

Housing Shortage / Parking Surplus

Silicon Valley's opportunity to address housing needs and transportation problems with innovative parking policies



A report by:

TRANSPORTATION
AND
LAND USE
COALITION

Working together for a sustainable and spatially just Bay Area

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July 2002

The Transportation and Land Use Coalition (formerly BATLUC, the Bay Area Transportation and Land Use Coalition) is a groundbreaking partnership of more than 85 groups working to maintain our regions' renowned high quality of life, achieve greater social equity, and protect our natural environment. Coalition members believe that current development patterns do not have to be our destiny. Instead, the region can refocus public investment to serve and revitalize existing developed areas; design livable communities where residents of all ages can walk, bike, or take public transit; provide effective transportation alternatives; and develop affordable, transit-oriented housing that contributes to vibrant and diverse communities.

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TALC would like to extend a special thanks to the Packard Foundation whose contribution to the Transportation Choices Forum (TCF), now a project of TALC, made this report possible. The Transportation and Land Use Coalition, and TCF, gratefully acknowledge funding from: East Bay Community Foundation, The Wallace Alexander Gerbode Foundation, David B. Gold Foundation, Richard & Rhoda Goldman Fund, W. Alton Jones Foundation, San Francisco Foundation, Surdna Foundation, the Women's Foundation, and the Diversity Network Project.

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- ✦ Downloading free from TALC's Website at www.transcoalition.org
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Cover Photographs

- ✦ Aerial photograph of San Jose business park development taken at 2:30 p.m. mid-week in June 2002. This photo illustrates how much land is devoted to surface parking and the opportunity for infill development. This particular site has both retail, other residential units, and light rail all within a short walk. Special thanks to Lighthawk for providing a free flight to do aerial photographs and reconnaissance and pilot Robert Ovaranin. *Photo: Stuart Cohen/Chris Augenstein*
- ✦ Diners enjoy lunch in historic downtown Campbell at a popular eatery under the Gateway mixed use housing development. This development would not have been possible without the City of Campbell reducing their parking requirements and allowing a shared parking area for the bank, restaurant and residents. *Photo: Kim Strickland*

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The overarching goal of ***Housing Shortage/Parking Surplus*** is to add timely information and focused policy recommendations to the growing movement for housing solutions in Silicon Valley. The report will be distributed to elected leaders, housing advocates, developers, business leaders, and city planners. It is our hope that the information sparks renewed interest in identifying new housing infill sites and creating policies that help build sustainable and diverse communities.

Stuart Cohen and Kimberly Strickland, of the Transportation and Land Use Coalition, were the project managers for the report and assisted with the research, writing and editing.

ACKNOWLEDGMENTS

The staff at Nelson/Nygaard did an excellent job moving the project from concept to fruition. In particular, we would like to acknowledge Ryan Russo, who did much of the initial writing and data gathering, and Adam Millard-Ball, who assisted with critical editing and final compilation, and Jeffrey Tumlin who contributed knowledge reaped from his years as a South Bay transportation planner.

Doug Shoemaker, of the Non-Profit Housing Association of Northern California, provided tremendous help conceptualizing focus and content, convening the advisory committee, and writing and editing the report. Without his help, the *Housing Surplus/Parking Shortage* report would not have the same level of community input.

Harriet Ragozin, Elizabeth Pollitt, and Carmen Chu, graduate students at the Goldman School of Public Policy, University of California, Berkeley, did an excellent job researching and assisting with writing Chapter 3: Promoting Employment Centered Housing.

We especially thank the following of our Advisory Committee participants, who provided insight and guidance to shape the report:

- Shiloh Ballard, Silicon Valley Manufacturing Group
- Phyllis Ward, Affordable Housing Network
- Janet Stone, Greenbelt Alliance
- Chester Fung, Santa Clara Valley Transportation Authority
- Elaine O'Rourke, Mayfair Neighborhood Improvement Initiative
- Reagan Flagler, Community Housing Development
- Anna-Maria White, Mercy Housing
- Sandy Perry, Community Homeless Alliance Ministry
- Dan Wu, Catholic Charities Housing
- Irvin Dawid, Sierra Club, Loma Prieta Chapter & San Jose State University Urban Planning Coalition
- Shannon Dodge, Non Profit Housing Association of Northern California
- Anne Crealock, Greenbelt Alliance
- Bill Zavlaris, Community Housing Development

We wish also to acknowledge planning staff of the following cities for graciously taking time to review and update our data: Campbell, Los Altos, Los Gatos, Menlo Park, Milpitas, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, and Sunnyvale.

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Executive Summary

Housing Shortage/Parking Surplus examines solutions to Silicon Valley’s housing crisis and transportation problems from a new perspective – parking. The report shows that if we rethink our approach to, and assumptions about, parking, we can free up land to yield more than 15,900 much-needed housing units.

Santa Clara County alone will need approximately 177,000 new housing units by 2025 just to keep up with projected job growth, but current land-use and housing policies are expected to leave the county more than 48,000 units short. This deficit will exacerbate the existing shortage, push sky-high housing costs even higher, and force more workers to commute from distant counties in the Central Valley and Monterey Bay region.

Housing Shortage/Parking Surplus shows how two strategies – reducing parking requirements where justified and promoting infill housing on underutilized parking lots – can greatly reduce this anticipated shortage. In addition, these strategies can capitalize on our investments in light rail and other transit services, turning the under-utilized portions of some parking lots into vibrant, attractive developments that are an asset to the community.

Housing Shortage/Parking Surplus takes an in-depth look at each of these strategies and provides case studies and detailed recommendations, serving as both a resource and a challenge for Silicon Valley cities. While concerted action is needed from businesses, developers, lenders, community groups and the wider public, the Transportation and Land-use Coalition’s (TALC) recommendations focus on cities, which have the opportunity to lead and so bring about these changes.

TAILORING PARKING REQUIREMENTS

Silicon Valley cities, like most United States jurisdictions, routinely prescribe a minimum number of parking spaces for each new housing development. Unfortunately, these parking requirements often take a “one-size-fits-all” approach, even though vehicle ownership varies dramatically for different types of households. Renters, low-income households, seniors, and those living in dense neighborhoods near

transit tend to own fewer cars. In fact, over one of every three households in Silicon Valley own a single vehicle or none at all. Some cities now take into account certain variations in vehicle ownership — but usually not in a comprehensive fashion.

Excess parking comes at a very high cost: First, the cost of the land combined with paving or construction of the parking typically exceeds \$20,000 per space, increasing rents and residential prices. Second, by increasing the land needed for each housing unit, excess parking often reduces the number of potential housing units per acre. In other words, parking squeezes out housing. Third, the parking costs and lower number of units reduce the financial feasibility of new housing construction and increase the subsidy required for affordable housing. Finally, the land used to comply with high parking requirements often reduces the potential for amenities, such as parks or ground-floor retail, that can improve the neighborhood.

This report does not question the need for an adequate amount of parking, but it recommends that cities conduct comprehensive demographic and vehicle-ownership reviews to identify the *optimal* amount of parking to require. By freeing up additional land within future developments, **this strategy has the potential to create at least 8,450 new units in Santa Clara County.**

Tailoring Residential Parking Requirements to Fit Demonstrated Need
◆ Conduct a comprehensive review of parking demand to assess how parking requirements can be adjusted and which innovative solutions are appropriate for each city
◆ Reduce minimum parking requirements for senior and special-needs housing and for affordable housing countywide
◆ In transit-intensive areas reduce minimum parking requirements and adopt parking maximums that are 125% of the new minimum parking requirements
◆ Encourage 'bundling' of housing and parking costs in rental units
◆ Reward developers that supply residential Eco-passes and that support car sharing
◆ Allow shared parking at mixed-use developments and in mixed-use areas

PROMOTING EMPLOYMENT-CENTERED HOUSING

The key constraint on housing construction in Silicon Valley is land availability. Yet low density, suburban-style office development – much of it built before the Valley’s huge investment in public transit – has left enormous areas devoted to surface parking lots. Even where lots are nearly full, replacement parking can be placed under the new housing. Clearly, not all office parking lots are suitable locations for housing, but many provide a site that meets the three basic needs of employment-centered housing: convenient access to public transportation, nearby amenities such as grocery stores and restaurants, and neighboring residential communities.

Promoting housing at or near employment sites can bring a broad range of benefits to workers, employers, landowners, and cities. When employers provide the land, the “break-even” rents can be reduced from over \$2,100 for a typical two-bedroom unit to about \$1,400. This offers choices to people who may otherwise be priced out of the market, increases employee retention, and reduces commute times by allowing people to live adjacent to or closer to their work. Construction of employment-centered housing can also benefit landowners as underused property reaches its full development potential; this can benefit cities as additional revenue is generated through property and sales taxes. These developments can also benefit the larger community by transforming underutilized pavement into lively, interesting places.

Three case studies – two of them in Silicon Valley – demonstrate the extraordinary benefits of employment-centered housing. However, a strong lead from cities, through amending zoning ordinances and conducting housing opportunities studies, is needed for this strategy to fulfill its potential. **Employment-centered housing could create at least 7,450 new units in Santa Clara County.**

Strategies for Cities to Promote Employment-Centered Housing	
■	Work with businesses, public agencies, and communities to help identify sites and help them address community needs
■	Conduct housing opportunity studies that include office parks as potential sites for development
●	Rezone or modify land uses, where appropriate, to allow development at densities that address both housing and transportation goals
●	Be proactive in linking housing needs to future office-park development

Chapter 1 Introduction

INTERTWINED CRISIS OF HOUSING AND CONGESTION

The lack of housing, particularly affordable housing, and increased traffic congestion in the Silicon Valley are posing a formidable strain on residents, businesses and the environment. Between 1990 and 2000, the number of jobs in Santa Clara County increased by 200,000, while the number of households increased by less than a quarter of that, by just 45,000¹. In a 2001 poll of Bay Area residents, transportation and housing respectively ranked as Bay Area residents' first and third most pressing concerns.²

Just 12% of homes are affordable to a median-income family,³ and over 90,000 Santa Clara County residents pay more than 30% of their income for rent.⁴ This is forcing many workers in the Silicon Valley to commute in from outside the area, and others to leave the region entirely. By 2000 a lack of housing had effectively priced 133,000 Silicon Valley workers out of Santa Clara County.⁵ Indeed, the Santa Clara County supervisors recently declared a "state of affordable housing emergency" and convened a County Housing Task Force. City of San Jose Mayor Ron Gonzalez, meanwhile, created a Housing Production Team to produce more market-rate units.

Employees at Stanford Research Park can now be found living in Eastern Contra Costa County, Tracy and even Stockton – a two-hour drive on a low traffic day.⁶ In the first half of 1999, meanwhile, 12 Bay Area companies contacted Sacramento's city manager about relocating due to the difficulties they were having attracting employees in a market with rising housing costs.⁷

¹ Association of Bay Area Governments (2001), Projections 2002. Forecasts for the San Francisco Bay Area to the Year 2025. Oakland, Calif. The number of jobs increased from 890,930 to 1,092,330, while the number of households rose from 520,180 to 565,863.

² Bay Area Council (2001), Bay Area Poll.

³ Estimates by the National Association of Home Builders, cited in Association of Bay Area Governments (2001), Shaping the Future of the Nine-County Bay Area. Briefing Book for Smart Growth Strategy/Regional Livability Footprint Project.

⁴ California Budget Project (2000), Locked Out: California's Affordable Housing Crisis.

⁵ Valley Transportation Authority (September 2000) Draft Valley Transportation Plan 2020

⁶ Map produced by Steve Raney, of Cities21.

⁷ Johnson, Jason. "Gimme Shelter!" The San Francisco Chronicle. July 21, 1999.

This problem is not likely to go away. Job growth in Santa Clara County is forecast to be the most rapid in the region, with the Association of Bay Area Governments (ABAG) projecting an increase of more than 300,000 jobs between 2000 and 2025⁸. In order to provide housing for these new workers alone, the county must add approximately 177,000 new dwelling units⁹ – nearly four times as many as were added between 1990 and 2000.

ABAG, however, calculates that current local land-use policies and market forces such as high land prices will restrict the potential to just 129,307 units over the 2000-2025 period¹⁰ – **about 48,000 short of the number needed simply to keep up with job growth** (Figure 1-1). Without concerted action, new jobs will have to be filled by commuters from San Benito and Santa Cruz counties, the Central Valley and further afield. On top of this, there is an enormous need for additional housing simply to make up for past deficits.

Cities in Santa Clara County understand that something must be done and have been subsidizing more affordable housing and embracing the concept of transit-oriented development (TOD). Among a host of city initiatives, San Jose has directed millions of dollars from Redevelopment Project Areas towards affordable housing development. The Cities of San Jose and Santa Clara allocate 30% of their redevelopment money towards housing – 10% more than legally required. Other cities are also taking action. However, the scale of the challenge means that these initiatives must be complemented by even more innovative and creative solutions.

	Projections 2000-2025
Projected job growth	303,500
Housing needed to accommodate job growth	177,369
Potential units under current local policies	129,307
Additional housing deficit (excluding current shortfall)	48,062

Figure 1-1 Housing Requirements in Santa Clara County. Housing construction is not expected to keep pace with job growth in the Silicon Valley under current land-use policies and market conditions.

Source: Calculated from ABAG, *Projections 2002*.

⁸ Association of Bay Area Governments (2001), *Projections 2002*.

⁹ Calculated from ABAG’s job growth projections, assuming an average of 1.711 workers per household (as used for Santa Clara County in Bay Areas Economics (2002), *Housing Affordability and Jobs/Housing Match Technical Appendix*. www.abag.ca.gov/planning/smartgrowth/AltTechApp/Technical%20Appendix.PDF

¹⁰ Association of Bay Area Governments (2001), *Projections 2002*.

UNTAPPED OPPORTUNITIES

There are two primary ways to fit this quantity of additional housing into the Silicon Valley. The first is to identify additional vacant or underutilized land. The second is to increase the permissible housing densities on a given plot. These strategies were highlighted in a 1999 report by the Silicon Valley Manufacturing Group (SVMG) and Greenbelt Alliance, *Building Sustainable Communities: Housing Solutions for the Silicon Valley*. This report identified 10,600 acres of land that could potentially be developed for housing. Based on current local zoning policies and market conditions, developing this land could result in 74,300 units developed on these parcels – meeting just 50-66% of the projected demand.

One of the study's key recommendations to reduce the housing shortfall was for cities in the Silicon Valley to increase the density of development on existing land. The report estimated that an additional 36,700 units could be built by increasing the average density from 7 units to 9 units per acre on vacant land, and from 12 units to 25 units per acre on reuse land.

While *Building Sustainable Communities* focused much-needed attention on the opportunities for infill and the need for greater densities, two questions remain:

1. How can we increase housing densities and make affordable housing economically feasible to develop, while maintaining or improving neighborhood livability and minimizing the impacts on local traffic congestion?
2. Where do we find additional land, beyond what was identified in the *Building Sustainable Communities*, to provide more infill housing?

To tackle these two issues, TALC reviewed numerous city and county policies, and spoke to affordable housing developers who are stymied by land costs and various zoning policies, and advocates for more affordable housing and smart growth. To our surprise, one issue – parking – emerged as both one of the greatest obstacles to new development, and one of the biggest opportunities to provide more land.

City requirements for developers to provide parking, even when it is not needed, mean that many developments simply do not pencil out and are never realized. Others that have been built have more space devoted to housing cars than housing people. The amount of parking that has to be provided also limits overall housing densities, wastes valuable land and places a particular onus on builders of affordable housing.

At the same time, underutilized parking lots in the Silicon Valley are a plentiful and readily available source of developable land. In many cases, the lots surrounding office parks and commercial areas were built prior to the county’s aggressive investment in transit and represent an untapped supply of land in a county where high land costs and low availability represent significant barriers to housing development.

These two opportunities alone – tailoring parking requirements and promoting employment-centered housing on underutilized parking lots – have the potential to meet more than one-third of Santa Clara County’s expected housing shortfall. Tailoring parking requirements to actual vehicle ownership levels could allow at least 8,500 new units to be built, while underutilized office parking lots could provide land for 7,000 units (Figure 1-2).

Tailoring Parking Requirements		Assumptions and Sources
Projected new Santa Clara County households 2000-2025	129,307	ABAG, <i>Projections 2002</i>
Number of new multifamily housing units	64,655	50% multifamily in line with past trends
Number of parking spaces saved through Tailoring parking requirements	32,328	0.5 spaces saved per unit
Acres saved through Tailoring parking requirements	241	325 sq ft per space
Additional dwelling units possible	8,442	35 units/acre
Promoting Employment-Centered Housing		
Acres available in office surface parking lots	852	See Chapter 3
Acres developed	213	25% of potential developed
Additional dwelling units possible	7,455	35 unit/acre
Total additional dwelling units possible	15,897	

Figure 1-2. Potential New Housing Units. Tailoring parking requirements and promoting employment-centered housing can contribute a minimum of 15,900 additional units in Santa Clara County.

This total of 15,900 potential units is a conservative estimate. It assumes densities of just 35 units per acre – for comparison, similar developments in Los Angeles have taken place at an average of 48 units per acre.¹¹ Equally importantly, the estimates do not account for potential developments that are currently not financially feasible, but would pencil out if parking requirements were revised.

¹¹ Fulton, William (2002), Multi-Family Housing is Being Constructed on Los Angeles Commercial Strips. Solimar Research Group, available at www.solimar.org.

Moving in the Right Direction: Local Policies Facilitate Transit Oriented Development

Faced with the dual challenges of traffic congestion and scarce housing, many local governments are implementing policies to facilitate transit-oriented development and infill.

- ✦ Mountain View completed thirty Precise Plans (a.k.a. Specific Plans) to address concerns on a community scale rather than a project scale, smoothing the development process.
- ✦ San Jose conducted a housing opportunity study that identified underutilized sites along transit corridors and rezoned them as appropriate. Among many other initiatives, San Jose allows a 10 percent reduction in parking requirements for transit oriented development.
- ✦ Mountain View and Milpitas also allow parking requirement reductions for developments near transit.
- ✦ Campbell approved a vertical mixed used project, the Gateway Project, in its downtown (see Case Study).
- ✦ Menlo Park and Milpitas have reduced parking requirements for high density housing.
- ✦ Santa Clara, Palo Alto and Cupertino have all recently created redevelopment agencies to facilitate the housing development process. The city of Santa Clara recently decided to increase the amount of redevelopment money spent on housing from 20% to 30%.
- ✦ Palo Alto has inclusionary affordable housing requirements, a commercial housing fee, and has reduced parking requirements for affordable housing developments near transit (see Case Study of Alma Place).
- ✦ Palo Alto is embarking on a comprehensive study to revise its parking requirements, to encourage transit oriented development and further its Comprehensive Plan goals of promoting alternatives to the private automobile.
- ✦ Redwood City has rezoned its downtown and two transit corridors for mixed use, completed a specific plan facilitating the construction of 500 multi-family units, aided development of affordable housing in its downtown, and increased allowable floor-area ratios for developments including housing.
- ✦ Milpitas has just adopted the Midtown Specific Plan, which increases housing densities and reduces parking requirements in the core area of the city
- ✦ The cities of Palo Alto and Mountain View require bicycle parking at residential developments.

Adapted From:

Strategic Economics with Green Info Network (1999), Building Sustainable Communities: Housing Solutions for Silicon Valley.
Greenbelt Alliance (2002), *Smart Infill*.
Conversations with city planning staff.

HOUSING AFFORDABILITY

Parking is not just a housing supply issue – it is also a major constraint on housing affordability. High parking requirements directly increase the cost of each unit. For a typical multifamily development with two spaces per unit, parking can account for more than 20% of total costs. Reducing parking provision to one space per unit can reduce these costs to 11% (Figure 1-3).

Eliminating excess parking will allow subsidies for affordable housing to stretch further. The subsidies needed to build just 8,600 below market rate units would cost \$1.2 billion, according to *Everyone’s Valley: Inclusion and Affordable Housing in Silicon Valley*, a report released last year by Working Partnerships, USA in collaboration with ACORN, The Interfaith Council on Religion, Race, Economic and Social Justice, the Santa Clara County Tenant’s Association and the South Bay AFL-CIO Labor Council. This \$1.2 billion could stretch nearly 18% further by reducing the average number of parking spaces from two per unit to one per unit – allowing around 1,500 more units to be subsidized.¹²

Parking Spaces Per Unit	0	1	2
Units/acre	39	35	31
Land cost/unit	\$55.846	\$62.229	\$70.258
Paving costs/unit	\$0	\$1,600	\$3,200
Housing construction costs/unit	\$76.500	\$76.500	\$76.500
Soft costs (fees and professional services)/unit	\$22,950	\$22,950	\$22,950
Construction financing (8%)	\$12.424	\$13.062	\$13.833
Total construction costs	\$167,720	\$176,341	\$186,741
Developer’s profit (10%)	\$16,772	\$17,634	\$18,674
Retail price per unit	\$184,492	\$193,975	\$205,415
Total Price of Parking (land and construction)	\$0	\$21,206	\$42,412
Parking as a % of retail price	0%	11%	21%

Figure 1-3 Parking Impacts on Development Costs. Parking spaces can account for 10% of the retail price of a \$205,000 unit in the Silicon Valley. These illustrative calculations assume an 850 square foot unit, a 325 sq ft surface parking space and land costs of \$50 per square foot. Note that structured parking can reduce land cost but significantly increase construction cost.

Source: Based on calculations in Litman, Todd (1999), *Parking Requirement Impacts on Housing Affordability*, Victoria Transport Policy Institute, with additional data from Sandoval and Landis (2000).

¹² Assuming that each space costs \$21,206, including the value of land at 325 square feet per space. The subsidy needed would then drop from approximately \$139,500 to \$118,300 per unit, allowing the \$1.2 billion to subsidize more than 10,100 affordable units.

Housing Shortage/Parking Surplus aims to complement and build upon the *Building Sustainable Communities* and *Everyone's Valley* reports, by focusing on two specific strategies to promote housing development, particularly affordable housing. Chapter 2 illustrates how existing parking requirements can lead to an over-abundance of parking, and provides recommendations for how cities can move away from a one-size-fits-all approach to one that is tailored to the needs of the community. In Chapter 3, TALC examines the opportunities for employment-centered housing on office parking lots, and recommends how cities can promote such development.

Chapter 2. Tailoring Residential Parking Requirements

INTRODUCTION

The zoning codes of cities in the Silicon Valley require that a certain amount of parking be built with each new unit of housing. Each additional space that is required, however, entails an increase in costs, and can often result in fewer housing units and less attractive design. In some cases, the financial feasibility of the housing can be jeopardized altogether. While some parking is needed, parking requirements in the Silicon Valley tend to reflect a low-density, auto-oriented development pattern and in many cases do not accurately reflect actual vehicle ownership patterns or the level of transit service.

The primary reason parking tends to be excessive is that cities tend to apply a “one-size-fits-all” approach, generally assuming that every household will own two or more vehicles. In fact, more than one-third of Santa Clara County households own only one vehicle or none at all.¹⁴ While upper-income residents and suburban dwellers tend to own more automobiles (and drive more), residents who live near transit, in dense areas, or in affordable or senior housing tend to own fewer vehicles and drive less.

Cities all along the West Coast, from San Diego to Seattle, are revising their parking requirements to reflect their success in creating dense, livable communities centered around transit. In the Silicon Valley, many cities have also started to break the mold. Milpitas, Mountain View and San Jose now allow parking reductions for housing near transit, while Campbell, Menlo Park and Palo Alto allow residential and mixed-use developments to share parking.

Recent research and census data indicate that there is a strong correlation between income, transit and density in the Silicon Valley. Cities should use this data and the strategies outlined in this study to complement their efforts in promoting housing and transportation solutions, by implementing new policies that will allow the amount of parking to be tailored to the needs of targeted new developments and parts of their community.

¹⁴ Census 2000 data.

THE HIGH COST OF EXCESS PARKING

Most residents in Santa Clara County own at least one vehicle, and some parking is a necessary part of development. However, when supplied in overabundance, parking brings many social and environmental costs that outweigh the benefits. Excess parking can:

- ✦ Increase the cost of development, sometimes to the point of making it infeasible. Every parking space for a given housing unit can increase the cost of that unit by up to \$25,000.¹⁴ Housing developers in the Silicon Valley often cite parking requirements as a major challenge to the feasibility of their proposals. Since parking requirements are generally the same throughout a city, developers can only reduce the cost of compliance by building where land values are lower –usually meaning greenfield sites or the suburban fringe where transit service is minimal or non-existent.
- ✦ Waste valuable land. Instead of excess parking, land could be better used for more housing, ground-floor retail, a park, or other facilities to meet community needs. Assuming a given height limit, the number of housing units that can be built on a site decreases as the amount of parking increases. Each parking space per unit may reduce the density that can be achieved by as much as 25%.¹⁵
- ✦ Hide a major cost of owning a vehicle. The oversupply of residential parking means that it is almost always given away for free despite the high cost of providing it. By hiding a major part of the cost, free parking encourages higher vehicle ownership rates, which in turn inevitably leads to people using their car, rather than taking transit, walking or biking. Households with three or more vehicles, for example, drive more than twice as much as one-vehicle households (Figure 2-1).
- ✦ Make rent unaffordable for lower-income families. Parking costs are generally passed on to the consumer through higher rents or housing prices – regardless of whether they use the parking or not. This burden is disproportionately borne by lower-income households, who can least afford the additional rent and are also least likely to benefit from the free parking, due to their lower vehicle ownership rates (discussed below).

Vehicles Per Household	Daily Vehicle Trips Per Household
0 vehicles	0.3
1 vehicle	3.3
2 vehicles	5.7
3 vehicles	7.4
4 or more vehicles	9.2

Figure 2-1 How Vehicle Ownership Influences Driving. Ample parking leads to higher vehicle ownership, which in turn means more trips on congested streets and highways. This table shows how the number of vehicle trips per Bay Area household for an average weekday increases with vehicle ownership.

Source: Metropolitan Transportation Commission (1994), *San Francisco Bay Area 1990 Regional Travel Characteristics: Working Paper #4*.

¹⁴ Non-Profit Housing Association (2001), *Planning for Residential Parking: A Guide for Housing Developers and Planners*. San Francisco, Calif. See www.nonprofithousing.org

¹⁵ Non-Profit Housing Association (2001).

TAILORING PARKING REQUIREMENTS TO NEEDS

Looking at Figure 2-2, which presents the minimum parking requirements for multi-family housing in the Silicon Valley, it is safe to say that most cities assume that a household will have at least two vehicles. One of the most amazing aspects of the requirements is that eight cities have the same minimum parking requirements for any size unit, whether it is a small studio or a three bedroom. Requiring more than two spaces for a studio clearly shows how some requirements are not truly adjusted to the expected need. This also creates an incentive to produce larger units since the relative cost of parking will be less.

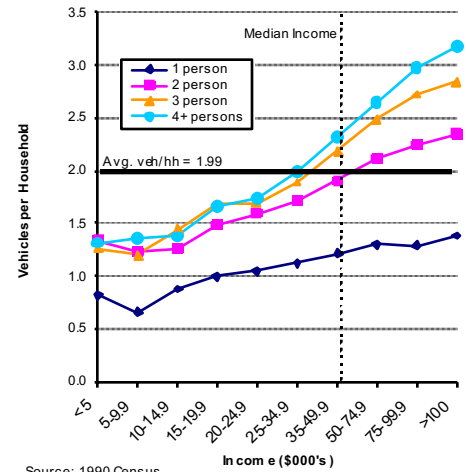
While unit size may be the most obvious factor, there are several other household characteristics that have a clear, demonstrable influence on vehicle ownership in Santa Clara County. They include:

	Studio	1 BR	2 BR	3 BR
Campbell*	1.7	1.7	2.2	2.2
Cupertino	2	2	2	2
Fremont	2	2	2	2
Los Altos	2	2	2	2
Los Gatos	2.5	2.5	2.5	2.5
Menlo Park	2	2	2	2
Milpitas*	2.2	2.2	2.2	2.2
Morgan Hill*	1.83	2.33	2.33	2.83
Mountain View*	1.67	2.3	2.3	2.3
Palo Alto*	1.35	1.6	2.1	2.1
Redwood City	2.25	2.25	2.25	2.25
San Jose	1.5	1.5	1.8	2
Santa Clara (city)	2	2	2	2
Saratoga	2.5	2.5	2.5	2.5
Sunnyvale	1.5	1.5	2	2
Union City*	1.75	1.75	2.25	2.25
Unincorporated Santa Clara County	1.9	1.9	1.9	1.9
* Guest parking requirement incorporated to ease comparisons of total parking requirements between cities.				

Figure 2-2. Summary of Silicon Valley Minimum Parking Requirements for Multi-Family Housing.

Most Silicon Valley cities assume that households will own at least two cars.

✦ Low-income residents own fewer vehicles. Even controlling for other factors such as density and transit accessibility, lower-income households have lower vehicle ownership rates.¹⁶ The vast majority of car-free households earn less than \$25,000 per year (Figure 2-3). Figure 2-4 shows the relationship between income and vehicle ownership in Santa Clara County, segmented by household size. Rather than owning a car, which can cost more than \$7,000 a year to own and operate,¹⁷ some low-income residents get around by other means. A survey by the Santa Clara Valley Transportation Authority (VTA) found that 59% of VTA bus riders make less than \$35,000 per year, qualifying them for very low- or low-income housing, depending on family size



Source: 1990 Census

Figure 2-4. Income vs. Vehicles per Household by Household Size (Santa Clara County 1990). This chart shows the strong correlation between vehicle ownership rates and incomes. It also shows that as household size increases, the number of vehicles per household does not rise at the same rate, especially for lower income households.

✦ Seniors own fewer vehicles. In the Bay Area, the vehicle ownership rates of seniors are about 30% lower than the general public. As Figure 2-5 shows, the difference is even more marked with seniors aged 75 and over, who own just half as many vehicles as the average household.

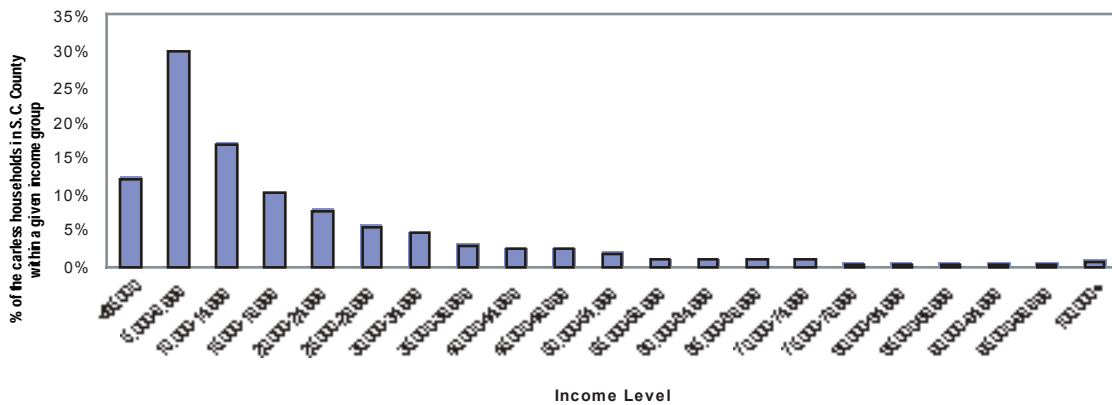


Figure 2-3. Impact of Income on Vehicle Ownership. Due to the high cost of car ownership, many low-income households do not own a car. This chart shows that of all of the carless households in Santa Clara County, the vast majority make under \$25,000. Note: The higher level of car ownership among those with incomes less than \$5,000 is due to retirees and students who fall into the extremely low-income category.

Source: Santa Clara County section, page A-3, of San Francisco Bay Area County & Regional Profiles (based on 1990 census data), released by the Metropolitan Transportation Commission in September 1994.

¹⁶ Ewing, Reid and Shi-Chiang Li (1998), *A Vehicle Ownership Model for FSUTMS*. Washington, D.C.: National Research Council, Transportation Research Board.

¹⁷ AAA (2001), *Your driving costs. Figuring it out*. Assuming a small car (2001 Chevrolet Cavalier) driven 20,000 miles.

	Mean Vehicles per Household	Per Cent Difference from Average
All households.	1.76	
Households with all residents aged 62 and over.	1.29	-27%
Households with all residents aged 65 and over.	1.24	-30%
Households with all residents aged 75 and over.	0.89	-9%

Figure 2-5. Vehicle Ownership by Age. Senior households own significantly fewer vehicles than the average for the Bay Area.

Source: 1990 MTC Household Travel Survey

- ✦ Renters own fewer vehicles. According to 1990 census data, the most recent for which a breakdown is available, 41% of rental households in Santa Clara County own one vehicle and 9% own no vehicle at all – more than double the proportions for owner occupiers (Figure 2-6).
- ✦ Residents of dense, transit-oriented development own fewer vehicles. Residents in light rail corridors use transit as their predominant commute mode more than five times as often as residents countywide.¹⁸ In turn, they are less likely to own a vehicle. A recent study of the factors influencing vehicle ownership in the Bay Area, Los Angeles and Chicago found that transit service and density, along with income and household size, explained virtually all the variation in vehicle ownership between different neighborhoods in each region.¹⁹ Figures 2-7 and 2-8 show how vehicle ownership rates vary among renters across Santa Clara County, with the densest, most transit accessible areas showing the lowest vehicle ownership rates. As Figure 2-8 shows, apartment dwellers also own fewer vehicles than those in detached homes – regardless of income.

Vehicles/ Household	Owners	Renters
None	2%	9%
1	20%	41%
2	44%	36%
3	22%	10%
4+	12%	4%
	100%	100%

Figure 2-6. Vehicle Ownership for Renters and Owners (Santa Clara County). Half of renters own just one vehicle, or none at all.

Source: 1990 Census

¹⁸ Gerston & Associates, *Transit-based Housing Survey*. 1995.

¹⁹ Holtzclaw, John; Clear, Robert; Dittmar, Hank; Goldstein, David; and Haas, Peter, "Location Efficiency: Neighborhood and Socio-Economic Characteristics Determine Auto Ownership and Use – Studies in Chicago, Los Angeles and San Francisco." *Transportation Planning and Technology*. 2002. Vol. 25, pp 1-27.

ESTIMATING PARKING REQUIREMENTS FOR SPECIFIC DEVELOPMENTS

It is often useful to see how these different factors combine to affect vehicle ownership within the context of an individual project. To this end, the Non-Profit Housing Association of Northern California has developed a model to help developers determine the appropriate amount of parking for a particular project. It uses a project's unique characteristics – location, unit types and rent levels – to predict vehicle ownership at a proposed development, using the same equations as the Location Efficient Mortgage (see sidebar). Cities can also use this model to help fashion more fine-grained parking requirements. The model is available online at www.nonprohousing.org.

Location Efficient Mortgage

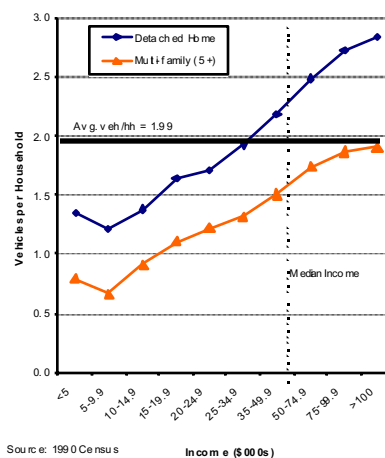
Lender Fannie Mae has established a "Location Efficient Mortgage" program based on the fact that people living in dense neighborhoods with good transit are less likely to own a vehicle. Even if they have a car, they are likely to drive it less. The resulting personal financial savings can be calculated, and are taken into consideration during the underwriting process. The result? People buying housing in dense, transit-accessible places can qualify for a larger loan. For more details on the Location Efficient Mortgage, visit www.locationefficiency.com.

FOUR INNOVATIONS THAT CAN FURTHER REDUCE CAR OWNERSHIP

While factors such as income, age and transit access and type of housing tend to determine the base level of vehicle ownership, various strategies are available to developers, property managers and cities to further reduce the number of cars that need to be accommodated. Four innovations have proved particularly successful – Residential Eco-pass; car sharing; rental or sale of parking separately from the housing itself; and sharing residential spaces with commercial tenants.

Residential Eco-Pass

VTA's Residential Eco-Pass allows property managers to purchase annual transit passes for all of their residents for between \$20 and



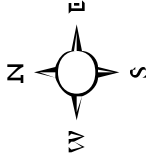
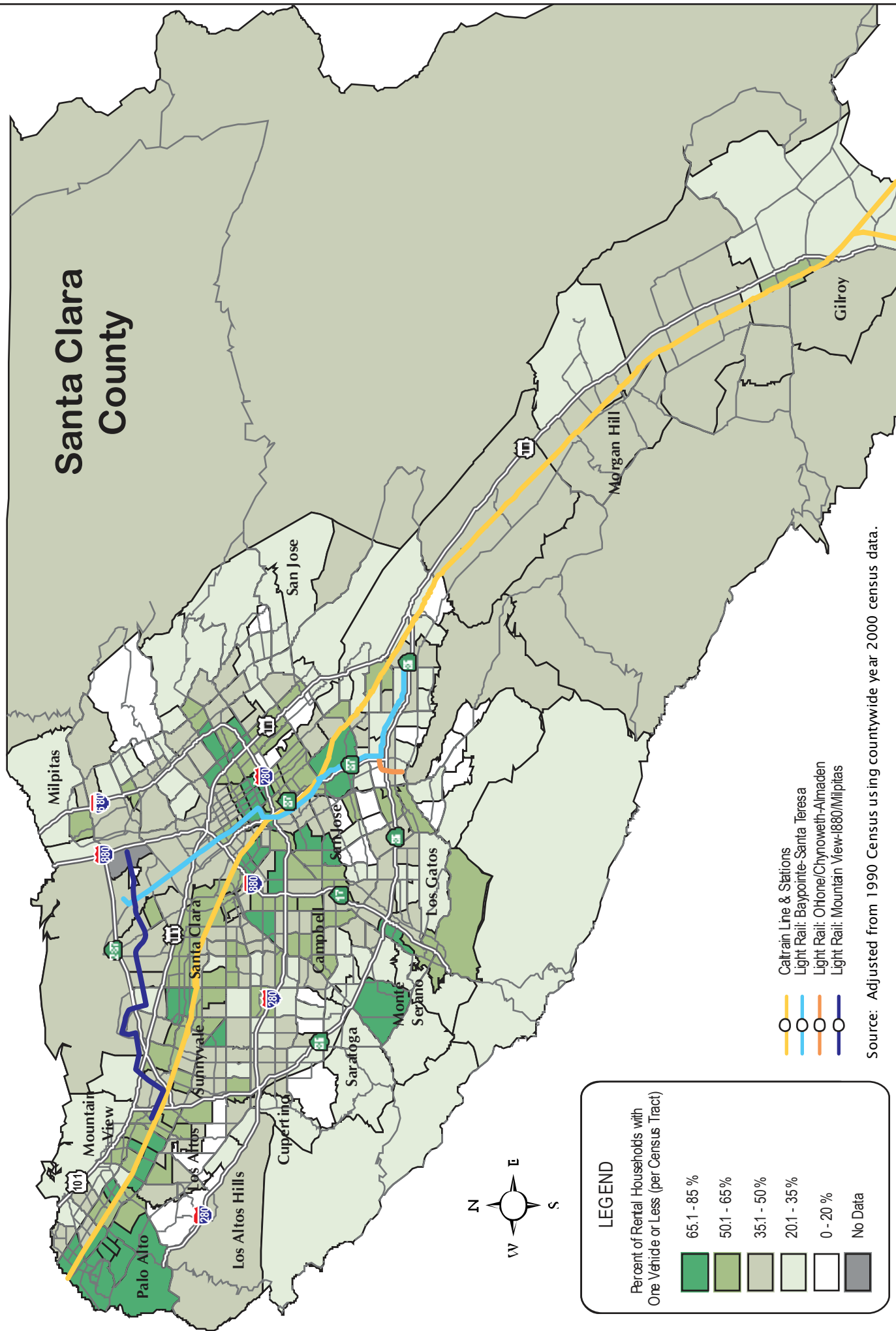
Source: 1990 Census

Income (\$000s)

Figure 2-8: Income vs. Vehicles per Household by Housing Unit Type (Santa Clara County 1990).

Households at all income levels living in multi-family housing in Silicon Valley tend to own fewer vehicles than the countywide figure of 1.99 per household. The lowest income households in multi-family developments average less than one vehicle per household.

Santa Clara County



LEGEND

Percent of Rental Households with One Vehicle or Less (per Census Tract)

	65.1 - 85 %
	50.1 - 65 %
	35.1 - 50 %
	20.1 - 35 %
	0 - 20 %
	No Data

- Caltrain Line & Stations
- Light Rail: Baypointe-Santa Teresa
- Light Rail: Ortone/Chynoweth-Almaden
- Light Rail: Mountain View-880/Milpitas

Source: Adjusted from 1990 Census using countywide year 2000 census data.

Figure 2-7 Percent of Rental Households with One Vehicle or Less (by Census Tract) – Year 2000



Case 1

Affordable, Transit Accessible Housing Without the Parking

Alma Place, Palo Alto

Under standard zoning, Palo Alto requires 1.35 parking spaces for a studio apartment. Alma Place, an affordable single-room occupancy (SRO) building near Palo Alto's downtown developed by the non-profit Palo Alto Housing Corporation, has only 0.5 spaces per residential unit.

The project, begun in 1996, sits on a half-acre parcel originally zoned at 15 units per acre. As built, Alma Place offers 250 units per acre, unprecedented in downtown Palo Alto. The site was a former used car dealership squeezed between two automobile repair shops. The City of Palo Alto wanted to upgrade the neighborhood while addressing its tremendous housing crunch.

Alma Place offers 106 single-room units and a manager's unit. The apartments provide 260 square feet of living space that includes a bathroom, sink, small refrigerator, noise-insulated bay windows, and nine-foot ceilings. Alma Place was constructed more as an urban, transit-oriented development than the suburban architectural styles typically found in the Silicon Valley. The units must meet strict affordability requirements, with rents offered according to income ranging from \$330 to \$490.

Funding came primarily from the City of Palo Alto's Affordable Housing Trust (generated by housing mitigation fees) (\$2.2 million), the Federal Low Income Housing Tax Credit program (\$5 million), and from various private grants (\$1 million).

Alma Place is a tremendous success. Located only 2.5 blocks from University Avenue and the Caltrain Station, the site offers easy access to transit. Its downtown location means that many residents simply sell their cars altogether and travel by bicycle. The City and its residents welcome the visual improvement to the neighborhood as well as the provision of needed housing. A year 2000 survey showed that 81% of the parking was utilized in peak periods. City of Palo Alto staffs acknowledge that the building "certainly isn't underparked," and it has received little complaint from tenants or surrounding residents. If Palo Alto's standard parking requirement were applied to Alma Place, 70% of its parking would have been unused (or, more likely, it would have contained less housing). Alma Place illustrates the point that creative funding and an intelligent design can provide a great place to live.



Alma Place, which contributed to the revitalization of this area of Palo Alto, only provides one parking space for every two units. Even so, only 4 out of 5 parking spaces are occupied.

Case 2

“Overparked” Affordable Housing with Quality Transit and Amenities

Stevens Creek Village Apartments, Cupertino

Cupertino requires two parking spaces per unit for multi-family housing, regardless of unit size, income, transit or access to neighborhood services. But at the time Community Housing Developers, a non-profit housing developer, built the Stevens Creek Village Apartments, the development was located in unincorporated Santa Clara County. As a result, the 40-unit development is built to the less stringent county code and has only 60 parking spaces (1.5 spaces per unit).

Opened in 1996, the Stevens Creek Village provides 24 studios, eight one bedrooms and eight two bedrooms for low to moderate-income family and senior residents. Stevens Creek is at a highly transit accessible area, two-tenths of a mile from a confluence of six VTA bus lines. Convenience retail is next door to the development and Cupertino’s main shopping center is only three blocks away. This combination translates to low vehicle ownership for occupants.

A recent survey found that typically only half of the parking is occupied. Tenants would like to convert unused parking area to a play area after observing parking go unused for months. *If Cupertino’s zoning code applied, twenty additional parking spaces would sit empty at Stevens Creek Village.* Then again such a parking requirement may have derailed the whole development.



City CarShare

City CarShare, a nonprofit car share operator that began operations in San Francisco in 2001, opened for business in Palo Alto in July 2002. Car sharing can dramatically reduce the amount of parking needed at housing developments. Almost 60% of those who owned a vehicle before joining City CarShare have given up at least one of them.

\$80 each, depending on community size and the location of the development. Nearly a \$700 value, this pass makes transit essentially free for all residents. When transit is no longer on a pay per use basis, it can compete more effectively with the car and may allow families to avoid purchasing a second or third vehicle. At a price of \$60, a manager would spend \$6,000 to provide 100 residents with a transit pass for a year – a worthwhile investment if it reduced the need to construct parking.

Car Sharing

An innovative newcomer to the Bay Area is car sharing – a concept well established in Portland, Seattle, Boston, Canada and Europe. Non-profit operator City CarShare provides pay-per-use car sharing in San Francisco, Alameda County and Palo Alto. CarShare members can reserve a car any-

time at “pods.” Like the Eco-Pass, car sharing can eliminate the need for an additional car, while guaranteeing access to a vehicle when one is required. Car sharing in the Bay Area is already reducing vehicle ownership. Nearly 60% of those who owned a vehicle before joining City CarShare have given up at least one car, and another 13% are considering it.²⁰

By providing financial support and/or parking spaces, developers can partner with Car Share providers – reducing their parking needs. For example, the Gaia Building in downtown Berkeley has below the mandated amount of parking for residential developments and two parking spaces devoted to City CarShare. Alternatively, property managers can facilitate more informal car sharing among households in their developments.

“Unbundling” parking from rent

Unbundling parking costs from rent allows developers to pass on savings from reduced parking requirements to renters, communicates the true cost of vehicle ownership and allows housing to be more affordable.

The current system simply bundles the costs of parking into housing prices. This forces all residents of a housing development to pay for parking whether they use only one space or three. Further, pricing parking communicates the true cost of vehicle ownership and allows households to make rational decisions when considering whether to buy a first, second, or third car.

This system can be implemented by giving rate “rebates” or discounts to those who own fewer or no vehicles and will not use their parking space. “Unbundling” parking costs from housing costs fosters choice, can make housing more affordable, and promotes equity.²¹

²⁰ Data from an April 2002 email survey of 130 CarShare members conducted by Nelson\Nygaard Consulting. For more information visit: www.citycarshare.org

²¹ Litman, Todd (1999), Parking Requirements Impacts on Housing Affordability. Victoria Transport Policy Institute. Available at: www.vtpi.org/O_land.htm.

“Shared” parking

Transit-oriented developments are usually planned as mixed-use areas. Since commercial and residential uses have different times of peak parking demand, there is great potential for them to share a common pool of parking, reducing the amount of parking that needs to be built and facilitating better design. This was successfully done by the City of Campbell when it approved a mixed-use project in its downtown (see Case 3).

Case 3

Shared Parking Works

The Gateway Project, Campbell

The City of Campbell's Gateway Project was approved in 1997 and built the following year. The project represented a considerable departure from Campbell's parking requirements by allowing this mixed-use development to share spaces.

Originally a one-story, 6,900 square foot Bank of America building, the Gateway Project kept the bank but added other units to the site that included: a 4,500 sq. ft. unit with 20 apartments and a garage, and a 5,050 sq. ft. mixed-use building (with ground floor retail and office space above). The ground floor underneath the apartments offers both retail and a restaurant.

The one-acre site is located in downtown Campbell, only three blocks from a VTA Light Rail Station and bus routes. The twenty apartments have covered parking that lies between the buildings. Since many of the residents are away during the day, the site allows the needed parking for the retail, office and restaurant space at the site. The shared use provision reduced the required parking from 82 spaces to 50 spaces. Initially, residents expressed reservation about the reduced parking. However, the City of Campbell noted that this has not presented any significant problems.

The parking reduction represented a concession by Campbell in an effort to allow mixed-use developments to occur downtown. The project signified a first step in the city's sustainable development efforts, and was the first three story building in its downtown. The shared use parking concept works and Campbell city staff welcome the opportunity to use similarly creative land use strategies in the future.



Kim Strickland

Shared parking and mixed uses make the Gateway Project in downtown Campbell a model for other Silicon Valley cities.

Currently many cities look at projects in a piecemeal fashion, which can make shared parking difficult to implement. One way to overcome this obstacle is for cities to develop parking management strategies in focused areas, such as around transit stations. A transit station that features a park and ride lot, housing and some commercial retail could share one parking lot. Demand for the park and ride lot will peak during the day while demand for residential parking will peak during the evening. Demand for the commercial lot will generally remain constant through the day depending on the type of business. This will create a more vibrant area and allow denser development around the transit station since three separate parking lots will no longer be required.

	Number of Bedrooms		
	1-2	3	4+
Market Rate Housing	1/unit	1.5/unit	2/unit
Restricted Affordable Units	1/unit	1.5/unit	1.5/unit
Restricted Affordable Units within 1,500 feet of mass transit or major bus line.	1/unit	1/unit	1/unit

Figure 2-9. City of Los Angeles Minimum Parking Requirements (spaces per unit). Los Angeles’ parking requirements are reduced for affordable housing and developments close to transit.

TAILORED PARKING REQUIREMENTS GAINING POPULARITY

Cities throughout California are starting to reduce minimum parking requirements as they strive to create dense, transit friendly neighborhoods and provide their residents with affordable housing. The City of Los Angeles, for example, has acknowledged the relationships between income, transit service and vehicle ownership through reducing parking requirements for larger units in affordable housing developments. The City reduces parking requirements further when housing is near mass transit or a major bus line (see Figure 2-9). Overall, Los Angeles is becoming more relaxed in terms of parking requirements as it promotes denser development in its more urban areas.

Locally, the City of Milpitas has a Transit Oriented Development District within its midtown area that allows a 20% reduction in required parking. Mountain View also allows developers to reduce parking by 20% in locations close to transit. Further afield, the City of San Diego has created a zoning overlay

zone for 'Transit Areas', where parking requirements for multi-family housing are reduced by 0.25 spaces per unit.

RECOMMENDED RESIDENTIAL PARKING POLICIES

The analysis above clearly shows that one-size-fits-all parking requirements are inappropriate in the Silicon Valley. How, then, can cities take account of factors such as income and transit accessibility in their parking requirements? Based on the data in the previous section, TALC presents a series of strategies that cities can adopt as they revisit their current parking policies.

Conduct a comprehensive review of parking requirements

Different numerical parking standards will be appropriate for different cities in Silicon Valley. Cities should conduct a comprehensive review of parking demand, and identify the types of land uses and locations that justify a variation in parking standards. These studies will show how parking requirements can be adjusted and which innovative solutions are appropriate for each city.

Reduce minimum parking requirements for affordable housing.

The strong link between vehicle ownership and income means that less parking is needed when housing is targeted to low-income households. Lower minimum parking requirements can either take the form of a fixed reduction, or a sliding scale of reductions based on the expected incomes of tenants. For example, units targeted for moderate incomes could be granted a 15% reduction from the base requirement. Units targeted to low- and very low-income households could get a 30% reduction and units targeted to extremely low-income households a 45% reduction in required parking. These figures reflect the statistical relationship between income and vehicle ownership in Santa Clara County.

Addressing Spillover

The prospect of more intense development with minimized parking around transit stations and in transit corridors typically raises the concern of parking spillover into the on-street parking of lower density residential areas. Cities could address this concern by establishing a residential permit parking (RPP) program. An RPP program can restrict parking in lower density residential areas to residents of that area, eliminating the potential for spillover from higher density districts.

Land banking is another mechanism to combat spillover. The City of Santa Clara, for example, allows developers to build less than the required number of parking spaces, provided they include an open space component. If spillover parking is a problem the developer can go back and convert the open space into parking

Reduce minimum parking requirements for senior and special needs housing.

Housing targeted toward seniors and the disabled should have reduced parking requirements, since fewer residents will own a vehicle. The precise reduction will depend on the age and characteristics of the expected residents. Many cities already reduce parking requirements for assisted living and convalescent care facilities. However, reductions are also warranted for independent living housing targeted at seniors.

Reduce minimum parking requirements in Transit Intensive Areas.

Cities should establish Transit Area Zoning Overlays along rail and bus rapid transit corridors and around rail stations and high-frequency bus hubs, incorporating reduced parking requirements to more accurately reflect vehicle ownership. This will ensure that developers can devote less land and money towards expensive parking where it will not be needed.

Adopt parking maximums of 125% of minimum parking requirements in Transit Intensive Areas.

To make the best use of new housing opportunities and capitalize on transit investments, parking maximums should be introduced alongside reduced minimums in Transit Area Zoning Overlays. Parking maximums, which place a cap on the amount of parking that may be provided, will help to promote greater densities around rail stations and bus hubs. Since developments with fewer cars generate less traffic, parking maximums can also help to make

Supportive Strategy: Parking Lifts To Free Up Space for Housing, Retail

"Fitting in the parking" is a quandary for designers attempting to create transit-oriented development. Surface parking lots are unattractive and often unsafe, while building parking on a podium can create an uninteresting, bleak street frontage. Tenant-operated parking lifts are becoming increasingly common in the Bay Area. These allow two or even three cars to be parked or stacked in a single space, freeing up space for additional housing units or ground floor retail. Current zoning codes in most cities do not allow parking lifts. If Silicon Valley cities permit parking lifts, developers can overcome some of the design and financing challenges of infill housing.



Courtesy of Panoramic Interiors

Space-efficient and simple to use, parking lifts like these in the Gaia Building in Berkeley, with independent access to each car, can allow pedestrian oriented ground floor uses.

new housing more acceptable, by assuaging neighbors' fears of traffic impacts.²²

Parking maximums are growing in popularity and have been employed in places such as Eugene and Portland, Oregon, and in San Francisco. In Eugene, parking maximums are 125% of the parking minimum.

Encourage 'unbundling' of housing and parking costs.

Separating parking costs from housing costs promotes fairness and helps residents make rational transportation decisions. Silicon Valley cities should promote this "unbundling" by reducing parking requirements by 10% at developments that agree to separate the cost of housing from parking. This incentive would recognize that residents who have to pay separately for parking are less likely to own a vehicle – and that developments that charge for parking will attract residents with fewer cars, in a "self-selection" process. Cities should require "unbundling" where possible, for example in developments on publicly owned land.

Reward developers that supply Residential Eco-Passes and support car sharing.

Silicon Valley cities should grant a 10% reduction in parking requirements to developers that commit to providing Eco-Passes to their residents. This would give developers the financial rationale to implement such an initiative, as well as recognizing the reduction in car ownership that could be realized. A similar reduction should be granted for providing space and support for car sharing.

Allow shared parking at mixed-use developments and in mixed-use areas.

Shared parking between residential and neighboring commercial should be acknowledged in local zoning codes. Specific area plans, especially near transit, should be required to examine the potential for shared parking.

²² Shoup, Donald (1997), "The High Cost of Free Parking", *Journal of Planning Education and Research*, Vol. 17, No. 1:3-20.

PUTTING IT ALL TOGETHER

Figure 2-10 provides suggested parking requirements for a Transit Area Zoning Overlay, and for affordable housing countywide. These are suggested minimum parking ratios. Developers would have the flexibility to adjust parking provision to tenants and locations, for example if they feel that tenants at a particular site would require more parking.

	Parking Spaces Per Unit	
	Transit Friendly OR Affordable	Transit Friendly AND Affordable
Studios	.9	.65
1 Bedroom	1.15	.9
2 Bedrooms	1.35	1.15
3 or more Bedrooms	1.60	1.35
Residential Eco-Pass Reduction*	10%	
Car Sharing Reduction*	10%	
Parking Charges / Rent Rebates*	10%	

* Apply cumulatively and could apply to areas outside of Transit Overlay Zone.

Figure 2-10. Sample Minimum Parking Requirements for Silicon Valley Cities. The greatest reductions in parking requirements would apply to developments that are both affordable and close to light rail and bus rapid transit corridors, rail stations or high frequency bus hubs.

Chapter 3. Promoting Employment-Centered Housing

Although many Silicon Valley cities are embracing infill housing development, the scale of the challenge calls for exploring innovative and visionary opportunities. Employment-centered housing is an exciting opportunity that is still largely untapped. This chapter offers the rationale, case studies and framework for pursuing this strategy. It highlights the necessary considerations and actions that can make employment-centered infill housing a substantive addition to the list of housing solutions in the Silicon Valley.

THE POTENTIAL

Low density, suburban-style office development has left the Silicon Valley with enormous fields of surface parking lots. TALC estimates that there are more than 850 acres of surface parking at major Class A and B office developments in Santa Clara County (see box).²³ Growing transit ridership, however, has left many of these lots underutilized.

This is partly because the level of transit service has dramatically increased since many of these developments were planned, giving their employees alternatives to driving to work. In addition, many companies have robust programs to encourage their employees to utilize transit. More than 100 Silicon Valley companies currently participate in the Eco-Pass program, for example, offering free transit passes to their employees. Light-rail daily ridership peaked at more than 30,000 riders in 2001 and while the current recession and transit cuts have caused daily ridership to fall below 24,000, ridership is expected to increase as the economy picks up and new light rail lines open.²⁴

Many publicly owned parcels — from school district to transit district land — also have excess parking or underused sections. While it may

²³ Office developments are defined as Class A, Class B, or Class C, depending on rents, interior finishings, accessibility, market presence and other factors.

²⁴ Richards, Gary, "Light Rail Primed For Leaps Forward" San Jose Mercury News, July 7, 2002

be difficult to imagine redeveloping office parks or school landscapes to include housing, important precedents exist:

- ◆ **Cochrane Village in Morgan Hill.** This affordable housing development was the first to be constructed by a major business park, Morgan Hill Ranch.
- ◆ **Casa del Maestro in Santa Clara.** This collaboration between the Santa Clara Unified School District and the Silicon Valley Manufacturing Group led to a first of its kind: housing for teachers developed on land owned by the school district.
- ◆ **Hacienda Business Park in Pleasanton.** The Owners' Association of this business park saw housing development as a way to shorten worker commutes and enhance the return on their land.

These case studies are presented in greater detail beginning on page 3-6. One commonality between the projects is the incredible demand for the units. In Cochrane Village, the waiting list is consistently full at 250 people; some names have remained on the list for three years.²⁵ In the case of Casa del Maestro, a 40-unit complex, only half of applicants entering a lottery were selected for participation.²⁶

Isolated success stories will, unfortunately, only have a marginal impact on

Need Some Land: How About a Billion Dollars Worth?

TALC estimated the amount of land in Santa Clara County devoted to surface parking at office developments (excluding industrial and retail locations). The result: more than 850 acres of surface parking lies undeveloped in the county. The estimate was derived as follows:

- ◆ **47.3 million square feet of office space** have been required to supply...
- ◆ **190,000 parking spaces** (based on various city parking requirements) of which...
- ◆ **126,000 spaces are surface spaces**, assuming one-third have been built in structures or were not required (two-thirds in downtown San Jose). At 325 square feet per space (including aisles and other space for circulation)....
- ◆ **Approximately 37 million square feet, or 852 acres** of Class A and B office parking has the potential for redevelopment in Santa Clara County.

Because land values are typically in excess of a million dollars an acre in the area, this land devoted to car parking may exceed a billion dollars in value. If only one-quarter of this area were to be developed at 35 units per acre, this land would yield 7,455 housing units.

Office space data from CB Richard Ellis (2002), *Silicon Valley Market Brief: 1st Quarter 2002*. Available at <http://gkc2.cbrichardellis.com/GlobalMarketReports/us/siliconvalley1q02ofc.pdf>.

Office parking requirements from Cook, J., et. al. (1997), *Parking Policies in Bay Area Jurisdictions: A Survey of Parking Requirements, Their Methodological Origins, and an Exploration of Their Land Use Impacts*. Paper in City Planning 217. Berkeley, Calif.: University of California.

²⁵ Jeisel, Jonathan (2002), "County Targets Affordable Housing," Morgan Hill Times. February 25, 2002. *Valley Market Index Brief: 1st Quarter 2002*. Available at <http://gkc2.cbrichardellis.com/GlobalMarketReports/us/siliconvalley1q02ofc.pdf>

²⁶ Interview, Larry Carr, Silicon Valley Manufacturing Group Director of Education and Workforce Preparedness. March 28, 2002.

the Silicon Valley's housing crisis. It is our hope that these examples inspire similar developments, through a wholesale effort to identify and rezone the best sites. The Los Angeles experience, where 44% of recent multi-family housing approvals are located in areas originally zoned for commercial use, shows us that this is an achievable goal (see sidebar).

The strategy of promoting employment-centered housing can make an even bigger contribution to the Silicon Valley's housing needs by considering new developments as well as existing employment sites. With Santa Clara County expecting more than 300,000 new jobs between 2000 and 2025, allowing a mix of commercial and residential uses on the same lot, as considered for Coyote Valley, would allow housing and job growth to occur in tandem.

THE BENEFITS

Promoting housing at or near employment sites can bring a broad range of benefits for workers, employers, landowners and cities alike. In particular, employment-centered housing developments:

- ◆ **Reduce the price of housing** and offer housing choices to people who may otherwise be priced out of the market. Where the housing is being developed for the benefit of employees rather than for profit – for example on school district land – housing can be made even more affordable, since the land may not have to be purchased. Excluding the cost of land can reduce “break-even” rents from over \$2,100 for a typical two-bedroom unit to about \$1,400.²⁷ Cities can also use their control over rezoning to man-

Los Angeles Shows the Potential of Employment-Centered Housing

A recent study quantified the scale of employment-based housing in Los Angeles in 2000 and 2001.²⁷ It found that:

- ◆ Building permits for 2,944 units of multi-family housing were issued for projects located on commercially zoned parcels, accounting for 44% of all multi-family permits issued during these two years.
- ◆ The vast majority of these permits were issued in affluent sections of the city and were for market rate housing. This makes sense as sales and rentals will provide a higher return on investment.
- ◆ The large lot sizes available in commercial areas, as compared to existing residential areas, meant that the average number of units per project was 94 – more than three times the average for residential areas of 29 units per project.
- ◆ The average density of these units was 48 units per acre.

²⁷ Fulton, William (2002), Multi-Family Housing is Being Constructed on Los Angeles Commercial Strips. Solimar Research Group, available at www.solimar.org.

date the provision of affordable units as part of employment-centered housing developments.

- ◆ **Reduce commute times.** The high cost and lack of housing in the Silicon Valley has priced many workers out of the area into the Central Valley or Sacramento. More housing in the Silicon Valley would mean fewer workers needing to make long commutes, in turn increasing productivity, reducing congestion and improving quality of life. The greatest benefits can be achieved where workers live and work on the same site – eliminating the commute entirely.
- ◆ **Turn unfriendly landscapes into interesting places.** Well-designed development can bring life and activity to an area accustomed to fields of sterile parking lots. If the new development includes amenities such as retail or childcare, an unused parking lot can be transformed into a community benefit, as well as a facility for all of the company’s workers who now have additional on-site amenities.
- ◆ **Increase employee retention.** The lack of housing is a major reason why many Silicon Valley employers are having trouble retaining workers, especially those on lower and middle incomes. Employer-provided housing can be a critical benefit in persuading workers to stay.



These photo simulations of the North First Street Light Rail Corridor illustrate how a bleak landscape can be transformed into a vibrant area with housing, offices and retail, all safely and conveniently accessed by transit, foot or bike.

²⁸ Sandoval, Juan Onesimo; Landis, John; Deng, Lan; and Koch, Heather (2000), Estimating the Housing Infill Capacity of the Bay Area Institute of Urban and Regional Development. Berkeley, Calif: University of California. The authors calculated break-even rents for archetypal multi-family projects in Santa Clara County. A 60-unit development on 2 acres of land was estimated to have a land cost of \$4,350,000 and a total cost of \$ 11,626,080. The break-even rent on such a building, including vacancies, was \$2179 – eliminating the land cost would reduce the needed rent by 38% to just under \$ 1400.

- ✦ **Provide a newfound revenue stream for companies.** Landowners can generate revenue by selling or leasing an unused portion of the parking area for housing, even if they have otherwise fully developed their parcel.
- ✦ **Generate additional revenues for cities.** New development means more property taxes for a city. If retail is included, the city will benefit from additional sales taxes as well.

WHERE TO PUT IT?

Clearly, not all office parking lots are suitable locations for employment-centered infill housing. In an area not originally designed to support residential development, employment-centered housing must create a sense of “place.” Further there are some businesses that use hazardous materials which would make their office development an inappropriate location for housing. Cities should meet with businesses to assess their current and future plans, look at the site itself as well as the surrounding area to determine whether it will support housing. Some key considerations include:

- ✦ **Access to public transportation.** Locating next to a VTA light rail or Caltrain station or a frequent bus line will maximize the transportation benefits. Nearby access to the growing network of bicycle and creek paths in the county will offer both a transportation and recreational benefit.
- ✦ **Amenities within walking distance.** If a site does not provide grocery stores, restaurants and other amenities within walking distance, residents will

School-based projects may lead the way

San Jose Unified School District – plans for an 80-unit apartment complex at Lenzen Avenue in San Jose near district offices. The City of San Jose has agreed to subsidize the project. SJUSD is working with Core Development, Inc.

La Honda-Pescadero Unified School District – considering an apartment complex on district land next to Pescadero High School in San Mateo.

Milpitas Unified School District – working with the City’s housing staff to ensure that some of the affordable housing units in two new developments are set aside for teachers. One is an apartment complex and the other townhouses, according to former Superintendent Charles Perotti. The apartment complex would be a mix of affordable units for teachers and market priced units for non-district employees. Townhouses would possibly be available for sale to Milpitas teachers at 75% of market value.

Sunnyvale Unified School District – considering the placement of 10-unit apartment buildings at six or seven of its 10 school sites, according to Superintendent Benjamin Picard.

be forced to drive for simple errands. Some sites such as Hacienda provide an array of services and destinations, and cities and companies can encourage developers to include services in the site design where they are currently lacking. These services will benefit all employees, and may allow more of them to utilize public transit for the commute to work since they will have less need for a car during the day.

- ✦ **Close to other residential areas if possible.** This will help to create a better sense of place and community, particularly if a new development is too small to accomplish this on its own. Adjacent residential developments will benefit from ground floor services.
- ✦ **Appropriate Office Park Developments.** Housing will only be appropriate near office parks where companies do not use hazardous materials, either now or in the future.

The less utilized a parking lot is, the more attractive it is for development. However, even well used surface lots can be suitable for employment-centered housing. Developments can be built over a level of parking, or the spaces replaced in some other way.

CASE STUDIES

The following three case studies illustrate the potential for housing development near office parks and underutilized land, as well as some of the barriers to this type of development. The case studies vary by the type of housing built, the developer, the intended residents, and funding sources. They describe three housing developments: market-rate housing within a business park; affordable housing within a business park; and workforce housing for a school district.

Case 1. Market Rate Housing Co-located with an Office Park: Hacienda – Pleasanton, CA

The Hacienda Business Park broke ground in 1982 on an office and retail development project. Traditional real estate investors currently own most of the park, and there are some owner-occupied properties. While the original design did not include plans for housing developments, the Owners' Association reexamined its land-use plan in the late 1980s and decided to add residential properties. By 1987, one apartment complex had been built. In 1989, the Association got the property rezoned to allow for a complex of townhouses. In 1993,

another major revision added 80 acres to the land available for residential development.

Today, about an eighth of the almost 8 million square feet of development in the business park is residential. Characteristics of Hacienda include:

- ✦ Two apartment complexes, 2 condo complexes and 2 single-family home developments
- ✦ 4,600 residents in 1,500 units
- ✦ One apartment complex has 25% of units set aside as affordable to low and very-low income, and the Association anticipates all future housing to include 25% designated affordable
- ✦ Within 1 mile of BART, with a free shuttle bus to and from the station, as well as local bus service
- ✦ Easy access to retail and service centers including grocery stores, restaurants, banks, dry cleaners, a hospital, etc.
- ✦ Business park successfully integrates housing, office space and retail through the use of landscaping and retaining walls



Elizabeth Pollitt/Harriet Rogozin

The Hacienda Business Park Owners' Association recognized the value that housing would add to a suburban office park, by building 1,500 units of housing. The office park also provides retail facilities, including grocery stores, and childcare with reduced rates for residents.

The park also provides childcare and gives priority and discounted rates to residents. The Owners' Association estimates that up to 40% of residents work within the park.²⁹

A few complaints have arisen from residents after they have moved in and most are fairly easily resolved. For example, residents complained about overnight leaf blowing at a neighboring office building and the Owners' Association worked with the office management to reschedule the leaf blowing. The city of Pleasanton takes a strong stance on enforcing low-density developments, so this type of development will not realize the same level of transportation benefits as a higher density project.

²⁹ Unfortunately, the Association did not receive an adequate response rate on its survey to provide a precise estimate.

Case 2. Affordable Housing within an Office Park: Cochrane Village – Morgan Hill, CA

Cochrane Village is an affordable housing development located in Morgan Hill Ranch Business Park – the first major business park in Silicon Valley to construct affordable housing. In the late 1980s, Morgan Hill Ranch struggled to find businesses to move into the park. Abbott Laboratories had a building in the park and was considering expanding. They were looking to move to other states because of the lack of affordable housing in the Bay Area. The City of Morgan Hill worked with Abbott Laboratories and a nonprofit housing developer, EAH, to create affordable housing within the office park.

Characteristics of the housing at Cochrane Village include:

- ✦ 96 one-, two-, three- and four-bedroom apartments and townhouses
- ✦ Rents for one-bedrooms: \$490-\$688; Rents for four-bedrooms: \$737-\$1,042
- ✦ A playground and a daycare facility
- ✦ 41 units reserved for households earning 40% or less of area median income; 41 units for households earning 50% or less; 14 units for households earning 60% or less
- ✦ Access to retail



Kim Strickland

Cochrane Village was financed through both 4% and 9% tax credits, a tax exempt loan, a conventional loan, and limited funds from Morgan Hill Redevelopment Agency, Santa Clara County CDBG Program, Santa Clara County HOME Program and Santa Clara County Housing Bond Trust Fund.

Affordable housing developed in conjunction with office development across the street keeps jobs and housing balanced and reduces commuting nightmares.

Case 3. Workforce Housing: Casa del Maestro – Santa Clara, CA

Responding to the lack of affordable housing and the difficulty attracting and retaining teachers, Santa Clara Unified School District (SCUSD) partnered with the Silicon Valley Manufacturing Group

(SVMG) to build the first teacher housing development in the country. The housing complex, *Casa del Maestro*, is open only to the district's teachers at rental rates below market value. With the high costs of living in the area, attracting and retaining qualified teachers in Silicon Valley have been problematic. Teachers' salaries begin at \$40,000 a year, only marginally above the cap of \$39,850 for a single person household to qualify for city government housing assistance in the area. The average rent in Santa Clara County is \$1,902 – almost 60% of the pre-tax salary for starting teachers.

School district Superintendent Paul Perotti played a crucial leadership role in spearheading the project and in recognizing the district's unique position of having the excess property and capital funds necessary to support the project.

Residents were selected through a lottery system with 80 applicants for 40 units. Residents can remain for a maximum of 5 years or until they leave the school district.



Kim Sirkland

Characteristics of Housing at Casa del Maestro:

Casa del Maestro was built on Santa Clara Unified School District land, and helps Santa Clara schools retain teachers by providing them with affordable housing.

- ✦ Available only to teachers who have been with SCUSD for less than 3 years
- ✦ 40 units on 2-acre lot
- ✦ 16 one-bedroom apartments; 24 two-bedroom apartments
- ✦ Rents for one-bedrooms: \$675-\$725; Rents for two-bedrooms: \$1,175-\$1,125
- ✦ Amenities include washer/dryer, central AC, patios or balconies, attached garages, community building
- ✦ Located near transit lines

The development costs, estimated at \$5 million, were funded completely through bond issues called "Certificates of Participation" (COP). The School District considered used bond finance to take advantage

of low interest rates. These low rates, together with the lack of the need to purchase land or for the school district to make a profit, contribute to low housing costs for residents.

There were also discussions about obtaining additional funds through the city's redevelopment agency or HUD. However, the use of these funds would have limited the school district's ability to set rents and restrict housing to Santa Clara Unified School District teachers.

Apart from concerns over a dog park that would be overtaken in the process, there was minimal public opposition to the teacher housing complex.

Other barriers included educating the school district on the development process, and linking the issue of teacher housing with the district's goal of improved education. Zoning, however, was not a major obstacle. Even with the new housing complex, the land remains zoned as public facilities land because it is owned by the school district.

THE OBSTACLES

These successful examples show that, given the right circumstances, employment-based housing can become a reality. However, a host of obstacles, listed below, are limiting the concept to a few select sites at present.

Zoning

Appropriate parcels are generally zoned for a single use. For example, office parks are zoned for commercial use, and would require rezoning to allow for infill housing. Most developers do not currently try to build housing in office parks because rezoning is a costly, time-consuming and uncertain process.

Lack of Identified Sites

There is little sense of which sites have the greatest potential, or of the overall scope of employment-based housing to contribute to the Silicon Valley's housing needs. Developers can be reluctant to pursue sites without an understanding of which projects a city is likely to sup-

port. Housing opportunities studies, like the Housing Initiative Studies completed for the Guadalupe Light Rail Transit Corridor in April 1991, have resulted in the approval and/or construction of approximately 11,000 additional housing units in the City of San Jose.³⁰ However, such specific studies are lacking for most parts of the Silicon Valley.

Community Acceptance

Community acceptance is generally an issue with any new development. Local residents and others nearby are rightly concerned about the impacts of new housing, particularly in terms of traffic and congestion. However, since much employment-centered housing will be situated away from existing residential development, and as many projects will include services that the existing community can utilize such as child care, restaurants or dry cleaning, it may gain acceptance more easily than many other proposals.

Corporate Focus

Housing is rarely in the forefront of a developer's mind when planning a new office park. Whether an office park is developed with a specific tenant in mind, or as a more speculative investment by a developer, housing is, quite naturally, not the primary focus. Without the provision of incentives or other encouragement from cities, future office parks will continue to present a missed opportunity to link jobs with housing.

ACTION STEPS FOR CITIES

While landowners and developers will be key players in making employment-centered housing become a reality, a strong leadership role is also needed from Silicon Valley cities. Many of the barriers identified above, such as zoning, are directly within their purview. Cities are also ideally placed to take a strategic perspective on the housing situation, and to bring together businesses, residents, landowners and other members of the community. TALC makes five key recommendations for action steps by cities:

³⁰ City of San Jose Planning Department (2001). Housing Opportunities Study. Available at www.ci.san-jose.ca.us/planning/sjplan/gp/housing_element/Housing_opp_study.html

Work with businesses, public agencies, and communities to help identify sites and address community needs.

Landowners and companies, especially those with an interest in additional revenue or a need for workforce housing, will be the best starting points for identifying underutilized parcels of land, and cities should engage them to help identify sites. Businesses and business associations, such as the Silicon Valley Manufacturing Group (SVMG), are already actively involved in promoting housing development in the Silicon Valley, and cities should capitalize on their commitment.

At the same time, cities need to engage local residents and other nearby land users, who usually have concerns about increased traffic and congestion. Neighboring corporations may also be concerned about successfully integrating residential and commercial space, which often requires some rearranging of activities such as grounds maintenance and delivery truck traffic. Cities can better prepare by anticipating these concerns, and including these constituents as part and parcel of the identification process. They can also help secure amenities such as parks, grocery stores and childcare as part of the development, benefiting existing residents and businesses and helping to ameliorate their concerns.

Conduct housing opportunity studies that include office parks as potential sites for development.

Silicon Valley cities should conduct housing opportunity studies that examine the potential of underutilized land in office parks as sites for housing. These studies would provide direction and reduce uncertainty for developers, giving them a clear understanding of which sites a city is likely to support. Where housing opportunity studies are currently underway, such as in San Jose, their scope should be expanded to explicitly cover potential sites for employment-centered housing. It is important that the cities work with local businesses to ensure that sites identified do not impinge upon companies' needs – either today or in the future.

Rezone or modify land uses where appropriate to allow development at densities that address both housing and transportation goals.

Where appropriate sites for employment-centered infill housing are identified, cities should ensure that they are re-zoned for housing or mixed-use development. They should also specify minimum densities, particularly at locations near transit, to ensure that the full potential of each site is realized and that transit investments are used to their maximum advantage.

Because rezoning both enables new housing development and creates new value for landowners, jurisdictions have the opportunity and obligation to ensure that the housing being developed truly meets the full range of local needs. Therefore, localities should require that **at least** 15% of the new employment-centered housing units be designated as affordable.

Be proactive in linking housing needs to future office park development.

By including residential housing in the original land-use plan, developers can avoid many of the complications that tend to delay employment-centered infill housing. Cities should aggressively link future housing needs with office development.