

South Fremont/Warm Springs Area Studies

Economic and Market Strategic Plan



Economic & Planning Systems, Inc.



STRATEGICECONOMICS

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1. INTRODUCTION AND PURPOSE

The New United Motor Manufacturing Inc. (NUMMI) plant, located in the Warm Springs Industrial District, represented a major, longstanding component of the City of Fremont's diverse industrial base until its closure in April 2010. The auto manufacturing plant had been operating there since the 1960s when General Motors (GM) opened the facility as an expansion of a much smaller factory located in Oakland since the 1930s. GM closed the plant in the early 1980s, but it reopened again after two years as NUMMI, a joint venture between GM and Toyota. After GM declared bankruptcy in 2009, Toyota declined to keep the plant open, despite efforts on the part of the State of California and the City of Fremont, and NUMMI produced its last car on April 1, 2010.

The closure resulted in the loss of 4,700 jobs at the site, and affected an estimated 300 companies in California representing an estimated 30,000 jobs. Given this major loss to the City, the State, and the U.S. manufacturing base, the NUMMI closure attracted the attention of all levels of government. To address this challenge, the U.S. Economic Development Administration (EDA) awarded the City of Fremont with a \$333,000 grant to prepare four studies related to the reuse of the NUMMI plant, its associated land holdings to the north and south of the plant, and the surrounding industrial lands:

- 1) Economic and Market Strategic Plan
- 2) Land Use Alternatives Analysis
- 3) Infrastructure and Cost Analysis
- 4) Financial Assessment

In May 2010, Toyota agreed to sell the NUMMI plant to Tesla Motors (Tesla), the Palo Alto-based electric car manufacturer that started in 2003. Toyota also decided to invest \$50 million in Tesla, further expanding the number of important collaborations and partnerships between Tesla and long-standing auto manufacturing companies. NUMMI formally vacated the plant in October 2010; Tesla has since begun ramping up its operations at the newly named "Tesla Factory." Tesla will initially produce about 20,000 cars annually plus powertrains and components for other manufacturers, actively using just a portion of the factory. Over time, Tesla plans to expand their product line and use the entire facility.

NUMMI owned a total of 369 acres of land in the Warm Springs area, which was divided into three parcels. Parcel 1, at the north end of the site, is 109 acres and Parcel 3, at the south end, is 53 acres—both of these parcels are virtually vacant. The factory itself sits on Parcel 2 (209 acres). While Tesla's occupancy of the factory resolved the issue related to the reuse of the actual NUMMI plant, EDA and the City recognized that the future of the remainder of the South Fremont/Warm Springs area, including Parcels 1 and 3, was still a major opportunity for the City. The combination of the following factors: (1) the two vacant NUMMI parcels were for sale with the potential to support considerable increments of new development; (2) BART's new Warm Springs extension and station is slated to open in 2015, considerably changing access to the area; and (3) the presence of other significant vacant and underutilized parcels whose value could also change with these new conditions—presented the need for a more detailed look at the

City's existing land use policy and potential public investments in the South Fremont/Warm Springs district.

In early 2011, the City learned that parcels 1 and 3 had been sold to Union Pacific Railroad (UP). After a number of discussions with UP in early 2011, it was clear that UP intended to use the parcels to provide expanded freight rail operations to its customers, further constraining the City's land use planning for the area.

However, in April 2011, a City delegation traveled to UP headquarters in Omaha, Nebraska, to introduce UP to Fremont, further develop the City/UP relationship, and gain a better understanding of UP's intent for the Fremont parcels. UP has acknowledged that the two Fremont parcels are desirable due to their relatively flat topography, freeway adjacency, proximity to other UP facilities in the Bay Area, and the fact that they are flanked by existing UP main line track.

In August 2010, UP confirmed the Fremont parcels would be conducive to a rail facility, but UP had no definitive plans for a full-scale terminal at that time. For a limited time of about one year, UP said it would offer for sale 94 acres on the northern parcel and 53 acres on the southern parcel. UP will retain approximately 15 acres on the northern parcel for rail use to alleviate UP operations capacity challenges in the Bay Area. If a sale does not occur during this limited time, UP has indicated it will move forward with planning rail-related uses on the parcels.

The City is appreciative of UP's willingness to consider the sale of this site and will work closely with interested parties to ensure it is developed in a manner that benefits the community and region, including quality jobs and high density housing.

The four-part study moved forward even with Tesla in place and an understanding of UP's potential future railyards, focusing on an approximate 850-acre Study Area that includes the three former NUMMI parcels and 480 additional acres spread among a number of different ownerships. This report and its appendices comprise the first of the four studies, the Economic and Market Strategic Plan.

Purpose of Economic and Market Strategic Plan

On May 4, 2010, the City Council adopted Resolution No. 2010-28 that included twelve guiding principles for the South Fremont/Warm Springs area. These goals and subsequent City Council meetings and guidance have provided overarching direction to the preparation of the Economic and Market Strategic Plan. Of particular importance to the preparation of the Economic and Market Strategic Plan were the following concepts included within the principles:

- Pursue opportunities to create high-paying jobs, including green technology, manufacturing, and professional jobs.
- Create an active and vibrant mixed-use urban center within a one-half-mile radius around the future BART station and direct high-density housing, commercial, and employment uses to this area.
- Promote walkable, sustainable subareas supported by open spaces with appropriate buffers between residential/mixed-use developments and R&D/industrial uses.

- Seek opportunities to establish public infrastructure financing mechanisms to spur private development without use of the City's General Fund.
- Create a financially feasible plan that can respond to market changes over time and that can support job creation, the City's tax base, and the City's overall quality of life.

Taken together the guiding principles provided the challenge of identifying economic futures for South Fremont/Warm Springs that: (1) were economically viable over the long term; (2) identified denser uses that could be focused around the new BART station; (3) captured high-paying jobs; and (4) supported the creation of attractive, connected but buffered, sustainable places. The Economic and Market Strategic Plan was also tasked with informing the other three studies by providing guidance on economically viable uses, the potential timing of these uses, and other economic information important to the formulation of the land use alternatives and their subsequent analysis.

Informing the Economic and Market Strategic Plan

Given the scale of the Study Area and the complexity of the assignment, the Economic and Market Strategic Plan is the culmination of a large body of work by the consultant team on-site conditions and constraints, and extensive feedback from the City Council, City staff, and Community Workshops. Technical reports developed by and meetings conducted by the Economics Team (i.e., the authors of this report) included:

- **Baseline Real Estate Market Analysis:** The baseline market analysis provided market information to evaluate and judge the potential for the reuse and redevelopment of the South Fremont/Warm Springs Study Area in the short and long term. The baseline market trend report provides an understanding of current conditions as well as emerging opportunities by building from previous studies completed by the Economics Team and using the latest market information, data and key informant feedback. Key informants included brokers, developers, landowners, businesses, and regional policymakers familiar with/active in the area (see **Appendix A**).
- **Transformational Opportunities White Paper:** The White Paper evaluated the City of Fremont's current and potential future industrial base in the context of the major changes in the location, scale, and focus of industrial production in recent decades at the global, national, State, and regional levels. It also laid the ground-work for the discussion of the key job-generating opportunities in South Fremont/Warm Springs with the Expert Panel (see **Appendix B**).
- **Expert Panel Discussion – "Testing the Big Ideas":** The purpose of the expert panel was to obtain national and regional expert input regarding (1) the future of manufacturing nationally and in the region, (2) emerging industry trends, (3) the major opportunities for reuse and redevelopment of the NUMMI facility and site, and (4) key policy actions to support a sustainable industrial future in Fremont (see **Appendix B**).

Subsequent to and during the completion of these technical reports/panel, the Economics Team received important feedback on their initial results and findings from City staff, the City Council, and the Community.

Report Organization

This report is organized into four chapters. Following this introductory chapter, the physical land use considerations are discussed in **Chapter 2**. **Chapter 3** provides an overview of the economic context and discusses market findings by land use, including locational factors as well as potential strategies that could affect the land use concepts. The final chapter, **Chapter 4**, brings the preceding chapters together and presents strategies and recommendations for the South Fremont/Warm Springs Study Area.

2. CRITICAL CONSIDERATIONS

In addition to the City Council vision and direction, the work conducted by the consultant team points to three underlying factors that will shape the future of the site beyond fluctuating real estate market conditions and particular financial feasibility challenges associated with new development in the area:

- **Physical Context.** A complex blend of existing and adjacent uses and transportation and other infrastructure that characterize the Study Area and its surroundings have been identified. Additional work is ongoing, though the economic opportunities in the area are tied to the regulatory and market need for buffers, setbacks, and the appropriate blending of uses.
- **Planned BART Station.** The planned opening of the Warm Springs BART station in 2015 will link the Study Area to the current and expanding connectivity offered by BART. As discussed below, while not alone sufficient to drive new development, when coupled with investments in place-making, the presence of a BART station can offer an important advantage in the regional competition for jobs and housing.
- **Future of Industry in Bay Area and Fremont.** The City has long been home to a diverse range of industries and has continued to protect its three core industrial areas—Warm Springs, Baylands, and Ardenwood—in the face of a range of alternative development pressures through different real estate cycles. In an era of fast technological change, off-shoring, intellectual property disputes, and outsourcing, there is a continual question of the future of different types of industry in different regions and cities within the United States. These questions are directly addressed in the White Paper and the Expert Panel (Appendix B) and underlie a number of the conclusions and recommendations of this report.

Physical Context

The South Fremont/Warm Springs Study Area encompasses approximately 850 acres. The best access to the site is from Interstate 680 to the east and Interstate 880 to the west and south. While there are currently virtually no housing units in the Study Area, there are extensive residential neighborhoods to the southeast and east of the Study Area's boundaries. There are several physical factors in the Study Area that influence the viability of different land uses. The following section includes a discussion of each factor and its implications for land use.

Freeway and Rail Access

The Study Area is located at the convergence of two major interstate highways, I-880 and I-680. The two largest opportunity sites in the Study Area also have access to a freight rail line via rail spurs. This kind of rail access is unusual for large undeveloped sites in the Bay Area and represents a very specialized opportunity. In particular, the rail access could make the Study Area an ideal location for logistics and distribution companies as well as manufacturing companies that need to transport raw materials and finished products all over the United States

and sometimes the world. UP's decision to purchase parcels 1 and 3 is further evidence of this unique access to rail and other transportation.

Hazards/Toxics

Some of the parcels in the Study Area have been or are currently in industrial operation. Some of the sites could potentially be contaminated with hazardous chemicals which may preclude residential uses from being constructed on these sites without significant environmental remediation. A full environmental review should be completed to determine which properties are affected.

Adjacencies and Buffer Requirements

Another issue related to the presence of industrial operations includes risks related to potential ongoing exposure to hazardous materials through possible chemical releases or accidents. Many companies or other activities in the Study Area or immediately adjacent to the Area's boundary utilize hazardous materials as part of their normal operations. To minimize the risks posed by these materials, such companies typically operate in areas where housing and other sensitive uses with "vulnerable populations," such as schools, are prohibited through restrictive zoning. Zoning in parts of the Study Area currently allow businesses using hazardous materials, so any change to zoning to accommodate sensitive users, particularly around the BART station, will have to address these potential land use conflicts.

Three major transportation routes within the Study Area warrant consideration for adjacency compatibility: State Route 92 (Mission Boulevard), I-680, and I-880. Additionally, the adjacent UPRR corridor warrants analysis given potential constraints from train diesel emissions. Bay Area Air Quality Management District regulations require that cities evaluate air quality risks and hazards within a 1,000-foot distance of major freeways and roadways. Depending on specific air quality conditions, some setback distance may be necessary to minimize toxic air exposure to sensitive populations from the health risks associated with proximity to freeways and other emission sources.

BART as a Special Consideration

When the Warm Springs BART station and extension is completed in 2015, the Study Area will offer a new mobility option for people traveling in the highly congested I-880 corridor, particularly for work-related trips which typically correspond with the highway's peak congestion. However, at this time, it is not clear what exact value this opportunity represents from a market perspective. In reality, the BART extension going south to San Jose will not connect to any of Silicon Valley's major employment centers for many years to come. After the Warm Springs extension is finished, it will be at least four more years before the next leg of this line is built, with stops at Milpitas and Berryessa in San Jose. Neither of these two additional stops is directly connected to any major regional employment centers. In fact, other than downtown Fremont, most station areas on the "BART to San Jose" line are more oriented to housing than to job centers.

The literature on transit and its impact on property values is somewhat limited, but recent findings by the Center for Transit Oriented Development have found that the most significant development impacts related to transit tend to be in station areas that are near downtowns or other major regional employment centers. This suggests that because the Warm Springs BART station would not necessarily connect workers to proximate employment centers, it may be a long time before the market places a true "TOD premium" on this site, making residential units valuable enough to support the higher construction costs associated with higher density housing. In reality, a major employment concentration at Warm Springs could be a better long-term, transit-oriented use for this area. If both Warm Springs and Downtown Fremont could support significant employment concentrations, these areas could help strengthen the residential demand for other station areas both north and south along the line. This does not preclude either Fremont station from including housing, as a mixed-use environment is also attractive for office users, but it does indicate that there are more options for TOD in the Warm Springs than just high-density housing, and that these options could have significant benefits for both Fremont and BART.

3. ECONOMIC CONTEXT AND REAL ESTATE MARKET FINDINGS BY LAND USE

Economic Context: Future of Industry

Even in the context of the current economic downturn and the increasing levels of competition from China and other nations, the San Francisco Bay Area has continued to maintain its ability to be at the forefront of innovation in emerging technologies. Its combination of world renowned universities, colleges, and federal research laboratories; its history of technological innovation and clustering of old and new technology, its combination of start-ups and mature firms and vibrant venture capital community; and its diverse and varied cities and communities to call home continue to support this strength. And while the media focuses more on the Facebooks, Googles, and Twitters and their location decisions and labor forces, the Bay Area's economic fabric includes complex and overlapping layers of businesses, industries, research labs, and nonprofits spread from Vacaville to San Francisco and from Livermore to San Jose.

According to the available literature and the expert panelists, this edge in innovation and all the businesses required to spur and support it will continue to provide the life-force of the Bay Area economy, and, in particular, Silicon Valley and San Francisco. And while the competition between cities within the Bay Area is strong and the downturn-era vacancies and lease rates hold back new development, locations that make place-making investments, offer large land holdings, and are accessible and centrally located will be well-placed to capture new opportunities as the economy and real estate market improve. Within this context and supported by Tesla Motors' decision to purchase and occupy the former NUMMI plant, the South Fremont/Warm Springs area provides an opportunity for the City of Fremont to "set the table" to support the opportunistic capture of new waves of innovation functions, whether focused on research, development, and/or production.

As described in greater detail in the White Paper (**Appendix B**), an examination of the City's existing industry clusters and new and emerging regional opportunities indicate a number of industry sectors and subsectors that might be interested in locating or expanding in the South Fremont/Warm Springs area, including:

- Electric Vehicle Industry
- High-Tech and Information Technology
- Clean and Green Technology
- Biotechnology/Life Sciences
- Logistics/Warehousing/Goods Movement

With the exception of logistics which has a more predictable land use form, these industries cover a broad range of functions accommodated in workspace ranging from office space through a broad range of R&D Flex and laboratory space to modern manufacturing facilities. With the hallmark of most of these industries being the development and production of new products based on new and improving technologies, many businesses will look to cover all or most innovation functions within one building or within one area of the City.

Of course, an over-arching issue currently facing growth and development in Fremont, as elsewhere in the region, is the recent national recession and continuing economic stagnation. Current market conditions are weak across the range of potential uses, reflecting the economic downturn, instability in the credit and capital markets, fall off in retail expenditures, and declining housing prices. These conditions are expected to persist with a general consensus that it will be 2012 before there is a return to more stabilized market conditions, although the precise timing may differ substantially by region. Although the current economic environment is an important issue affecting development feasibility, this economic development strategy is provided in the context of a long-term plan and thus focuses on longer-term trends.

Fremont has several strengths that can be leveraged as the market begins to recover. The City is a family-friendly community that offers diverse housing options. The City is also well-located at the intersection of Interstates 680 and 880, between the core job concentrations in San Francisco, Silicon Valley, the I-80/880 Corridor, and the Tri-Valley. The City has a diverse and highly-educated workforce, and is home to a number of prominent businesses that form a cluster of innovation activity, such as Tesla, the electric car manufacturer that has purchased the former NUMMI factory. Other innovative business examples include well-established technology firms Lam Research, Boston Scientific, and Western Digital. Fremont's innovative technology businesses and Silicon Valley linkages position the City well as the market recovers.

Market Findings

The following section is organized by land use and addresses market realities, locational needs, and strategies. The Market Realities sections summarize market trends that may influence future development potential. Any special considerations regarding where a particular land use should be located within the Study Area are described in the Locational Needs section. The Strategies section synthesizes previous sections and outlines specific strategies for how to incorporate the most promising land uses into the land use concepts under development. Various features and metrics of each land use category (and sub-categories in some cases) are summarized on **Table 1** which provides more specific information about long term job creation, market timing, and development values.

Residential

Fremont is known for being family-oriented and providing quality neighborhoods and school systems relative to the price of housing. The housing market in Fremont has historically centered around single-family product types with 70 percent of units being single-family units. During the last decade, the market has shifted to higher density products. Attached housing products made up almost 60 percent of units constructed. However, the recent decline in housing prices has shifted market feasibility towards lower density products. Prices are not likely to rise high enough to allow high-density for the next several years.

Recent construction trends show that multifamily unit construction now outpaces single-family construction. According to the California Department of Finance, 58 percent of units added in Fremont between 2000 and 2010 were located in multifamily structures.

Table 1: South Fremont/Warm Springs Land Use Features and Metrics

Use	Long-Term Job Creation	Average Wage Rates	Job Density (# of Jobs/Acre)	Density (FAR or DUA)	Market Timing	Range of Development Values (in 2011 dollars) [1]
General "Intensive" Industrial/Manufacturing	Medium	High	15 - 25	0.25	Near to Long Term	\$100 to \$250 p.s.f.
General Industrial/Warehouse/Distribution	Low	Medium	20	0.30	Near to Long Term	\$75 to \$200 p.s.f.
Restricted Industrial/ R&D	High	High	35	0.35	Medium to Long Term	\$200 to \$400 p.s.f.
Office/ R&D Innovation	High	High	50 - 100	0.4 - 0.75	Medium to Long Term	\$300 to \$750 p.s.f.
Light Industrial/Service	Low	Medium	20	0.25	Near to Long Term	\$150 to \$300 p.s.f.
Office	High	High	100 - 250	0.6 - 1.5	Medium to Long Term	\$300 to \$600 p.s.f.
Commercial/Retail	Medium	Low	40	0.35	Medium to Long Term	\$150 to \$300 p.s.f.
Residential	Low	Medium	na	20 - 60	Medium to Long Term	\$300 to \$450 p.s.f.

[1] Represents estimates of development values per building square foot.

Source: Perkins + Will; Strategic Economics; Economic & Planning Systems, Inc.

Market Realities

In the current market, low-density residential products are the most financially feasible. However, any housing in the Study Area should provide a variety of housing products that can respond to differing market cycles for differing housing types. Given past experience the Study Area would need a minimum of 2,500 housing units to create a self-sufficient residential community that would have enough critical mass to provide a range of housing choices and sufficient buying power to support some increment of daily needs shopping as well as parks and other common area amenities. Without the critical mass the housing is less likely to achieve the rents and sales prices necessary to justify four- to five-story construction types with structured parking.

The issue of critical mass is also important because the Study Area is isolated from other residential neighborhoods and this situation cannot be solved by merely moving the residential uses around within the area. There are no residential neighborhoods that abut the Study Area. Therefore, the housing cluster needs to be big enough to create a place where people would really want to live, as opposed to being a smaller less desirable place. Without the critical mass, the residential uses will tend towards rentals, be considerably less appealing to families, and not be able to command the sales prices or rents associated with a more premier neighborhood. If housing is constructed in the Study Area, it should be clustered within a half-mile of the future BART station. Our research shows that the residential price premium associated with transit access can vary widely, ranging anywhere from 2 to 45 percent.

Taking into consideration Fremont's added transit capacity from BART extensions but limited transit connectivity to resident employment, past absorption of 250 to 350 units per year, regional growth projections of households with a TOD preference, the slow shift of city housing stock toward higher-density units, and continued dominance of family households less likely to reside in a TOD, an estimated 3,900 to 5,900 additional households will exhibit demand for TOD housing in Fremont between 2010 and 2035. Actual capture of this demand will vary depending on whether the City zones and regulates in such a manner that will allow for sufficient development, but potential future absorption of 250 to 350 units per year can easily include these TOD units. Given the current market conditions, development of housing uses will likely commence approximately 5 to 10 years from today and reach build out in approximately 20 to 30 years depending on future market cycles.

A more detailed discussion of the demand for residential uses in the Study Area is contained in the Baseline Real Estate Market Analysis located in **Appendix A** of this report.

Locational Needs

The following criteria will maximize the market viability of residential land uses in the Study Area. Residential development should be:

- segregated from businesses handling hazardous materials,
- set back and an appropriate distance from freeways and railroad tracks and any significant point-source land uses so as to meet recommended state air quality and noise standards,
- clustered together to create a "neighborhood," and

- located within one-half mile (ten-minute walk) or less from the future Warm Springs BART station.

Strategies

- Cluster the residential development within one-half-mile and preferably quarter-mile radius of the BART station.
- Allow a variety of densities, while still maintaining a minimum critical mass so that developers can adapt to different market cycles.
- Create a high-quality place to live by including some ground-floor retail along the major streets and areas with higher pedestrian focus.

Retail

Fremont has almost 6 million square feet of retail, spread among 29 retail clusters. The 12 major shopping centers account for approximately 70 percent of total supply and almost 80 percent of total sales. At slightly over 645,000 square feet, the City Center has the largest concentration of retail space in the City. The largest void in the existing supply of retail are places that target higher income shoppers and follow the recent consumer trend of lifestyle and pedestrian-oriented retail centers. The existing supply does not offer an alternative to standard retail product types, nor does it provide the opportunity to stroll in a pedestrian-oriented environment. Fremont lacks the selection and quality of retail centers that are available regionally in the East and South Bay communities. Until the development of Pacific Commons, Fremont had been lacking in comparison merchandise.

Market Realities

Over the long term, the Study Area could accommodate a community shopping center and a small amount of convenience retail adjacent to the BART station. The retail analysis shows that there is significant long-term demand for high-quality retail in the Fremont Trade Area and the primary focus should be on providing retail in an urban format. Some of the demand will be absorbed by improving existing centers. In addition, clustering retail businesses could help with pedestrian connectivity and provide for more sustainable development patterns in the future. Given current retail development, planning efforts to date, and site considerations, retail development in the Study Area should be limited to mixed-use and community-serving retail to prevent over-saturation of retail and the demise of existing retail centers. To achieve these goals and to grow and maintain retail in the near future in Midtown, as well as preserving the vitality of existing regional centers, such as Pacific Commons, development of regionally-focused retail in the Study Area should be considered after Midtown and existing regionally-oriented retail offerings have grown and stabilized. Developers should be required to complete a financial analysis to determine impacts to existing retail.

Retail uses built in the Study Area should also reflect the future vision for the study, not current uses. For example, there is currently demand for stand-alone, regional-serving retail outlets that are not pedestrian-oriented, but these uses should be discouraged in the Study Area because the land use vision for the Study Area calls for a high-density, mixed-use district of research and development, office and possibly residential uses next to the BART station.

Locational Needs

- If a community shopping center is developed it should be located on a major arterial street with good traffic access and good visibility.
- Convenience retail should be located near the residential, office and R&D uses, and if possible, in a mixed-use format.
- All retail uses should be clustered together, not distributed throughout the Study Area.

Strategies

- Create a high-quality place to live by including some ground-floor retail along the major streets.
- Limit retail to convenience retail or community-serving businesses so as not to detract from existing major retail centers.

Hotel

The existing hotels in Fremont are oriented towards the I-880 freeway and are divided into two market segments: Midscale/Economy, mostly serving budget-conscious travelers, and Upscale/Luxury Hotels, primarily serving the business/conference market. The majority of the hotels in the trade area are in the Midscale/Economy segment, no doubt taking advantage of visibility and access along the highway corridors. The Upscale/Luxury segment generally contains larger hotels, so while the Midscale/Economy segment comprises 75 percent of hotel properties in the trade area, it comprises 60 percent of total hotel rooms. Almost 30 percent of all hotel rooms in the market area are located in Fremont. Fremont contains 30 percent of Midscale/Economy and 22 percent of Upscale/Luxury hotel properties.

Market Realities

In the short term, the potential for new hotels is relatively low. Over the past 40 years, the number of hotel rooms built varies significantly from decade to decade and has followed regional and national booms in employment. Fremont has strength in mid-scale and economy hotels. However, no new hotels were built even during the last market peak and occupancy rates remained relatively modest, suggesting limited demand for hotels in the short term. Until occupancy rates and average daily rates rise, it is unlikely that significant hotel room additions will occur in the trade area. In the medium to long term, assuming long-term trends continue, there could be demand for an additional 2,200 rooms or approximately 15 hotels over the next 30 years. Given that this trade area is attracting primarily budget-conscious business travelers, opportunities for new hotel construction will hinge on a strong regional economic recovery and job creation. Current hotel operators also cite a lack of evening and weekend activities for long-term guests (corporate guests can stay as long as two weeks) as a challenge for the market. A retail and entertainment hub within Fremont which is easily accessible without a car would enhance the viability of Fremont's existing hotels and strengthen market support for future construction.

Locational Needs

- Hotels should have strong regional access and good highway visibility. Also being proximate to the new BART station would further enhance access.
- Hotels should not be located near those industrial uses which might have air quality or hazardous chemical concerns.

Strategies

- Hotels should be located near other amenities in the Study Area such as a community shopping center.
- Hotels should have good pedestrian accessibility to office and R&D uses as well as to the BART station.

Office

The City of Fremont has historically attracted a dispersed range of small office users distributed throughout the City's numerous business districts. Within the City, the City Center, located adjacent to the existing Fremont BART station, represents the primary cluster of Class A office space with densities approaching transit-supportive levels. It also represents the primary cluster of health services with hospitals, medical office, and other health service providers located in the area.

Market Realities

The City of Fremont is not currently viewed as a major office destination for businesses interested in locating in Silicon Valley or the East Bay, as indicated by its distribution of building stock between office, R&D, manufacturing, and warehouse space. Recent real estate upcycles in office development have resulted in modest levels of stand-alone office development and the subsequent downturns have created an oversupply of office space not only in Fremont but throughout much of the Bay Area.

Nevertheless, the City of Fremont still has the opportunity to capture an increasing proportion of regional office development if it provides transit-accessible, attractive locations for single-user and multi-tenant office space. The Midtown District with its vision for mixed-use retail, entertainment, workplace, and residential development within walking distance of the existing BART station is likely to be the first recipient of this type of demand in the medium term (5- to 15-year) time horizon. The majority of demand for Class B/C office space is expected to locate in smaller existing and new buildings in the different business districts.

Optimistic job forecasts point to the potential addition of 13,700 jobs requiring office and medical office space between 2010 and 2035. This could translate into a potential demand for 2.9 million square feet of office space and 800,000 square feet of medical office space over the next 25 year period. The Warm Springs District, and most specifically the area directly adjacent to the BART station, could capture a portion of this demand in the long term and might, on completion of development of the Warm Springs BART station, be able to capture a major institutional or private office catalyst user that sees adjacency to a BART station as critical.

Locational Needs

- Office uses need to be segregated from businesses handling hazardous material, but can otherwise be adjacent to most uses including residential, retail, R&D, and light industrial.
- Office uses benefit from proximity to retail, entertainment, and residential uses, especially when in an area with strong connectivity and a positive sense of place.
- In a mixed-use district, office can serve as a buffer between residential and more assembly-style land uses. Freeway visibility can generate a price premium, though office can also be sensitive to noise and other impacts from freeways or rail/transit lines.
- Office uses can benefit tremendously from being proximate to transit, but just as with residential TOD, employment-based TOD requires a critical mass of uses and careful consideration of urban design to ensure that there are clear linkages from the surrounding uses to the BART station.

Strategies

- Opportunities for office development are best in proximity to the BART station and could be appropriately placed adjacent to the freeways.
- Office uses could fit well into a mixed-use TOD cluster and will have greater market value if well-integrated into a mixed-use district.
- The range of opportunities for office development elsewhere throughout the region supports the provision of a discrete set of office opportunities close to the BART station, not overly dispersed throughout the Warm Springs area.
- The demand for new office development in Warm Springs will likely only develop over the medium to long term, so the capture of office uses around the BART station requires a long term approach to development.

Research & Development/Industrial

The City of Fremont has a long history of accommodating a diverse range of industrial businesses reflective of its location in both Silicon Valley and the I-80/880 corridor markets. These businesses collectively provide a significant numbers of jobs and sales tax revenues to the City. The City's three core industrial areas—Ardenwood, Baylands, and Warm Springs—each include a differing mix of the City's key industry clusters. The computer/communications manufacturing, clean technology, biotechnology, and logistics/distribution industry sectors represent strong clusters for the City. The City currently has a significant supply of R&D space (over 20 million square feet—63 percent of I-80/880 Corridor R&D space) as well as about 9.6 million square feet of manufacturing space and 8.0 million square feet of warehouse/distribution space. The City also includes some of the largest and most contiguous industrial areas in the inner-Bay Area.

Market Realities

The Whiter Paper and expert panel explored the opportunities for the City to further expand its capture of businesses providing jobs in innovation sectors. While many U.S. firms have shifted manufacturing and also research and development functions offshore, Silicon Valley continues to

retain and attract a large array of established and growing technology companies. This trend is expected to continue, and with the increasingly recognized advantages for integrated functions—management, research and development, prototype manufacturing—to be kept proximate when developing new technologies, new demand is expected for a range of building types in the Silicon Valley. Within this context, the City of Fremont, and South Fremont/Warm Springs in particular—with its available land, its existing industrial base, recent arrivals such as Solyndra, and its newest arrival Tesla—could provide a flexible innovation zone for companies requiring office, R&D, manufacturing, logistics space or a combination thereof.

At present, there is an abundance of vacant space, in particular R&D Flex space in the City of Fremont. For businesses driven by price and able to utilize existing building designs, there is a large inventory. At the same time, many new businesses either require specialized build-to-suit buildings or require building specifications—such as high ceiling clearance—that are not available in the existing set of buildings. It is these businesses—many engaged in using and/or developing new technologies—both medium and large, new and expanding, that will likely drive the next wave of industrial development.

Available, optimistic job forecasts indicate the potential for the City of Fremont to add over 15,000 new jobs in R&D Flex, manufacturing, and warehouse and distribution space over the next 25 years. To achieve (or even approach) this level of growth will require that the City reserve land for industrial uses, including significant portions of the South Fremont/Warm Springs area.

Locational Needs

- The R&D/Industrial category captures a broad continuum of uses ranging from R&D activities that occur in standard office space to R&D activities that require lab-style settings to light industrial assembly activities to warehousing and distribution to light manufacturing to heavy industrial uses that involve hazardous or toxic materials. While warehousing and distribution may require specialized infrastructure and/or access and heavy industrial uses require specialized zoning and buffers to protect adjacent land uses, many of the other uses in this category can be considered interchangeably.
- Within the R&D/Industrial continuum, the office and R&D activities generate the most employees per square foot and would benefit the most from adjacent or near-by access to the BART station. While all R&D/industrial uses would benefit from innovative and high-quality placemaking, again, the office and R&D uses would benefit the most.
- Industrial uses have very specific locational needs depending on the exact nature of the business and whether or not the business processes handle hazardous materials. Heavy industrial uses need to be buffered from housing, office, and institutional (e.g., schools, hospitals, places of worship) uses, and depending on the type of industrial activity, may need to be buffered from other R&D uses. Warehousing and distribution uses, as well as manufacturing, typically require adequate and appropriate access by truck and occasionally by rail. Some forms of manufacturing also require significant buffer zones.

Strategies

- Critical mass will be important to establish and brand a quality environment with a range of innovation industries. A significant and contiguous area reserved for employment uses will be required in South Fremont/Warm Springs to capture significant new job growth.
- While recognizing buffer/setback requirements, a flexible approach to zoning within the “work zone” will be important to allow subareas of South Fremont/Warm Springs to develop with a flexible set of workplaces. These areas should also offer large and small parcels for different scales of users.
- Investment in public improvements, achievement of high urban design standards, and careful planning to set a model for a high quality planned industrial zone, which could include a mix of other uses, will support successful development of the area.
- A contiguous area within walking distance of the BART station and connected to the larger industrial area could provide the genesis of a high-tech campus concept, where research and design is integrated with product development and manufacturing to foster innovation.
- Tesla Motors provides a powerful image for South Fremont/Warm Springs as a place of innovation, technology, and production. An industrial zone anchored by Tesla could become a new Silicon Valley hub for 21st century innovation and production.

4. STRATEGIES AND RECOMMENDATIONS

The vision for the Study Area is for the creation of a 21st century mixed-use innovation hub that is flexible enough to respond to transformational opportunities that may arise that are also consistent with the City Council's goals for the Study Area. Successful placemaking requires first rate urban planning and design *and* takes time. It is important to recognize that there may be a disconnect between uses that the market will support at any given time and uses that will create value and strong neighborhoods in the long term.

This chapter contains three sections: Conclusions, Recommendations and Implementation Strategies. The Conclusions section summarizes major findings of the economic work conducted. Based on those findings, a number of recommendations, including recommendations concerning potential land use alternatives, are made in the next section. Finally, the Implementation Strategies section takes those recommendations and puts forward actionable items for both the near term and long term.

Conclusions

- In aggregate, there is demand for future development for a variety of potential user types within the Study Area, but the timing of this development will likely be slow and incremental. Slow growth in both housing and commercial construction indicates that the build out time frame for any vision will be slow, and near-term lack of development activity will not necessarily be indicative of poor planning.
- Fremont is well-positioned to compete globally based on the strengths of the Bay Area as well as Fremont's specific strengths. Fremont should build on its existing strengths for attracting new housing and employment uses.
- By focusing on up-front investments in place, making and building a street network through the area that is bike and pedestrian friendly, Fremont can be a model for the renaissance of American "producer" cities, building on the needs of both innovation industries and the lifestyle preferences of the young workforce that will these firms will require.
- Existing Study Area characteristics do impact the potential viability of some uses including residential.
- In the near term Tesla is a key anchor and the cornerstone upon which the planning should be structured. Tesla offers the opportunity to create a near-term destination in the area and to help reinvent the area's overall image.
- The City is already doing (and should continue) many of the actions Expert Panel members listed as best practices including:
 - Maintaining current and relevant industrial zoning
 - One-stop permitting
 - Working to create a "brand" for Fremont emphasizing innovation

- Working with Ohlone Community College to improve workforce training
- Meeting with domestic and foreign companies interested in the Study Area
- Working with major property owners on future zoning and land uses

Recommendations

- The Plan must include “Infrastructure for Innovation”
 - Place making will be critical to establishing this area as a 21st century work place. The Study Area should reflect the highest urban design standards for the public realm and will require careful planning to set a model for a high quality planned industrial zone. Options should be explored for building out a street network that supports biking and walking in advance of new development to help set the stage for implementing the City’s vision.
 - High-quality urban design should be a critical component to any land use plan regardless of use mix. Creating a premium location for housing, retail and innovative industries all require the same attention to detail with respect to the area’s built form.
 - Design and build a layout of streets and blocks that creates a highly connected place that allows people to easily, walk, bike, or drive through the area. This development pattern is more urban than most places in Fremont and can help differentiate this node.
 - Ensure that the street and block pattern allows for flexibility over time within given land use categories. In other words, development on individual blocks or districts within the plan can change and evolve over time.
- At least one land use alternative should not contain any residential uses because of the significant challenges with compatibility between housing and heavy industrial uses, and the potential air quality challenges posed by I-680.
- If residential uses are built, a minimum of 2,500 dwelling units needs to be constructed to achieve critical mass.
- Residential uses should be located within one-half mile of the planned BART station.
- Create a new blended land use category that allows for both office and R&D, with the idea that this would be where higher value and potentially more dense R&D development could be located alongside office development.
- Leverage rail uses on existing track to promote sustainable shipping.
- Leverage the presence of Tesla which aims to become a show place for innovative manufacturing to attract other businesses with similar interests.
- Focus on promotion of office development for specialized users.
- Look for opportunities to leverage private resources for public use, such as encouraging users to allow public access to open space within their facility or allowing public use of conference facilities.
- Create a branding strategy for the Study Area that targets innovative businesses that could catalyze transformational opportunities.

- In the near term, focus on redefining the public realm, supportive infrastructure to make it happen, etc., rather than focusing on the land use alternatives themselves.
- Discourage freestanding uses that cannot be well integrated into the long-term vision.
- Encourage educational institutions that also foster innovation; for example a technology-based charter high school or a community college level facility with a “tech shop.”

Key Implementation Strategies

The following key implementation strategies were formulated using the information gathered in previous work products and takes into account the unique challenges that face Fremont:

- Continue working to establish a redevelopment project area, provided this is still an option.
- Promote and assist establishment of foreign trade zones for firms located within the area.
- Continue and increase City staff efforts to lobby and work with the state and federal government to provide financial support for framework infrastructure, and to promote City interests; and/or hire a lobbyist to perform these duties.
- Pursue “game changing strategies” but be prepared to “pivot” when new opportunities arise.
- Take a master plan approach to planning the Study Area to implement highest quality planning including anticipating long-term proactive involvement of the City to recruit new businesses and enforce the high design standards.
- Create a branding strategy for the Study Area to attract complementary users.
- In the first phase of development, focus on developing the necessary infrastructure for R&D and office uses that follow the same innovative model as Tesla.