

Date: May 25, 2010

To: John Downs, Fresno Council of Governments

From: Sujata Srivastava, Senior Associate

Project: Public Transportation Infrastructure Study, Phase II

Subject: Fresno County TOD Demand Estimates

This memorandum updates Strategic Economics' previous evaluation of the market for transit and transit-oriented development (TOD) in Fresno County for the Regional Public Transportation Infrastructure Study. This memorandum provides the following:

1. A forecast of market demand for TOD among households in Fresno County in the short term (2007-2020), medium term (2020-2035), and long term (2035-2050), segmented by household type and household income.
2. Preliminary findings of financial analysis testing the development feasibility of a range of compact single-family and attached multi-family TOD housing types.
3. Preliminary findings of the affordability of TOD units to Fresno County households.

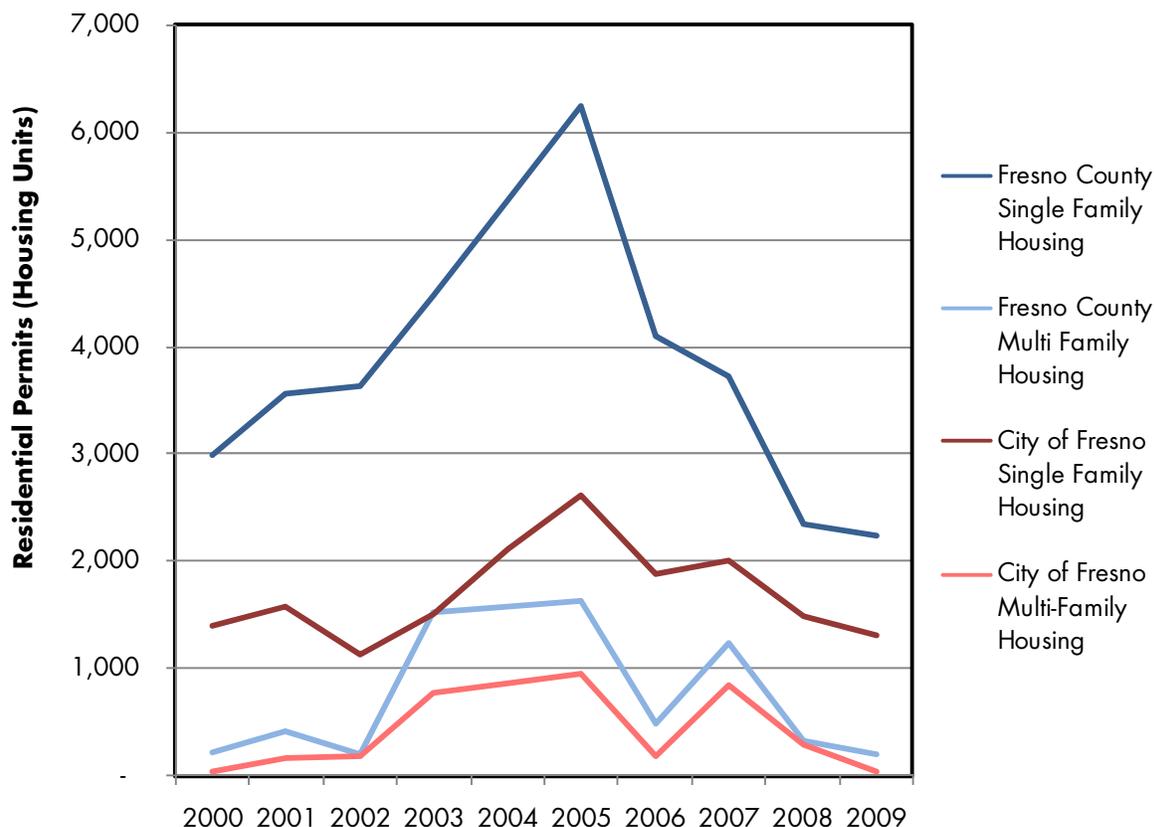
1. Forecast of market demand for transit-oriented development (TOD) in Fresno County

In July 2009, Strategic Economics estimated the demand for housing near transit in Fresno County in 2035. The demand estimate drew upon the national forecasts from the Center for Transit-Oriented Development (CTOD), which projects that there will be demand for nine million new housing units near transit by 2030. Transit is defined as fixed-guideway rail or rapid bus. The growth in demand for TOD is driven by factors such as demographic trends, rising energy costs, and the growing popularity of compact, mixed-use, urban environments. While there is a higher propensity for single person households, non-family households, and married couples without children to live near transit, one-fifth of the national TOD demand is among households with children. The diversity of this TOD demand across numerous household types, age groups, and income levels suggests that there are a variety of product types that can be built to accommodate these households.

Because the Fresno region does not have rail or rapid bus transit, in order to apply the national TOD demand methodology to Fresno, SE defined TOD demand more broadly as the demand for living in full-service, compact neighborhoods that offer opportunities for non-auto modes of transportation (transit, walking, and biking). Compact and transit-oriented development is a largely untested

development type in the Fresno area. During the recent housing boom, the share of construction in multifamily housing increased in many Central Valley cities, particularly in the Sacramento area. However, Fresno County area lagged behind the rest of the Central Valley in this regard: the share of development in multifamily housing was 20% of total units permitted.

Figure 1: Housing Permit Activity in Fresno County and City of Fresno, 2000-2009



There are nonetheless signs that there may be pent-up demand for compact housing types in Fresno County, driven in part by the desire to reduce commute time and transportation costs by living closer to job centers. Although 55 percent of Fresno County households do not have children, two-thirds of the housing stock is in single-family homes.¹ Recent multifamily projects in Downtown Fresno have attracted households that desire more urban lifestyles, and there are several additional planned and proposed projects.

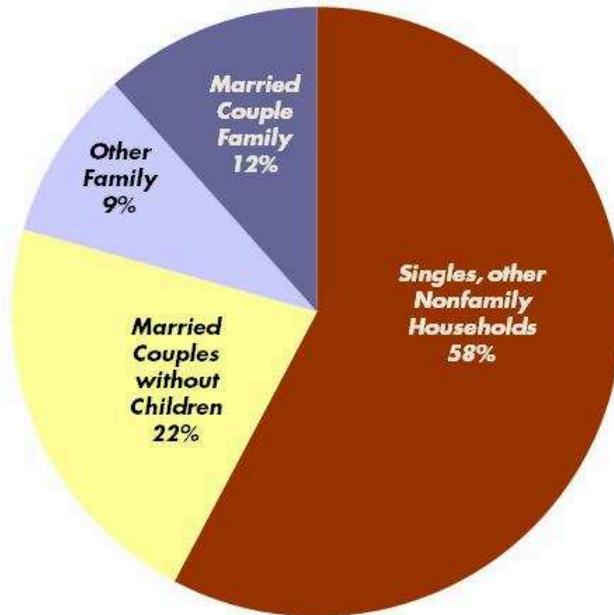
In order to realize the potential for more compact housing in the region, and to encourage densities that can support transit service, it is critical for local governments to allow for a wider range of housing types, including rental and for-sale multi-story flats, small-lot/attached single family homes, and townhomes.

Demand for Transit-Oriented Development

¹ Sources: U.S. Census Bureau, American Community Survey, 2007; California Department of Finance, 2009.

Strategic Economics forecasted the demand for transit-oriented development (TOD) in Fresno County based on a methodology developed by the Center for Transit-Oriented Development (CTOD) to forecast the national demand for TOD.² This methodology uses information about the current households living near transit, including household type and age, to project future demand. Among regions with the largest transit systems in the country,³ CTOD has estimated that approximately 25 percent of households live near transit. As shown in Figure 2 below, smaller households without children have a higher propensity to live near transit.

Figure 2: Distribution of National Demand for TOD by Household Type, 2030



Source: Center for Transit-Oriented Development, 2006

From 2007 to 2050, the number of households in Fresno County is projected to increase from 282,100 to 663,500, adding nearly 400,000 new households. As the Baby Boomer generation enters retirement age, the share of senior households will increase dramatically. Almost two-thirds of future housing demand will be from households with no children. These demographic trends will fuel the demand for more walkable, compact, and transit-friendly housing options (see **Table 1** and **Table 2**).

² For more about this methodology, please see *Hidden in Plain Sight: Capturing the Demand for Housing Near Transit* (2004), which is available at www.reconnectingamerica.org

³ The Boston, Chicago, New York, Philadelphia, and San Francisco regions

Table 1: Forecasted Household Growth in Fresno County by Age, 2007-2050

	2007	2050	Change	% Growth
Households	282,100	663,494	381,394	135.2%
Households with Head Over 65	52,000	187,227	135,227	260.1%
Share over 65	18%	28%	35%	

Sources: California Department of Finance Population Projections by Age, 2005; Strategic Economics, 2010.
Note: Numbers may not add due to rounding

Table 2: Forecasted Household Growth in Fresno County by Type, 2007-2050

	2007	2050	Change	% Growth
Households	282,100	663,494	381,394	135.2%
Households without Children	175,669	417,568	241,899	131%
Share of Households without Children	62%	63%	63%	

Sources: California Department of Finance Population Projections by Age, 2005; Strategic Economics, 2010.
Note: Numbers may not add due to rounding

Strategic Economics has calculated that Fresno County could capture up to 14 percent of its total households near transit, or about 92,900 of its 663,500 households by 2050. While this 14 percent estimate is significantly lower than the 25 percent share reported at the national level, it is reasonable for Fresno County, which is likely to have a smaller transit system than other metropolitan areas, and which is forecasted to maintain a higher than average share of family households with children. This estimate is also consistent with a forecast of compact development completed by Economic and Planning Systems in 2004 for the San Joaquin Valley Growth Response Study, which forecasted that 12 percent of households in Fresno and Madera counties would have a demand for compact development.⁴ The total projected TOD demand for Fresno County in the short term (2007-2020), medium term (2020-2035), and long term (2035-2050) is summarized in **Table 3** and illustrated in **Figure 3** below.

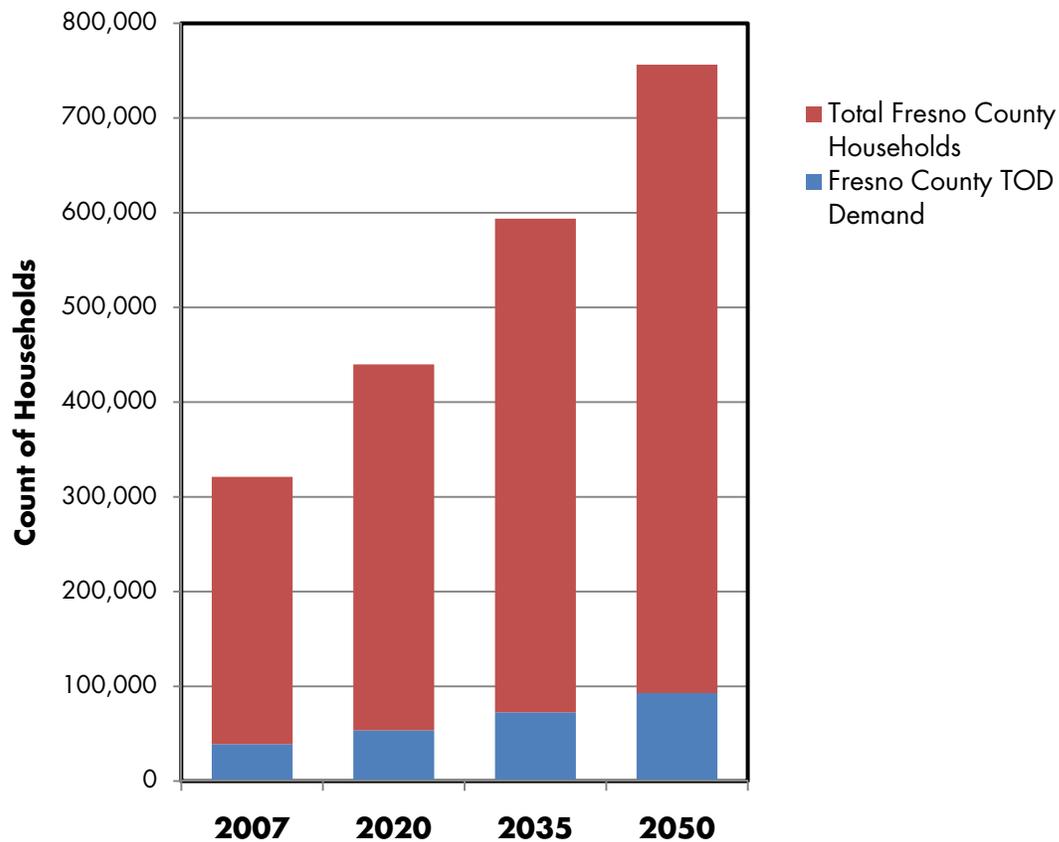
⁴ Economic and Planning Systems, "An Economic Assessment of the Prospects for Compact Development in Fresno and Madera Counties," completed for the San Joaquin Valley Growth Response Study, Phase II, October 2004.

Table 3: Forecasted Demand for TOD in Fresno County by Period

	2007	2020	2035	2050	Change 2007-2050
Total Households	282,100	386,300	521,200	663,500	381,400
TOD Demand	38,600	53,600	72,600	92,900	54,300

Source: US Census ACS 2005-2007; California Department of Finance, 2010; Strategic Economics, 2010

Figure 3: Forecasted Demand for TOD in Fresno County, 2007-2050



Source: US Census ACS, 2007; California Department of Finance, 2010; Strategic Economics, 2010

Table 4 on the following page shows more detailed tables on TOD demand by household type.

Table 4: Forecasted Demand for TOD by Household Type, 2007-2050

Household Type	2007		2020		2035		N H
	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent	
Married-Couple Family	14,119	37%	19,300	36%	25,930	36%	3
Other Family Households	9,428	24%	12,915	24%	16,935	23%	2
Householder Living Alone	12,207	32%	17,420	32%	24,580	34%	3
Householder Not Living Alone	2,852	7%	4,020	7%	5,220	7%	
Total	38,607	100%	53,655	100%	72,665	100%	9

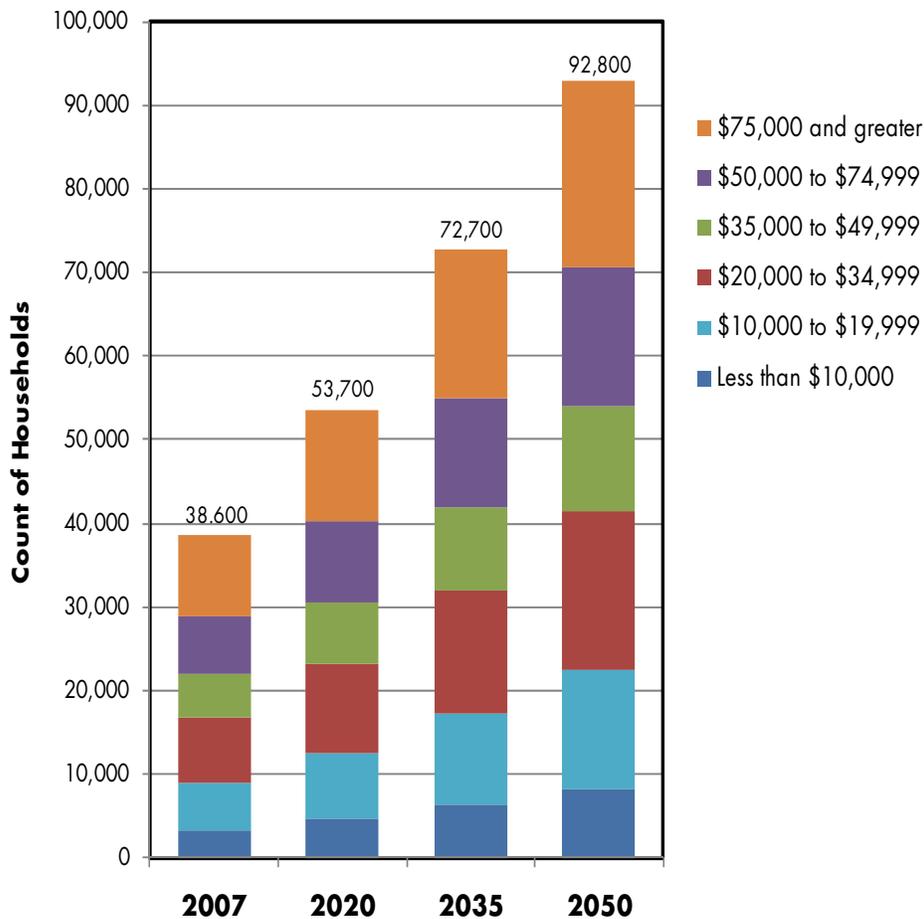
SE further segmented the TOD demand by household income based on the current household income distribution in Fresno County, as shown in Table 5 and Figure 4 below.

Table 5: TOD Demand by Household Income, 2007-2050

Household Income (constant 2007 dollars)	2007	2020	2035	2050
Less than \$10,000	3,364	4,667	6,445	8,400
\$10,000 to \$19,999	5,618	7,873	10,860	14,128
\$20,000 to \$34,999	7,741	10,784	14,737	19,013
\$35,000 to \$49,999	5,216	7,281	9,803	12,492
\$50,000 to \$74,999	7,062	9,764	13,092	16,574
\$75,000 and greater	9,606	13,286	17,729	22,239
Total TOD Households	38,607	53,655	72,665	92,845

Source: US Census ACS 2005-2007; California Department of Finance, 2010; Strategic Economics, 2010

Figure 4: TOD Demand by Income Distribution



2. Financial Feasibility of Multi-family Residential Development

Generally, the per square foot construction of attached housing types is more costly than single-family homes. Typically, the unit costs decline as density on the site increases. Higher density projects however often require a larger upfront investment, and are less proven in the Fresno marketplace. Therefore, it is important to test the financial feasibility of a range of compact single-family and attached multi-family housing development that is both profitable to developers and affordable to local households.

As part of this assignment, SE prepare a static pro forma analysis of four building types, including small-lot single-family units, townhouses, warehouse rehabilitation, and a four-story mixed-use building on a “typical” one-acre development parcel. The financial analysis tested overall feasibility from the perspective of the developer using a residual land value methodology. SE worked with building typologies defined by Fregonese Associates, and conducted interviews with local developers to derive key inputs such as unit sizes, parcel sizes, densities, parking ratios, and cost and revenue assumptions for the financial model. From the pro forma analysis, SE then derived the per-unit cost of constructing each building type and the likely market that it could serve. The detailed financial pro forma can be found in the Appendix to this report. Table 6 summarizes our preliminary findings:

- The home price of a compact single-family home is approximately \$325,000 per unit, compared to \$260,000 per unit for a townhouse and \$375,000 per unit for a mixed-use four-story apartment building. While the cost of rehabilitating existing buildings can vary tremendously, the conversion of a prototypical warehouse building into loft apartments is estimated to be valued at about \$200,000 per unit (see Figure 5).
- Due to the depressed housing market in Fresno County and the existing inventory of low-cost single-family housing, all of the building types tested are infeasible given current values.
- Once the housing market recovers and housing prices once more begin to appreciate, the development of more compact for-sale products, such as small-lot single-family homes and townhouses will likely become financially attractive.
- The development of high density rental products, such as the rehabilitation of a warehouse building into loft units, or the construction of a new mixed-use four-story building, will take much longer to realize. The rents that can be currently achieved for these products are not sufficiently high to justify the higher development costs.
- SE’s market research confirms these findings. The majority of recent higher density multi-family development that has occurred in Fresno has received some form of public subsidy.

Figure 5: Estimated Prices per Unit of Higher Density Building Types

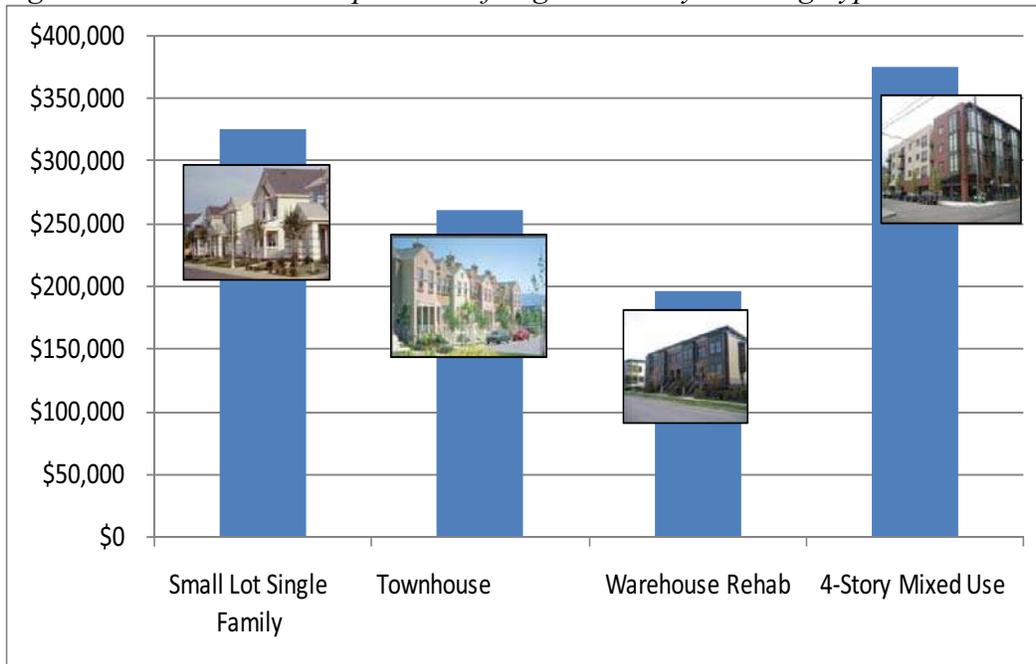


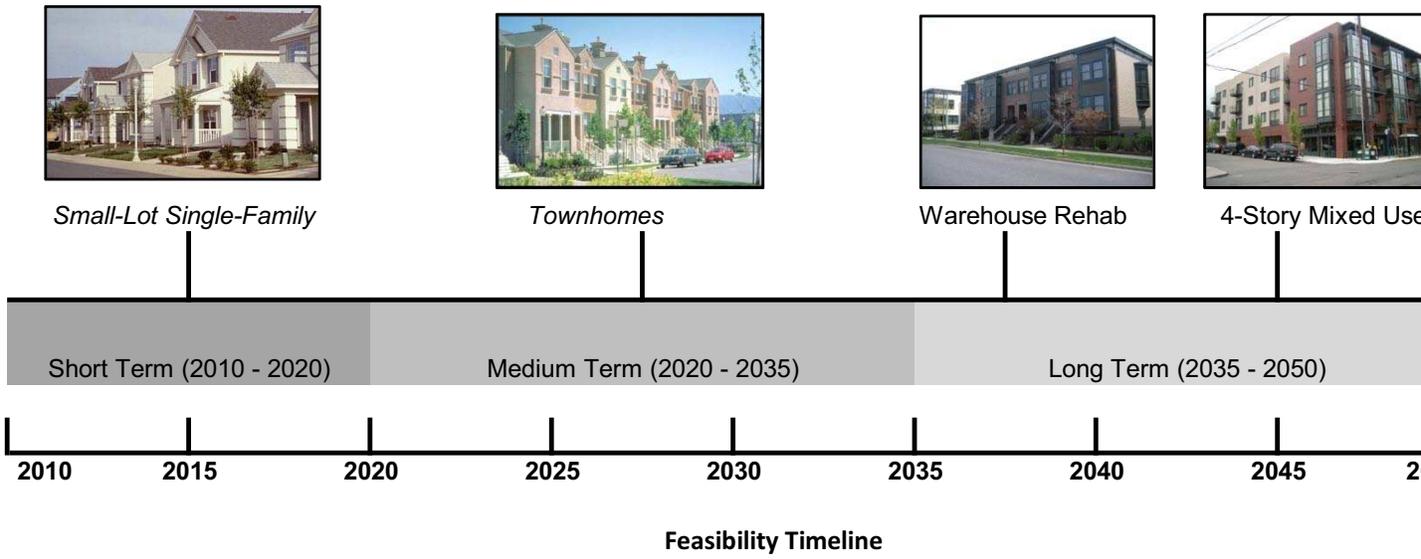
Table 6: Results of Financial Analysis of Building Types

Unit Type	Average Density	Likely Development Feasibility Timeframe	Required Percent Increase in Revenue	D U
Ownership				
Small Lot Single Family	9 du/acre	Short (2010 - 2020)	20%	\$
Townhouse	18 du/acre	Medium (2020 - 2035)	33%	\$
Rental				
Warehouse Rehab	50 du/acre	Long (2035 - 2050)	41%	\$
4-Story Mixed Use	55 du/acre	Long (2035 - 2050)	86%	\$

*Assumes 20% downpayment and 5.5% interest rate.

Source: RS Means; Developer Interviews; Fregonese Associates, 2010; Strategic Economics, 2010.

Figure 6: Likely Time Frame for Development of Prototypical Buildings



3. Preliminary Findings of Affordability Analysis

In order to determine the affordability of each building type, SE calculated the household income required to rent or purchase a unit in each of the prototypical building types. SE then compared this to the TOD demand forecasts by household income in order to determine whether the cost of each new housing type will meet or exceed the income ranges among transit-friendly households.

As shown, all of the building prototypes tested would be affordable to higher income households with annual incomes of over \$65,000. The four-story mixed-use units would be affordable to households earning over \$100,000.

Table 7: Affordability of Prototypical Higher Density Units

Unit Type	Average Density	Development Cost per Unit	Required Income*
Ownership			
Small Lot Single Family	9 du/acre	\$325,019	\$87,460
Townhouse	18 du/acre	\$259,802	\$73,746
Rental			
Warehouse Rehab	50 du/acre	\$196,099	\$65,550
4-Story Mixed Use	55 du/acre	\$375,041	\$101,250

*Assumes 20% downpayment and 5.5% interest rate.

Source: RS Means; Developer Interviews; Fregonese Associates, 2010; Strategic Economics, 2010.

When compared to the TOD demand estimates by household income, it becomes clear that the higher density housing types modeled in the financial analysis would be affordable to only 42 percent of total TOD households (see Figure 7 and Table 8).

Figure 7: TOD Households Qualified to Purchase or Rent Higher Density Units

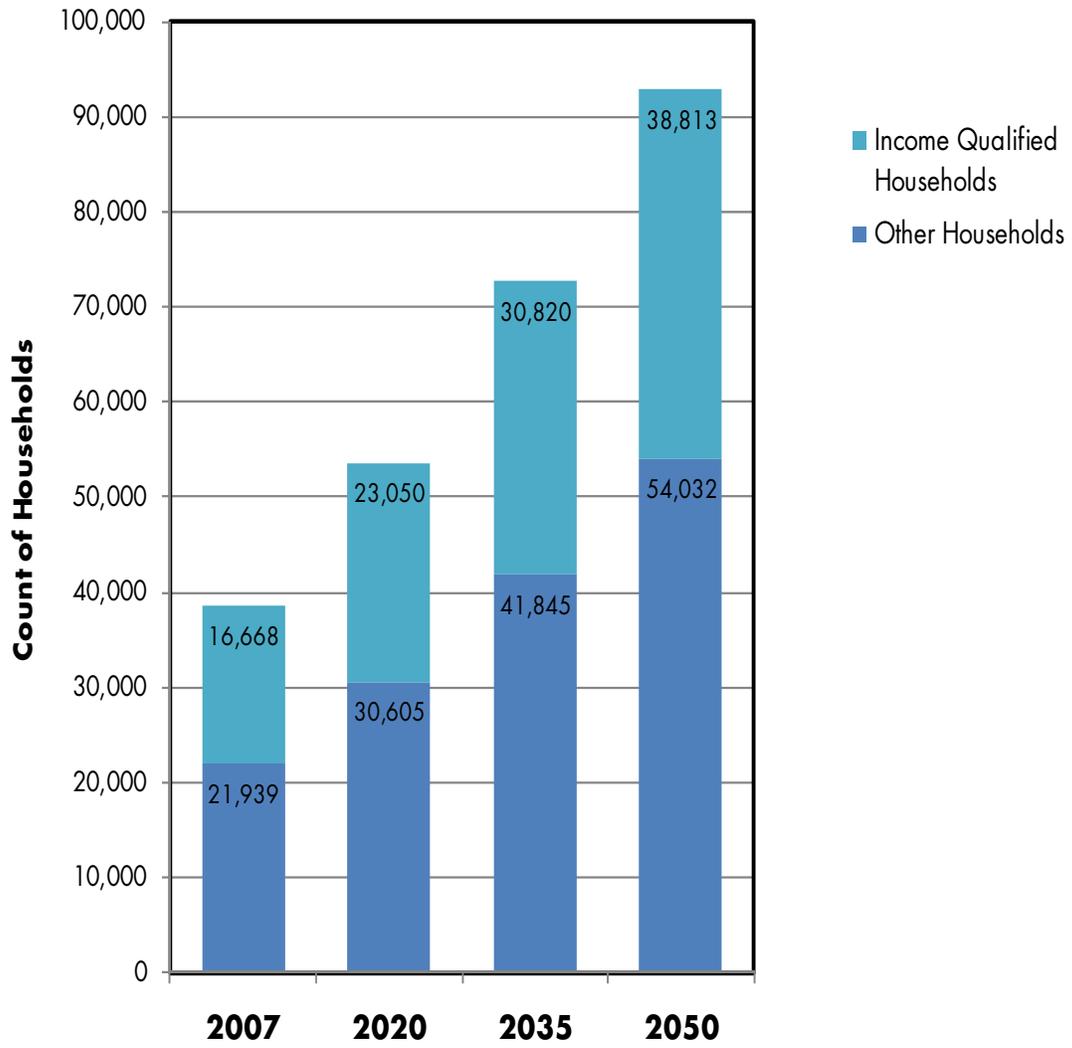


Table 8: TOD Households by Income, 2007-2050

Household Income (constant 2007 dollars)	2007		2020		2035	
	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent
Less than \$10,000	3,364	9%	4,667	9%	6,445	9%
\$10,000 to \$19,999	5,618	15%	7,873	15%	10,860	15%
\$20,000 to \$34,999	7,741	20%	10,784	20%	14,737	20%
\$35,000 to \$49,999	5,216	14%	7,281	14%	9,803	13%
\$50,000 to \$74,999	7,062	18%	9,764	18%	13,092	18%
\$75,000 and greater	9,606	25%	13,286	25%	17,729	24%
Total TOD Households	38,607	100%	53,655	100%	72,665	100%

Source: US Census ACS 2005-2007; California Department of Finance, 2010; Strategic Economics, 2010