

Lawrence Station Area TOD Study

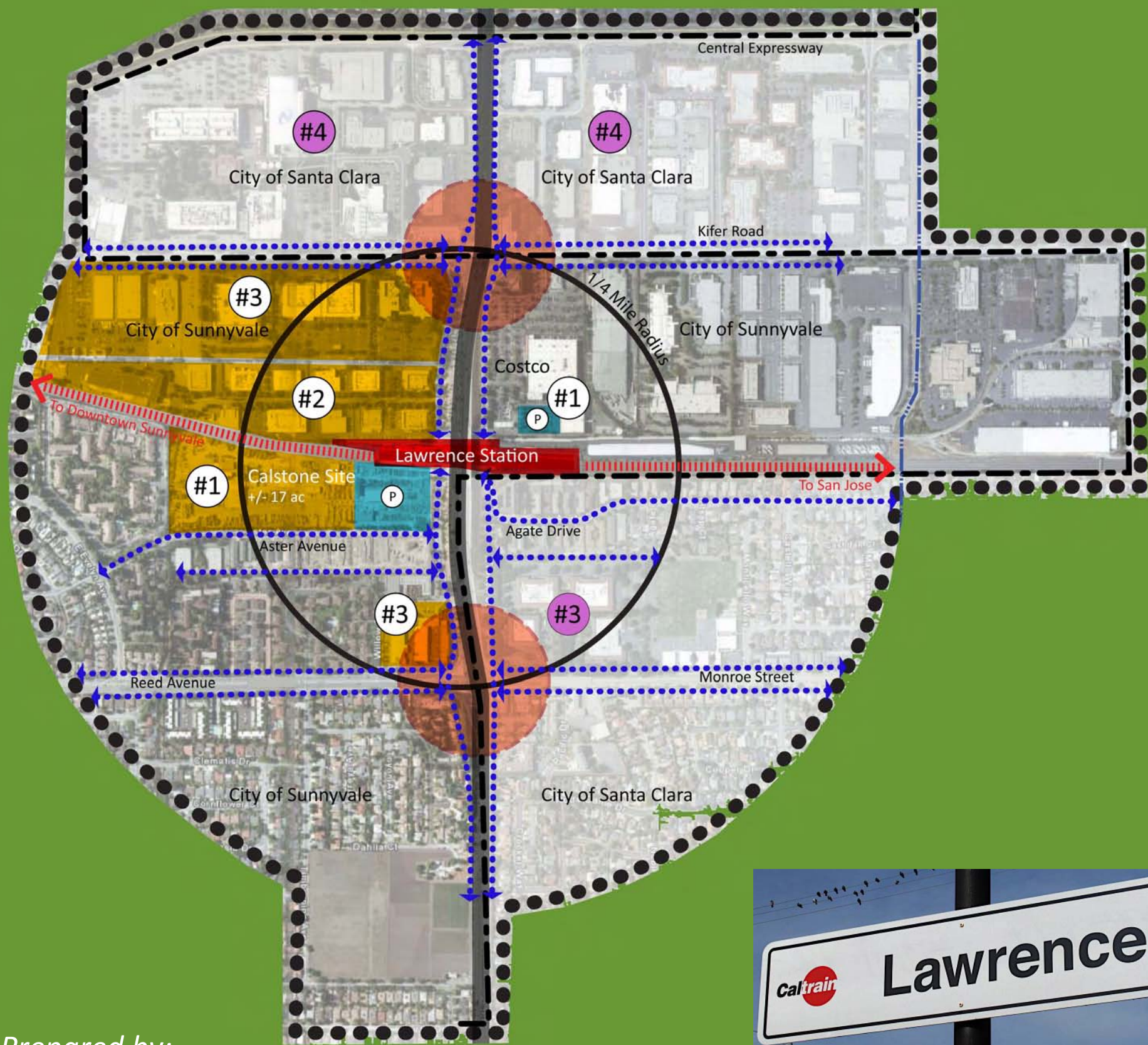
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1. INTRODUCTION

Lawrence Station is an existing Caltrain Station located along the Lawrence Expressway between Kifer Road to the north and Reed Avenue/Monroe Street to the south. Although the station is located in the City of Sunnyvale, the area borders the City of Santa Clara in an unusual zipper-like pattern. Land uses around the station consist primarily of older, single-story office/R&D structures to the north and single-family homes and multifamily residential buildings to the south. Retail and light industrial uses are scattered throughout the area. With some exception, the existing land uses surrounding the station area are underutilized from a density perspective, precluding the area from developing into a vibrant node of employment and residential activity and taking full advantage of transit accessibility.

In areas where there is potential for transition, like the Lawrence Station area, sites with transit station access are frequently able to support higher density and mixed-use development in what otherwise may be a more traditional suburban setting. This pattern of transit-oriented development (TOD) has the effect of reducing sprawl and providing more choice in housing opportunities and employment access than might otherwise be available.

However, in order for the Lawrence Station area to begin this evolution, the City of Sunnyvale, working in partnership with the City of Santa Clara, will need to ensure that appropriate land use policies are in place to encourage private sector redevelopment efforts. The City was awarded a Community Design and Transportation (CDT) grant, administered by the Santa Clara Valley Transportation Authority (VTA), to study the feasibility of TOD around Lawrence Station. This report represents a preliminary assessment of the area's potential for TOD and lays the groundwork for the next steps. The City Council will review this study and may direct staff to begin intensive collaborations with local stakeholders including not only the City of Santa Clara, but the County, VTA, and SamTrans, as well as area residents and business owners. City staff intends to apply for a MTC grant in the coming year.

Purpose of Study

Economic & Planning Systems, Inc. (EPS) in collaboration with Ken Kay Associates (KKA) has been retained to evaluate the potential of the Lawrence Village transit station area for TOD, suggest key land use strategies that would enable market-driven development to transform the area to support and draw from transit accessibility over time, and assess the financial feasibility of TOD-compatible product types. The purpose of this study is to summarize the findings of the market analysis and to quantify, on a preliminary basis, the comparative feasibility of each product prototype without regard to particular sites, with the objective of assisting the City of Sunnyvale in identifying projects that have the greatest potential for feasibility. Site-specific land use recommendations will require more detailed planning and input from property owners and other key stakeholders.

Summary of Findings

Based on our preliminary analysis, we note the following:

- **There is potential for Caltrain's Lawrence Station to support substantial employment and residential densities in the long run.** The site is well-positioned within the region's extensive roadway and transit network and reflects a mix of residential and employment uses.
- **Future redevelopment should include more intensive uses that benefit from transit accessibility.** With some exception, the existing land uses near Lawrence Station are underutilized from a density standpoint (see **Figure 3**).
- **The Calstone operation in the southwest quadrant is an immediate opportunity site as is at least a portion of the Costco site in the northeast quadrant.** The Calstone site could be redeveloped in phases, permitting the current owner/operator time to reorganize and intensify operations, according to their own business priorities. A portion of the Costco site may be a candidate for shared parking facilities that could serve their customers, as well as transit riders (see **Figures 5 and 6**).
- **Pedestrian, bicycle, and vehicular access throughout the area must be improved.** Improved access to the Caltrain Station could enhance transit ridership and redevelopment opportunities throughout the area, without jeopardizing existing established neighborhoods (see **Figures 5 and 7**). Wayfinding and efficient access is currently constrained by the existing configuration of access roads.
- **There is inadequate retail serving the area's existing residents.** The commercial and service retail at the corner of Reed Avenue and Lawrence Expressway should remain retail so that these parcels can continue to serve the surrounding residential uses, but the site could be redeveloped to better serve residents and may present an opportunity for mixed use. Estimating demand for new retail at this point is outside the scope of this analysis but could be analyzed as part of a Specific Plan work effort.
- **Development prototypes that may be appropriate for the transit station area include mid- to high-density multifamily housing, in-line retail, and mid- to high-density office buildings.** Under normal market conditions, these types of buildings reflect the types of densities desirable in transit-served locations (see **Appendix B**). Lower density product types may be financially feasible but may not meet the density goals of TOD.
- **In today's market (February 2009) nearly all product types face feasibility challenges because of negative or low residual land values.** For sale residential products are the only product analyzed in this study that return positive residual land values under current market conditions. Rental residential product types do not approach feasibility until achievable rents grow beyond 2007 market conditions. Of the office product types evaluated, none achieved positive residual land values under current market conditions, but they approach feasibility under a recovered market scenario. The achievable lease rates for in-line retail developments result in positive residual land values. However, the residual land

values are not positive enough to attract developer interest at current market rates. It may be some time before demand translates into price points that can support the costs of development and overcome the recent fallout in the real estate market (see **Table 1**).

- **With the transformation of the Lawrence Village station area, demand for various product types is likely to increase, thereby improving the overall feasibility of development around the station and within the general study area.** This assumes the recovery of the residential market and continued improvements in the regional office market. It is also assumed that an increase in station area household populations and increased foot traffic created by improved access will strengthen demand for retail in the general study area. This analysis models both a recovery and a growth scenario in addition to today's market scenario.
- **For sites that are large enough to accommodate multiple land uses, it is possible that an overall development program can attract developer interest even if only some of the individual uses generate positive land values.** A site plan that combines a strongly feasible use (such as for-sale residential) with something less feasible (such as retail) might still yield an overall positive feasibility profile. Such site plans may not maximize land value but may result in development that meets other goals, such as increased transit ridership.

Principles of Transit-Oriented Development

TOD is characterized by high-density, mixed-use development located within walking distance of a transit center. At its best, TOD can have a transforming effect on surrounding neighborhoods and commercial districts. Public transit does not, in and of itself, generate new regional growth but it can focus growth around a planned project area. The creation of and investment in a mixed-use transit area expands employment, residential, and retail options for residents while encouraging alternative modes of transportation. At the same time, the improved access and the concentration of activity at station areas support infill and higher density development that can add to the vitality and sustainability of the urban fabric.

A study conducted by Cervero and Landis in 1992 found that Bay Area Rapid Transit (BART) had a strong influence on the character of development along the Walnut Creek-to-Concord axis namely in "concentrated, mixed use development."¹ Over 4 million square feet of new office space was developed around the Walnut Creek station between 1973 and 1992, and there has been "considerable amount of multifamily residential development within a quarter-mile radius of BART stations."²

¹ Cervero, R. and J. Landis. "Suburbanization of Jobs and the Journey to Work: A Submarket Analysis of Commuting in the San Francisco Bay Area." *Journal of Advanced Transportation*, 26, 3 (1992).

² Transit Cooperative research Program. TCRP Report 16, "Transit and Urban Form." (1996).

In Atlanta the presence of MARTA was credited for “making higher densities possible” in North Park.³ It is also important to note that while higher densities can be supported by mass transit, land-use regulations around the station must allow for this intensification. In the 1970s Boston completed the extension of the subway to Cambridge but did not change the zoning around the stations. This resulted in little commercial or residential development around the station area.⁴

The City’s efforts at redevelopment around a transit station area can serve as a catalyst for revitalization and economic development, attracting capital investment for the redevelopment of older uses to take advantage of improved accessibility. Developers are increasingly looking for proximity to transit in their site selection process. Additionally, studies have found price premiums for almost all land use types around transit stations, particularly office and multifamily uses, which generate the highest and next highest premiums, respectively. In a study done by the University of Texas, property valuation around DART stations increased more quickly than property not located by a transit station. Between 1997 and 2001, office buildings near DART increased in value 53 percent more than comparable properties not near light rail and residential properties increased 39 percent more than properties not served by light rail.⁵ The price premiums allow developers to pay more for the underlying land, and/or utilize higher-density and higher-cost construction formats (such as steelframe buildings or structured parking) while maintaining the project’s financial feasibility. As a result, the density of development tends to be higher near transit stations, which also enhances ridership potential.

Methodology

EPS has collaborated with KKA, to analyze and graphically document current conditions and key opportunity sites around Lawrence Station. While specific development scenarios are beyond the scope of this analysis, EPS developed preliminary static pro formas for several product prototypes that may be appropriate and marketable as market conditions improve (See **Appendix A**). Graphics representing a range of conceptually feasible product prototypes are attached as **Appendix B**. The pro forma analyses provide an estimate of the residual land values associated with each prototype under varying market conditions to assess project feasibility. This analysis is not time-specific, as it is unclear when market conditions will recover enough to justify new development, nor does this analysis compare the residual land values to current land values as detailed appraisal or land valuation analysis is beyond the scope of this study. Further, it would be inappropriate to make such estimates before engaging land owners in the discussion.

³ Ibid.

⁴ Ibid.

⁵ Weinstein, B. and T.L. Clower. *DART Light Rail’s Effect on Taxable Property Valuation and Transit Orient Development*. Dallas Area Rapid Transit (January 2003).

2. LAWRENCE STATION AREA LAND USE ANALYSIS

Economic Geography and Existing Conditions of Station Area

As illustrated in **Figure 1**, Caltrain's Lawrence Station is well-positioned within the region's extensive roadway system and transit network. The Station is located along the Lawrence Expressway, south of the Central Expressway and north of 82 (El Camino Real), east of 85, and west of 880 and the San Tomas Expressway. The Station is one stop north of the Santa Clara Transit Center and one stop south of the Downtown Sunnyvale Station, which is also a "baby bullet" stop. The "Airport Flyer" is a VTA-operated shuttle that facilitates travel between the Santa Clara Caltrain Station and the Norman Y. Mineta International Airport. The Airport, in turn, is accessible by Caltrain, Altamont Commuter Express (ACE), and AMTRAK. Additionally, BART's San Jose extension will connect with VTA bus routes. Given this context, the area immediately surrounding Lawrence Station is likely to be able to support substantial employment and residential densities in the long run.

Figures 2 through 4 illustrate current conditions within an approximate one-half mile radius of the Lawrence Transit Station with extensions to possible adjacent development opportunity sites. The graphics marry data from both the City of Sunnyvale and the City of Santa Clara. However, the City of Santa Clara is in the process of updating its General Plan and the attached figures do not reflect the City's latest planning efforts. **Figure 2** shows the cities' general plan designations in the project area, consisting primarily of mixed-use, employment, and some residential. **Figure 3** maps current uses in the project area, and **Figure 4** reflects the current zoning. **Figures 8 and 9** are site photos, depicting existing conditions at Lawrence Station.

Transit-Oriented Development Opportunities

Future redevelopment should include more intensive uses that benefit from transit accessibility and should consider mixing commercial and residential uses to help balance origin/destination ridership. **Figure 5** highlights the sites within the project area that represent redevelopment opportunities. A site is deemed a redevelopment opportunity as a result of proximity to the station and/or underutilization from a density perspective. Sites are labeled #1 through #4 reflecting the order in which redevelopment efforts could be prioritized, with sites in Santa Clara assigned higher numbers to reflect the City of Sunnyvale's lack of jurisdiction and the cooperative efforts that will be required.

With some exception, the existing land uses near Lawrence Station are generally underutilized from a density standpoint. The Calstone/Peninsula Building Supply operation in the southwest quadrant is ranked #1 and is an immediate opportunity site. There are two businesses operating at this site, both of which have been in place for some time. At least one of these businesses has no intention of moving in the foreseeable future. However, the City could put in place land use policies that create a potential increase in land values, thus incentivizing consolidation of current activities and more intensive use of portions of the site, making available land for higher density uses, mixed uses and parking close to the station, and setting a framework for eventual

redevelopment to higher intensity, transit-served uses on the remainder of the site, when the property owner(s) is ready to consider such a change. The site is currently zoned to transition from industrial to residential at a density of 24 dwelling units per acre. The density envisioned by EPS and KKA for this site is 60 to 90 dwelling units per acre. Future development at the Calstone site will need to be compatible with the KB Homes project along Aster Avenue at Willow Avenue. KB Homes has developed 25 townhomes, priced starting at approximately \$600,000.

The Costco in the northeast quadrant, also ranked #1, is a very valuable sales tax generator for the City. The use is unlikely to change in the foreseeable future, but a portion of the site may be a candidate for a shared parking facility that can serve Costco's customers, as well as transit riders. Specifically there is space between the gas station and the tire center that is appropriately sized for a shared parking structure. Such a partnership would preserve the retailer's current operation.

The northwestern quadrant of Lawrence Expressway and the Caltrain tracks (ranked #2) is most accessible to the transit station, and has a number of large older office/R&D parcels surrounded by underutilized parking that are candidates for redevelopment. According to industrial lease comps provided by the City, one of the R&D/Flex properties on Sonora Court is available at an asking rent of \$1.40 (NNN). Average R&D/Flex rents within a one mile radius were \$1.53 (2007 Q4 to 2008 Q3).

There is inadequate retail serving the area's existing residents. The commercial and service retail at the corner of Reed Avenue and Lawrence Expressway (ranked #3) should remain retail so that these parcels can continue to serve the surrounding residential uses, but the site could be redeveloped to better serve residents. The site may be large enough to support vertical or horizontal retail/residential mixed use.

Sites located in the City of Santa Clara are labeled #3 and #4 to reflect the City of Sunnyvale's lack of jurisdiction and, consequently, the time that it will take to coordinate redevelopment efforts. As the City of Santa Clara is engaged, many of the Santa Clara sites may be deemed near-term opportunity sites. Meanwhile, the area north of Kifer Road and east of Lawrence appears ripe for redevelopment, but the City of Santa Clara will need to be involved in any policy recommendations for this area. The Southeast quadrant holds little potential for redevelopment. The quadrant is located entirely in the City of Santa Clara and contains primarily established multifamily and single-family residences with some community serving uses (e.g., churches, performing arts center, preschool, school, etc.). South of the tracks and east of Lawrence, there is a medium-density multifamily residential building that appears to be relatively new. At the intersection of Lawrence and Monroe, there is a Shell Service Station, a 7-11, and a medium-density office park. The City of Santa Clara is currently undertaking a comprehensive General Plan and Zoning Code Update, which is anticipated to conclude by the end of 2010. Properties throughout the City, including those within 1/2 mile of Lawrence Station, will be examined for future land uses and development potential over the next 25 years. The City is currently soliciting public input as part of this effort.

Figure 6 highlights which of the opportunity sites could be considered catalyst sites (labeled P₁ and C₂). A site is deemed a catalyst site if there is potential for near-term redevelopment of the site that would signal market opportunity and a direction for new development to developers in the market, setting the stage for private-sector investment. For example, developing a parking

facility at the eastern edge of the Calstone site could catalyze development on the remainder of the site. Likewise, incentivizing redevelopment of the parcels immediately to the northwest of the Station (C₂) would trigger developer interest in the surrounding parcels (O₂).

Accessibility to, from, and around Lawrence Station is difficult for pedestrians, bicyclists, and vehicles. Improved pedestrian and bicycle access to the Caltrain Station could enhance transit ridership and redevelopment opportunities throughout the area, without jeopardizing existing established neighborhoods. Vehicular access and wayfinding can be facilitated through enhanced signage. **Figure 7** indicates that the Lawrence Expressway embankments could be redesigned more efficiently to create space for pedestrian and bicycle improvements. The Expressway is a County road and long term plans for grade separation are in place to address conditions at the intersections of Kifer Road and the Expressway and Reed Avenue/Monroe Street and the Expressway.⁶ This work may present an opportunity to develop creative solutions to the Station area's access problems and to facilitate connectivity which is critical for TOD.

⁶ Grade separation is likely to require additional real estate. The effect of this on area-TOD will need to be considered as plans develop.

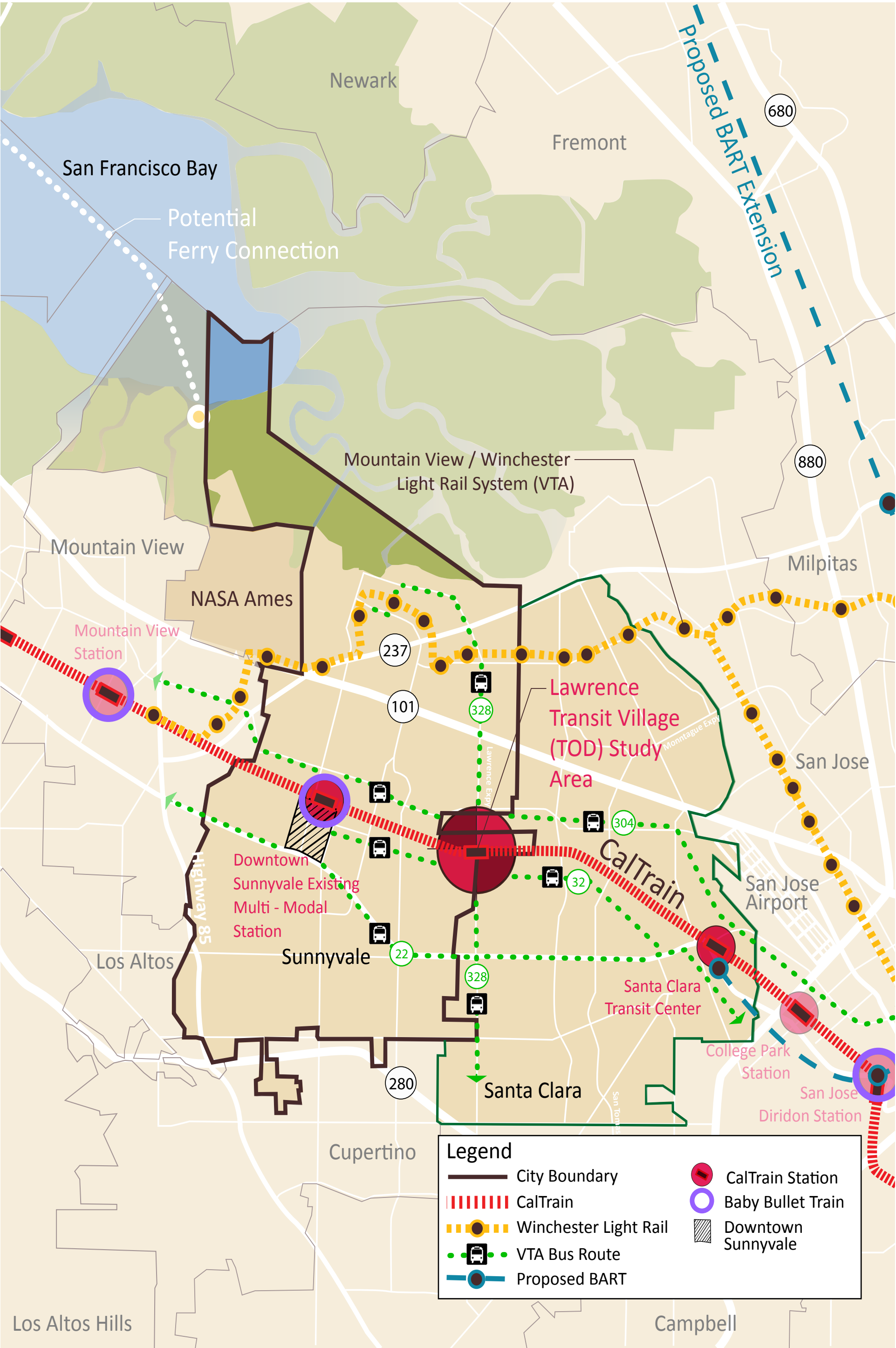


Figure 1 - Local Diagram

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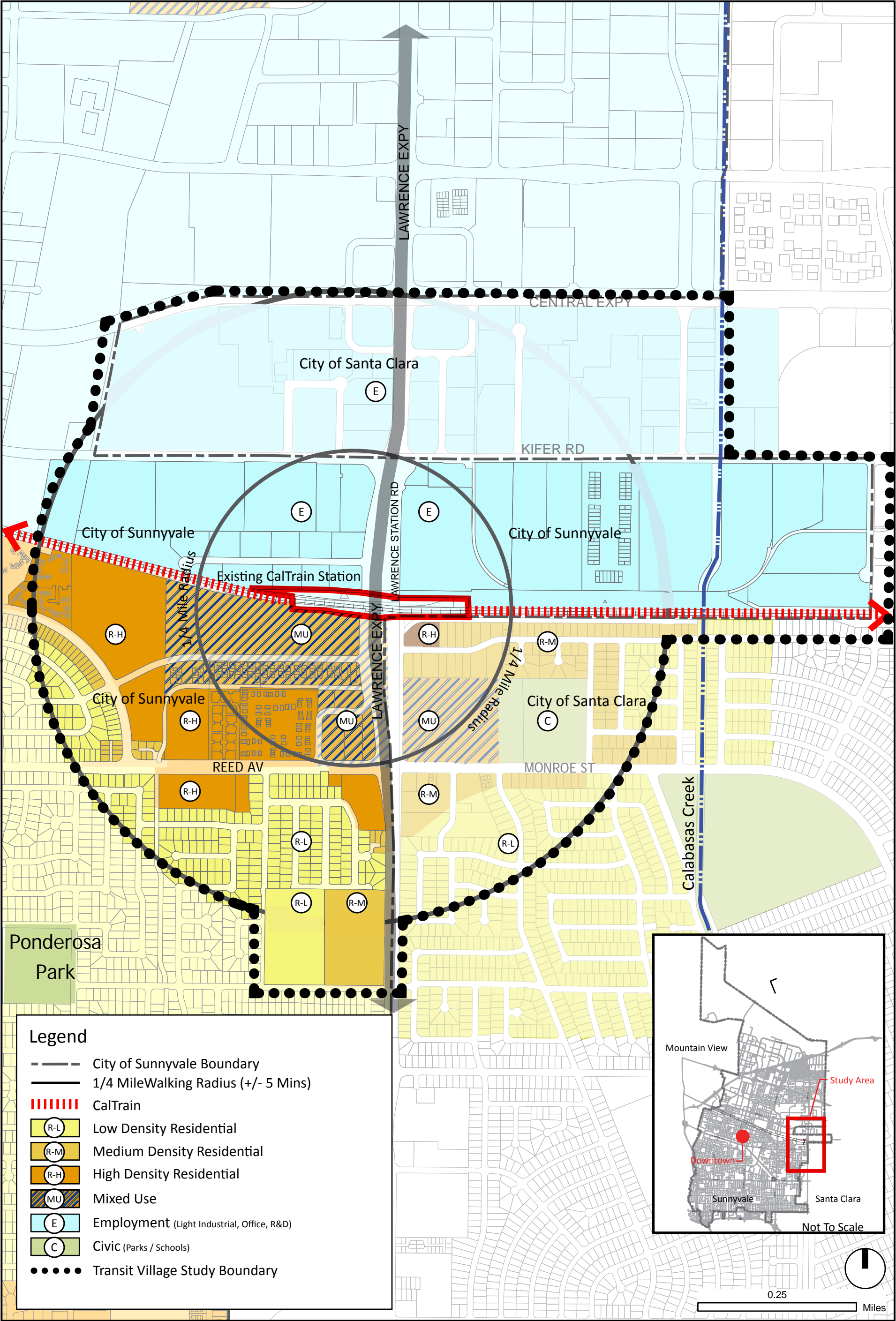


Figure 2 - General Plan Designations with Transit Village Study Area
(City of Sunnyvale & City of Santa Clara)

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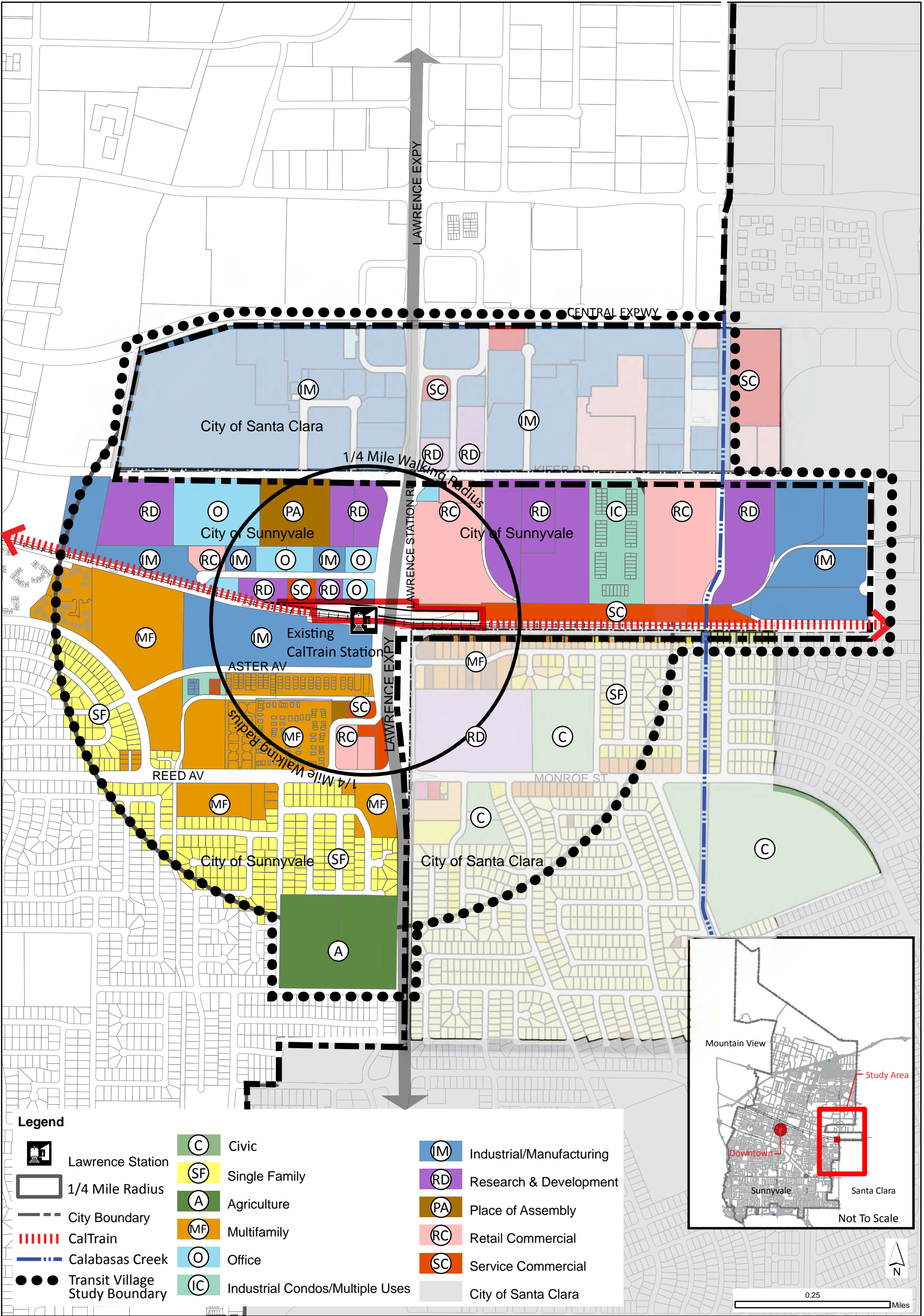
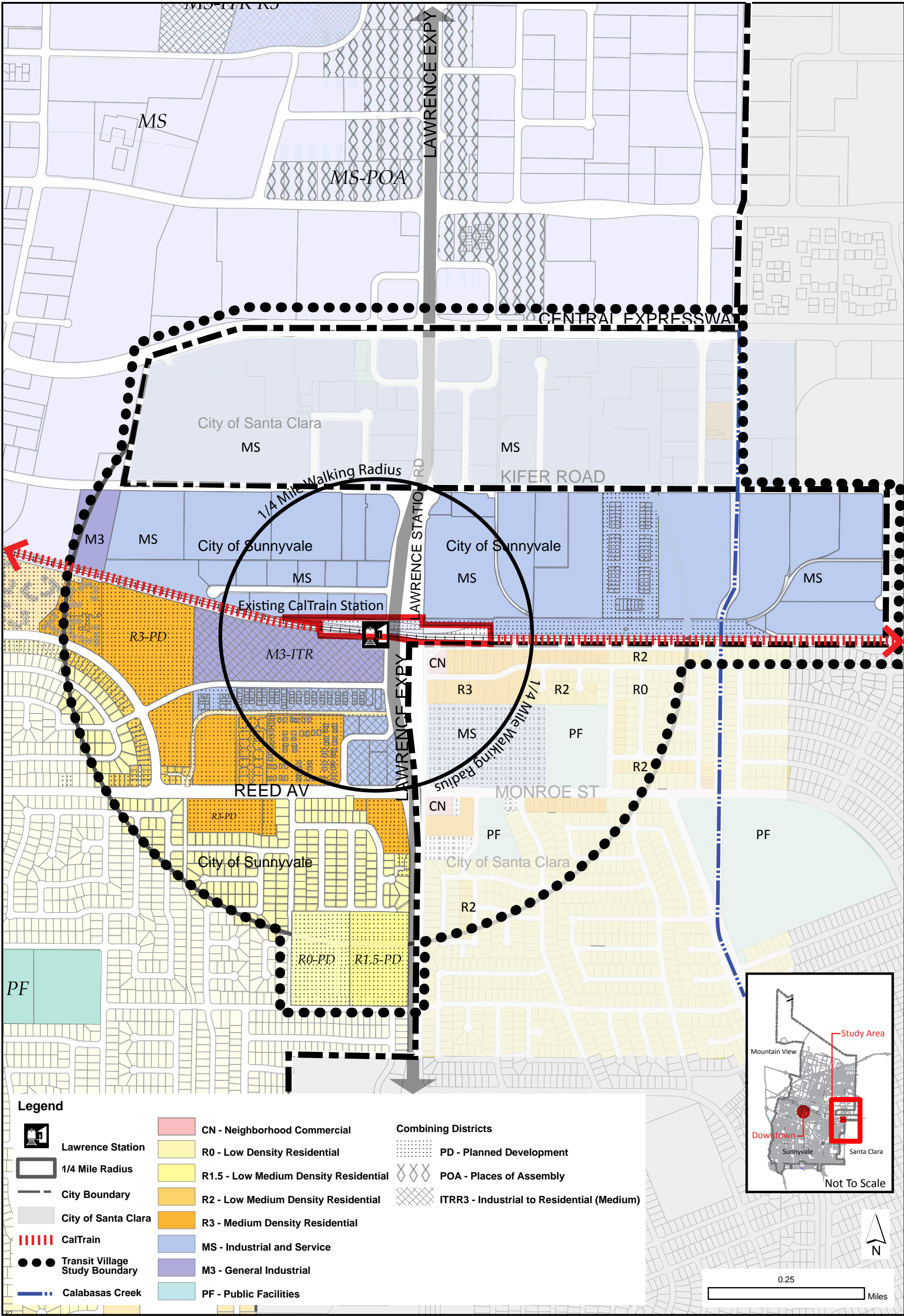


Figure 3 - Current Uses (City of Sunnyvale & City of Santa Clara)

February 17, 2009



August 2008

Figure 4 - Zoning (City of Sunnyvale & City of Santa Clara)

February 17, 2009

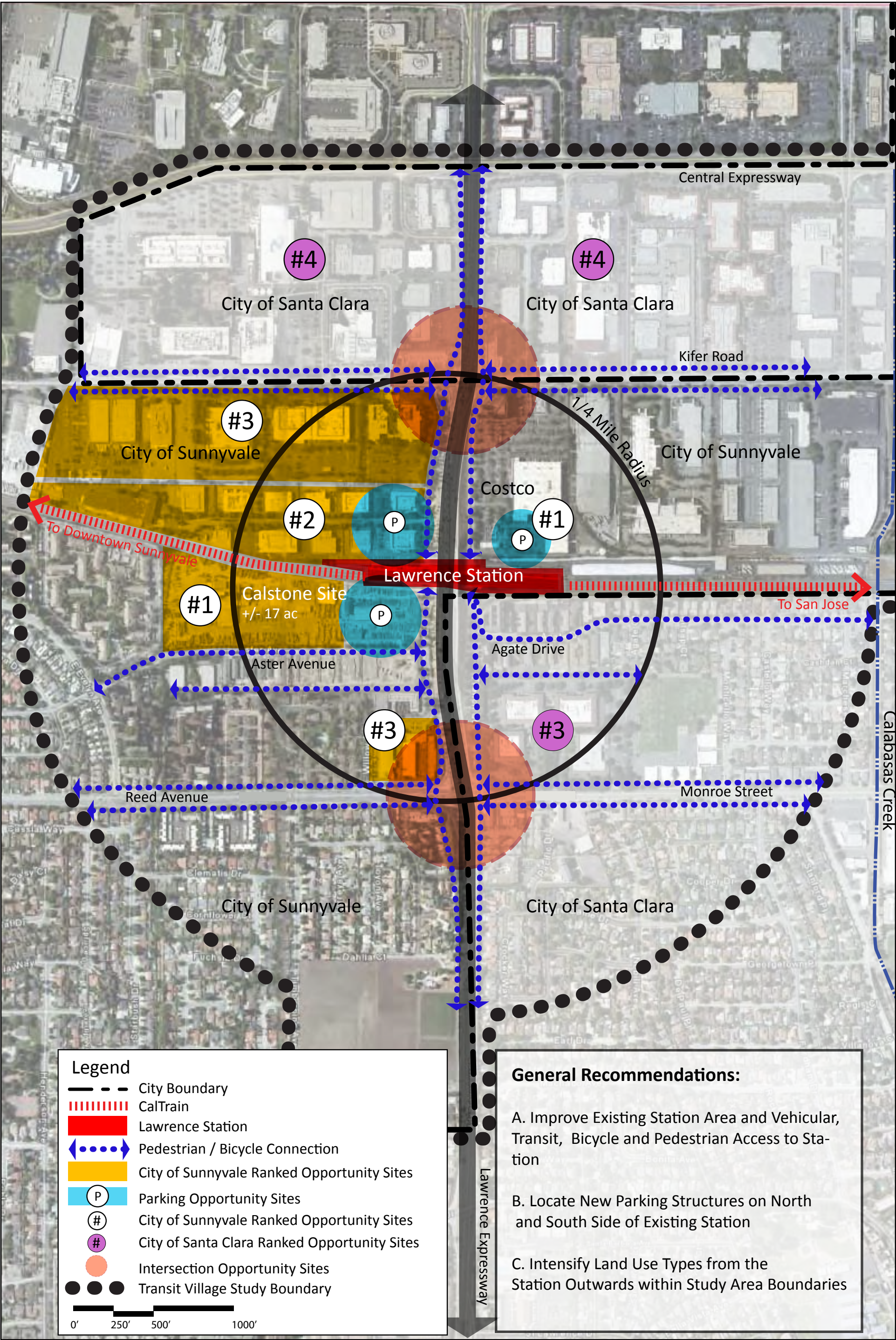


Figure 5 - Planning Opportunities and Constraints Diagram

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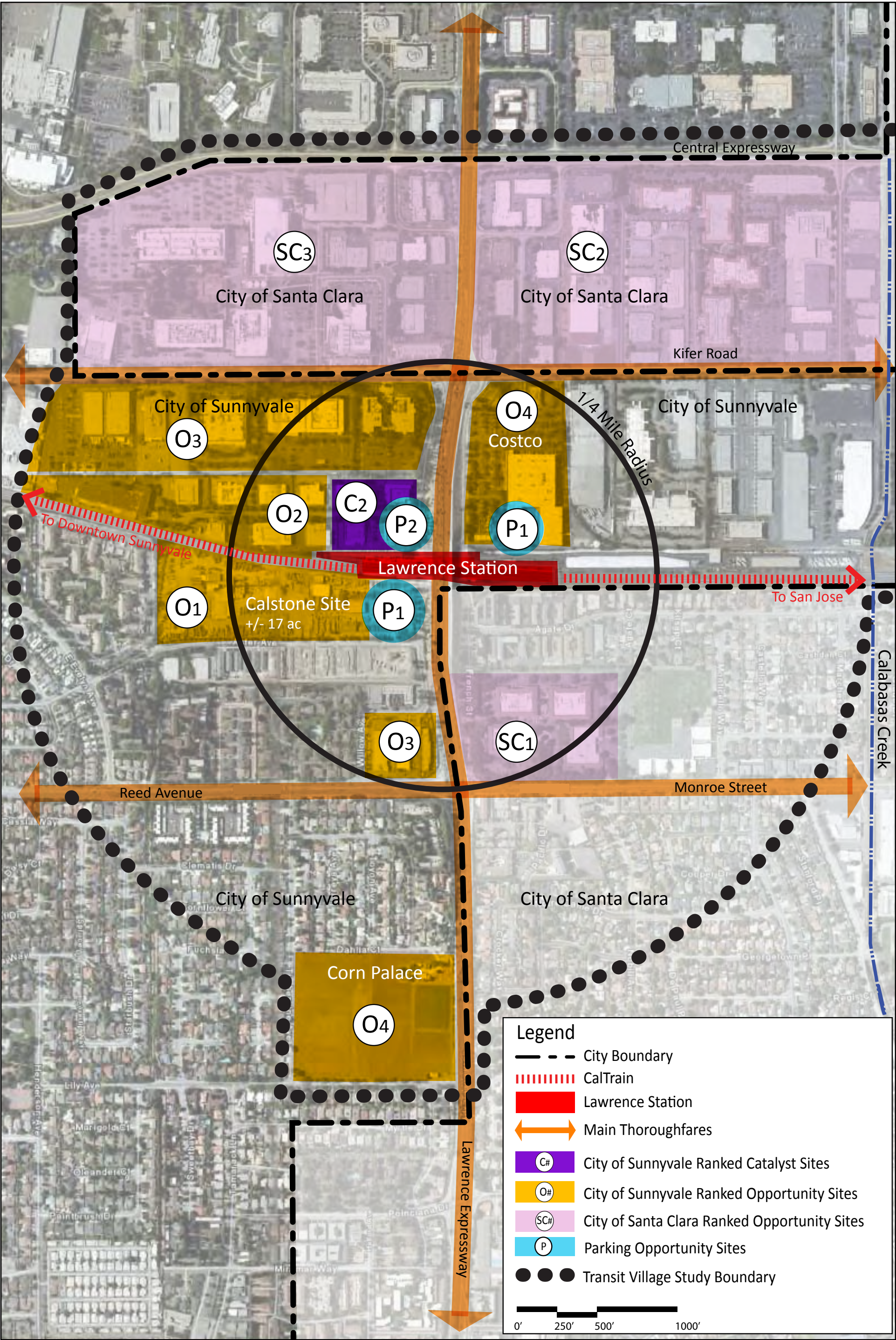


Figure 6 - Catalyst and Opportunity Sites

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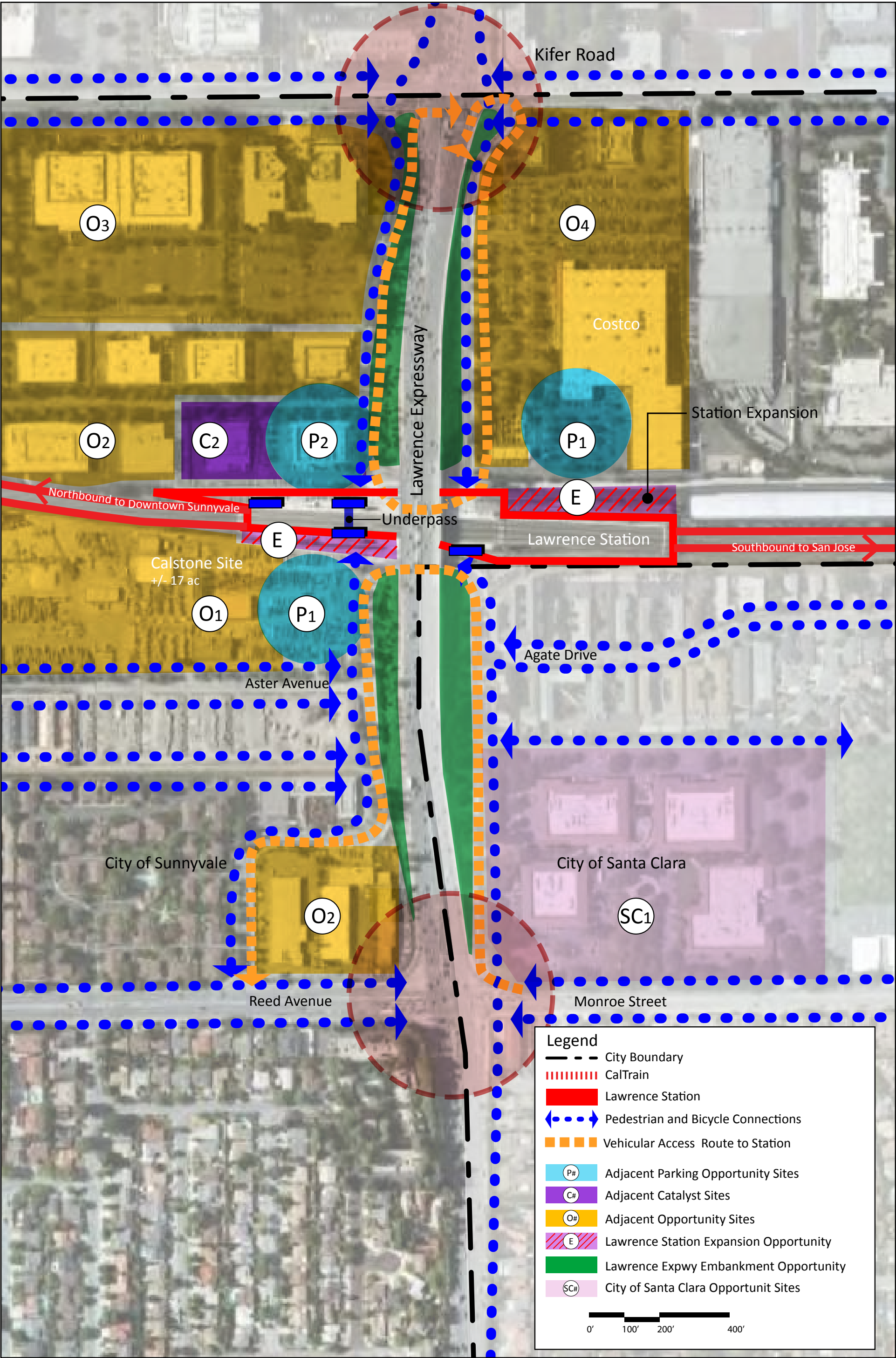


Figure 7 - Lawrence Transit Station Enhancement

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Lawrence Station



Looking Towards Calstone Site

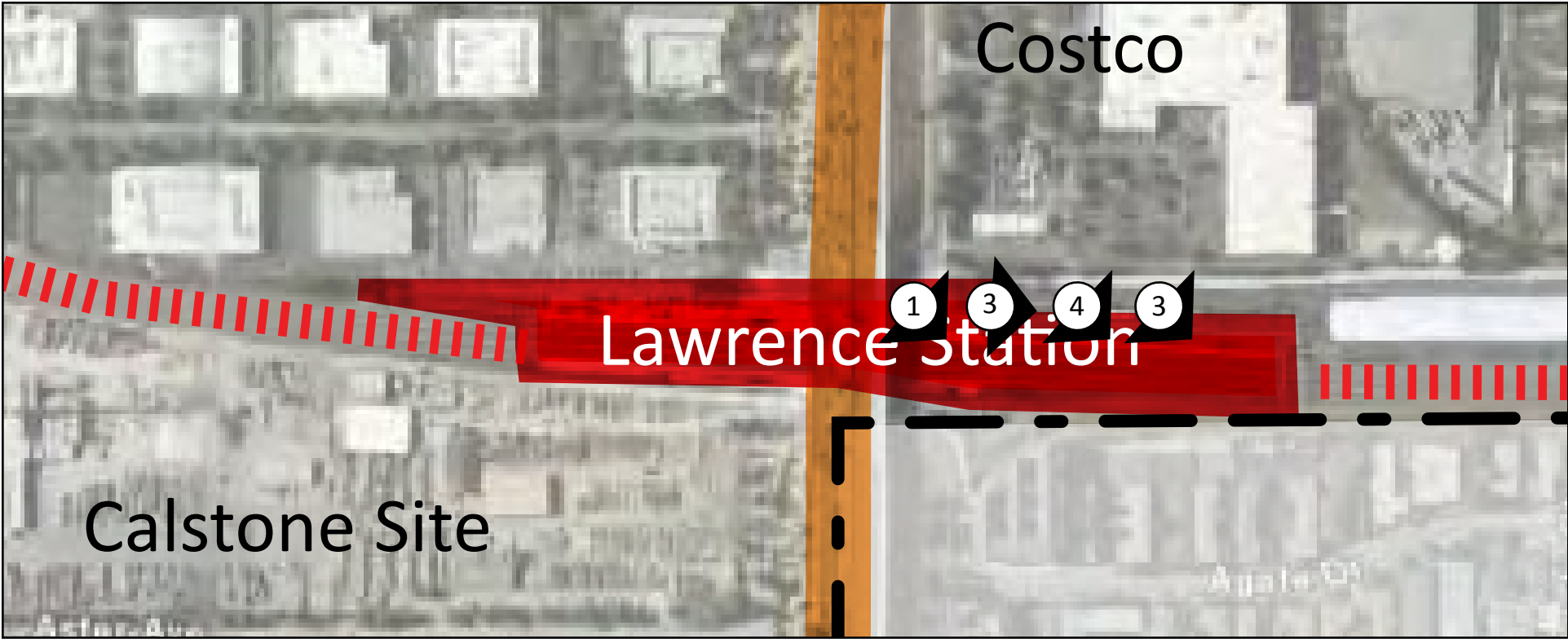


Pedestrian and Bicycle Underpass



Figure 8 - Site Photos (From West Side of Platform Looking Towards Sunnyvale)

February 17, 2009



Looking Towards Station Entrance and Multi Family Housing



Looking Towards Single Family Housing in Santa Clara



Looking Towards Service Commercial



Looking Towards Multi Family Housing in Santa Clara



Figure 9 - Site Photos (From East Side of Platform Looking towards Santa Clara)

February 17, 2009

3. MARKET AND FINANCIAL FEASIBILITY

The primary determinant of the overall feasibility of a project in these analyses is the residual land value—the amount a developer could pay to acquire the land parcel and fund additional costs for infrastructure improvements, lease buy-outs, and environmental remediation, as necessary, and receive a sufficient return on those costs.

The land value achieved from developing a new building must exceed the value of the property before redevelopment by a sufficient margin for a project to be feasible. If the residual land value margin is negligible, a property owner will not have an economic incentive to redevelop the property. **Table 1** summarizes the land residuals likely to be attained by redeveloping uses at various densities under different assumptions about market conditions. While a comparison against existing values of specific parcels is beyond the scope of this study, the land residuals provide an initial indication of the relative feasibility of different types and densities of use.

To begin this analysis, EPS conducted a broad-brush review of market conditions for the various land use types in the greater Silicon Valley area. This review was comprised of a review of TOD projects in the region and observed market values provided by City staff or as published in brokerage or other industry reports. See **Table 2** for the fundamental development cost and revenue assumptions used in this analysis.

EPS and KKA worked to establish appropriate physical parameters for the types of buildings subject to this feasibility analysis. Such parameters include the heights, densities, and parking requirements for each building type. These determinations were made based on a desire to test a range of development options given how costs associated with various types of construction (e.g., woodframe vs. steel) can vary, and appropriateness for a transit-served location. The types of buildings tested include mid-rise and high-rise residential structures, both for sale and for rent, as well as mid-rise and high-rise office structures, and single-story retail. Low-rise residential structures, both for sale and for rent, are analyzed as well, although the relative low density associated with low-rise structures make them less appropriate for TOD.

The feasibility analysis uses financial pro formas to simulate the costs of developing and operating a given building prototype, and the potential revenues and resulting residual land value that can be achieved with each type. The pro forma models developed for these analyses are “static.” They compare the development costs to the future resale value of the building after stabilized operations have been achieved for each of the building prototypes tested. For each of the building prototypes, the feasibility analyses have applied generalized development and operating cost figures. Achievable lease rates and sale prices are estimated by EPS based on market conditions in the Silicon Valley area and assume high-quality, high-amenity, TOD products. The construction and operating cost estimates and the value estimates were all generated by EPS using published materials as well as EPS’s research to ensure that they are consistent with similar recent developments within the region.

Potential feasibility is indicated when the residual land value for a given product type is not only positive but sufficiently positive to incentivize a developer to develop the land. While estimating current land values for specific parcels of land is beyond to scope of this analysis, the land

Table 1
Prototype Feasibility: Land Value / Density Matrix
Lawrence Station TOD Feasibility Analysis; EPS #18136

Product Prototype	Residential						Office			Retail
	Low-Rise		Mid-Rise		High-Rise		Low-Rise	Mid-Rise	High-Rise	Single-Story
	3-4 stories; 45'		7-8 stories; 85'		19-20 stories; 200'		3-5 stories	6-9 stories	19-22 stories	
	Est. Du/Ac: 40		Est. Du/Ac: 90		Est. Du/Ac: 225		Est. FAR: 1.00	Est. FAR: 2.00	Est. FAR: 6.00	Est. FAR: 0.38
	<u>Sale</u>	<u>Rent</u>	<u>Sale</u>	<u>Rent</u>	<u>Sale</u>	<u>Rent</u>				
Current Market: Residual Land Value (per acre)	\$2,934,000	(\$2,189,000)	\$3,113,000	(\$7,494,000)	\$8,742,000	(\$14,425,000)	(\$537,000)	(\$493,000)	(\$7,669,000)	\$95,000
Return to 2007 Market Conditions: Residual Land Value (per acre)	\$4,838,000	(\$292,000)	\$7,612,000	(\$2,885,000)	\$21,596,000	(\$146,000)	\$4,195,000	\$9,932,000	\$26,732,000	\$95,000
Growth beyond 2007 Conditions: Residual Land Value (per acre)	\$6,774,000	\$1,196,000	\$12,187,000	\$732,000	\$34,667,000	\$11,062,000	\$6,080,000	\$14,079,000	\$40,419,000	\$734,000

Sources: Economic & Planning Systems, Inc.

Table 2
Prototype Matrix and Assumptions for Analysis
Lawrence Station TOD Feasibility Analysis; EPS #18136

Product Prototype	Construction Type	Est. # of Stories	Range of Du/Ac	Du/Ac to be analyzed	Range of FARs	FAR to be analyzed	Bldg Construction Cost	Lease/Price: Current Market	Lease/Price: Recovered Market	Lease/Price: Growth beyond Recovery
Residential [1]										
Low-Rise for sale for rent	2007 CBC Type V-A 1 hour "Podium"	3-4	40-70	40	na	na	\$ 225.00 \$ 202.50	\$ 500,000.00 \$ 2.50	\$ 554,534.13 \$ 2.87	\$ 609,987.54 \$ 3.15
Mid-Rise for sale for rent	2007 CBC Type I "Mid-Rise" (Non-Life Safety)	5-8	90-150	100	na	na	\$ 250.00 \$ 225.00	\$ 525,000.00 \$ 2.70	\$ 582,260.83 \$ 3.09	\$ 640,486.92 \$ 3.40
High-Rise for sale for rent	2007 CBC Type I "High-Rise" (Full-Life Safety)	19-20	150-350	200	na	na	\$ 275.00 \$ 247.50	\$ 600,000.00 \$ 2.90	\$ 665,440.95 \$ 3.32	\$ 731,985.05 \$ 3.66
Office [2]										
Low-Rise	2007 CBC Type I or II "Low-Rise" (Non-Life Safety)	3-5	na	na	0.8-1.2	1.0	\$ 175.00	\$ 3.82	\$ 5.10	\$ 5.61
Mid-Rise	2007 CBC Type I "Mid-Rise" (With Life Safety)	6-9	na	na	1.5-2.5	2.0	\$ 190.00	\$ 4.20	\$ 5.61	\$ 6.17
High-Rise	2007 CBC Type I "High-Rise" (With Life Safety)	19-22	na	na	6-8	6.0	\$ 205.00	\$ 4.62	\$ 6.17	\$ 6.79
Retail [3]										
Single-Story		1	na	na	0.25-0.5	0.38	\$ 185.00	\$ 3.00	\$ 3.00	\$ 3.30

[1] Current market residential pricing estimates are based on data provided in The Santa Clara County Real Estate Market Trends Report. Within a 2-mile radius of Sonora Court, the average price of attached residences was \$483,287 in 2008. The townhomes available for sale on Aster Avenue at Willow Avenue are priced starting at \$600,000. For-Sale residential values are increased from those shown in the "Current Market Value" column to model values at the peak of the San Jose area for-sale market. The California Building Industry Association has data on median sale prices for new homes from 2005 to 2008. According to this source, new single-family and condominiums have decreased in median sale price by 10.91% since a peak in 2007. Values are increased again by 10% to reflect growth beyond market recovery.

Rental units in the Silicon Valley area averaged \$2,000 per month in early 2001 (according to RealFacts). Data reported for the third quarter 2008 indicates that the average has fallen to \$1,708. This translates into a total decrease since the peak in 2001 of 14.6%. This percent is applied to increase the rental values from the "Current Market Value" column.

[2] Rents reflect full-service leases. Office lease rates are based on the Grubb & Ellis, Office Market Trends Third Quarter 2008 report. Sunnyvale Class A Asking Rent is \$3.82. Rent is adjusted up by 10% to reflect high-amenity, new TOD construction. Low-rise is assumed to be 10% less and high-rise is assumed to be 10% more. Office rates in the San Jose market area increased in 1998 from \$23.67/sq.ft./year (full service) to \$54.00 in mid-2001. Office rates in 2008 in the region now average about \$36.00. This represents a decrease of about 33.51%. Values shown in the "Recovered Market" column for office uses are increased by this amount.

[3] Retail rents reflect NNN leases.

residuals do provide an indication of the relative feasibility of the various product types. While some prototypes appear feasible under current market conditions, future feasibility will depend on improved market conditions or premiums that derive from successful TOD in the area.

Prototype Feasibility Analysis: Land Value/Density

The pro forma analyses (included in **Appendix A**) provide an estimate of the residual land values associated with each product prototype under three different market conditions—current market conditions, recovery market conditions that assume a return to 2007 values, and growth beyond recovery conditions that represent a 10 percent increase beyond 2007 levels. Presenting these various market conditions indicate that product prototypes that are not currently feasible may become feasible as market conditions improve. Actual feasibility will depend on current land values, demolition required, site and infrastructure improvements required, and developer interest.

Findings

Residential

As indicated on **Table 1**, under current market conditions, for-sale low-rise, mid-rise and high-rise residential product types are feasible development prototypes in that they return positive land residuals. As market conditions improve, these product types generate even higher residual land values.

Rental residential product types do not approach feasibility until achievable rents grow beyond 2007 market conditions.

Office

Of the office product types evaluated, none achieved positive residual land values under current market conditions, but they approach feasibility under a recovered market scenario. High development costs assume that each of the office developments would require structured or underground parking. Surface parking would yield improved financial feasibility results but would not be consistent with the density goals of TOD.

Retail

The achievable lease rates for in-line retail developments result in positive residual land values. However, the residual land values are not positive enough to attract developer interest at current market rates. It must be noted that EPS has not evaluated the feasibility of a structure or podium parking format for single-story, in-line retail because that combination is rarely utilized.

Mixed-Use

The feasibility of mixed-use projects is dependent upon the proportions of housing, retail, and office land uses that are included in the development, as well as the parking format utilized. Because there are several variables in the ability of a project to achieve the price points necessary for feasibility, it is often most appropriate to address mixed-use projects' feasibility on a case-by-case basis, a task not permitted by the scope of this analysis.

APPENDIX A

Development Prototype Pro Forms and Description of Technical Approach



ASSUMPTIONS AND CALCULATIONS

Development Costs

It is necessary to estimate the costs of development for various building prototypes to conduct feasibility analyses. Development costs typically include "direct costs" and "indirect costs."

Direct Costs

"Direct" costs include the materials and labor for the construction of the buildings and the finishing of the interiors, otherwise known as "tenant improvements," as well as the construction costs for the necessary site improvements and parking spaces. EPS initially referenced data from R.S. Means, *Square Foot Costs 2007*, in order to derive direct cost estimates. This publication provides general costs for construction of several types of development projects nationally and provides adjustment factors to account for differences in costs among metropolitan areas. Following this initial inquiry, EPS then sought confirmation of these direct cost assumptions from companies active in development in the Silicon Valley area. Based on the feedback received, adjustments have been made to the cost estimates, where necessary, to achieve confidence in the development program assumptions.

It is important to note that there are significant "breaks" in construction costs, because of the development of structured or underground parking or the use of concrete or steel building materials. Construction costs therefore are significantly higher for high-rise residential units than for mid-rise residential units. In some cases, these increases in construction costs may not be overcome by increases in achievable values as products become more dense, in which case the residual land values are actually lower for higher density projects, until they are sufficiently high density to recoup higher per square foot construction costs and improve residual land values.

Indirect Costs

The "indirect costs" of a project include a variety of charges beyond the labor and materials for construction that are components of the development process. Examples include:

- Architectural and engineering services
- Impact fees and costs to secure development entitlements
- Project management and general overhead, such as employee salaries
- Construction financing

Indirect costs are typically integrated as percentages of direct costs. Such relationships are fairly standard in the development industry, and EPS has used general industry standards for these indirect costs, with vetting again provided by locally active developers.

Total Development Costs

The total development cost of each of the proposed land uses is the sum of the direct and indirect costs, plus a “contingency” factor to cover unanticipated cost overruns. EPS has applied a 10 percent contingency in the pro formas to account for unknown factors.

Building Values

The building values of for-sale properties are straightforward—the price the buyer pays for the building. In order to estimate the building value for income properties (residential and commercial), the net operating income (operating revenues less costs in a stabilized year) is capitalized. Static pro formas for each land use have been assembled to accommodate a variety of approaches to revenue estimation.

Sale/Lease and Operating Revenues

Different land uses may use different means of projecting revenues. For instance, a for-sale home simply generates its sale value, while a rental residential unit’s revenue is generated on a monthly basis, and annual net revenue is capitalized to determine a full value of the property.

The operating revenue and cost assumptions in this feasibility analysis assume generally accepted lease terms for various building types. The lease rates applied in these analyses are consistent with the following guidelines:

- Residential Apartments (rental) — tenant pays rent and utilities; management pays taxes, insurance, and maintenance
- Retail Use — “triple-net” leases; tenants pay rent, utilities, taxes, insurance, and maintenance
- Office Use — “full service” leases; property managers pay maintenance, utilities, taxes, and insurance

Operating Costs

The majority of income properties (i.e., buildings leased rather than sold) experience standard relationships between achievable revenues and operating costs. Typical operating costs include utilities and common area maintenance. These costs may potentially be inherited by tenants through the lease terms in “triple net” retail leases, but are more likely to be absorbed by the property managers and not redirected to tenants in “full service” office leases or rental apartments. Operating costs are often applied in one of two ways: they are estimated as a percentage of total achievable revenues, or as a given amount per leasable building square foot.

Buildings will typically experience some vacancy through tenant turnover, which represents revenues unachieved. EPS has used standard vacancy assumptions for each of the income property prototypes.

“Replacement reserves” are an additional element of the total operating costs associated with income properties. Typically, a certain amount of annual revenues is withheld for purposes of providing revenues to fund necessary repairs as the building ages. These “replacement reserves” are a small fraction of overall achievable revenues, and EPS has used an industry standard of 3 percent.

Total Building Value

The building values of for-sale properties are straightforward—the price the buyer pays for the building. For-sale properties do not maintain annual net operating incomes; therefore the capitalization rate is shown as 100 percent. This means that there is no multiplier to derive the total building value, and the total building value of for-sale properties is simply derived by multiplying the sales rate per building square foot by the net building area. For income properties, a “capitalization rate” is applied to reflect the value of a constant annual revenue stream. EPS has assumed capitalization rates for each of the building prototypes, using information from Value Monitor’s published data, loopnet.com, and nreonline.com as a starting point and adjusting for current shifts in the residential, retail, and office markets.

The sale of a building typically includes marketing costs and commissions associated with that service. For-sale housing projects are assumed to bear those costs as part of their indirect costs, but for all rental residential and commercial building prototypes, EPS has assumed that these marketing and commission costs are 6 percent of the total building value. This amount is subtracted from the capitalized value to derive the net revenue from the building’s sale.

“Income” properties such as apartments, retail, or office, typically assume that developer profits are captured in the operating income over time, as well as in the future sale value of the building. However, for for-sale housing the profit margin must be captured in the initial sale of the units. Because of this, developers typically assume that sale prices will be at least 10 percent higher than the total costs of development.

Appendix A
Low-Rise Residential Residual Land Value (For-Sale)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	40.0 du/acre		40.0
Gross Area	1,053 sq.ft. per unit		42,105 sq.ft.
Efficiency Ratio	95%		
Net Area	1,000 sq.ft. per unit		40,000 sq.ft.
Parking Spaces	1.5 spaces per unit		60
REVENUE ASSUMPTIONS			
Base Price [2]	\$500,000 /unit	\$500,000	\$20,000,000
(less) Cost of Sale	3.0%	<u>(\$15,000)</u>	<u>(\$600,000)</u>
Total Revenues		\$485,000	\$19,400,000
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$225.00 /sq. ft.	\$236,842	\$9,473,684
Parking Cost [4]	\$25,000 /space	<u>\$37,500</u>	<u>\$1,500,000</u>
Total Direct Costs		\$274,342	\$10,973,684
Indirect Costs	25.0% of direct costs (excluding pa	\$68,586	\$2,368,421
Subtotal, Direct and Indirect Costs		\$342,928	\$13,342,105
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$29,605	\$1,184,211
Profit Margin (% of sales revenue)	10.0%	\$48,500	\$1,940,000
Total Costs		\$421,033	\$16,466,316
RESIDUAL LAND VALUE (rounded)		\$73,400	\$2,934,000

[1] Density of 40 units per acre is assumed based on low end of feasible range for 2007 CBC Type V-A 1 hour "Podium" Construction Type.

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$30,000, and \$50,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Mid-Rise Residential Residual Land Value (For-Sale)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	90.0 du/acre		90.0
Gross Area	1,124 sq.ft. per unit		101,124 sq.ft.
Efficiency Ratio	89%		
Net Area	1,000 sq.ft. per unit		90,000 sq.ft.
Parking Spaces	1.5 spaces per unit		135
REVENUE ASSUMPTIONS			
Base Price [2]	\$525,000 /unit	\$525,000	\$47,250,000
(less) Cost of Sale	3.0%	<u>(\$15,750)</u>	<u>(\$1,417,500)</u>
Total Revenues		\$509,250	\$45,832,500
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$250.00 /sq. ft.	\$280,899	\$25,280,899
Parking Cost [4]	\$25,000 /space	<u>\$37,500</u>	<u>\$3,375,000</u>
Total Direct Costs		\$318,399	\$28,655,899
Indirect Costs	25.0% of direct costs (excluding parking)	\$79,600	\$6,320,225
Subtotal, Direct and Indirect Costs		\$397,999	\$34,976,124
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$35,112	\$3,160,112
Profit Margin (% of sales revenue)	10.0%	\$50,925	\$4,583,250
Total Costs		\$484,036	\$42,719,486
RESIDUAL LAND VALUE (rounded)		\$34,600	\$3,113,000

[1] Density of 90 units per acre is assumed based on low end of feasible range for 2007 CBC Type I "Mid-Rise" Construction Type (Non-Life Safety).

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$30,000, and \$50,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
High-Rise Residential Residual Land Value (For-Sale)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	225.0 du/acre		225.0
Gross Area	1,124 sq.ft. per unit		252,809 sq.ft.
Efficiency Ratio	89%		
Net Area	1,000 sq.ft. per unit		225,000 sq.ft.
Parking Spaces	1.5 spaces per unit		338
REVENUE ASSUMPTIONS			
Base Price [2]	\$600,000 /unit	\$600,000	\$135,000,000
(less) Cost of Sale	3.0%	<u>(\$18,000)</u>	<u>(\$4,050,000)</u>
Total Revenues		\$582,000	\$130,950,000
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$275.00 /sq. ft.	\$308,989	\$69,522,472
Parking Cost [4]	\$40,000 /space	<u>\$60,089</u>	<u>\$13,520,000</u>
Total Direct Costs		\$369,078	\$83,042,472
Indirect Costs	25.0% of direct costs (excluding parking)	\$92,269	\$17,380,618
Subtotal, Direct and Indirect Costs		\$461,347	\$100,423,090
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$38,624	\$8,690,309
Profit Margin (% of sales revenue)	10.0%	\$58,200	\$13,095,000
Total Costs		\$558,171	\$122,208,399
RESIDUAL LAND VALUE (rounded)		\$38,900	\$8,742,000

[1] Density of 225 units per acre is assumed based on mid-point of feasible range for 2007 CBC Type I "High-Rise" Construction Type (Full Life Safety).

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$30,000, and \$50,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Low-Rise Residential Residual Land Value (Rental)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	40.0 du/acre		40.0
Gross Area	1,053 sq.ft. per unit		42,105 sq.ft.
Efficiency Ratio	95%		
Net Area	1,000 sq.ft. per unit		40,000 sq.ft.
Parking Spaces	1.5 spaces per unit		60
REVENUE ASSUMPTIONS			
Gross Revenue [2]	\$2.50 /net sq.ft./month	\$30,000	\$1,200,000
Other Operating Revenue (beyond leases)	5.0%	\$1,500	\$60,000
(less) Vacancy Rate	3.0%	(\$900)	(\$36,000)
(less) Operating Expenses	\$4,200 per unit	(\$4,200)	(\$168,000)
(less) Replacement Reserve	3.0%	(\$900)	(\$36,000)
(less) Marketing and Commission Expenses	6.0%	(\$1,800)	(\$72,000)
Subtotal, Annual Net Operating Income		\$23,700	\$948,000
Capitalized Value	7.5% cap rate	\$306,520	\$12,260,800
Total Revenues		\$306,520	\$12,260,800
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$203 /sq. ft.	\$213,158	\$8,526,316
Parking Cost [4]	\$25,000 /space	<u>\$37,500</u>	<u>\$1,500,000</u>
Total Direct Costs		\$250,658	\$10,026,316
Indirect Costs	25.0% of direct costs (excluding par	\$62,664	\$2,131,579
Subtotal, Direct and Indirect Costs		\$303,947	\$12,157,895
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$1,065,789	\$1,065,789
Profit Margin (% of capitalized value)	10.0%	<u>\$30,652</u>	<u>\$1,226,080</u>
Total Costs		\$361,244	\$14,449,764
RESIDUAL LAND VALUE (rounded)		(\$54,700)	(\$2,189,000)

[1] Density of 40 units per acre is assumed based on low end of feasible range for 2007 CBC Type V-A 1 hour "Podium" Construction Type.

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions,

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Mid-Rise Residential Residual Land Value (Rental)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	90.0 du/acre		90.0
Gross Area	1,124 sq.ft. per unit		101,124 sq.ft.
Efficiency Ratio	89%		
Net Area	1,000 sq.ft. per unit		90,000 sq.ft.
Parking Spaces	1.5 spaces per unit		135
REVENUE ASSUMPTIONS			
Gross Revenue [2]	\$2.70 /net sq.ft./month	\$32,400	\$2,916,000
Other Operating Revenue (beyond leases)	5.0%	\$1,620	\$145,800
(less) Vacancy Rate	3.0%	(\$972)	(\$87,480)
(less) Operating Expenses	\$4,200 per unit	(\$4,200)	(\$378,000)
(less) Replacement Reserve	3.0%	(\$972)	(\$87,480)
(less) Marketing and Commission Expenses	6.0%	(\$1,944)	(\$174,960)
Subtotal, Annual Net Operating Income		\$25,932	\$2,333,880
Capitalized Value	7.5% cap rate	\$335,387	\$30,184,848
Total Revenues		\$335,387	\$30,184,848
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$225 /sq. ft.	\$252,809	\$22,752,809
Parking Cost [4]	\$25,000 /space	<u>\$37,500</u>	<u>\$3,375,000</u>
Total Direct Costs		\$290,309	\$26,127,809
Indirect Costs	25.0% of direct costs (excluding par	\$72,577	\$5,688,202
Subtotal, Direct and Indirect Costs		\$353,511	\$31,816,011
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$2,844,101	\$2,844,101
Profit Margin (% of capitalized value)	10.0%	<u>\$33,539</u>	<u>\$3,018,485</u>
Total Costs		\$418,651	\$37,678,597
RESIDUAL LAND VALUE (rounded)		(\$83,300)	(\$7,494,000)

[1] Density of 90 units per acre is assumed based on low end of feasible range for 2007 CBC Type I "Mid-Rise" Construction Type (Non-Life Safety).

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
High-Rise Residential Residual Land Value (Rental)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Unit	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Units [1]	225.0 du/acre		225.0
Gross Area	1,124 sq.ft. per unit		252,809 sq.ft.
Efficiency Ratio	89%		
Net Area	1,000 sq.ft. per unit		225,000 sq.ft.
Parking Spaces	1.5 spaces per unit		338
REVENUE ASSUMPTIONS			
Gross Revenue [2]	\$2.90 /net sq.ft./month	\$34,800	\$7,830,000
Other Operating Revenue (beyond leases)	5.0%	\$1,740	\$391,500
(less) Vacancy Rate	3.0%	(\$1,044)	(\$234,900)
(less) Operating Expenses	\$4,200 per unit	(\$4,200)	(\$945,000)
(less) Replacement Reserve	3.0%	(\$1,044)	(\$234,900)
(less) Marketing and Commission Expenses	6.0%	(\$2,088)	(\$469,800)
Subtotal, Annual Net Operating Income		\$28,164	\$6,336,900
Capitalized Value	6.5% cap rate	\$420,294	\$94,566,046
Total Revenues		\$420,294	\$94,566,046
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [3]	\$248 /sq. ft.	\$278,090	\$62,570,225
Parking Cost [4]	\$40,000 /space	<u>\$60,000</u>	<u>\$13,500,000</u>
Total Direct Costs		\$338,090	\$76,070,225
Indirect Costs	25.0% of direct costs (excluding par	\$84,522	\$15,642,556
Subtotal, Direct and Indirect Costs		\$407,612	\$91,712,781
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$7,821,278	\$7,821,278
Profit Margin (% of capitalized value)	10.0%	<u>\$42,029</u>	<u>\$9,456,605</u>
Total Costs		\$484,403	\$108,990,664
RESIDUAL LAND VALUE (rounded)		(\$64,100)	(\$14,425,000)

[1] Density of 225 units per acre is assumed based on mid-point of feasible range for 2007 CBC Type I "High-Rise" Construction Type (Full Life Safety).

[2] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[3] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[4] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions,

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Single-Story Retail Residual Land Value (0.38 FAR)
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Sq.Ft.	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Gross Area	0.38 F.A.R.		16,553 sq.ft.
Efficiency Ratio	100%		
Net Area			16,553 sq.ft.
Parking Spaces	250 net sq.ft. of bldg. per space		66 spaces
REVENUE ASSUMPTIONS			
Gross Revenue (NNN) [1]	\$3.00 /net sq.ft./month	\$36.00	\$595,901
Other Operating Revenue (beyond leases)	5.0%	\$1.80	\$29,795
(less) Vacancy Rate	5.0%	(\$1.80)	(\$29,795)
(less) Operating Expenses	5.0%	(\$1.80)	(\$29,795)
(less) Replacement Reserve	3.0%	(\$1.08)	(\$17,877)
(less) Marketing and Commission Expenses	6.0%	<u>(\$2.16)</u>	<u>(\$35,754)</u>
Subtotal, Annual Net Operating Income		\$30.96	\$512,475
Capitalized Value	7.0% cap rate	\$429.02	\$7,101,435
Total Revenues		\$429.02	\$7,101,435
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [2]	\$185 /sq. ft.	\$185.00	\$3,062,268
Parking Cost [3]	\$4,000 /space	<u>\$16.00</u>	<u>\$264,845</u>
Total Direct Costs		\$201.00	\$3,327,113
Indirect Costs			
Indirect Costs	25.0% of direct costs (excluding par	\$46.25	\$765,567
Tenant Improvement Allowance	\$100 /net sq. ft.	<u>\$100.00</u>	<u>\$1,655,280</u>
Total Indirect Costs		\$146.25	\$2,420,847
Subtotal, Direct and Indirect Costs		\$347.25	\$5,747,960
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$548,312	\$548,312
Profit Margin (% of capitalized value)	10.0%	<u>\$42.90</u>	<u>\$710,143</u>
Total Costs		\$423.28	\$7,006,415
RESIDUAL LAND VALUE (rounded)		\$6.00	\$95,000

[1] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[2] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[3] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$25,000, and \$40,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Low-Rise Office Residual Land Value
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Sq.Ft.	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Gross Area	1.00 F.A.R.		43,560 sq.ft.
Efficiency Ratio	90%		
Net Area			39,204 sq.ft.
Parking Spaces	400 net sq.ft. of bldg. per space		98 spaces
REVENUE ASSUMPTIONS			
Gross Revenue (Full-Service) [1]	\$3.82 /net sq.ft./month	\$41.26	\$1,797,111
Other Operating Revenue (beyond leases)	5.0%	\$2.06	\$89,856
(less) Vacancy Rate	3.0%	(\$1.24)	(\$53,913)
(less) Operating Expenses	30.0%	(\$12.38)	(\$539,133)
(less) Replacement Reserve	3.0%	(\$1.24)	(\$53,913)
(less) Marketing and Commission Expenses	6.0%	<u>(\$2.48)</u>	<u>(\$107,827)</u>
Subtotal, Annual Net Operating Income		\$25.99	\$1,132,180
Capitalized Value	7.0% cap rate	\$360.16	\$15,688,782
Total Revenues		\$360.16	\$15,688,782
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [2]	\$175 /sq. ft.	\$175.00	\$7,623,000
Parking Cost [3]	\$25,000 /space	<u>\$56.25</u>	<u>\$2,450,250</u>
Total Direct Costs		\$231.25	\$10,073,250
Indirect Costs			
Indirect Costs	25.0% of direct costs (excluding par	\$43.75	\$1,905,750
Tenant Improvement Allowance	\$40 /net sq. ft.	<u>\$36.00</u>	<u>\$1,568,160</u>
Total Indirect Costs		\$79.75	\$3,473,910
Subtotal, Direct and Indirect Costs		\$311.00	\$13,547,160
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$1,109,691	\$1,109,691
Profit Margin (% of capitalized value)	10.0%	<u>\$36.02</u>	<u>\$1,568,878</u>
Total Costs		\$372.49	\$16,225,729
RESIDUAL LAND VALUE (rounded)		(\$12.00)	(\$537,000)

[1] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[2] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[3] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$25,000, and \$40,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
Mid-Rise Office Residual Land Value
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Sq.Ft.	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Gross Area	2.00 F.A.R.		87,120 sq.ft.
Efficiency Ratio	90%		
Net Area			78,408 sq.ft.
Parking Spaces	400 net sq.ft. of bldg. per space		196 spaces
REVENUE ASSUMPTIONS			
Gross Revenue (Full-Service) [1]	\$4.20 /net sq.ft./month	\$45.36	\$3,951,763
Other Operating Revenue (beyond leases)	5.0%	\$2.27	\$197,588
(less) Vacancy Rate	3.0%	(\$1.36)	(\$118,553)
(less) Operating Expenses	30.0%	(\$13.61)	(\$1,185,529)
(less) Replacement Reserve	3.0%	(\$1.36)	(\$118,553)
(less) Marketing and Commission Expenses	6.0%	<u>(\$2.72)</u>	<u>(\$237,106)</u>
Subtotal, Annual Net Operating Income		\$28.58	\$2,489,611
Capitalized Value	7.0% cap rate	\$395.99	\$34,498,893
Total Revenues		\$395.99	\$34,498,893
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [2]	\$190 /sq. ft.	\$190.00	\$16,552,800
Parking Cost [3]	\$25,000 /space	<u>\$56.25</u>	<u>\$4,900,500</u>
Total Direct Costs		\$246.25	\$21,453,300
Indirect Costs			
Indirect Costs	25.0% of direct costs (excluding par	\$47.50	\$4,138,200
Tenant Improvement Allowance	\$45 /net sq. ft.	<u>\$40.50</u>	<u>\$3,528,360</u>
Total Indirect Costs		\$88.00	\$7,666,560
Subtotal, Direct and Indirect Costs		\$334.25	\$29,119,860
Contingency (% of direct and indirect costs, excluc	10.0%	\$2,421,936	\$2,421,936
Profit Margin (% of capitalized value)	10.0%	<u>\$39.60</u>	<u>\$3,449,889</u>
Total Costs		\$401.65	\$34,991,685
RESIDUAL LAND VALUE (rounded)		(\$6.00)	(\$493,000)

[1] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[2] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[3] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$25,000, and \$40,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

Appendix A
High-Rise Office Residual Land Value
Lawrence Station TOD Feasibility Analysis; EPS #18136

Item	Assumption	Per Sq.Ft.	Per Acre
DEVELOPMENT PROGRAM			
Land Area (acres)			1.0 acre
Gross Area	6.00 F.A.R.		261,360 sq.ft.
Efficiency Ratio	90%		
Net Area			235,224 sq.ft.
Parking Spaces	400 net sq.ft. of bldg. per space		588 spaces
REVENUE ASSUMPTIONS			
Gross Revenue (Full-Service) [1]	\$4.62 /net sq.ft./month	\$49.90	\$13,040,819
Other Operating Revenue (beyond leases)	5.0%	\$2.49	\$652,041
(less) Vacancy Rate	3.0%	(\$1.50)	(\$391,225)
(less) Operating Expenses	30.0%	(\$14.97)	(\$3,912,246)
(less) Replacement Reserve	3.0%	(\$1.50)	(\$391,225)
(less) Marketing and Commission Expenses	6.0%	<u>(\$2.99)</u>	<u>(\$782,449)</u>
Subtotal, Annual Net Operating Income		\$31.43	\$8,215,716
Capitalized Value	7.0% cap rate	\$435.59	\$113,846,346
Total Revenues		\$435.59	\$113,846,346
DEVELOPMENT COSTS			
Direct Costs			
Building Construction Cost [2]	\$205 /sq. ft.	\$205.00	\$53,578,800
Parking Cost [3]	\$40,000 /space	<u>\$90.00</u>	<u>\$23,522,400</u>
Total Direct Costs		\$295.00	\$77,101,200
Indirect Costs			
Indirect Costs	25.0% of direct costs (excluding par	\$51.25	\$13,394,700
Tenant Improvement Allowance	\$50 /net sq. ft.	<u>\$45.00</u>	<u>\$11,761,200</u>
Total Indirect Costs		\$96.25	\$25,155,900
Subtotal, Direct and Indirect Costs		\$391.25	\$102,257,100
Contingency (% of direct and indirect costs, excludes parking)	10.0%	\$7,873,470	\$7,873,470
Profit Margin (% of capitalized value)	10.0%	<u>\$43.56</u>	<u>\$11,384,635</u>
Total Costs		\$464.93	\$121,515,205
RESIDUAL LAND VALUE (rounded)		(\$29.00)	(\$7,669,000)

[1] Sales price / lease rates based on comps in Sunnyvale and greater Silicon Valley area under normal market conditions. Office lease rates reflect full-service leases and are adjusted to reflect new construction. Retail lease rate reflects NNN lease.

[2] Based on SF Bay Area data from Marshall Swift and modified based on interviews with area developers.

[3] Parking costs shown reflect the application of surface, structured, or underground parking solutions with all-in cost estimates per space for these solutions, estimated respectively at: \$4,000, \$25,000, and \$40,000.

Sources: Marshall Swift; Grubb & Ellis, Office Market Snapshot Silicon Valley Third Quarter 2008; Terranomics, Retail Shopping Centers Report Santa Clara County Mid-Year 2008; Economic & Planning Systems, Inc.

APPENDIX B

Samples of Product Prototypes





2007 CBC TYPE V-A 1 hour “TOWNHOMES” CONSTRUCTION TYPE

- Wood construction – 1 hour fire rating with limited floor area. (Typically with sprinklers system)
- Maximum 40' building height. (Typically 35' building height)
- Approximate density range from 18 to 25 du/ac
- Maximum of 3 to 4 story on-grade wood frame construction.
- Maximum of 4 story tall with attached ground floor garage
- Dedicated parking provided for individual unit, range from 1 car/du to 2 car/du.

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2007 CBC TYPE V-A 1 hour “PODIUM” CONSTRUCTION TYPE

- Wood construction – 1 hour fire rating with limited floor area. (Typically with sprinklers system)
- Maximum 60’ building height.
- Approximate density range from 40 to 70 du/ac
- Maximum of Type VA 4 story wood frame construction over one story of Type I concrete garage, retail, office or lobby at grade. (allows only one level of parking above grade)
- Maximum of 5 story tall including ground floor retail uses.
- Parking provided range from 1 car/du to 2 car/du in a common garage – parking ratio increases with subterranean level parking structure.



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2007 CBC TYPE III – A “PODIUM” CONSTRUCTION TYPE

- Fire treated wood construction – 2 hour fire rating with limited floor area. (Typically with sprinklers system)
- Maximum 80' building height. (Typically 75') (with sprinklers system only)
- Approximate density range from 75 to 90 du/ac
- Maximum of Type III-A 5 story wood frame construction over one story of Type I concrete garage, retail, office or lobby at grade.
- Maximum of 6 story tall including potential ground floor retail uses.
- Parking provided range from 1 car/du to 2 car/du in common garage – parking ratio increases with subterranean level(s) parking structure.

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2007 CBC TYPE I “MID-RISE” CONSTRUCTION TYPE (Non-Life Safety)

- Concrete/steel non-combustible construction with unlimited floor area.
- Typically 85’ to 90’ building height. (Maximum 75’ to the highest occupied floor)
- Approximate density range from 90 to 150 du/ac
- Maximum of eight story of Type I concrete or steel construction with mixed use residential, retail, office or parking garage.
- Multiple levels of garage levels above grade is allowed in Type I building.
- Parking provided range from 1 car/du to 2 car/du – parking ratio increases with subterranean level parking structure.

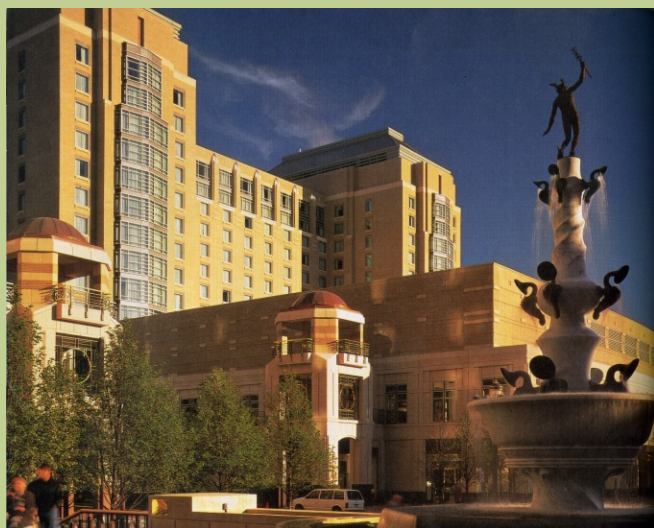
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2007 CBC TYPE I “HIGH-RISE” CONSTRUCTION TYPE (Full Life Safety)

- Concrete/steel non-combustible construction with unlimited floor area.
- Unlimited building height.
- Typical density range from 150 to 350 du/ac
- Virtually no limitation on the mix of uses – residential, commercial, hospitality, retail and parking, etc.
- Multiple levels of garage levels above grade is allowed in Type I building.
- Parking provided range from 1 car/du to 2 car/du – flexible parking ratio and arrangements due to unlimited height and unlimited building area.



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2007 CBC TYPE I or II “LOW-RISE” OFFICE CONSTRUCTION TYPE (Non - Life safety)

- Concrete/steel non-combustible construction with typically 28,000 to 35,000 SF. floor plate. (Tilt-up concrete construction possible up to three story)
- Typically three to five story with 13.5' to 15' floor to floor height. (Maximum 75' to the highest occupied floor)
- Approximate ly .80 to 1.20 Floor Area Ratio (FAR) generally located in a R&D campus or relatively suburban town center setting.
- Single or multiple tenants occupancies for speculative office or lab uses.
- Typically requires separate multiple level on-grade garage structure to accommodate parking.

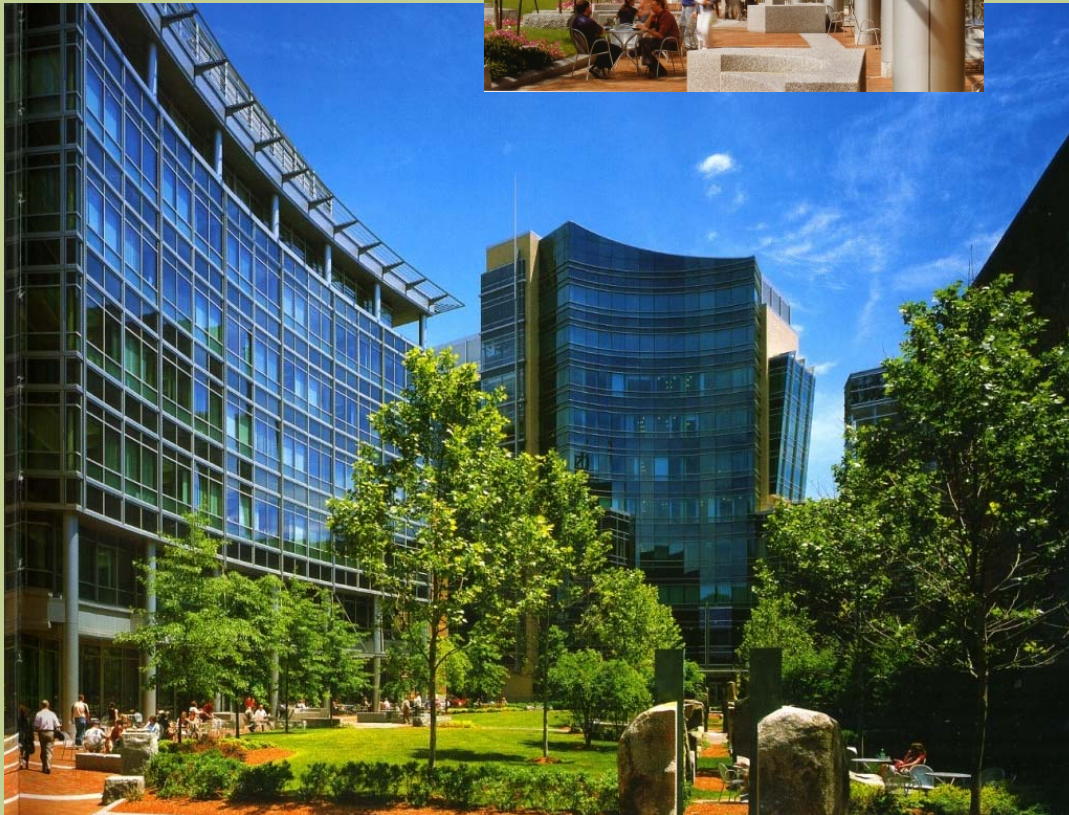


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2007 CBC TYPE I “MID-RISE” OFFICE CONSTRUCTION TYPE (with Life safety)

- Concrete/steel non-combustible construction with typically 25,000 to 35,000 SF. floor plate with unlimited area.
- Typically six to nine story with 13.5' to 15' floor to floor height. (Above 75' to the highest occupied floor requires full life-safety measure)
- Approximately 1.5 to 2.5 Floor Area Ratio (FAR) generally in a pedestrian friendly campus like environment in a semi-urban environment.
- Single or multiple tenants occupancies typically for speculative office uses or possibly mix of uses.
- Typically requires separate multiple level on-grade garage structure , or office built over garage structure to accommodate parking demand.



February 25, 2009



2007 CBC TYPE I “HIGH-RISE” OFFICE CONSTRUCTION TYPE (with Life safety)



- Concrete/steel non-combustible construction with typically 25,000 to 35,000 SF. floor plate with unlimited area. (Generally diminishing floor plates at upper floors)
- Typically 19 to 22 story with 13.5' to 15' floor to floor height. (Additional structural complexity and cost over 240' tall)
- Approximately 6 to 8 Floor Area Ratio (FAR) usually in urban core with limited development area and high land value.
- Single or multiple tenants occupancies typically for speculative office uses with potential mix of uses such as retail or hospitality.
- Typically requires separate multiple level on-grade garage structure or office built over garage structure to accommodate parking demand.

February 25, 2009

