housing choices more transparent.

In this report, CNT examines the Bay Area's housing plus transportation (H+T) costs, comparing the region to others in the U.S. The analysis highlights variations within the Bay Area, shines a spotlight on the fact that very few affordable opportunities exist for low-income households in the region when transportation and housing costs are considered in tandem, and draws attention to the disproportionate burden these families bear in added transportation costs when seeking out lower-cost housing.

II. Factoring Transportation into the Affordability Equation

Conventional wisdom suggests that to be considered affordable, housing costs should consume no more than 30 percent of a household's income. However, no comparable wisdom has been shared with prospective home buyers or renters about the transportation costs associated with living in a particular community. CNT's analysis of 54 metropolitan regions in the U.S. reveals that transportation costs typically represent 18 percent of a household's income. The H+T Affordability Index combines these two percentages, 30 percent and 18 percent, to suggest that combined housing and trasnportation burden should represent no more than 48 percent of household income.

CNT's analysis demonstrates that true affordability is derived from living in compact, mixed-use, transit-rich communities where homes are located near shopping, schools and work. Residents of these communities typically pay more for housing but own fewer cars, pay less for transportation, and thus dedicate less of their budget to combined H+T costs because of their proximity to transit and jobs.

H+T COSTS refer to the average dollar amount dedicated to housing and transportation expenses.

H+T BURDEN is a measure of affordability and refers to the percent of income allocated to housing and transportation costs.

PHOTO: MTC ARCHIVES

This picture of affordability contrasts with communities where housing costs less but where residential areas are far from employment centers, commercial areas, schools and public transportation. Households in these communities own more cars to get around and drive them farther to meet daily needs. People who choose to live in these ex-urban communities often pay more in increased transportation costs than they save on housing, thereby straining the family budget.

Bay Area's Housing Costs Highest In the Nation

The Bay Area's high housing costs make it one of the most expensive regions in the nation for housing. Yet it is the most affordable region in terms of transportation cost burden (16.6 percent of average income). Combining a relatively high housing burden and a low transportation burden places the Bay Area near the middle among 19 large metropolitan regions studied by CNT in terms of combined H+T affordability. Nevertheless, in terms of actual costs, the Bay Area's average annual combined housing and transportation expenses ($29,903) surpass all other markets including New York ($26,054), Washington, DC ($25,754), and Boston ($25,434) (Figure 1).

The region's high H+T costs are offset in terms of affordability by the fact that the Bay Area also has the highest Area Median Income (AMI) among comparable metropolitan regions ($62,024 in 1999).

The region's relative H+T burden equals 48 percent — a percentage that CNT has found to be the average spent by U.S. households on these combined costs — and situate the San Francisco Bay Area in the midst of its peer regions, tied with Boston, Dallas and St. Louis and more affordable than Miami (60 percent), Tampa (55 percent), Los Angeles (54 percent), New York (51 percent), Phoenix and Seat-

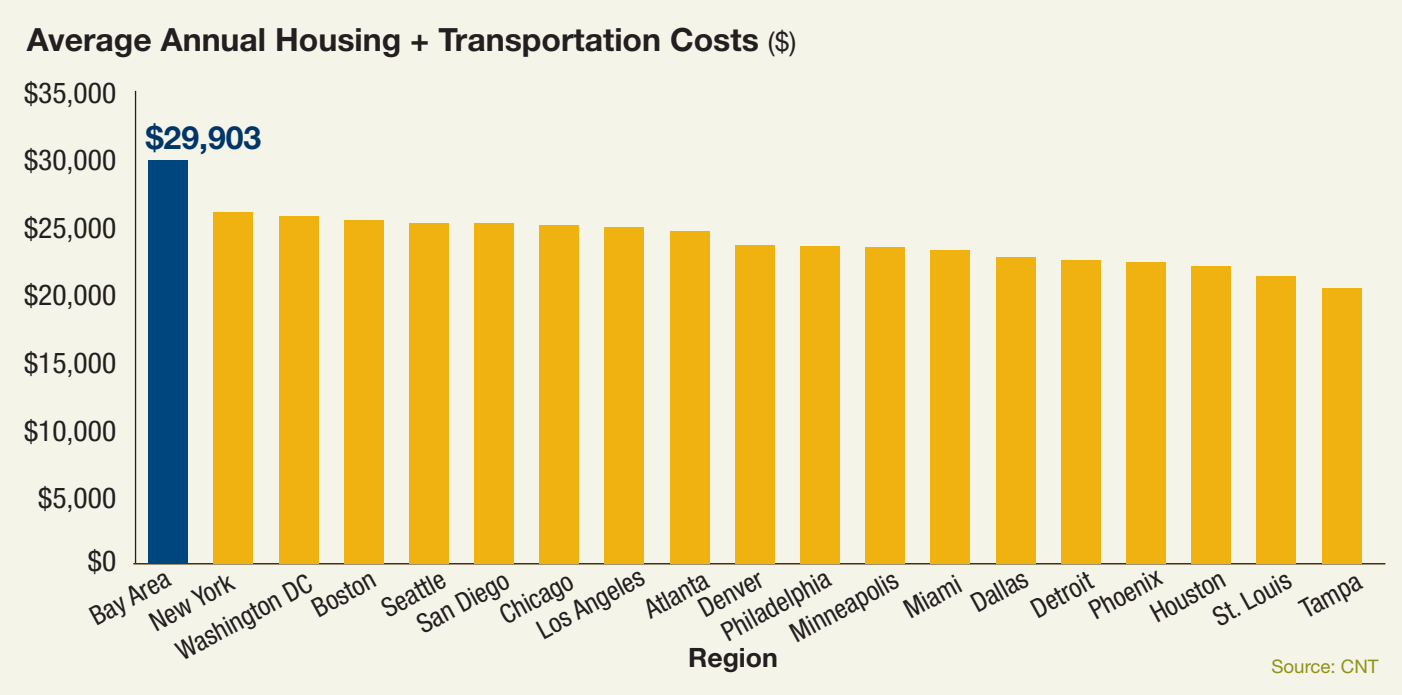


Figure 1: The Bay Area's combined housing and transportation costs make it the most expensive region in dollar tems among the largest metropolitan regions in the U.S.

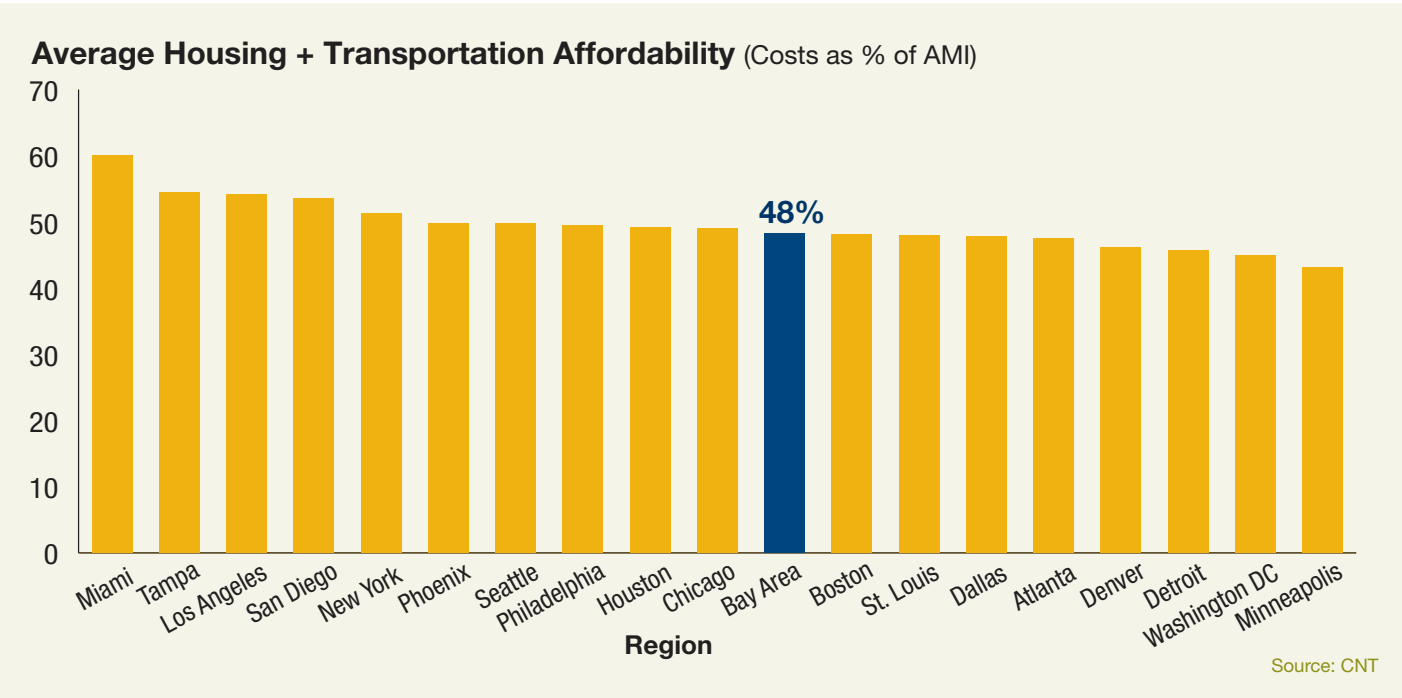


Figure 2: H+T costs computed as a percentage of Area Median Income (AMI) in the San Francisco Bay Area are similar to other regions' cost burdens for these budget items due to the Bay Area's high median income.

tle (50 percent), and Philadelphia, Houston and Chicago (49 percent) (Figure 2).

High income correlates strongly with high car ownership, which is the most significant component of transportation costs. The average number of automobiles per household in the Bay Area (1.76) places it in the same league as other auto-dependent regions such as Denver (1.81), Seattle (1.8) and Atlanta (1.79), and well above other regions with extensive, established transit systems such as New York City (1.25), Philadelphia (1.51) and Chicago (1.56). These figures represent regional averages that can vary significantly between communities within the region.

While regional officials are always interested in knowing how they compare to their peers, the H+T Affordability Index is best used to illustrate the cost variations within a region. These variations from city to city and neighborhood to neighborhood have significant implications for the financial health of low- and moderate-income families.

Urban Areas More Affordable Under H+T View

Housing costs average $20,000 per year in the Bay Area, but these costs vary considerably throughout the region. The counties of Santa Clara, San Mateo, Alameda and Contra Costa contain substantial areas where housing costs, on average, between $28,000 and $36,000 annually. The North Bay appears more affordable, with many areas where housing costs range from $12,000 to $28,000 annually.

The conventional view of housing affordability at 30 percent of income suggests that some portions of the Bay Area are affordable for moderately low-income households earning between $35,000 and $60,000 per year in 1999 (Figure 3). When considering housing costs alone, 1.2 million housing units, or 49 percent of the occupied housing stock, are located in Census block groups where the average cost is within an affordable range. These homes are concentrated in the inner East Bay and then again in the ex-urban areas farthest removed from the region's urban core.

However, once transportation costs are factored in, the picture changes considerably (Figure 4). Some communities that appear affordable under the 30 percent rule of thumb for housing affordability cease to be so when a 48 percent standard for combined housing and transportation cost burden is applied. Conversely, affordable opportunities expand in urban communities that are more densely developed, and well served by public transit.

LOW-INCOME HOUSEHOLDS refers to households falling in ABAG's lowest of four income groups, earning less than $35,000 in 1999 dollars (equivalent to $43,000 in 2008 dollars). There were 649,000 households in this income group in 2000, or 26 percent of the region's total.

MODERATELY LOW-INCOME HOUSEHOLDS refers to households with incomes in ABAG's second-lowest of four income groups, earning between $35,000 and $60,000 per year in 1999 dollars (equivalent to between $43,000 and $78,000 in 2008 dollars). There were 527,000 households in this income group in 2000, or 21 percent of the region's total.

An additional 50,000 housing units are affordable under the H+T scenario due to the low transportation costs associated with these denser, mixed-use, transit-rich communities. However, concentrated as they are in San Francisco and the inner East Bay, this limited choice of locations may not work for many families.

The Bay Area offers very few affordable H+T alternatives for the approximately 649,000 low-income households earning $35,000 or less annually (1999 dollars) (Figure 5). There are only 94,000 dwellings located in areas with an average H+T burden affordable to low-income families (Figure 6). These housing units are largely located in eastern San Francisco and parts of Oakland, dramatically constraining where low-income families can choose to live.

Conventional View of Affordability: Housing Costs as a Percent of Income for Moderately Low-income Households

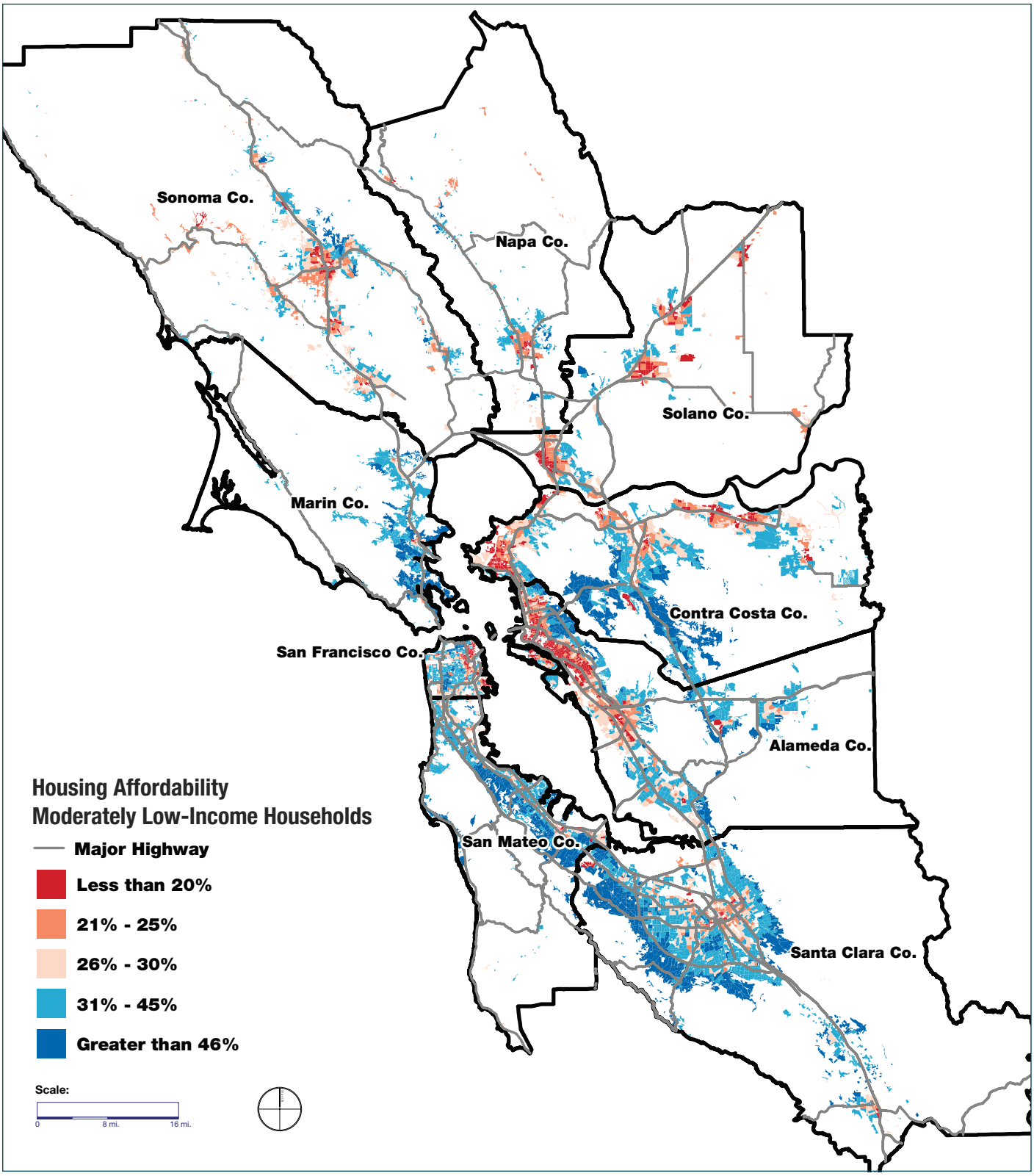
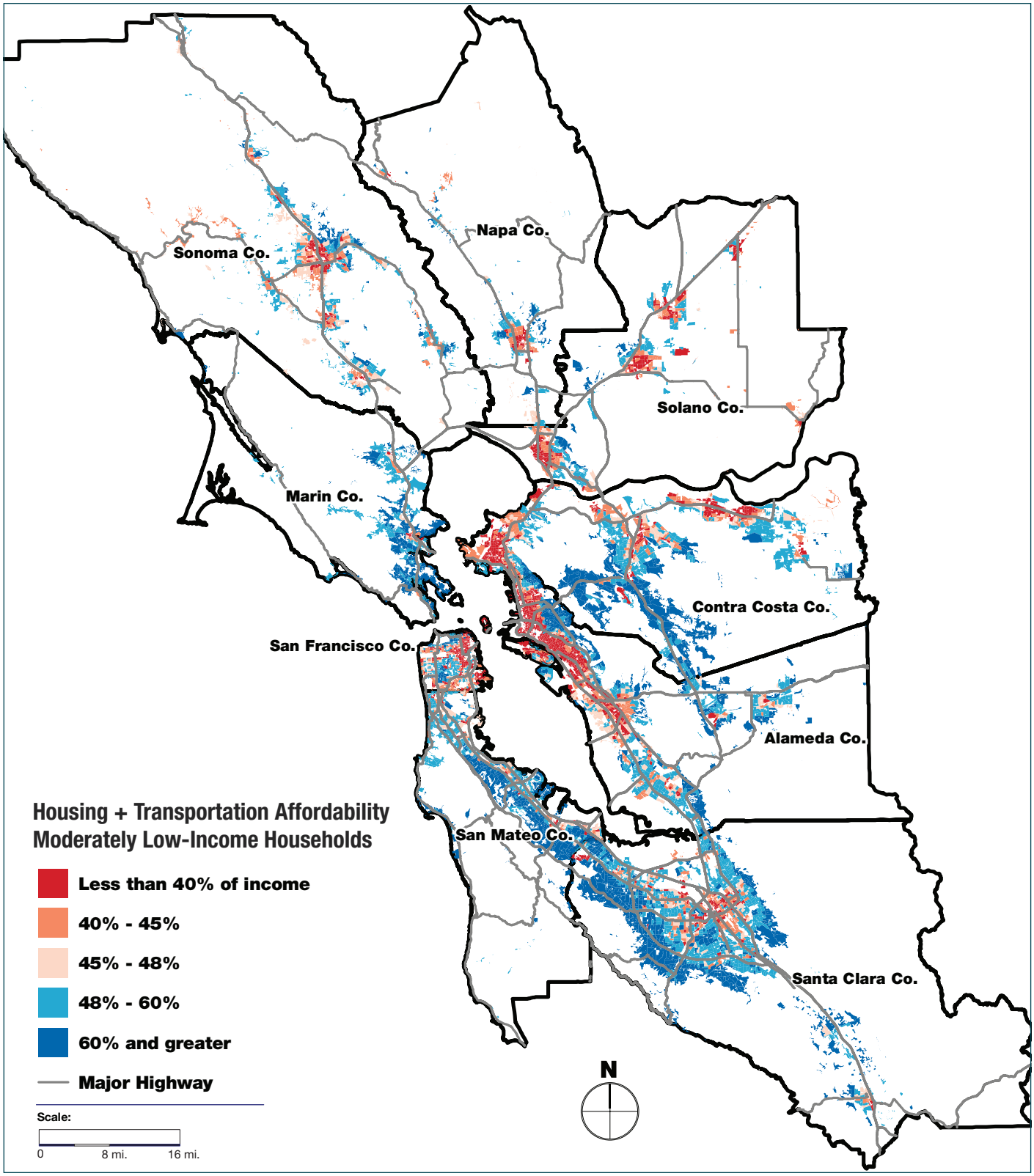


Figure 3: A conventional view of housing affordability reveals that average housing costs in many communities place them out of reach of moderately low-income households. Affordable housing appears to be located in the ring of communities bordering the San Francisco Bay and in outlying ex-urban communities.

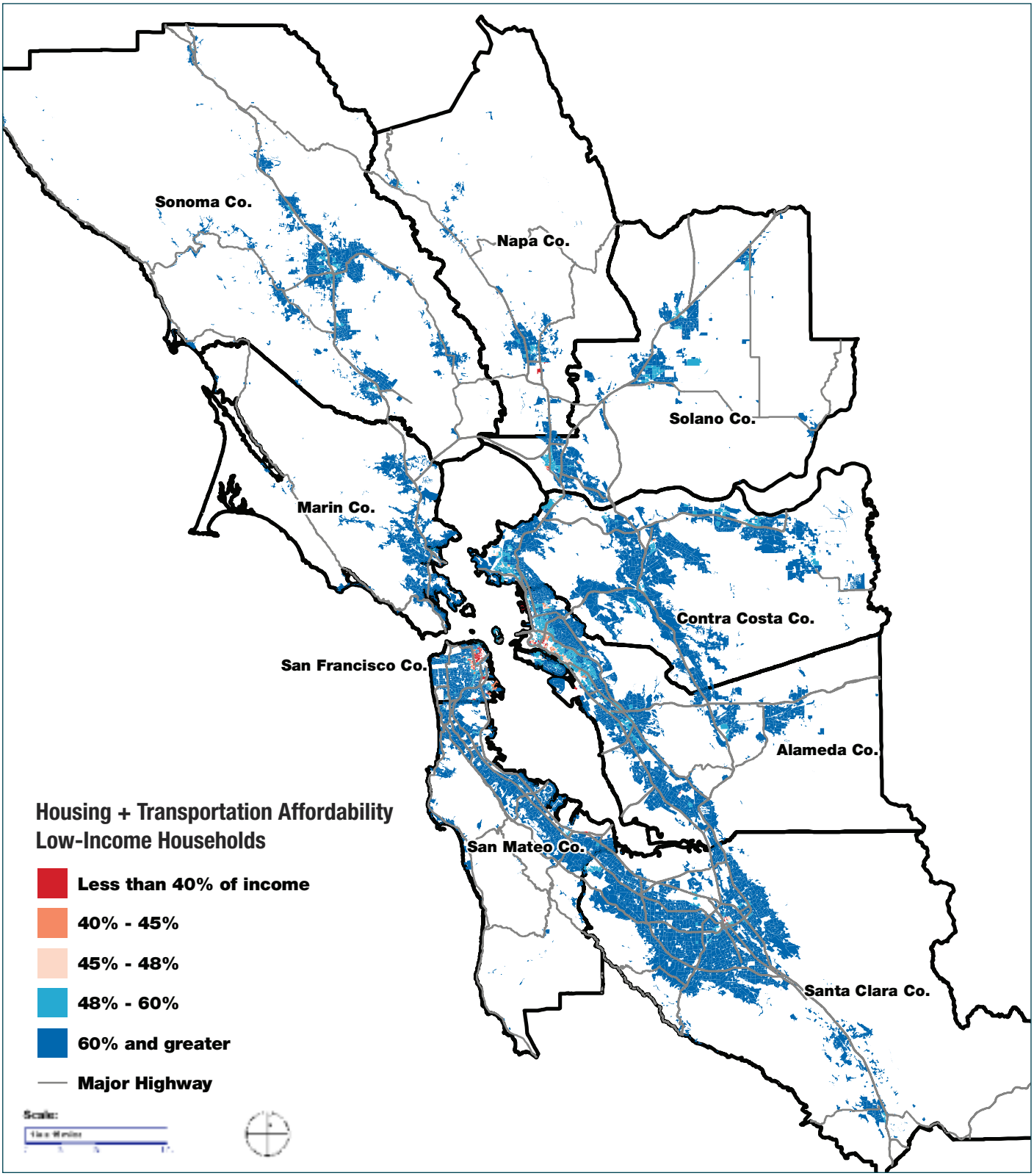
An H+T View of Affordability for Moderately Low-Income Households



Source: MTC, U.S. Census, colorbrewer.org, Center for Neighborhood Technology, 2009

Figure 4: The number of communities affordable to moderately low-income households shrinks considerably when transportation costs are added to housing costs and the 48 percent H+T affordability standard is applied.

An H+T View of Affordability for Low-Income Households



Source: MTC, U.S. Census, colorbrewer.org, Center for Neighborhood Technology, 2009

Figure 5: Low income households in the Bay Area earning $35,000 per year or less have very few options for keeping their combined housing and transportation costs below 48 percent of income.

Transit Keeps the Bay Area Affordable

Annual transportation costs in the Bay Area average $10,219 and consume 16.6 percent of a median-income household's budget. These regional averages, however, mask the wide range of transportation costs that can run as low as an average of $5,500 per year in some San Francisco and Oakland communities while reaching averages of $12,500 in Antioch and $14,000 in the farthest reaches of Napa and Solano counties (Figure 7).

Residents of communities with low transportation costs benefit from using transit to get around, owning fewer cars and driving them shorter distances. San Francisco and Oakland, where 31 percent and 17 percent of workers respectively travel by transit to their jobs, report car ownership as low as 0.9 and 1.2 cars per household in certain neighborhoods. Some well-known and densely populated neighborhoods in San Francisco such as Chinatown, North Beach, Tenderloin and Nob Hill are lower still. Communities with the highest transportation costs have lower densities and few alternatives to the automobile because transit service is not as readily available. As a result, their residents own more cars (2 to 2.5 per household), use them more often and travel more miles to run errands and get to work.

PHOTO: MTC ARCHIVES

PHOTO: MTC ARCHIVES

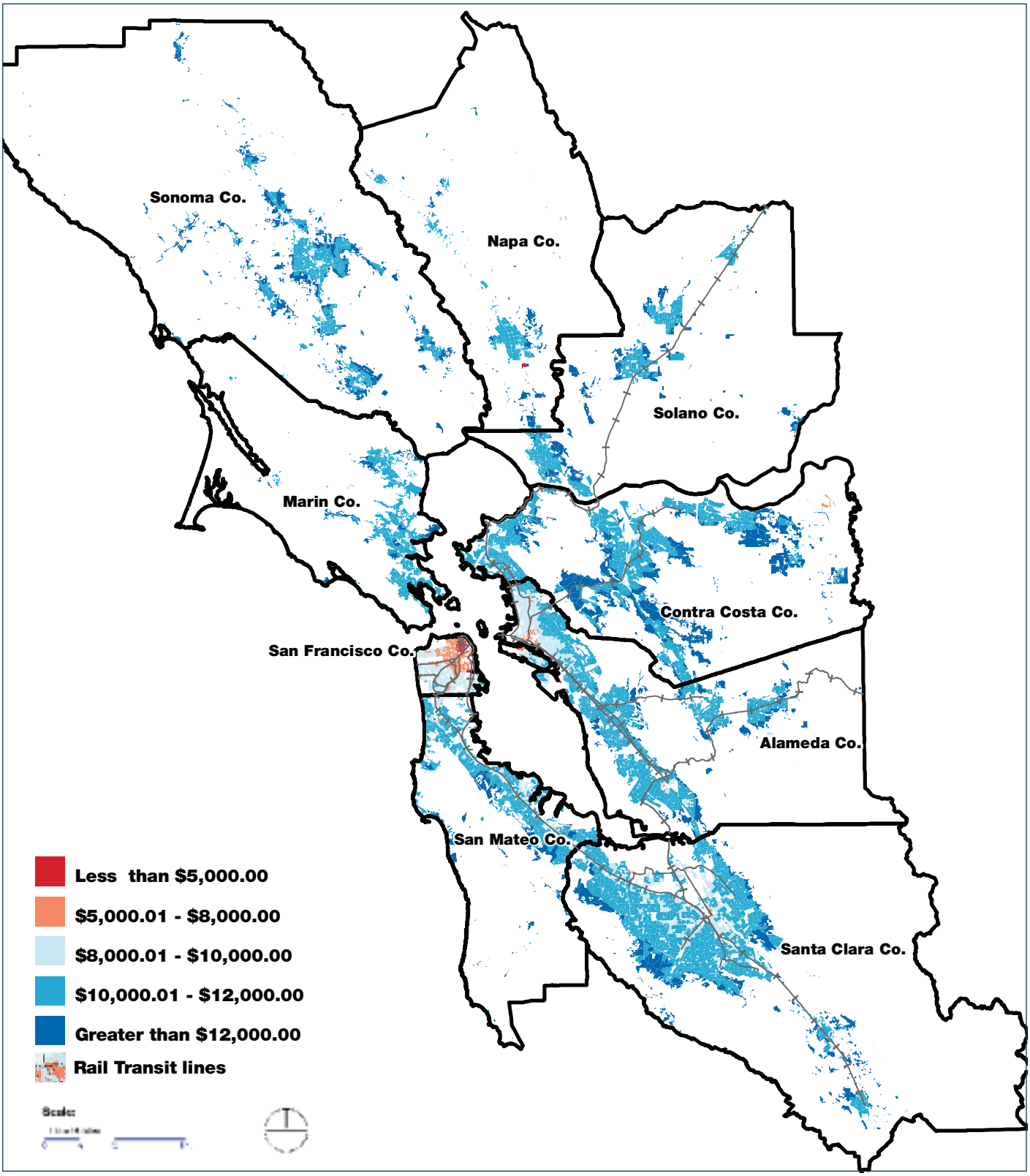
At an average annual cost of $5,000 per vehicle, car ownership constitutes the single biggest expense within most families' transportation budget and covers only auto payments and insurance, not gas or repairs. Annual transit expenses ranging from $540 in San Francisco to perhaps $2,000 or more for a distance rail commuter seem a bargain by comparison. The option to avoid or reduce automobile ownership provides a significant economic benefit for low-income households.

Number of Housing Units Located in Affordable Areas

	Traditional affordability definition: Housing costs ≤ 30% of Area Income	H+T affordability definition: Housing + Transportation Costs ≤ 48% of Area Income	Number of Bay Area Households (2000)
Low-Income Households (<$35,000)	163,164	93,641	649,204
Moderately Low-Income Households ($35,000-$60,000)	1,173,516	1,223,192	527,935

Figure 6: Very few affordable H+T alternatives exist for low-income households in the Bay Area, which represent 26 percent of all households. Only 94,000 dwelling units – 3.8 percent of the region's occupied housing stock — are located in Census block groups with an H+T cost burden of less than 48 percent of low-income household earnings.

Bay Area Transportation Costs for Moderately Low-Income Households



Source: MTC, U.S. Census, colorbrewer.org, Center for Neighborhood Technology, 2009

Figure 7: Transportation costs are lowest in the region's urban core, which features the most extensive transit service, highest densities and best access to a blend of amenities and employment centers.

The Data in Context: Key Regional Trends Since 2000

The analysis summarized in this report represents an affordability snapshot in time for the region as of 2000. Since MTC wanted to analyze proximity to the transportation network as a factor in overall H+T affordability, 2000 U.S. Census data is the most recent available that supports such a fine-grained geographic analysis. Since 2000, however, the Bay Area has experienced considerable volatility in both housing prices and fuel costs, with both sectors seeing steep run-ups followed by dramatic declines. And while housing values have fallen sharply in many areas recently, many homeowners' costs (their mortgage payment, taxes, and insurance, which are used to calculate the H+T Index) have not. Data from the Census Bureau used in this analysis are for housing costs, not value.

To capture some of these recent changes as additional context for this analysis, MTC performed a separate analysis of regional housing costs and household income data from the 2006 American Community Survey (2006 data is available for 54 Public Use Microdata Areas in the region, which are much larger than the fine-grained block group–level data from the 2000 Census). Analysis of these 54 regional subareas revealed the following trends when examined alongside comparable data from 2000:

- Regional housing costs rose between 2000 and 2006, and for homeowners more so than renters. Meanwhile, median income declined, further exacerbating the region's housing cost burden overall.
- The biggest increases in homeownership costs as share of income were in outlying suburban areas of eastern Contra Costa and Solano counties, as well as the urban areas of East Oakland, East San Jose, and Richmond/San Pablo.
- These same areas are also relatively auto-oriented, meaning their residents are also more sensitive to rising fuel prices, as were seen in 2008.

While fuel prices have since fallen off from their record-breaking 2008 levels, overall this analysis suggested that the region's H+T burden is very likely heavier today than it was in 2000, given the overall increases in housing costs and decline in incomes. The increased burden appears to fall heaviest on homeowners in auto-oriented areas, areas where residents have the greatest exposure to increased fuel costs and where homeowners have seen their housing cost burden increase the most.

PHOTO: PETER BEELER

PHOTO: NOAH BERGER

III. Framing a More Affordable and Equitable H+T Future

The Metropolitan Transportation Commission solicited this analysis to help frame the magnitude and geographic distribution of affordability issues in the Bay Area as an initial step toward identifying short-term strategies that preserve and promote affordability in the region. The H+T analysis clearly demonstrates that the challenges confronting the region vary widely by city and even by neighborhood within cities. Locations of affordable housing and transportation are concentrated in just a few cities, limiting the choices of low-income families.

The Bay Area Joint Policy Committee's goal of locating 50 percent of all new housing within a half-mile of transit ranks highly as an example of how the Bay Area's regional agencies are trying to ensure a more affordable and equitable distribution of housing and transportation choices in the region as it accommodates future growth. Nevertheless, more can and must be done. As illustrated by the case studies included at the end of this report, no one-size solution will work for all locations. Rather, solutions must be tailored to the residents and community given the particulars of each situation.

In the Bay Area, the combined cost of housing and transportation places the majority of municipalities beyond the reach of low- and moderately low-income households. High H+T costs affect people's ability to accumulate savings and their potential for wealth creation. In many cases, high costs also keep low- and moderately low-income workers from finding housing in proximity to their jobs, exacerbating what is an already tenuous financial situation by adding to their transportation expenses. Unless addressed, such a situation can ultimately threaten the quality of life and overall economic well-being of the region.

PHOTO: MTC ARCHIVES

Through its investments, however, regional government has the ability to influence transportation costs directly and indirectly encourage compact, mixed-use development in areas with transit. This H+T analysis provides a framework for the Bay Area's regional agencies, counties and municipalities to respond to the enormous challenges they face in accommodating 2.3 million new residents in sustainable ways and serves as a call to action on the part of elected and appointed officials.

Tracking Affordability as the Region Grows

Although the 48 percent H+T affordability standard captures more units of Bay Area housing than the traditional view of housing affordability alone, neighborhoods affordable to low-income households are concentrated in just a handful of communities in San Francisco, Oakland and Berkeley. This limited selection constrains where low-income families can live and their ability to select from a broader menu of local amenities and services that best suit an individual family's needs. The best opportunity to impact affordability in the Bay Area centers on directing the way the region grows, and particularly in giving lower-income families more locational options.

Affordability is multi-dimensional, and accordingly an H+T benchmark of 48 percent should be supported with multiple regional performance measures that track progress toward more affordable H+T costs. The following potential measures represent data that is readily available and in many cases already tracked. The key to monitoring affordability moving forward, however, consists in evaluating the data specifically through the lens of the H+T benchmark. Such an analysis could be performed periodically via updates to the Regional Housing Needs Allocation process and MTC's long-range Regional Transportation Plan.

One highly effective way to monitor H+T affordability performance is to coordinate regional housing and transportation data so that integrated spatial analysis is possible. Currently, the Bay Area's Regional Housing Needs Allocation (RHNA) performance is tracked only by municipality and the number of permits issued by income group, not by the actual location, type, or number/density of units. Thus, it is currently not possible to map specific locations against the transportation network so as to ascertain transportation costs associated with specific developments.

Lacking specifics by neighborhood, CNT analyzed RHNA data by municipality for 1999-2006, revealing that half of the region's low- and moderate-income housing granted permits for construction was produced in communities with rail stations and ferry terminals. Low-income housing was more likely than moderate-income housing to

PHOTO: MTC ARCHIVES

be located in communities having transit stations, with 60 percent of all low-income housing permitted in such municipalities, in contrast to 40 percent of moderate-income housing.

Without specific addresses for these housing units, however, it cannot be said with any certainty how many housing units are served by transit stations, only that the overall community is. If just one quarter of the homes permitted between 1999 and 2006 provided transit access adequate to enable their occupants to reduce their car ownership by one car (for example, going from two cars to one car, or one car to zero cars), $132.5 million in disposable income would have been created for these households in reduced car ownership costs alone. Reducing car ownership costs presents significant potential economic benefits for low-income households in particular who can dedicate the savings to housing, education or other necessities.

PHOTO: GEORGIA LAMBERT

Performance Measure	Source	Direction
Number and share of households with one or no cars	Census/MTC estimates	Increase
Supply and increase in supply of housing located in Census block groups that meet the H+T standard for low- and moderately low-income quartiles	ABAG/Census Bureau	Increase
Supply of all housing that is affordable and located within a half-mile of transit	ABAG/Census Bureau	Increase
Travel mode to work	Census/MTC estimates	Decrease share of single-occupant vehicle trips
Transit ridership	Transit operators/ MTC estimates	Increase
Walkability of new developments	ABAG	Increase the number and share of destinations accessible by walking
Number of customers and communities served by car-sharing	Local car-sharing providers	Increase
Vehicle miles traveled (VMT) by personal vehicles	MTC estimates	Decrease

IV. Location And Urban Form Matter: Three Case Studies

Regions concerned with affordability must add urban form to the real estate agent's mantra of "location, location, location"; the shape and density a community assumes has significant implications for whether households with a range of incomes can afford to live there. Location-efficient neighborhoods — compact, mixed-use communities with housing at a range of price points, fast and frequent transit, proximity to job centers, and streets that accommodate pedestrians and cyclists as well as the car — require a minimum household expenditure of money, time and effort for daily tasks. Not all communities develop in this fashion, however, so when studying H+T in the Bay Area, three communities representing different points on the development spectrum were selected and examined in greater detail.

- **Downtown Oakland** represents the region's densely developed urban core which is well served by rail and bus;
- The city of **San Mateo** is an established, medium density, inner ring suburb of San Francisco with rail and bus transit service; and
- **Antioch** is an ex-urban "bedroom" community located in eastern Contra Costa County, which currently has only limited regional transit service but is scheduled to receive a BART extension.

THREE PHOTOS: MTC ARCHIVES

These cities were selected to better illustrate the impact of location and urban form on affordability. The case studies also examined regional Priority Development Areas (PDAs) and MTC-defined communities of concern in each area to further drill down on affordability issues in these planning areas.

Priority Development Areas are locally identified infill-development opportunity areas within existing Bay Area communities, which have been adopted by the Bay Area Joint Policy Committee. They are generally areas of at least 100 acres where there is local commitment to developing more housing along with amenities and services to meet the day-to-day needs of residents in a pedestrian-friendly environment served by transit. To be eligible to become a PDA, an area had to be within an existing community, near existing or planned fixed transit or served by comparable bus service, and planned for more housing.

Communities of concern are those communities with concentrations of either minority or low-income populations, having at least 70 percent minority or 30 percent low-income residents, where low-income is defined as being at or below 200 percent of the federal poverty level.

PHOTO: PETER BEELER

Downtown Oakland

Of the three cities, Downtown Oakland, bounded by the MacArthur Freeway (I-580) on the north, Grove Shafter Freeway (I-980) on the west, Nimitz Freeway (I-880) on the south and Oak Street/Lake Merritt on the east, has the lowest housing and transportation costs. Downtown Oakland's average housing costs total $9,770 annually, half the regional average (Figure 8).

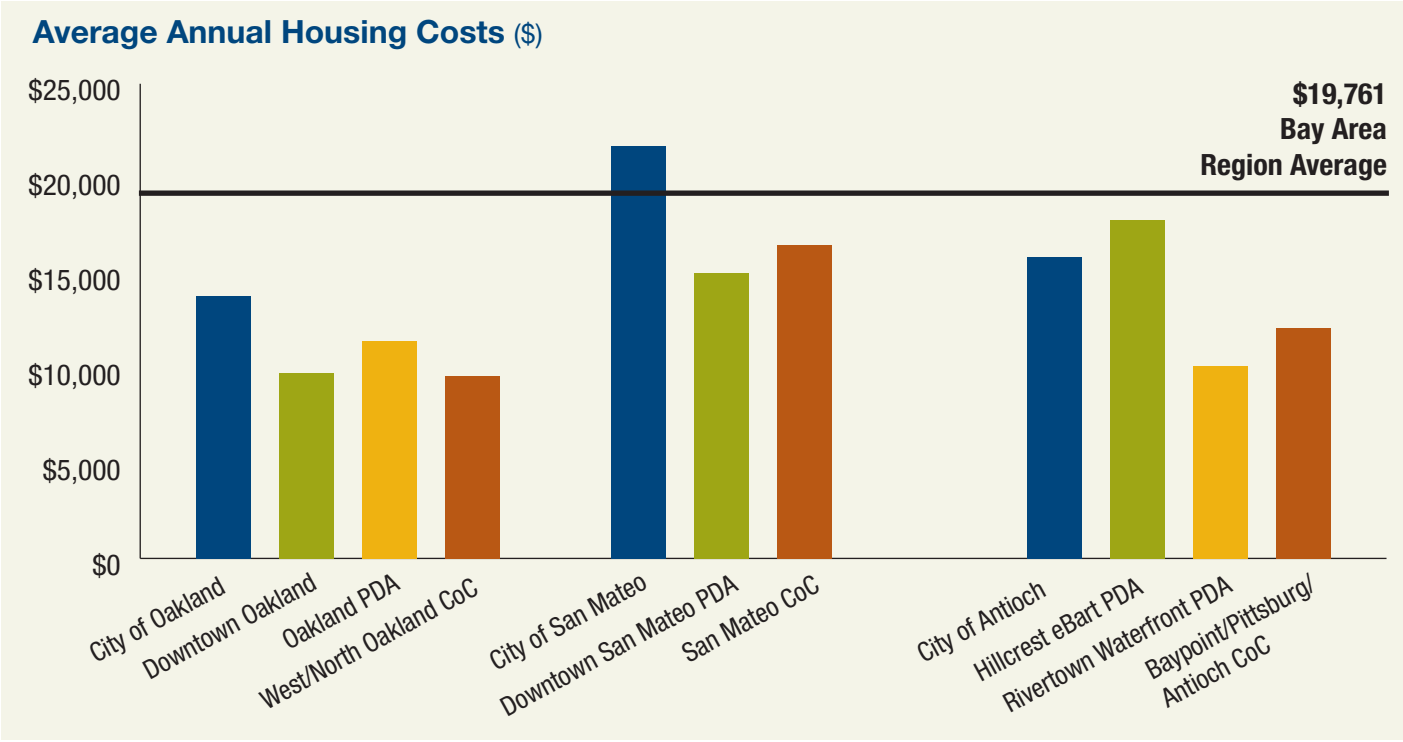


Figure 8: All three case study cities have areas with housing costs that fall below the regional average, with San Mateo's citywide average being the sole exception. Seven of the eleven areas cited had average housing costs at least 25 percent below the regional average.

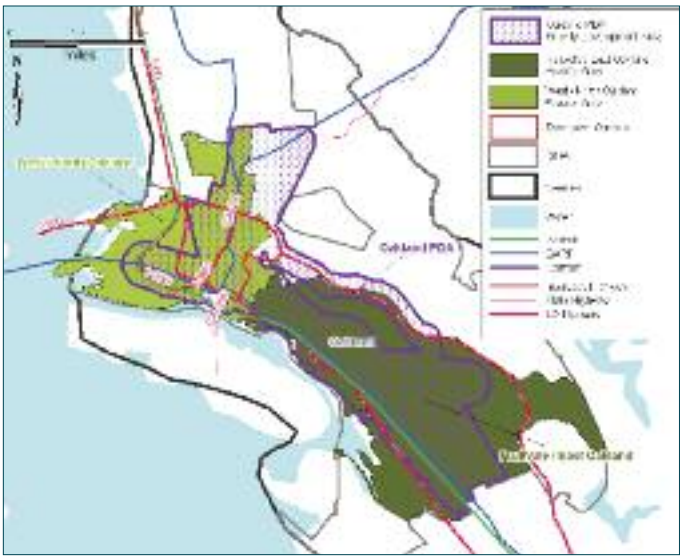


Figure 9: Downtown Oakland, Priority Development Area and Communities of Concern

Housing in Downtown Oakland costs less than for Oakland as a whole ($13,814) and less than for the Oakland Priority Development Area (PDA) ($11,468), and is comparable to that of the West/North Oakland community of concern ($9,590). Similarly, average transportation costs for Downtown amount to $4,417, below averages for the city ($7,963), the West/North Oakland community of concern ($5,447) and the Oakland PDA ($7,128). Figure 9 shows each area in context.

Low transportation costs in Downtown Oakland can be attributed to the transit saturation of the central business district but also to the fact that car ownership, the single biggest component of transportation cost, is very low, averaging 0.8 cars per household. The city of Oakland, by comparison, averages 1.4 cars per household while the Oakland PDA and the West/North Oakland community of concern report averages of 1.2 and 0.9 cars per household respectively. Generally, car ownership correlates positively with income so that high-income households own more cars and low-income households own fewer; Oakland's low car ownership follows this trend.

While residents of Downtown Oakland strain to cover housing and transportation costs because of their low incomes, the area ranks as the most affordable location among the four Oakland geographies considered in this case study (Figure 12). Residents there dedicate on average 52 percent of household income to cover H+T costs — well above the recommended 48 percent level, but better than the 53 percent citywide average, the 54 percent Oakland PDA average and the 58 percent average in the West/North Oakland community of concern, where housing alone consumes 38 percent of income.

Downtown Oakland presents the opportunity to take advantage of existing public transportation assets by preserving affordable housing wherever possible and by building mixed income, mixed-use developments. The Bay Area will have missed an essential chance to capitalize on Downtown Oakland's transit network if it fails to provide for affordable housing as part of Oakland's 10K plan, an effort by the city to attract 10,000 new residents to the city's downtown and Jack London Square areas.

San Mateo

The city of San Mateo's combined H+T costs are the highest of the three cities, a result of average housing costs ($21,721) that slightly exceed the regional average (Figure 8). Housing costs in the Downtown San Mateo PDA and the low-income community of concern near it, however, are 25 percent lower ($15,028 and $16,515 respectively) than the city's average and represent opportunities for preserving affordability. Figure 11 shows the location of each of these areas.

Transportation costs in the city of San Mateo present a dichotomy wherein the downtown's PDA's relatively low average transportation cost ($6,588) contrasts sharply with the higher-than-average costs ($10,922)

PHOTO: MTC ARCHIVES

of the community of concern (Figure 10). The low-income area's higher costs reflects this community's larger household sizes, greater number of workers per household, and greater auto ownership per household. The need to own and operate these additional autos drives up transportation costs accordingly.

While San Mateo and the downtown PDA are affordable to the people who live there, when considering the combined impact of H+T, the same is not true of the community of concern just outside of downtown San Mateo (Figure 12). Residents here dedicate 56 percent of household income to H+T, because both housing and transportation costs exceed their respective affordability benchmarks.

The North San Mateo community of concern near downtown has on average more workers and cars and higher transportation costs per household than other parts of the city despite its proximity to the nearby Caltrain station. MTC should further explore issues of accessibility and affordability via the Community-Based Planning Transportation program here to determine why public transportation is not used more frequently and if something can be done to increase transit use or provide other alternatives such as car-sharing as a way to lower the cost of living for local residents.

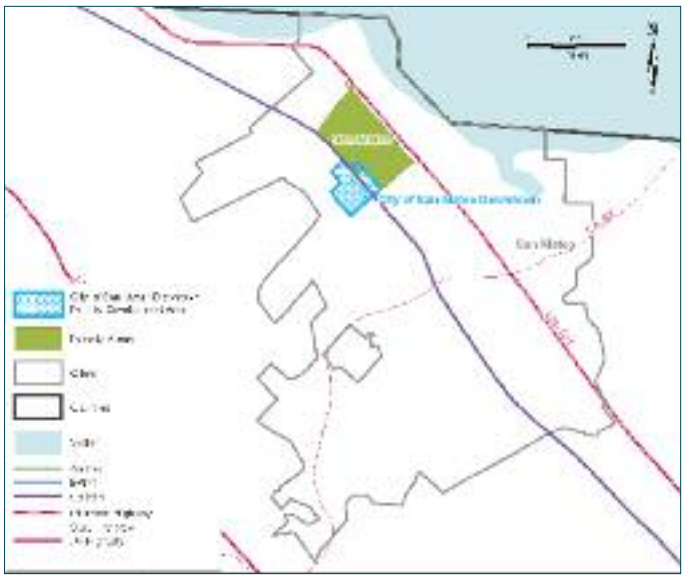


Figure 11: City of San Mateo, Priority Development Area and Community of Concern

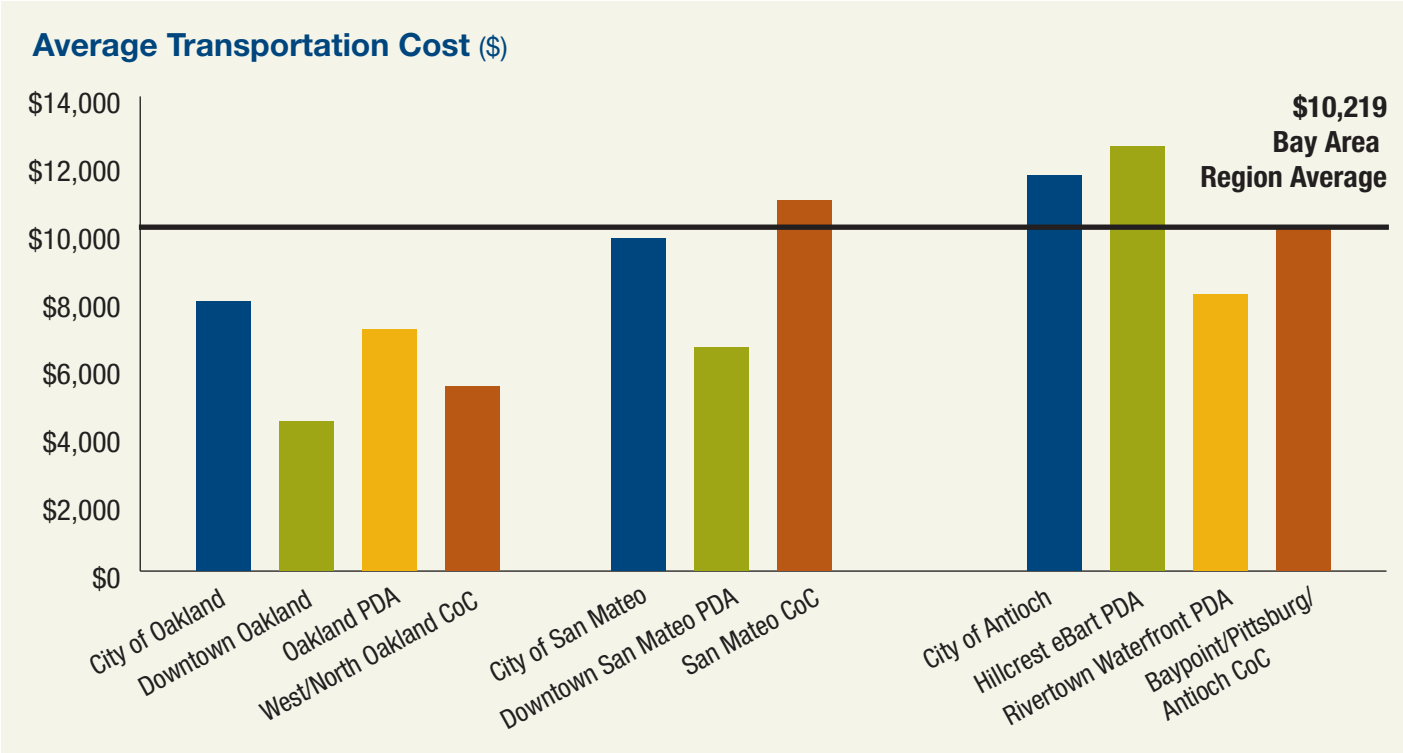


Figure 10: Transportation costs vary considerably between the three cities, largely as a function of differences in the availability of transit options, distance to employment centers, density and income levels. Citywide transportation costs are lowest in Oakland, and greatest in Antioch.

Antioch

Like many ex-urban communities, Antioch's housing costs consistently fall below the regional average whether measured for the city as a whole ($15,891) or particular neighborhoods: the Bay Point/Pittsburg/Antioch community of concern ($12,123), the Hillcrest Priority Development Area ($17,835), or the Rivertown Waterfront Priority Development Area ($10,144) (Figure 8). Figure 13 shows the location of these ares in Antioch. Housing costs this low are bound to attract new residents eager to live within their means.

PHOTO: MTC ARCHIVES

What many newcomers learn only after arriving, however, is that what they save in housing costs quickly goes to defray the increased cost of getting around. Transportation costs for the city of Antioch ($11,662), the Bay Point/Pittsburg/Antioch community of concern ($10,128), and the Hillcrest PDA ($12,531) meet or exceed the regional average, with only the Waterfront PDA coming in below ($8,162) (Figure 10). These increased travel costs are directly tied to auto ownership and vehicle miles traveled that are higher here than in either of the other two case study cities.

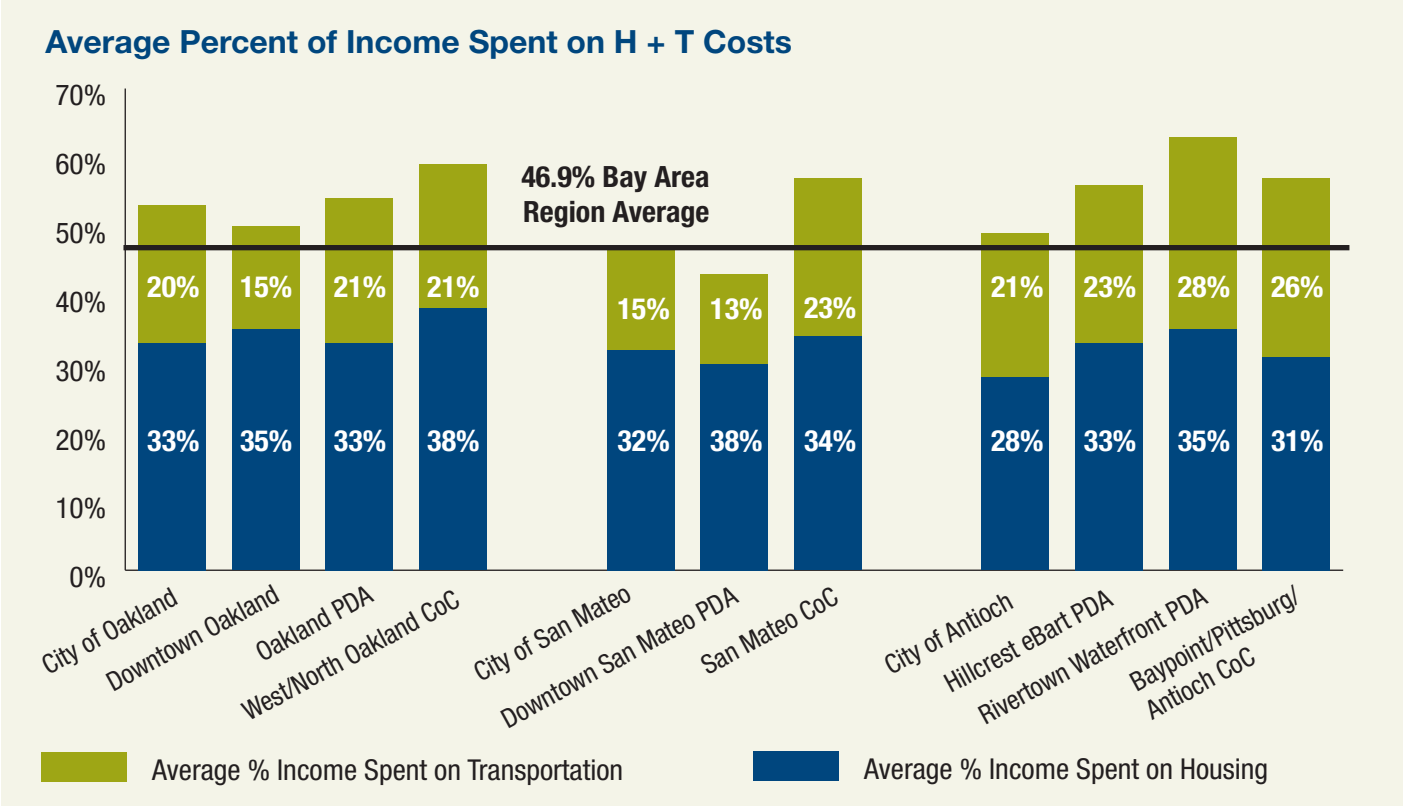


Figure 12: Excluding the low-income community of concern near downtown, the city of San Mateo is the most affordable of the three cities, a direct result of the city's Caltrain station and higher incomes. H+T costs in Antioch are driven by high car ownership and the distances that cars must travel. Downtown Oakland's H+T expenses, while quite low by any measure, simply overburden its low-income population's ability to cover them.

Note: Bay Area regional average cited differs from that shown in Figure 2 due to changes in the transportation cost model CNT made in developing its Bay Area specific analysis. Figure 2 shows an estimate based on a nationally consistent transportation cost estimation methodology across all regions CNT studied.

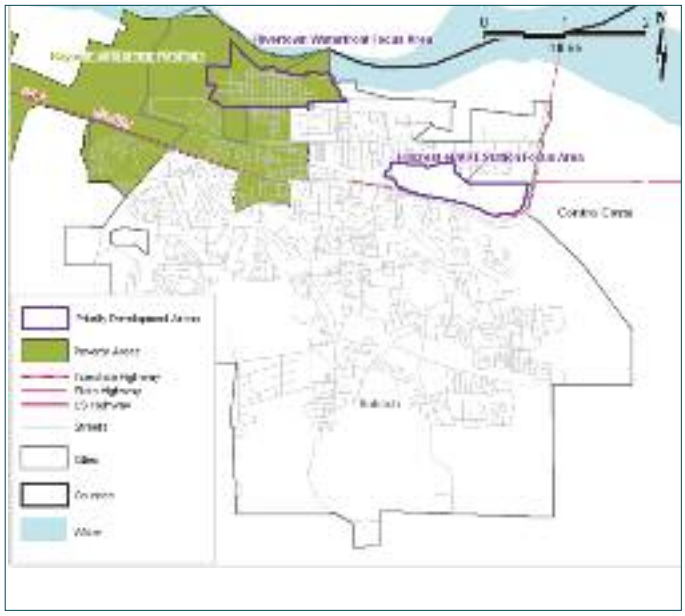


Figure 13: Antioch, Priority Development Areas and Community of Concern

Although the city's median income is higher overall in Antioch than it is in Oakland, H+T affordability does not improve. The city's average H+T burden of 49.2 percent is not far off the 48 percent benchmark, but the Bay Point/Pittsburg/Antioch community of concern at 57 percent, Hillcrest at 56 percent and RivertownWaterfront at 63 percent clearly place affordability beyond the reach of these communities' current residents (Figure 12).

The eBART extension to Antioch represents a singular opportunity to lower high transportation costs and create a pocket of H+T affordability on the urban fringe. Obstacles to optimizing the return on the public investment include siting the Hillcrest Station to facilitate its integration into new transit-oriented developments that will surround it. The proposal to locate the station in the highway median does not clearly support regional affordability goals as much as alternative sites and designs could; alternatives could be explored and their costs and benefits weighed with an eye toward H+T affordability.

BART's parking requirements can also distance the station from residential areas and should be addressed by reducing the number of spaces as much as possible, permitting shared parking between BART and other new enterprises, and placing it underground or in a structure. Finally, new mixed-use developments should be required to include affordable dwelling units, while greater efforts should be made to preserve the affordability of existing homes.

View from the Case Studies: An Inequitable Distribution of Affordability

Historically, the housing affordability portion of the H+T equation has been clearly presented to prospective homebuyers and renters, while little or no information has been made available regarding associated transportation costs. With escalating and increasingly volatile fuel costs, Americans can no longer afford to ignore the second largest, and for many the fastest growing, expenditure in their household budget.

High housing and transportation costs have a direct effect on individual household budgets. They limit the opportunity to save and to build assets. Just as importantly, they constrain people's choices about where to live. These impacts are felt most acutely by the Bay Area's low-income households who move out of inner-city neighborhoods with relatively poor services and opt to spend approximately the same share of their income elsewhere for better services, particularly schools.

The case study data for the communities of concern bear this out by showing that low-income households dedicate 58 percent of income to combined

PHOTO: MTC ARCHIVES

PHOTO: MTC ARCHIVES

H+T in the West/North Oakland community of concern, 56 percent in San Mateo's, and 57 percent in Antioch's. While the overall share of income spent on combined H+T remains about the same across the three quite different communities, the balance between housing and transportation shifts so that a higher percentage of income is needed to cover transportation costs — increasing from 21 percent in Oakland to 23 percent in San Mateo and 26 percent in Antioch. This leaves low-income households who lack an alternative to the car more exposed to major financial risks should gas prices rise suddenly as they did in 2008. For homeowners, offsetting lower housing costs with higher transportation costs shifts their spending from a wealth-creation asset — their home — to depreciating assets (auto ownership) or nonexistent assets (auto operating costs).

Communities rely upon the workers that comprise the low- and moderately low-income quartiles — the teachers, firemen, police officers, administrative support staff, and others — on whose livelihoods communities and businesses are built. Just as the Bay Area's Regional Housing Need Allocation (RHNA) process assigns future housing across municipalities by income groups, this H+T analysis reinforces the notion that transportation choices at varying price points should be more broadly available and connected to affordable housing alternatives.

V. Appendix: Detailed H + T Affordability Maps

Alameda and Contra Costa Counties:
H+T Affordability for Low Income Households **28**

H+T Affordability for Moderately Low Income Households **29**

Marin and Sonoma Counties:
H+T Affordability for Low Income Households **30**

H+T Affordability for Moderately Low Income Households **31**

Napa and Solano Counties:
H+T Affordability for Low Income Households **32**

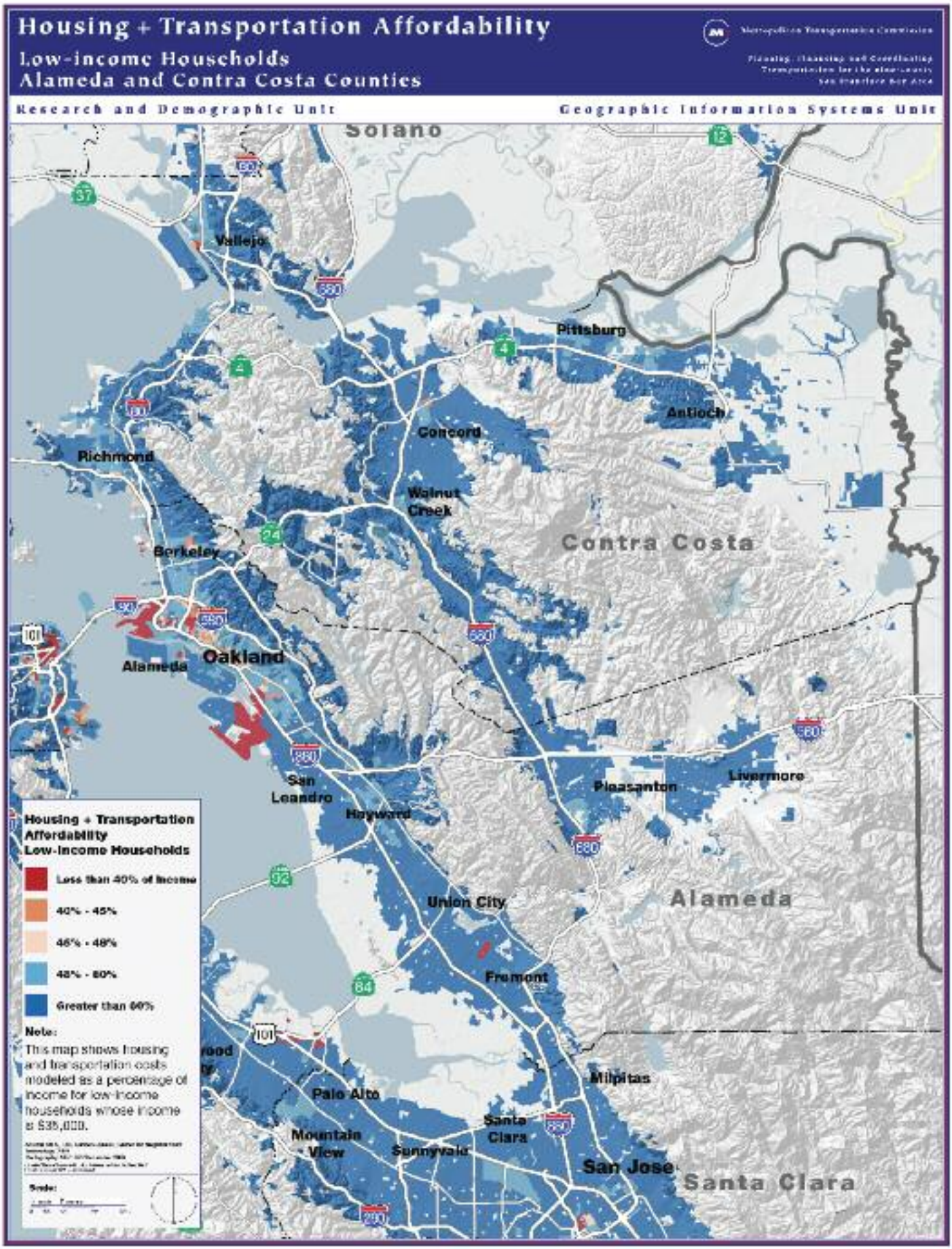
H+T Affordability for Moderately Low Income Households **33**

San Francisco and San Mateo Counties:
H+T Affordability for Low Income Households **34**

H+T Affordability for Moderately Low Income Households **35**

Santa Clara County:
H+T Affordability for Low Income Households **36**

H+T Affordability for Moderately Low Income Households **37**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Low-income Households
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Sunnyvale
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Less than 40% of Income
40% - 45%
45% - 48%
48% - 60%
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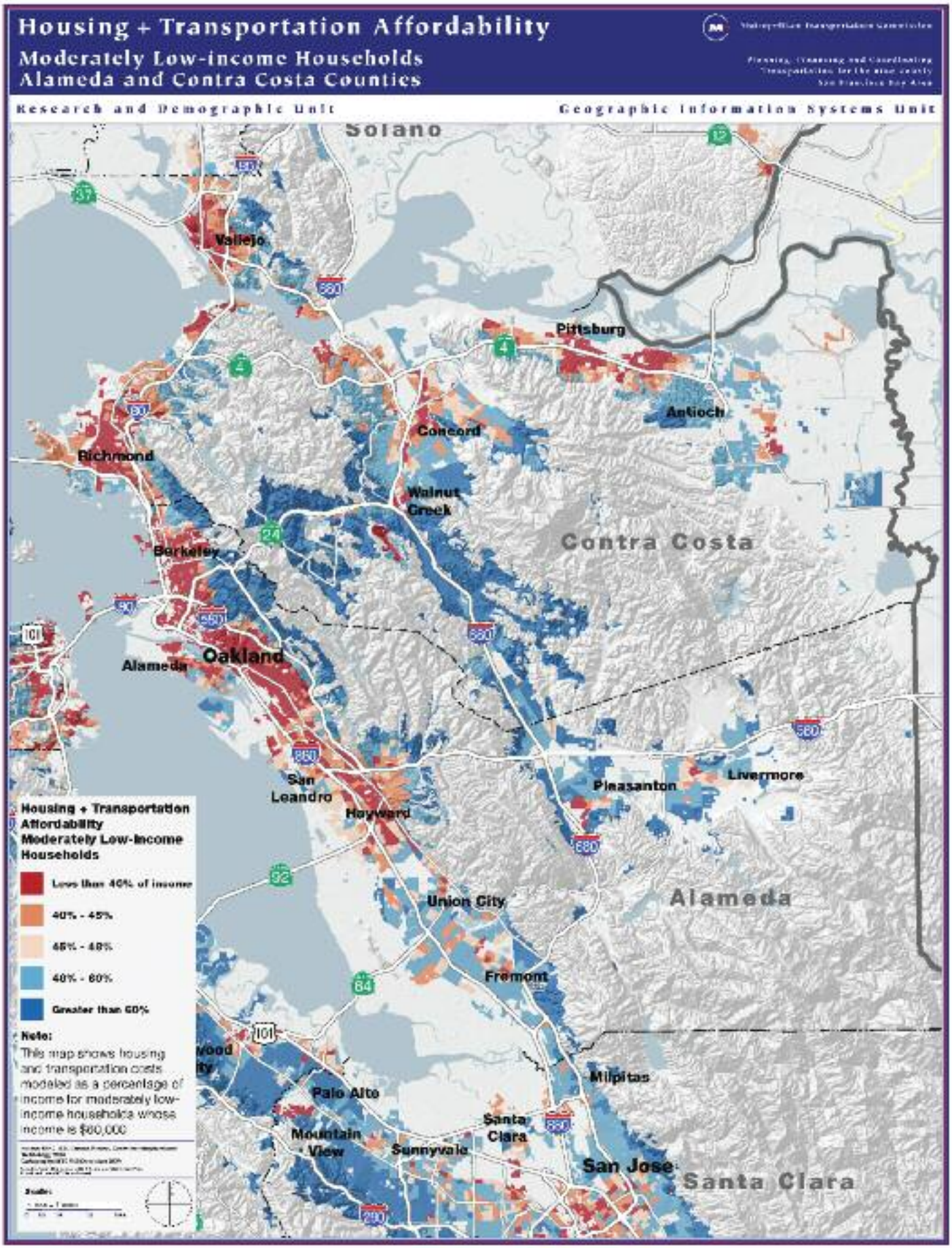
Note:
This map shows housing and transportation costs modeled as a percentage of income for low-income households whose income is $35,000.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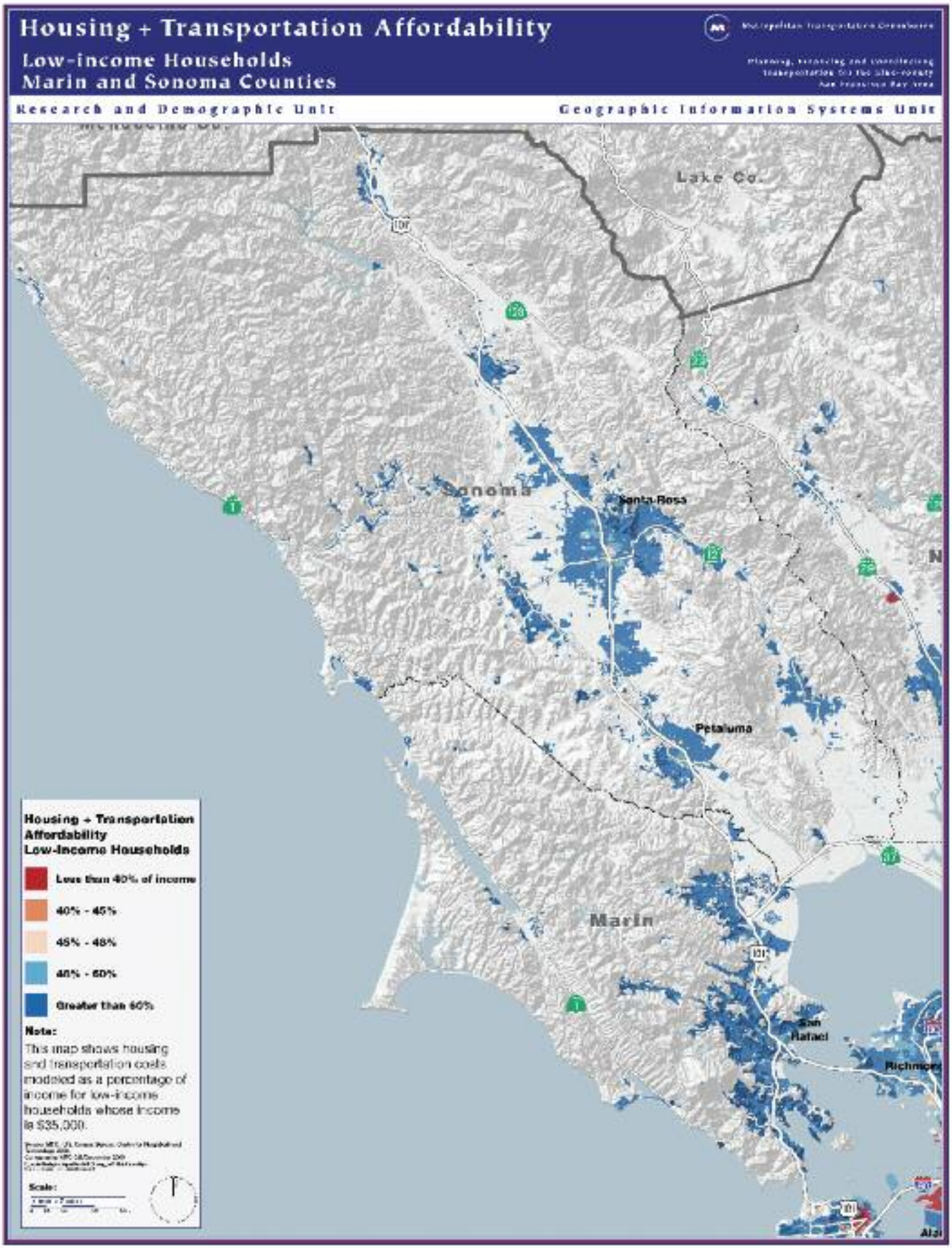
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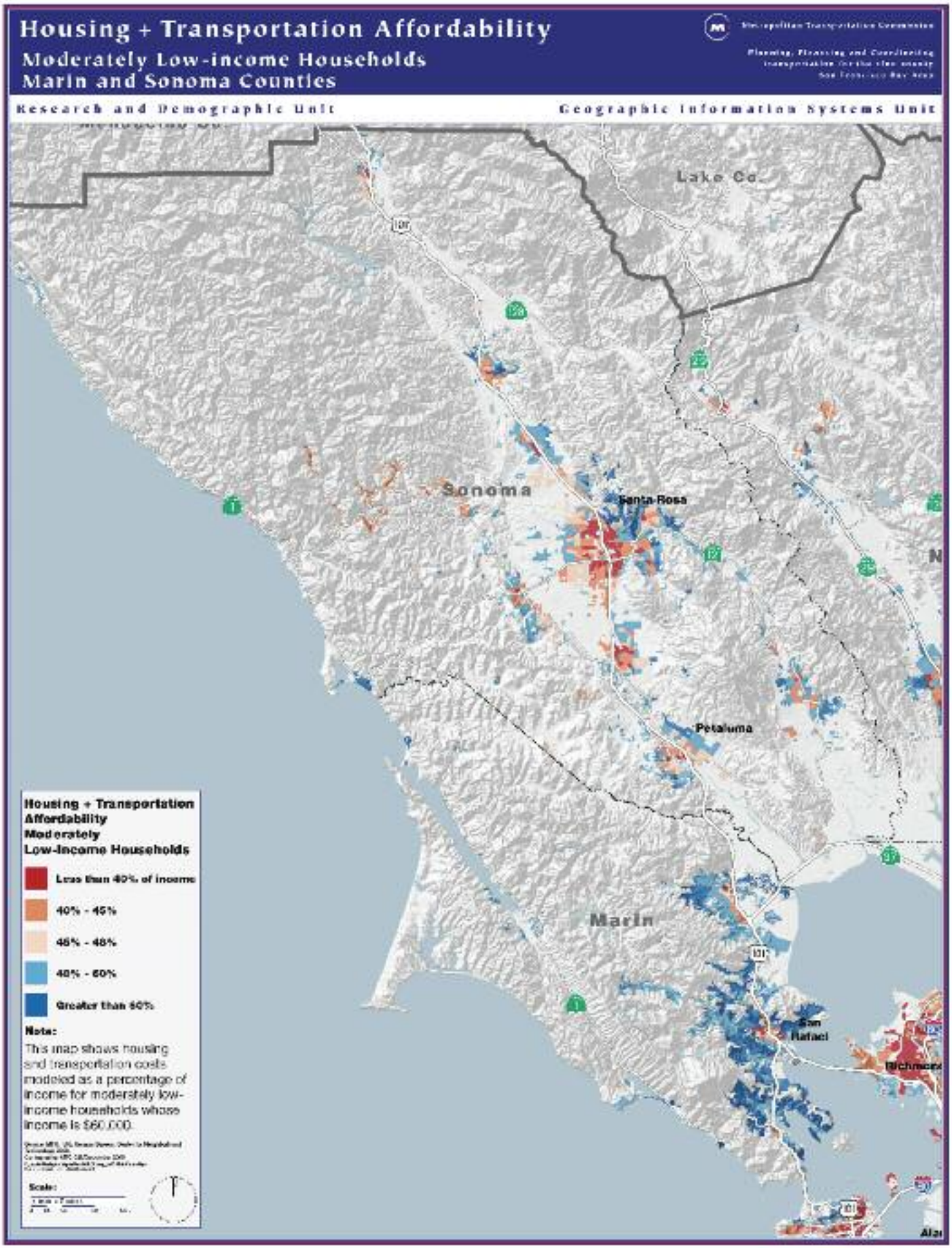
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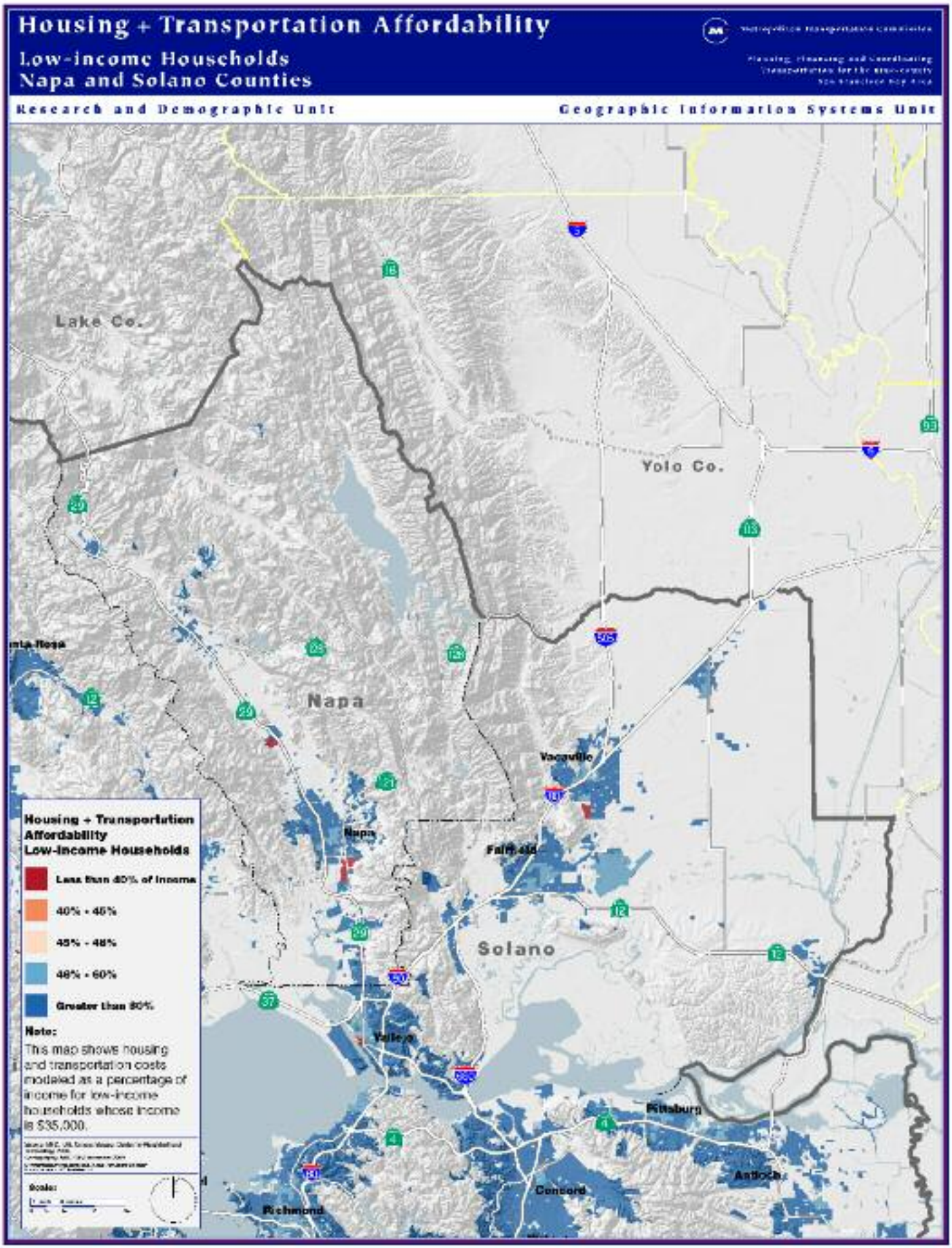
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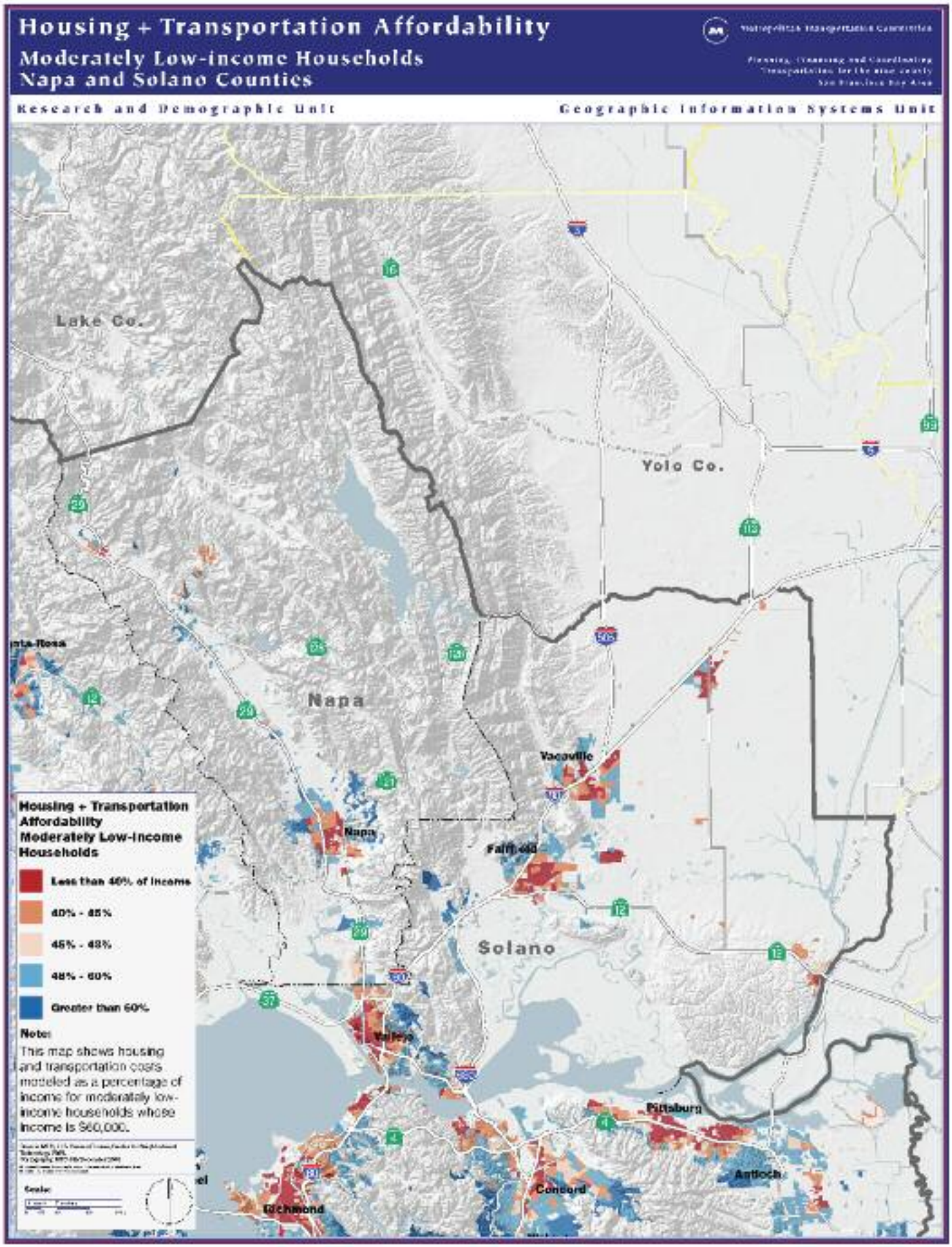
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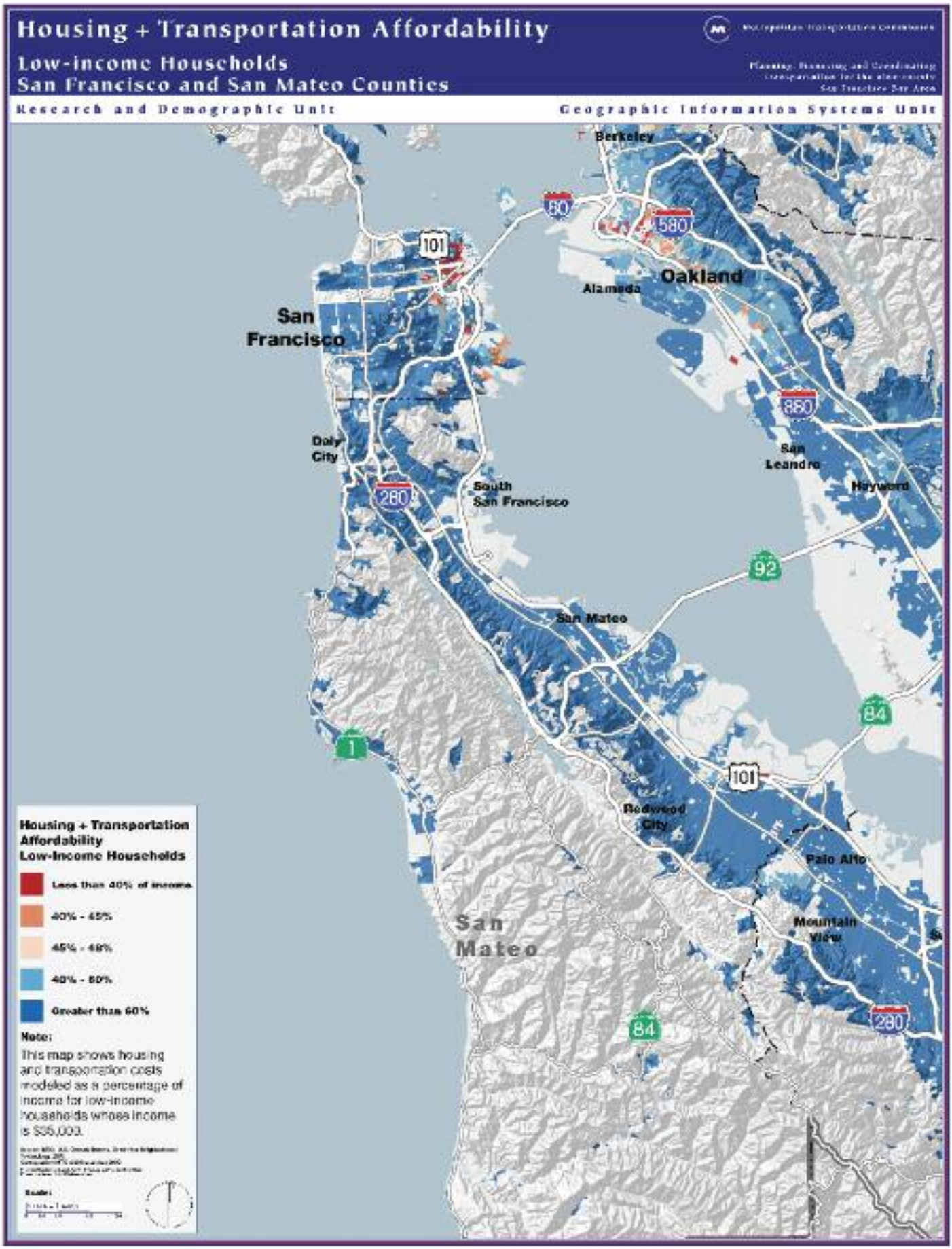
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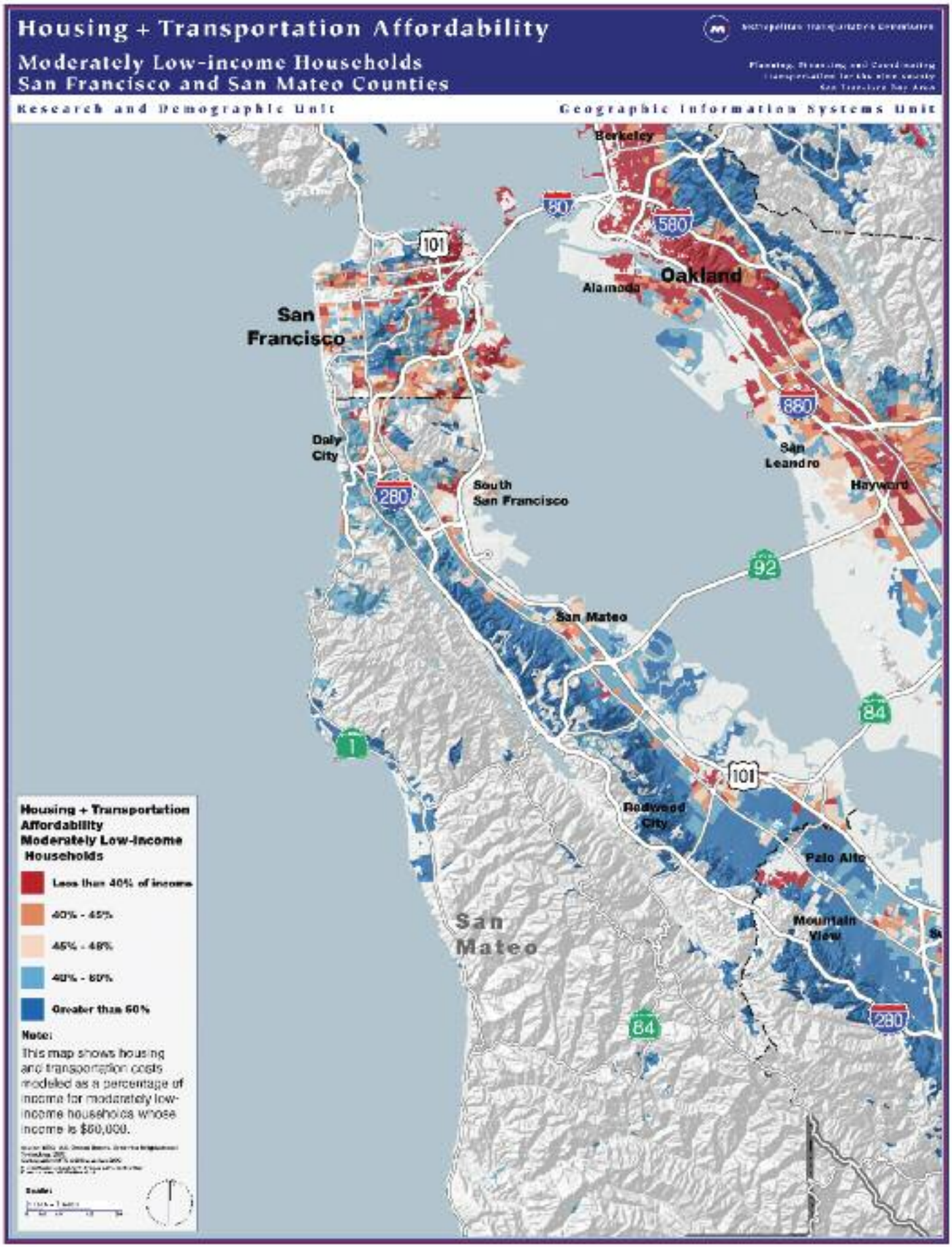
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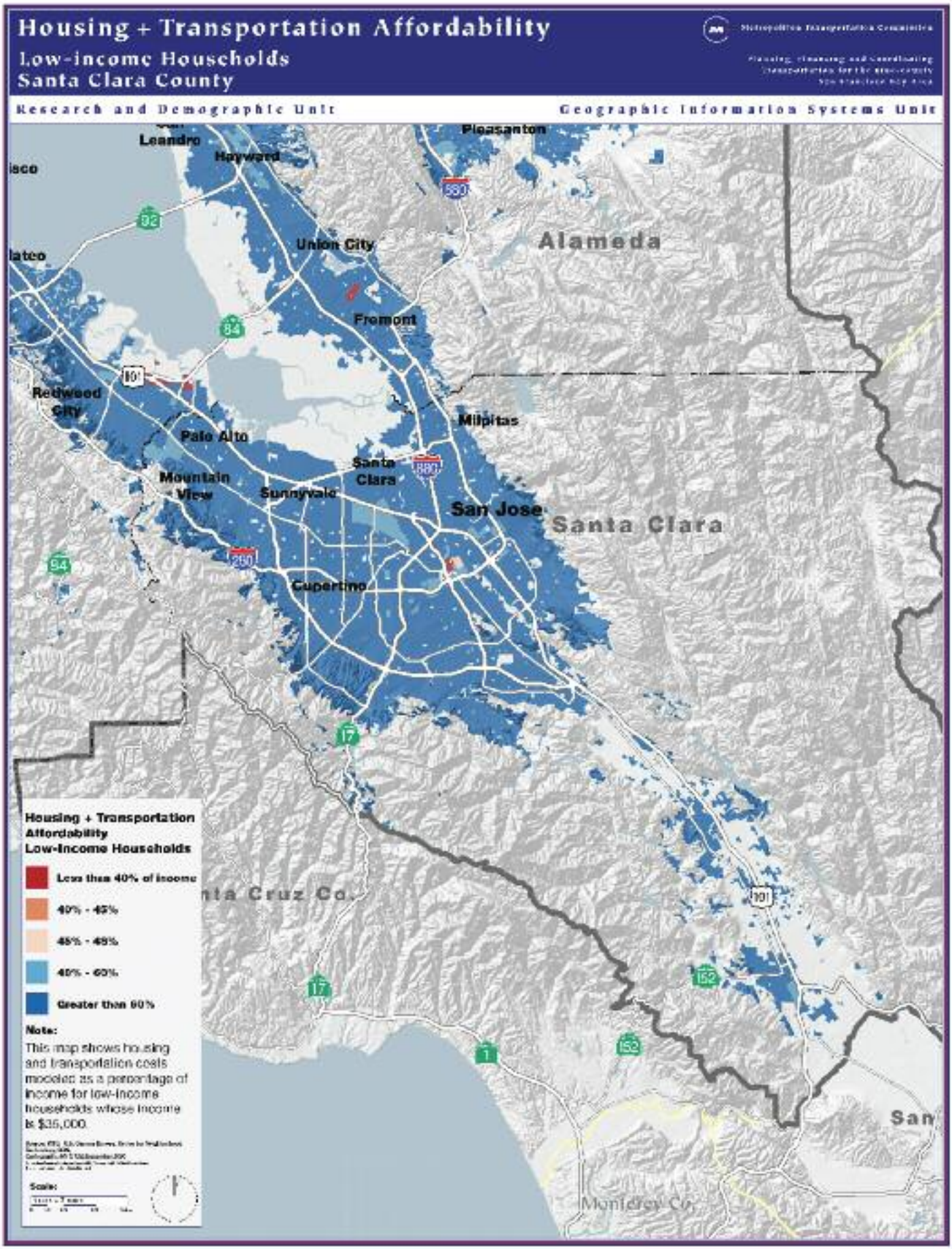
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Redwood City
Palo Alto
Milpitas
Santa Clara
Mountain View
Sunnyvale
San Jose
Santa Clara
Cupertino
Housing + Transportation Affordability
Low-Income Households
Less than 40% of income
40% - 45%
45% - 60%
60% - 80%
Greater than 80%
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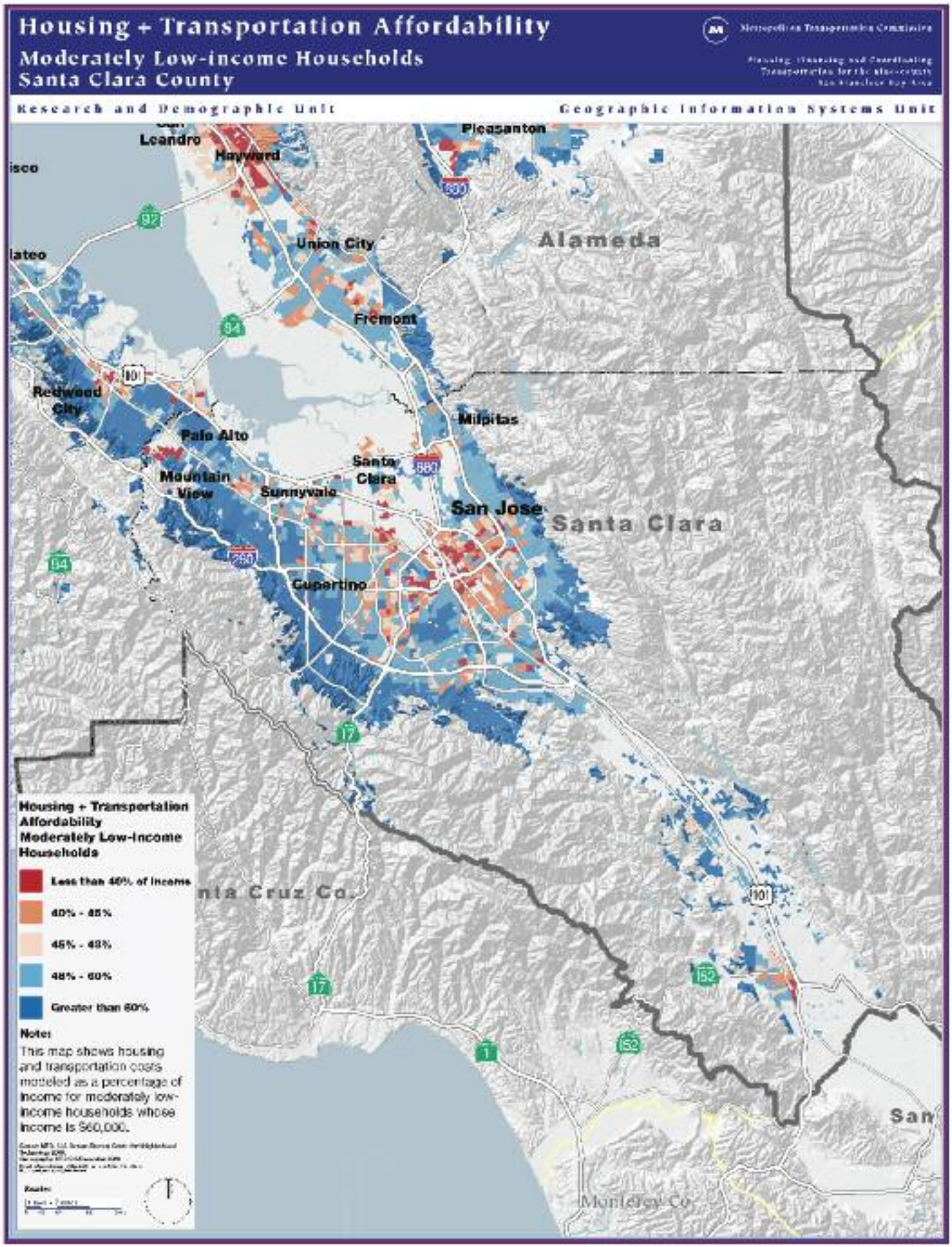
Monterey Co.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Geographic Information Systems Unit
Leandro
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Housing + Transportation Affordability Moderately Low-Income Households
Less than 40% of Income
40% - 45%
45% - 48%
48% - 60%
Greater than 60%
Note:
This map shows housing and transportation costs modeled as a percentage of income for moderately low-income households whose income is $60,000.

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