The Built Environment

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- Infrastructure

The Built Environment refers to the structures and places where we conduct our everyday activities, from the largest-scale civic buildings to the smallest plazas and parks. The Built Environment also includes vital community support systems, such as the infrastructure beneath our streets and the efforts we make to maintain economic vitality. As a leader in sustainability, Redwood City has planned the built environment to encourage walking and reduced use of cars. The City has adopted design practices that preserve historic resources and enhance the appearance and character of our neighborhoods and business centers. Our strategies for economic development provide local jobs and support the continued success of local businesses. Finally, we pay attention to the sometimes invisible but critical infrastructure systems that support all of the features that make Redwood City a desirable place to live, work, and visit.

Introduction

The Built Environment Element sets forth the policy framework to shape the physical environment of Redwood City through comprehensive guidance on urban form and land use, circulation, economic development, historic resources, and infrastructure.

The future of Redwood City depends upon our careful planning. Since incorporation, Redwood City has drawn inspiration from the physical environment and its influences, while fostering change that benefits our residents and local businesses. As we look forward and anticipate changes that will affect our lives and those of the next generation, the goals and policies in this Built Environment Element will guide choices toward a high quality, balanced community that residents and businesses value and appreciate.

Related Regional Plans

State law places the General Plan atop the hierarchy of land use planning regulations. The General Plan sets the broad policy framework for planning and decision making, with the policies implemented through specific regulations in the zoning and subdivision ordinances, specific plans and precise plans, design guidelines, and similar regulatory documents. At the same time, regional governmental agencies may also have land use review authority over specific portions of Redwood City. Regional issues of significance that cross jurisdictional boundaries, such as the San Francisco Bay and impacts associated with the San Carlos Airport, are regulated by regional plans. Transportation issues also generally cross boundaries; as such there are a multitude of regional transportation plans. A variety of these are discussed in the Circulation Chapter.

San Carlos Airport Land Use Plan

San Carlos Airport is located within the neighboring city of San Carlos, and is owned and operated by the County of San Mateo. The Airport lies northwest of Whipple Road near the Bay, separating Redwood Shores from the rest of the city. The City/County Association of Governments of San Mateo County (C/CAG) Board of Directors serves as the State-mandated airport land use commission for the county. The Board established the C/CAG Airport Land Use Committee (ALUC) to review proposed land use policy actions and related development in jurisdictions surrounding the three airports in the county. The ALUC makes

recommendations to the C/CAG Board regarding the consistency of proposed land use policy actions and related development with relevant airport/land use compatibility policies and criteria within defined Airport Influence Area (AIA) boundaries for each airport. The City of Redwood City is a member of the ALUC and the C/CAG Board.

For more information on San Carlos Airport Influence Areas, refer to the Airport Influence Area and Height Restrictions Maps on file with Redwood City. The Hazards Management Chapter of the Public Safety Element also includes maps and information on San Carlos Airport.

The adopted airport influence area (AIA) boundary for San Carlos Airport consists of two parts: Area A and Area B. Area A defines a geographic area that is subject to real estate disclosures of potential airport/aircraft impacts. All of Redwood City is located within Area A. Area B defines an area within which, in addition to the real estate disclosure provisions, affected jurisdictions must refer their proposed land use policy actions (including General Plan land use amendments) to the ALUC and to the C/CAG Board for a formal airport/land use compatibility review. Area B includes most of Redwood Shores, the inner bayfront area, a portion of the Veterans Boulevard Corridor, Centennial Neighborhood, and a portion of Downtown.

San Francisco Bay Conservation and Development Commission Bay Plan

The San Francisco Bay Conservation and Development Commission was created out of the McAteer-Petris Act in 1969. The Bay Conservation and Development Commission (BCDC) is dedicated to the protection and enhancement of San Francisco Bay and to the encouragement of the Bay's responsible use. The BCDC is a review authority for both Bay filling and dredging, as well as Bay-related shoreline development. BCDC's jurisdiction includes the San Francisco Bay, tidal areas up to the mean high tide level, and marshlands up to five feet above sea level.

An essential part of BCDC's regulatory framework is the Bay Plan. Projects approved by BCDC must be consistent with the McAteer-Petris Act and the Bay Plan. The Bay Plan includes priority land use designations for certain areas around the Bay, including portions of the bayfront in Redwood City. In addition, the Bay Plan includes a Seaport Plan that the Metropolitan Transportation Commission uses for maritime issues. Projects within BCDC's jurisdiction that are inconsistent with these designations would require an amendment to the Bay Plan.

Association of Bay Area Governments Projections

The Association of Bay Area Governments is responsible for making long-term forecasts for population, housing, and employment for the nine-county Bay Area. These forecasts assist local governments in planning for our changing environment.

ABAG produces updated forecasts every two years and publishes them as Projections. In recent updates, the Projections forecasts have presented a realistic assessment of growth in the region, while recognizing trends in markets and demographics, as well as local policies that promote more compact infill- and transit-oriented development.

Built Environment Vision - 2030

Here in Redwood City, the synergistic planning of land use, urban design, housing, circulation, economic development, historic resources, and infrastructure create a community that is treasured by residents, visitors, workers, and businesses.

Redwood City uses innovative land use policies that reveal a continued commitment to land use balance and diversity. Redwood City pays close attention to the design of buildings and public spaces, respecting and taking cues from historic structures and places, while celebrating new designs that contribute to and enhance established neighborhoods and centers. Well-designed streetscapes inspire high-quality and thoughtful infill development along our corridors. We celebrate our heritage through our historic resources, are committed to active cultural and architectural preservation, and encourage learning from our past.

Through the integration of land use and mobility planning, and provision of a balanced, safe, and efficient transportation system, Redwood City encourages travel by non-automobile modes, such as walking, biking, and transit via bus, rail, streetcar, and ferry. To facilitate these types of travel, we prioritize new development near transit stations in our Downtown and along major corridors, and we work to provide adequate facilities for cyclists and pedestrians.

Redwood City is a jobs-rich community, providing opportunities for people of diverse backgrounds and skills to find well-paying and satisfying jobs. We recognize that the City's land use and economic development policies must continue to maintain and encourage a diverse and entrepreneurial

economy in Redwood City, ensuring continued economic growth and financial stability.

Sound infrastructure planning and maintenance allow the City to provide residents and businesses with water, wastewater, energy, telecommunications, and flood control support systems that encourage economic growth and innovation, and that further environmental goals.

Consistent with this vision, City leaders continue to take action with regard to the built environment to maintain and promote Redwood City as the premier location on the Peninsula to live, work, learn, and have fun.

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Urban Form and Land Use

In Redwood City, vacant land is a scarce resource. Urban form and land use decisions must be carefully crafted to meet the needs of evolving demographics, foster neighborhood enhancement, plan for diverse open spaces, and revitalize commercial centers and corridors. These key objectives provide the framework for the General Plan's urban form and land use strategies.

Redwood City's urban form and land use strategies focus growth and development into mixed-use activity centers and corridors that are pedestrian-friendly focal points for residents and businesses, and linked to the regional transit system. By focusing on long-term economic, environmental, and social health, these strategies will help Redwood City reduce local contributions to greenhouse gas emissions by making it possible for greater numbers of people to make fewer and shorter auto trips.

A key strategy reinforces Downtown as the center of business, culture, and living, making Downtown once again the heart of the city. This strategy is balanced with efforts to: 1) shape identity and pursue "place-making" along major corridors and in centers through re-use and intensification, mixed-use development, and streetscape enhancements, and 2) create complete residential neighborhoods whereby, to the extent possible, residents in any neighborhood are able to comfortably stroll or pedal to school, work, or leisure or civic activities in 20 minutes or less.

Imagine Redwood City in 2030

Redwood City is a premier destination, business center, and home on the Peninsula. Our Downtown is renowned for the carefully preserved historic context and magnitude of activities. We have thoroughly embraced Redwood Creek, linking our Downtown core to the beautiful bayfront and facilitating new context-sensitive waterfront development. Our employment and industrial centers are flourishing. Our street corridors have been transformed so that they are fully walkable, exciting, and enhanced with well-designed buildings. Our neighborhoods have been preserved, and connections to services, goods, and public places have been improved. Redwood City is THE place to live, work, visit, and have fun.

Planning Context

Urban Form refers to the physical structures and infrastructure that influence how we experience an area, including street design and the circulation system, the size and shape (or "massing") of buildings, and how accessible a certain area is. Policies that shape an enjoyable urban form help create pedestrian experiences that lend vibrancy. Redwood City is a city of neighborhoods, corridors, and centers, each embodying a character that makes it unique. Our neighborhoods, corridors, and centers are intricately tied together to create a complete city.

Land use is a term that describes different types of activities that occur in a particular area. For example, different areas in Redwood City contain homes, shops, industry, parks, or schools. In some places, like Downtown, a mixture of uses creates an active and vital commercial and living center.

Through maps, graphics, and text, the general location, type, form, and intensity of allowed development throughout Redwood City is established in the Urban Form and Land Use Chapter. The Land Use Map presents a pictorial representation of land use policy, while the Urban Form Map indicates where specific policies will be implemented in the neighborhoods, corridors, and centers. Cumulatively, these policies will shape the enhancement, development, and maintenance of all areas of Redwood City. Policies for the development of individual parcels are inseparable from the policies that create places that the community values.

"Urban Form" describes the physical structures that house land uses, as well as street design and infrastructure that influence how we experience an area.

"Land Use" describes the types of uses and activities that can occur in a particular area.

Density and Intensity

Density and intensity are quantitative measures used to describe how much development may occur on a property. For residential uses, the term *density* is used. The Redwood City General Plan describes density in terms of the number of dwelling units allowed per acre (du/acre), exclusive of streets and public rights-of-way. This is commonly known as net density.

For nonresidential land uses, the measure *intensity* is used. Development intensity addresses the amount of building square footage on a particular parcel or lot. Intensity can be described in many ways, including total building square footage, the percent of the lot the building occupies, the mass of a building, or a floor/area ratio. This General Plan uses floor/area ratio (FAR) to measure nonresidential intensity. The FAR defines the ratio of the total gross floor area of all buildings on a lot to the total land area of the lot. It is useful to note that FAR alone does not describe the form

of buildings. For example, an FAR of 1.0 may yield a one-story building that covers the entire lot, or a two story building that covers half of the lot, or a number of other possible configurations as illustrated in Figure BE-1.

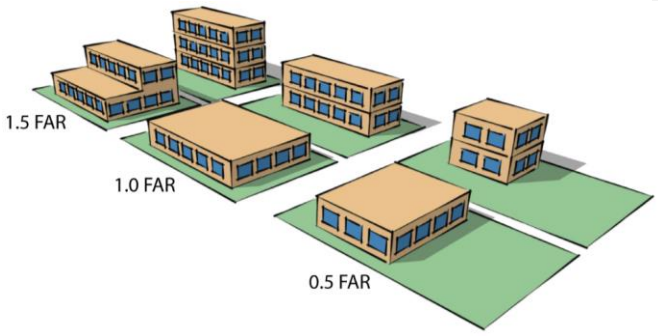


Figure BE-1: Floor/Area Ratio

Redwood City's Established Urban Form and Land Uses

In Redwood City, historic growth patterns related to commerce, housing demand, and governance, combined with architectural styles representative of varying eras, define the urban form. To a large degree, major transportation corridors–U.S. 101, El Camino Real, and Woodside Road–have also influenced how the city has developed. Our distinct neighborhoods, corridors, and centers are defined by:

- A variety of residential neighborhoods, with varying densities and character, including waterfront and marina residential areas
- A traditional downtown with retail, restaurant, office, and civic uses
- Multiple commercial and mixed-use corridors
- Active industrial areas serving a wide variety of needs, from research and development to heavy industrial uses associated with the Port of Redwood City and freight-rail distribution
- Modern office development in Redwood Shores and the Seaport Boulevard area
- Three distinct hospital/medical districts that draw patrons from the entire Peninsula
- Vast open space areas, including the San Francisco Bay, creeks, and areas preserved for natural resource conservation

- Ample civic areas, including County and City offices and facilities, parks, community centers, and schools

The corporate City limits of Redwood City encompass approximately 22,000 acres (34.4 square miles). The majority (over 560 percent) of this area is dedicated to open space, water, and recreation, as the City boundary extends into San Francisco Bay. Table BE-1 identifies the distribution of land uses in Redwood City as of 20082022. Figure I-2 in the Introduction to the General Plan shows the boundaries of the General Plan planning area, which include the corporate City limits and the Sphere of Influence areas.

Almost half of Redwood City's land area is under water, in the San Francisco Bay.

Table BE-1: Baseline Land Uses – 20082022

Land Use	City (Incorporated) Acres	Sphere of Influence (Unincorporated) Acres	Total Acres	Percent
Residential (single-unit and multi-unit)	4,1692,966	1,282216	4,2485,385	1721.85%
Commercial	9761,054	2963	1,1170150	4.53%
Industrial	361444	12291	483535	2.92%
Public and Quasi-Public*	433310	3935	472345	1.49%
Open Space, Water, and Recreation	1413,634842	5147	14,6853,889	6056.14%
Salt Harvesting	1,466	-	1,466	56.90%
Vacant	6553	482	69135	0.53%
Other (Streets, Rail lines)	1,487	395	1,882	7.67%
Total	**22,388825**	**1,9292**	**24,355754**	**100%**

*Note: *Public and quasi-public uses are those uses operated for public benefit.*
Source: San Mateo County Assessor 2008Urban Footprint, Redwood City 20082022.

Next to the combined category of open space, water, and recreation, residential uses represent the most prevalent land use in Redwood City. Older communities first developed around the historic Downtown core, such as the Stambaugh-Heller and Mezesville Historic Districts. Over the years, different neighborhood types have evolved, including conventional low-density subdivisions of the early to middle 20th century, denser post-World War II multi-unit developments near El Camino Real and Woodside Road, and the master-planned community of Redwood Shores. While detached homes comprise the majority of housing in the community, Redwood City contains many varieties of housing: condominiums, apartments, duplexes, triplexes, and four-plexes, and even floating homes.

The Historic Resources Chapter of the Built Environment Element discusses our historic districts and resources.

In Redwood City, commercial districts are primarily located Downtown and along the major travel corridors, including U.S. 101, Broadway, Veterans Boulevard, El Camino Real, and Woodside Road. In outlying areas, neighborhood shopping centers provide nearby neighborhoods with convenience goods and services. Demand for professional office and flexible research/development space has been met by office parks at Redwood Shores, Pacific Shores, and Seaport Center.

Lighter industrial and business-to-business commercial sales uses traditionally have been concentrated along East Bayshore Road and Broadway, generally removed from residential neighborhoods and with convenient freeway access. Heavy industrial uses are primarily located at and near the Port of Redwood City, where the waterfront, rail lines, and the freeway readily link businesses to customers throughout the region. Smaller industrial businesses involved in manufacturing and processing also have a long established history within the lower Broadway district.

Significant open space areas include Bair Island, Bird Island, and Greco Island, the portions of the city's land closest to the Bay. The city has over 225 acres of parks for use by city residents and visitors. Additionally, bikeways, jogging trails, pedestrian trails, and recreation trails are also available in Redwood City, contributing to the quality of life we enjoy.

In Redwood City, our Centers, Corridors, and Neighborhoods work together to create the urban form.

Urban Form:
Neighborhoods, Corridors, and Centers

Redwood City, for a city of its size, includes a very diverse urban landscape–from waterfront development to hillside homes, from small-town neighborhoods to urban mixed-use districts, from neighborhood commercial centers to Downtown Redwood City, and from Port-related industrial uses to high-tech office complexes. Redwood has a full spectrum of urban forms and natural environments that creates a unique blend of landscapes that distinguish this community from others on the Peninsula.

Our diverse urban landscape did not occur by accident. Redwood City's history of growth and development, dating to the City's founding as a lumber town in the mid-19th century and its designation as the county seat, laid the foundation for the neighborhoods, corridors, and centers evident today. These neighborhoods, corridors, and centers comprise the essential elements of Redwood City's urbanized form. The city has many distinct residential ***Neighborhoods*** with unique characters, each

influenced by predominant housing and architectural styles, street widths, trees, amenities, and densities. ***Corridors*** are streets that connect centers and neighborhoods and have their own identity, function, and form. Figure BE-2 identifies Redwood City's neighborhoods, corridors, and centers to which targeted policies apply.

Centers are concentrated places of commercial, industrial, and employment uses. Some centers may also be home to higher-density residential uses and/or mixed-use projects that integrate retail, office, community facilities, and other uses with housing.

The urban form goals and policies for neighborhoods, corridors, and centers will inform development decisions by providing a common understanding of the characteristics we wish to achieve and preserve. Every project must consider individual implications on the form and character of the community as a whole. The height and bulk of buildings, location of buildings on their lots, and the interaction of buildings to the street and the public realm are the primary issues requiring focused attention.

Carefully designed and executed urban form creates appealing community structures and spaces, leading to a positive human experience and fostering a high quality of life. Urban form policies must be applied in tandem with land use goals; working together, they affect the establishment and maintenance of the neighborhoods, corridors, centers, and open spaces that are integral to Redwood City's vitality and image.

The City's ambitious effort to revitalize Downtown represents an exemplary initiative and establishes an outstanding model for the other centers, corridors, and neighborhoods. To achieve goals for other areas that continue to be realized in Downtown–and to promote similar reinvestment and reinvention–Redwood City recognizes that conservation and preservation, sensitive new physical improvements, high-quality design, and carefully targeted economic revitalization are needed, particularly in the neighborhoods near Downtown and along high-visibility street corridors.

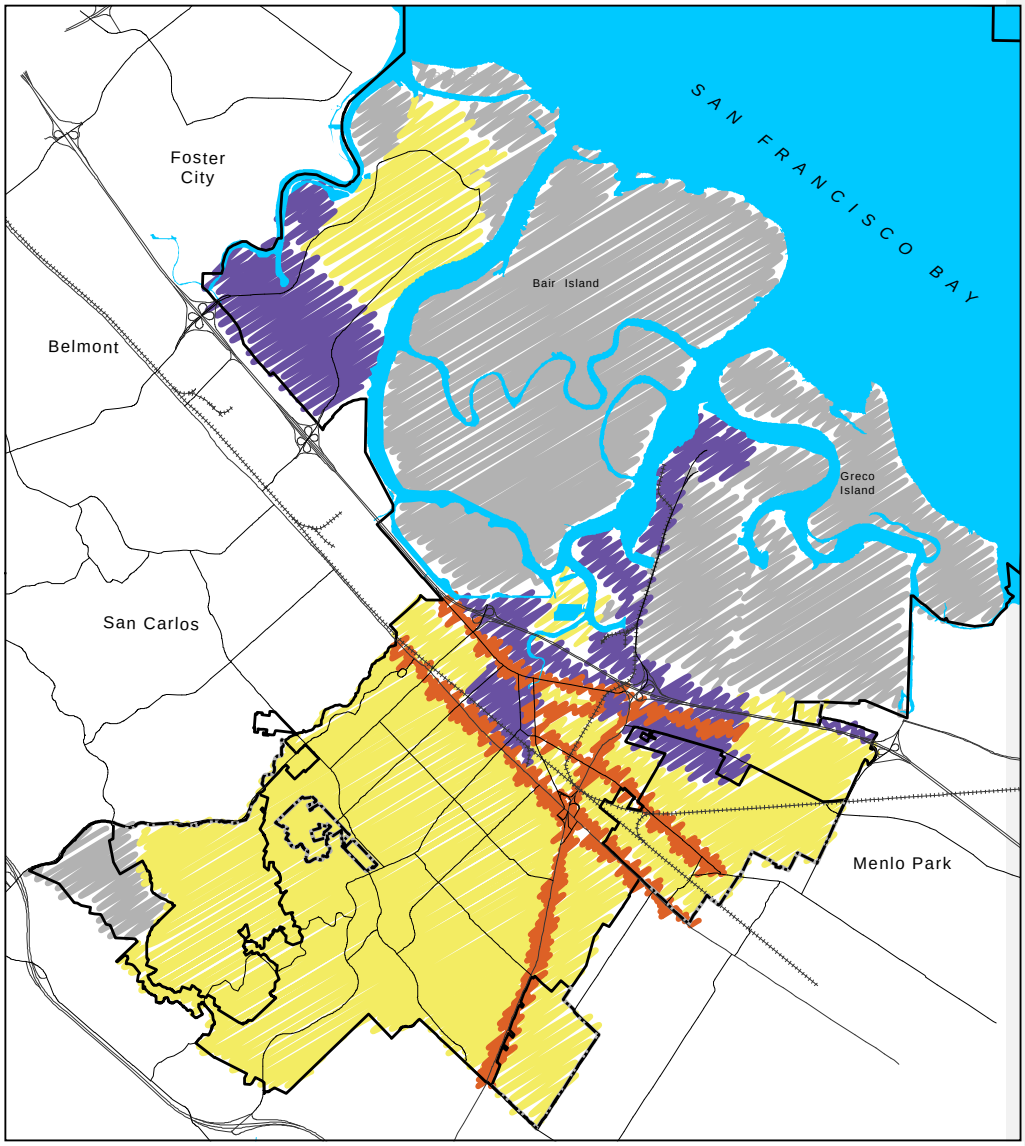


Figure BE-2: Urban Form

Neighborhoods

Redwood City has strong, involved neighborhoods that reflect the diversity and character of the city. Some areas have their own organized neighborhood associations, affiliated with and recognized by the City, which meet periodically to discuss issues affecting their neighborhood. Other neighborhoods are not organized into associations, but also maintain a relationship with the City and work cooperatively to address problems they may be experiencing. Redwood City is committed to fostering strong, safe, and vibrant neighborhoods, and urges all residents to get involved.

Our goal is to protect, maintain, and enhance our residential neighborhoods, ensuring that new development complements and reinforces each neighborhood's unique characteristics through sensitive infill and transitions in scale from adjacent centers and corridors. Policies focus on enhancing neighborhoods with a diversity of housing types and creating more complete neighborhoods that include complementary uses: schools, parks, libraries, fire and police facilities, community centers, cultural facilities, and neighborhood-serving commercial uses.

Neighborhood Typologies

Each of Redwood City's neighborhoods is easily recognizable by its character and personality, unique architecture, and other physical and social characteristics that help define the area. Our neighborhoods were developed during different periods in history; these time-sensitive features often greatly influence neighborhood character. From Victorian and early Craftsman, to the revival architecture of the 1920s and 1930s, to contemporary designs, architectural styles create dominant themes in neighborhoods. These styles combine with varying densities and street treatments to shape neighborhood identity.

No two neighborhoods are exactly the same, but some have similar characteristics, particularly where they overlap. Figure BE-3 identifies generalized neighborhood boundaries, organized by neighborhood typologies. The neighborhood typologies in Redwood City include:

- Historic Influence Low Density Neighborhoods
- Historic Influence High Density Neighborhoods
- Post-War Neighborhoods
- Mixed Density Neighborhoods
- Hillside Neighborhoods
- Master Planned Neighborhoods
- Waterfront Neighborhoods

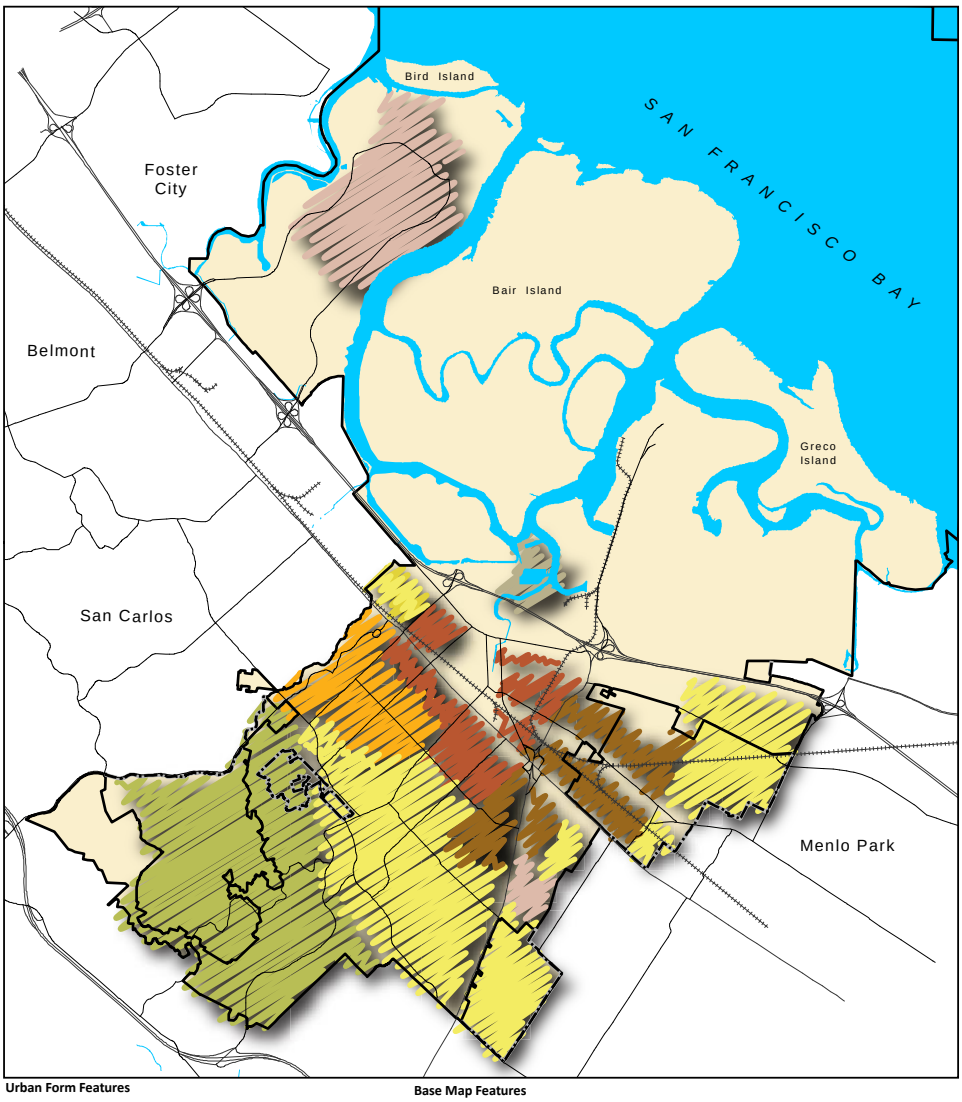
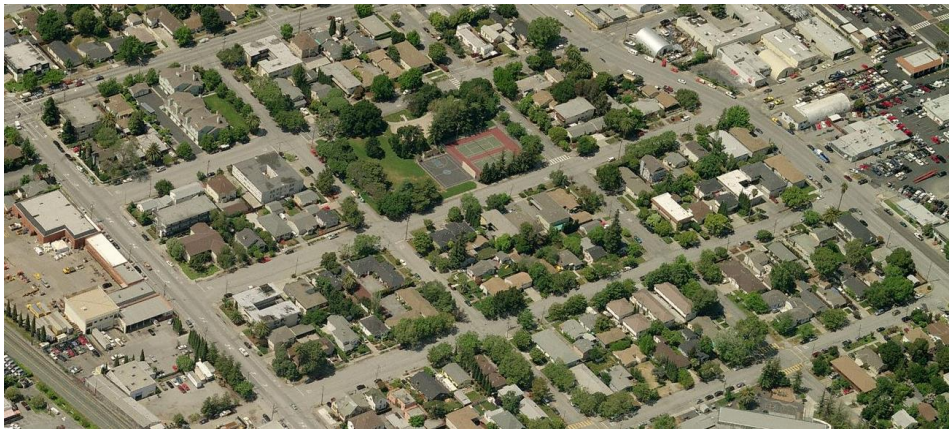


Figure BE-3: Urban Form - z

Historic Influence High Density Neighborhoods

Beginning in the 1850s, residential neighborhoods formed around the city's historic core. The Mezesville Historic District is located northwest of Downtown Redwood City. The district contains many 19th century one- and two-story, wood-frame homes in a variety of architectural styles indicative of that age. The Stambaugh-Heller Historic District, southeast of historic Main Street, contains the largest number of pre-1900 buildings in Redwood City.



Historic Influence High Density Neighborhood: bird's eye view

During the mid-20th century, infill in the form of poorly-designed apartments (which often have the unflattering moniker of "dingbats") was prevalent in these areas. These structures can detract from neighborhood character, as they provide limited architectural articulation or ornamentation and few amenities. Since these structures often exceed currently allowable densities, limited new development has occurred in the Historic Influence High Density Neighborhoods since the 1960s. However, several historic houses have been carefully restored and rehabilitated by residents who are attracted to the neighborhoods' charm and walking distance to Downtown.

Restored historic home in the Stambaugh-Heller neighborhood

Redwood City has a clear goal to promote higher-density, walkable development in Downtown and the adjacent neighborhoods, and a simultaneous goal to ensure that change harmonizes with existing development and preservation of historic character. Thus, efforts to revitalize and enhance these neighborhoods center on the

balance between conservation/preservation, attracting new development and investment, and increasing density while preserving and enhancing established community character and respecting building scale.

Significant public improvements in the Historic Influence High Density Neighborhoods will help encourage investment in historic house renovation and new residential infill development. An ambitious street tree planting program, relocation of overhead utility wires, improvements to sidewalks and crosswalks, and provision of pedestrian-oriented and context-sensitive street lighting will enhance these neighborhoods while preserving the city's heritage.

A home in Redwood City's Historic Influence Low Density Neighborhood

Historic Influence Low Density Neighborhoods

In the early 1900s, properties between Arlington and Edgewood Roads, known as Wellesley Park or Edgewood Park, were subdivided. The subdivision featured curvilinear streets and a small circular park, and attracted new residents who built homes in a variety of architectural styles. These areas near the San Carlos border, as well as the Mount Carmel area surrounding historic Sequoia High School, feature charming architecture, tree-lined streets, and ample green space provided at parks and nearby schools. Historic Influence Low Density Neighborhoods are expected to see little change over the life of this General Plan. Policies and efforts focus on maintenance, context-sensitive renovations, and improved access to commercial services and recreational opportunities.

Historic Influence Low Density Neighborhood: bird's eye view

Post-War Neighborhoods

The Post-War Neighborhood typology refers to neighborhoods of detached homes often interspersed with cul-de-sacs. Suburban in nature, these lower-density neighborhoods were designed to be automobile-oriented, with access taken from the street by a front driveway to an attached or detached garage. Post-War Neighborhoods were developed during the mid-20th century, following World War II.

A home in one of Redwood City's Post-War Neighborhoods

Commercial land uses typically lie beyond the Post-War Neighborhoods, which were designed with the automobile in mind. As such, many of the interior areas of these neighborhoods have limited pedestrian access to commercial and everyday services. Redwood City's Post-War Neighborhoods are well established and generally well preserved. As such, efforts will focus on continued care and maintenance, as well as increasing pedestrian and bicycle access to services and other parts of the city.

Post-War Neighborhoods: bird's eye view

Mixed Density Neighborhoods

A variety of building approaches in a Mixed Density Neighborhood

Although modern planning and zoning policy have encouraged the grouping of similar building types and densities into consistent districts with similar densities, some of the most interesting, attractive, and popular neighborhoods in the Bay Area and elsewhere have a mix of building types, density, height, and architectural styles. Many of these neighborhoods developed their mixed nature due to changing standards of development throughout their history. These neighborhoods provide a diverse and interesting mix of dwelling types that accommodate a variety of resident ages, incomes, family types, and family sizes.

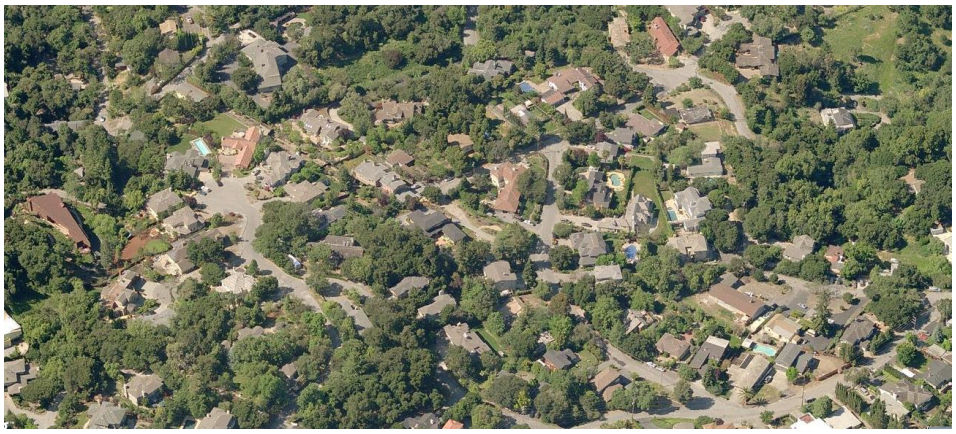
At the same time, these neighborhoods are not without their issues. Specifically, many buildings in Mixed Density Neighborhoods have less off-street parking than is typically provided today, which leads to high usage of on-street parking and perceptions of overcrowding. Redwood City anticipates active infill development as continued population and job growth in the region place pressure on the supply of existing land, and care must be taken to provide positive integration of new housing within the existing context. Policies emphasize continued maintenance in Mixed Density Neighborhoods, quality design and context sensitivity, easy access to transit to relieve parking burdens and impacts, and increased access to neighborhood goods, services, and activities.

Mixed Density Neighborhood: bird's eye view

Hillside Neighborhoods

Redwood City's Hillside Neighborhoods represent a unique type of neighborhood, influenced by topography changes in the foothills of the Santa Cruz Mountains. This area focuses around two man-made lakes and the Elks Club, which includes a nine-hole golf course. A majority of the hillside area consists of unincorporated lands. The streets in the Hillside Neighborhoods are curvilinear, following the land. Most Hillside Neighborhoods have been developed with larger homes. At the edge of the neighborhoods is Edgewood County Park, a resource to residents of the adjacent neighborhoods, the city as a whole, and the region.

Redwood City's Hillside Neighborhoods



Given the generally built-out, established, and well-maintained nature of this neighborhood type, little change is anticipated. As such, policies are related to context sensitivity in renovations and new development, as well as issues of grading and potential viewsheds.

Redwood Shores, a Master Planned Neighborhood

Master Planned Neighborhoods

Master Planned Neighborhoods are large-scale, unified land developments. Master Planned Neighborhoods in Redwood City, such as Redwood Shores, include a mixture of land uses and dwelling types, as well as public and common open space in conjunction with residential uses. A Master Planned Development contains a hierarchy of street types to accommodate different levels of activity. The Master Planned Neighborhoods in Redwood City are fully developed; as such policies for Master Planned Neighborhoods focus on ensuring that established neighborhoods maintain their character, with new development occurring consistent with City-adopted master plans. Local homeowners associations often apply additional development criteria.

Master Residential Planned Neighborhood: bird's eye view

Waterfront Neighborhoods

The bayfront is a unique location within Redwood City. Surrounded by vast open space areas, its lands are shaped by waterways that create a varied and beautiful City boundary. To create a new destination and lively Waterfront Neighborhoods near the San Francisco Bay waters, mixed-use designations apply near the bayfront, particularly along Redwood Creek. An active Waterfront Neighborhood is envisioned, complete with higher-density housing, floating homes, docks, and access to the Bay, in conjunction with supporting uses.

Homes in a Redwood City Waterfront Neighborhood

The vision for the Waterfront Neighborhood typology draws from the City's "smart growth" objectives, with development of a higher-density, pedestrian- and water-oriented residential district near Downtown, north of Redwood Creek. Waterfront Neighborhoods should be seen as extensions of the urbanism of Redwood City, with street grids of a similar scale as historic areas, with buildings fronting on those streets, and with good connections between adjacent projects. Waterfront Neighborhoods will be an integral part of the Redwood Creek/Harbor Center, discussed in the Centers discussion below.

Waterfront Neighborhood: bird's eye view

While encouraging this neighborhood typology, land use policy also retains long-established industrial and workplace districts along U.S. 101. These uses serve to buffer residential lands from the freeway and make available the freeway frontage for commercial access and visibility. Within Waterfront Neighborhoods, a mix of uses will also reduce automobile dependency and support "complete street" circulation for pedestrians, bicycles, and transit. Development will be configured to create attractive public places and spaces, as well as water-related destinations that expand community and visitor use of the bayfront area. The City will strive to provide continuous water-edge public access

wherever possible, completing Bay Trail segments and other open space links.

Corridors

Cities are often defined and remembered through the quality of their streets because we structure our experience and memory of a community by moving along its pathways. When we think of the great cities of the world or the memorable small towns we have visited, we immediately think of their important boulevards, attractive and vital business streets, leafy residential lanes, and other elements of the street network. In addition to the uses located along the street, the public right-of-way and private property frontages help influence the design quality of the street. Lanes for cars and bikes, planted parkways with street trees, sidewalks, front yards, street-facing plazas and courts, building frontages, and the pattern of building entrances all define the urban form we experience along our corridors. These elements must be carefully orchestrated to produce a successful and memorable urban form and streetscape.

In Redwood City, most commercial retail and service uses are located along our street corridors. In addition to serving as destinations, these corridors also typically serve as regional travel routes and allow for higher traffic volumes than local and collector streets; they also often form the boundaries or edges along neighborhoods. From a land use perspective, historically these corridors have provided places for many small businesses that attract pass-by traffic and also serve surrounding neighborhoods. From a traffic orientation perspective, they function as major spines for multi-modal transportation routes (walking, biking, public transit, and trucks/automobiles). In addition, the potential for access to reliable, high-quality transit creates opportunities for new housing development to flourish along certain corridors.

The corridors in Redwood City–El Camino Real, Woodside Road, Middlefield Road, Veterans Boulevard, and Broadway–have very different characters. However, each Corridor functions as a community and neighborhood connection, as well as a place for shopping, living, and working. Figure BE-4 identifies the locations of Redwood City's corridors. Also of note are Redwood Shores Parkway and Marine Parkway, within the Redwood Shores master planned community.

While our corridors are currently predominantly automobile oriented, with limited provisions for pedestrians and bicyclists, Redwood City envisions the corridors transformed into mixed-use, pedestrian-oriented

environments. Utilizing corridors in this manner contributes to a more compact pattern of development, and helps encourage use of alternative forms of transportation. Inspired by Downtown and our historic neighborhoods, we look to encourage urbanism where it has not existed previously, with private buildings lining and oriented to well-designed public streets. Development adjacent to low-scale neighborhoods will transition from higher intensity to lower intensity to limit impacts to residential areas.

Our street corridors also serve as the most visible pathways into the city, with major gateway entrance locations depicted in Figure BE-4. Gateways provide opportunities for urban design features including attractive landscape statements and high quality signage to help identify Redwood City and facilitate way-finding. In addition, signature uses and buildings at gateways can help visitors clearly identify entrances to the city. Gateways facilitate place-making, transforming strategic access points in the city's network of corridors into pleasing and memorable arrival points.

Gateways are our primary access points to the city. Through thoughtful urban design and land use planning, we can utilize our gateway entrances to clearly identify Redwood City.

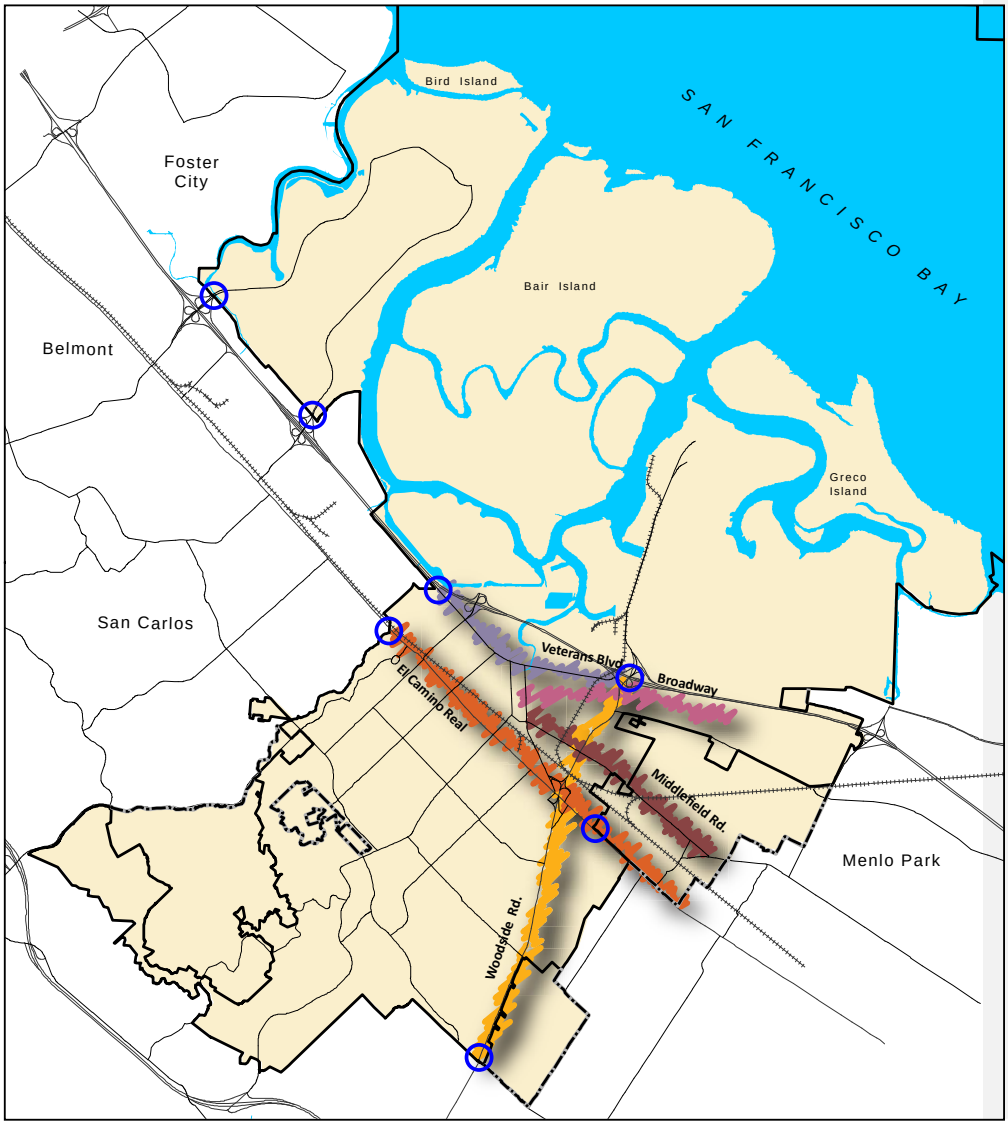
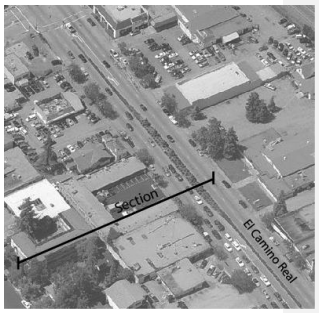


Figure BE-4: Urban Form - Corridors

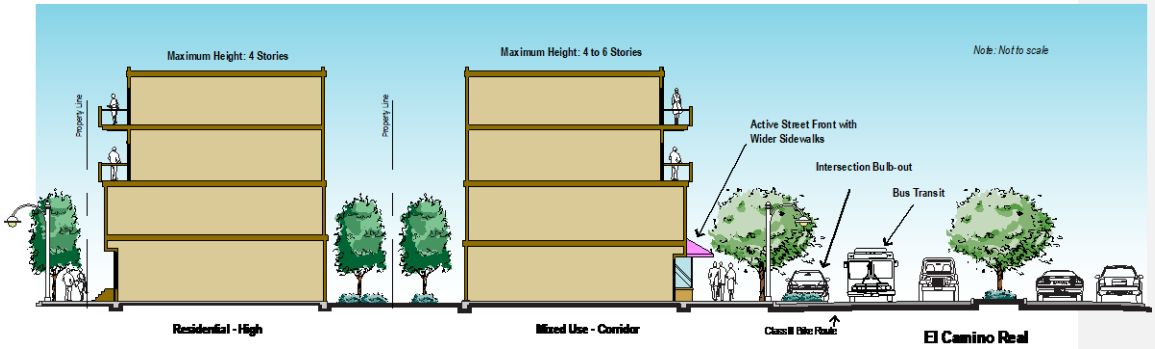
El Camino Real

El Camino Real (Spanish for The Royal Road) originally connected California's earliest missions from San Diego to San Francisco. Today, El Camino Real (State Route 82 in Redwood City) is a regional route connecting San Jose and San Francisco. El Camino Real spans the length of Redwood City, although the urban form changes significantly along the corridor. Ample development opportunity sites on El Camino Real offer the possibility to replace low-scale, auto-oriented commercial development built for the land economics of earlier decades.

Our vision for El Camino Real is integrated with the Grand Boulevard Initiative developed by San Mateo and Santa Clara County cities in conjunction with SamTrans. The Grand Boulevard Initiative looks to transform El Camino Real from a suburban, low-density strip commercial highway to a vibrant, mixed-use, pedestrian-friendly boulevard that links regional transportation improvements and local economic development efforts. Through this vision, El Camino Real will truly become a grand boulevard, with renewed importance and improved quality. In Redwood City, El Camino Real will be updated to facilitate walkable linkages between Sequoia High School, the transportation center at the Caltrain Station, and Downtown Redwood City. To help achieve this vision, El Camino Real has a "Boulevard" street typology classification (refer to the Circulation Chapter for more details).



El Camino Real section



New development projects will emphasize pedestrian orientation in site and building design, promoting a walkable environment with active street frontages, well-scaled and designed buildings, and engaging outdoor spaces. New street tree plantings, widened sidewalks, and pedestrian-scaled lighting will transform the public streetscape to create a "great street" experience that communicates the spirit and living quality of Redwood City. The vision for El Camino Real includes development in the form of higher-intensity mixed use to provide the appropriate height relative to the width of the street, and increased opportunities to live near goods, services, transit, and entertainment. As such, denser and taller buildings are allowed along El Camino Real.

El Camino Real in Downtown Redwood City (Villa Montgomery Apartments)

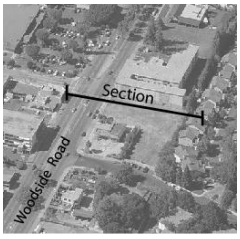
Woodside Road

Woodside Road (State Route 84) is the city's only major east-west connection, linking U.S. 101 to Interstate 280. It is a major commercial and residential corridor, and is one of Redwood City's most heavily traveled and highly visible streets. Woodside Road provides access from residential neighborhoods to El Camino Real and Downtown, and also serves as an important city entrance from both U.S. 101 and Interstate 280.

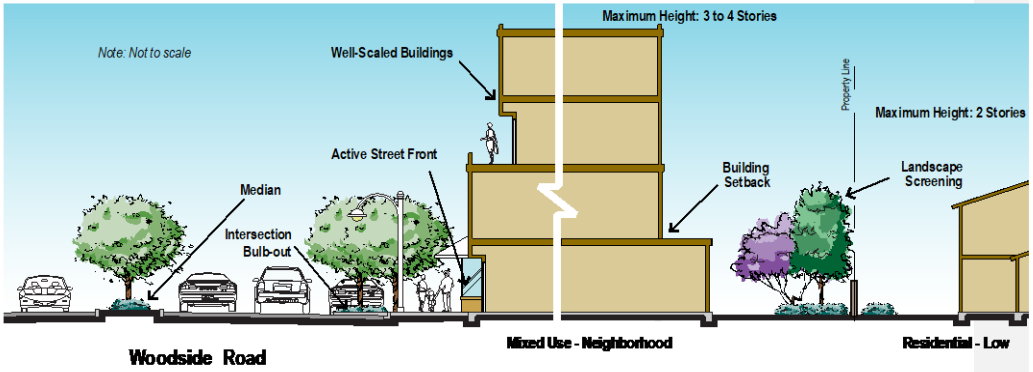
Woodside Road's mature trees are fundamental to the "Parkway" experience southwest of El Camino Real.

In 2009, uses along Woodside Road include neighborhood-serving retail and services, and the city's highest concentration of multi-unit residential buildings. The Corridor's character evolves along the route, with the most obvious transition at El Camino Real. Southwest of El Camino Real, Woodside Road is a landscaped suburban arterial, with planted medians, landscaped frontage properties, and special sites such as the historic Union Cemetery. At El Camino Real, the Woodside Road "fly-over" grade separation divides the neighborhoods and discourages pedestrian access. Northeast of El Camino Real, Woodside Road continues to separate neighborhoods with its freeway-like structure. Higher traffic speeds create difficulties for pedestrian and bicycle crossings.

The vision for Woodside Road is an attractive, walkable residential boulevard with mixed-use nodes that residents can easily walk to. Woodside Road is an ideal area for new residential development for a variety of people and households, especially seniors. With lush surroundings and easy access to goods, services, and activities, Woodside Road will provide new choices for people who prefer or need to walk or use transit rather than drive. Throughout Woodside Road, efforts will be made to increase pedestrian connectivity and safety. Woodside Road will evolve to become an attractive residential location, with supporting transit and commercial amenities and a gracious, pedestrian-oriented sidewalk frontage. Infill residential development should incorporate landscaped setbacks while emphasizing the pedestrian orientation of frontages in site and building design. Parking lots and enclosed parking facilities should be located to the rear of buildings or at other locations where they are not visible from Woodside Road and intersecting side streets.



Woodside Road section



New commercial and mixed-use development should emphasize pedestrian orientation in site and building design, promoting a walkable environment with active street frontages, well-scaled buildings, and usable spaces such as small plazas, courtyards, and sidewalk cafes. To help achieve this vision, Woodside Road has a "Boulevard" street typology classification (refer to the Circulation Chapter for more details).

Middlefield Road

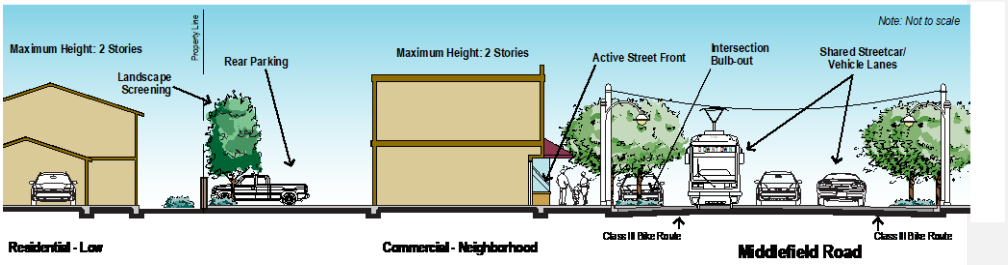
Middlefield Road has a multitude of different characters along different segments of the Corridor. Beginning at Veterans Boulevard in Downtown Redwood City, Middlefield Road traverses away from the Bay down

Middlefield Road section

Theater Way, fostering a special Downtown environment between Winslow and Marshall Streets. Continuing south, Middlefield Road bends and becomes the home to our civic and cultural buildings, including City Hall and the Downtown Main Library. Just southeast of the civic section of Middlefield Road, historic residential uses in the Stambaugh-Heller neighborhood define the Corridor. However, on the southeast side of Woodside Road, the Middlefield Corridor transitions to an active commercial area with both large- and small-scale retail, restaurant, and service uses.

Middlefield Road near the Stambaugh-Heller historic district

The vision for Middlefield Road is defined by these different segments: Middlefield will be a Cultural and Civic destination in Downtown, a moderate-scale residential Corridor through the historic residential area, and a commercial Corridor focused on locally serving uses southeast of Woodside Road.



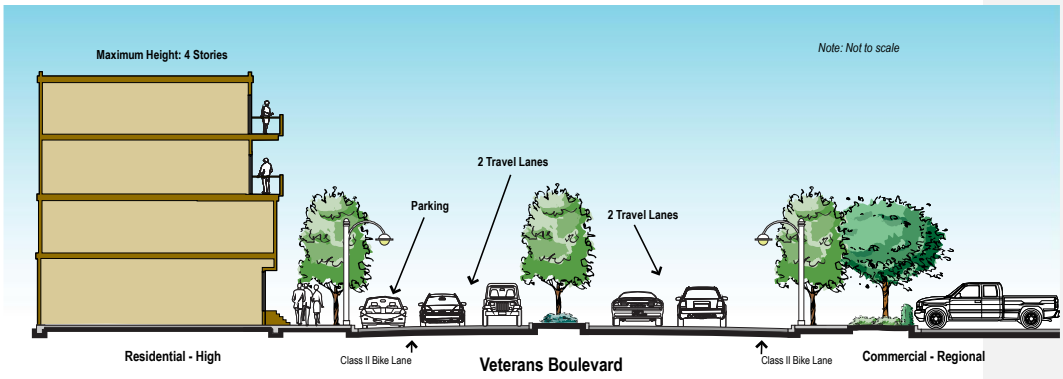
Policies related to Middlefield Road through Downtown are also addressed in the Downtown Center section and laid out in specific detail in the Downtown Precise Plan. The historic residential section of Middlefield Road will be preserved and strengthened through policies that focus on maintenance and pedestrian access/safety to neighborhood destinations including Jardin de Niños, a mini-park and valuable neighborhood asset. Along the commercial portion of Middlefield Road (southeast of Woodside Road), policies are related to provision of neighborhood commercial uses, transportation and pedestrian improvements, and consultation with San Mateo County as the corridor transitions into unincorporated county area. The Fair Oaks Community Center, located on Middlefield Road at Douglas Avenue, is the heart of the nearby neighborhoods, and access to this destination should be enhanced.

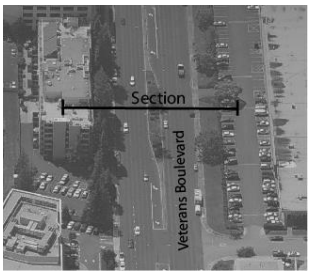
Transportation planning is integral to the urban form along the length of the Corridor, as Middlefield Road is a planned route in both the Streetcar and Bikeway plans. To help achieve this vision, it has a “Transit” street typology classification (see Circulation Chapter). Thus, policies emphasize transportation and safety improvements that respect and respond to surrounding uses. Policies also emphasize creating an attractive street front with landscaping, street furniture, public art, undergrounding of overhead utiliities, and enhanced intersections.

Veterans Boulevard

Veterans Boulevard, with U.S. 101 access at Whipple Avenue and Woodside Road, serves as a highly visible gateway into Redwood City. With its wide right-of-way and higher traffic speeds, Veterans Boulevard currently has a distinct auto-oriented character, with commercial and industrial businesses representing the dominant uses, although the Kaiser Permanente hospital campus also has a significant presence.

Redwood City envisions transforming the Veterans Boulevard Corridor into a true boulevard, with nodes of regional commercial, businesses that benefit from high freeway visibility at the Whipple and Woodside interchanges, and office district and mixed-use neighborhoods in between. To help achieve this vision, Veterans Boulevard has a "Boulevard" street typology classification (refer to the Circulation Chapter for more details).





Veterans Boulevard section

As part of the planned reclaiming of Redwood Creek as an attractive open space and recreation feature, a mixed-use neighborhood will develop along the creek, connecting to Downtown via Main Street. Other nodes of mixed-use and higher density residential developments are also recommended. The Kaiser Hospital complex will continue to evolve consistent with its approved master plan, creating better pedestrian movement within the complex and to surrounding uses, providing new and enhanced buildings, and expanding its role as a major medical facility and employment center. The Veterans Boulevard Corridor will welcome visitors to the city.

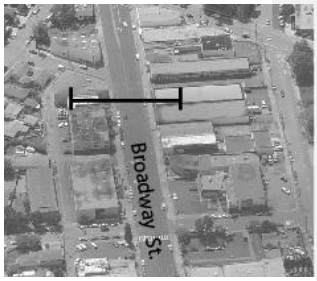
Broadway

By the 1920s, Broadway had become the center of commerce in Redwood City. Today Broadway serves as the heart of our Downtown. Historic buildings supporting pedestian-scale local commercial businesses and frequent events in Courthouse Square create a lively atmosphere on this beautiful stretch of the Corridor. The attactive "Climate Best By Government Test" gateway arches greet residents and visitors on both the east and west ends of Downtown.

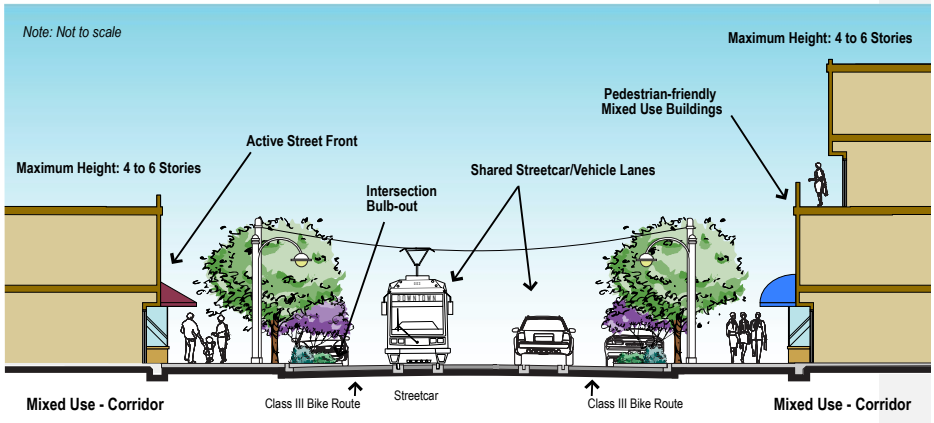
Southeast of the Downtown core, however, Broadway features a wide road width, limited streetscape improvements, and commercial and industrial buildings more oriented toward auto traffic than pedestrians. Continuing futher southeast past Woodside Road, Broadway historically has had an industrial character. However in the early 2000s, the emergence of lighter industrial and office uses began to push out the long-established machine shops and manufacturing businesses.

As the defining street in Downtown Redwood City and a connection between two important employment districts, the vision for the Broadway Corridor is to enhance mobility to allow even better movement between the districts–for pedestrians, transit riders, bicyclists, and drivers–and to create new business and living opportunities. One of the key components to foster this mobility is the development of a streetcar line, which would link the south Broadway industrial/business district to Downtown.

Broadway southeast of Woodside Road will maintain its traditionally industrial function, providing locations for businesses that support commerce throughout the Peninsula and that offer jobs for skilled laborers. The Light Industrial Incubator Overlay promotes new start-up businesses and new development related to innovative light industrial and research/development businesses. Southeast of Douglas Avenue, the Commercial - Office Professional/Technology designation is intended to encourage businesses that are complementary to the Stanford Medical Center complex and compatible with nearby industrial uses.



Broadway Street section



Broadway between Downtown and Woodside Road is designated Mixed Use - Corridor and Mixed Use - Neighborhood. These designations will help the corridor transition from an auto-oriented commercial strip to a complete neighborhood complementary to Downtown, with offices, urban-density housing, and commercial goods and services. New development in historic neighborhoods will be carefully designed and reviewed to ensure new construction is respectful of existing historic structures in terms of scale and design.

Broadway has two street typology classifications. In accordance with the streetcar concept, Broadway is classified as a "Transit Street" from Hopkins to Second Avenue and is classified as a "Local Street" from Second Avenue to Fifth Avenue (refer to the Circulation Chapter for more details).

Centers

Exciting new regional centers, both Downtown and in other locations, will evolve over the life of this Plan (see Figure BE-5). Centers are concentrated places of commercial, industrial, and employment uses. Centers may also, depending on the area, be home to mixed use and/or higher density housing.

Policies for centers provide for their intensification, redevelopment, and revitalization, while ensuring that development respects adjacent neighborhoods through careful siting of buildings, transitions in scale, and appropriate land use mix. Further, emphasis is placed on spurring continued activity within and facilitating connections to the centers.

Downtown

Downtown Redwood City is the heart of our city, the core center. Downtown was built on a double grid framework of streets platted as the town of "Mezesville" in 1856. Today Downtown includes a mix of retail, office, residential, governmental, entertainment, and visitor-serving uses. Our vision provides for the continued renaissance of Downtown as a mixed-use center enjoyed by residents, workers, and visitors. The tallest buildings and development intensities in Redwood City will be focused in our Downtown, where the Caltrain station and bus service provide easy commute access. Transit access and Downtown's wonderful pedestrian orientation make it a place where people can live and work without relying on automobile transportation. Increasing the residential population will add vitality to the Downtown by extending the hours of activity and the built-in market for retail, services, and entertainment. Outdoor gathering spaces will continue to make Downtown community oriented. As change occurs, priorities include maintaining Downtown's pedestrian orientation, preserving the historic character, and maximizing benefits of transit accessibility.

Courthouse Square evening event with live music

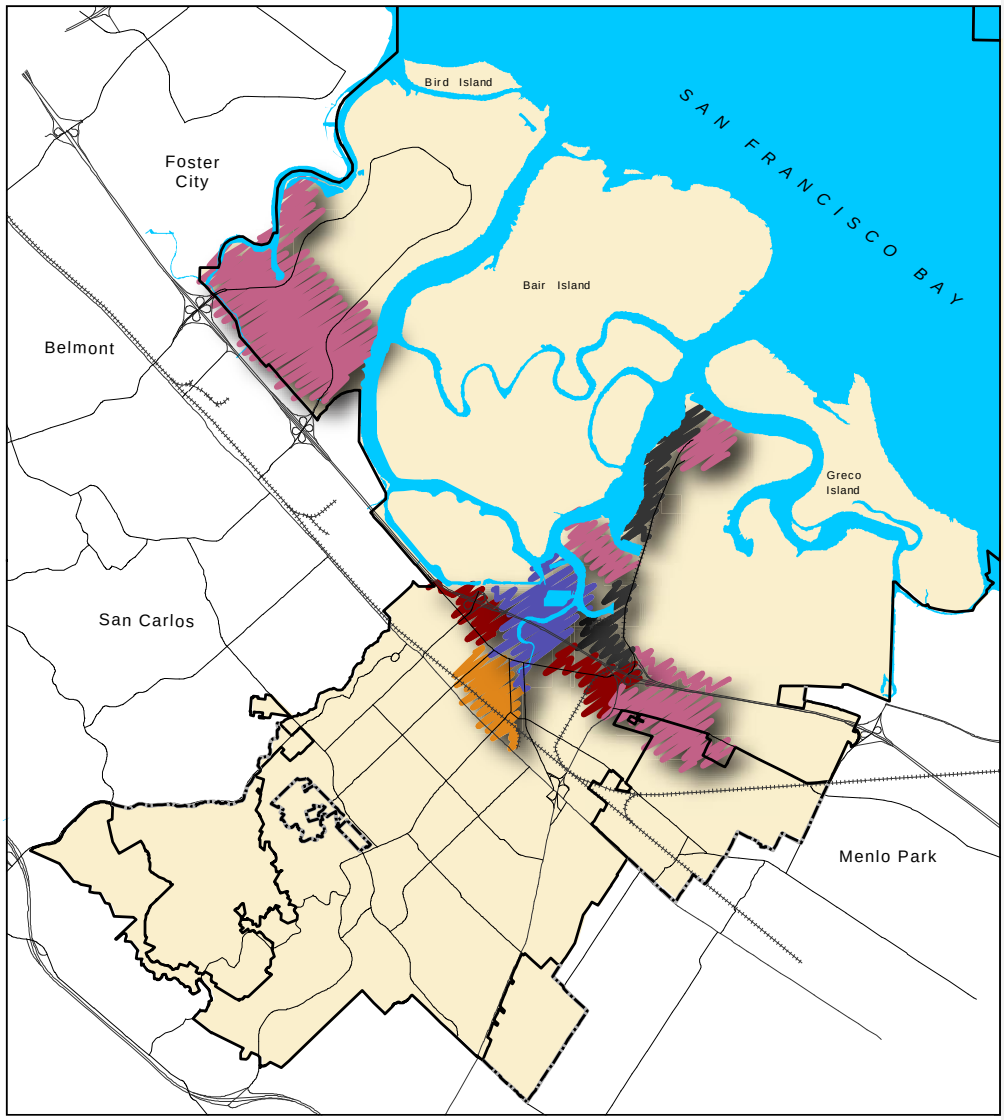


Figure BE-5: Urban Form - Centers

Employment Centers

Redwood City is a premier location for the knowledge, medical, and biomedical industries. As a jobs-rich community, Redwood City businesses provide opportunities for people of diverse backgrounds and skills to find well-paying and satisfying jobs. Redwood City's employment centers are predominately office or light-industrial in orientation, and many areas provide opportunities for research and development, technology, and other emerging types of businesses.

Pacific Shores Center

Redwood City envisions continued success for its Employment Centers, with centers filling particular broad business niches: Redwood Shores, Pacific Shores, and Seaport Center serving the Class A office market, and the Broadway/North Fair Oaks area providing flexible space for many enterprises, including new technologies and light industrial uses. As noted in the Economic Development Chapter of this Element, diversity and depth in business opportunities are key to economic sustainability.

Light industrial businesses offer employment opportunities for residents of all skill and education levels, create and support jobs in multiple other business sectors, and contribute to local tax revenues. The Bay Area's diverse and dynamic economy is increasingly home to many types of "new economy" jobs that function similarly to traditional industrial businesses. Technological advances and global economic changes are increasingly replacing factories and smokestack industries with more light industrial, light manufacturing, biomedical, logistics, and creative industries. The Veterans/Broadway Incubator Overlay responds to and anticipates the evolving nature of industrial businesses by preserving centers that can accommodate young businesses in "green," biotechnology, software, and other emerging industries.

Redwood City encourages new jobs-rich and tax-generating businesses to locate in Redwood City. At the same time, it will be important to monitor

and maintain our jobs: housing balance, so that there are housing choices near work for new employees.

Gateway Centers

Additional major gateway entrances exist in other parts of the city, including Redwood Shores and at the city's borders near El Camino Real and Woodside (Figure BE-3). The Gateway Centers are discussed here as they provide strategic opportunities for large scale land use change and economic development.

The city's entrances from U.S. 101 onto Veterans Boulevard offer the first impression many visitors have of Redwood City. To convey Redwood City's identity at these points of access, as well as to take better advantage of freeway visibility, Redwood City envisions successful commercial and mixed-use Gateway Centers near the Woodside/Veterans and Whipple/Veterans intersections. The Gateway Centers will support commercial, mixed use, and housing. Appropriate commercial uses include hospitality businesses, large-scale commercial and retail centers, and high-quality office space with associated amenities. Attractive streetscapes and clear directional signage will complement the uses. Efforts will be made to enhance these entrances to the city with urban design features and landscaping that support and define Redwood City's image.

Port Industrial Center

Redwood City's location on the San Francisco Bay has influenced the urban form since its beginnings. After the Mexican-American War, California became the thirty-first state, and Americans began using the "Embarcadero," the head of tide water of Redwood Creek close to El Camino Real, to ship merchandise to and from the area. The waterfront boasted prosperous shipping activity, as well as wharf-side industries like shipbuilding, blacksmithing, and tanneries in the late 19th century. The Port was moved from the Embarcadero closer to deep water in the 1920s, and a deep-water channel was dredged. The channel was widened and rail lines extended to the area to create a municipal marina and international port site by 1937.

The Port of Redwood City

Today, the Port of Redwood City is the only deepwater port in South San Francisco Bay. Heavy industrial uses, including gravel and cement processing/distribution, asphalt and concrete manufacturing, metal recycling, and chemical distribution are located along Seaport Boulevard and Blomquist Street near the Port. Utilizing 70 acres for maritime and industrial purposes, the Port specializes in long-term leasing of waterside properties to heavy maritime industries involved in importing or exporting granular bulk products. The Port's infrastructure includes deepwater wharves that handle cargo operations conducted by Port tenants. A freight rail system supports movement of goods to and from the Port.

The Port is one of the city's great assets. Policies emphasize the value provided by the Port and focus on retention; providing for efficient use of land to support the Port, Port-related, and Port-dependent industries and minimizing potential land use conflicts as appropriate. Policies also include encouraging development of a passenger ferry terminal station near the Port.

Redwood Creek/Harbor Center

Redwood Creek connects Downtown Redwood City to the San Francisco Bay. Through Redwood Creek, Redwood City seeks to facilitate a new center that embraces the water features that historically defined our city. This center will link Downtown, Redwood Creek, and the harbor area. In order to facilitate this vision, a master plan that enables a consistent vision is necessary. The master plan should focus on placemaking, "destination uses," design, trails and connections, and public infrastructure requirements. A Master Plan for the Redwood Creek/ Harbor area will strengthen the east/west connection from Downtown to the San Francisco Bay, and create a new destination for residents and

visitors to Redwood City. The Redwood Creek/Harbor Center will act as a complement to Downtown; as a destination and a fundamental part of the cohesive image of Redwood City. Waterfront Neighborhoods (further described in the Neighborhoods discussion earlier in this Chapter) will be an integral part of the Redwood Creek/Harbor Center.

Land Use Plan:

Creating Balance to Achieve Goals and Meet Community Needs

The Land Use Plan guides the development, maintenance, and improvement of land and properties in Redwood City. The Land Use Plan, illustrated in Figure BE-6 and described below, will allow us to preserve qualities that define Redwood City, and develop new paths toward a sustainable future.

Redwood City actively works to create a community that is walkable, has a balanced mix of uses, and fosters economic, environmental, and social sustainability. The City continues to lead Peninsula cities in testing new ideas that support emerging business practices and lifestyle trends and needs, from high-density housing to progressive child-care policies to flexible business space. New approaches to land use planning and development are driven by the connections between land use (and our transportation choices due to the land use patterns) and global warming.

Figure BE-6 illustrates the planned distribution of land uses throughout Redwood City and the Sphere of Influence (together referred to as the planning area). The land use categories below describe how neighborhoods, corridors, and centers in the planning area will develop over time–or will be preserved–to achieve overall land use and urban form objectives. These land use descriptions establish the general development character, types of uses, and activity levels associated with each category.

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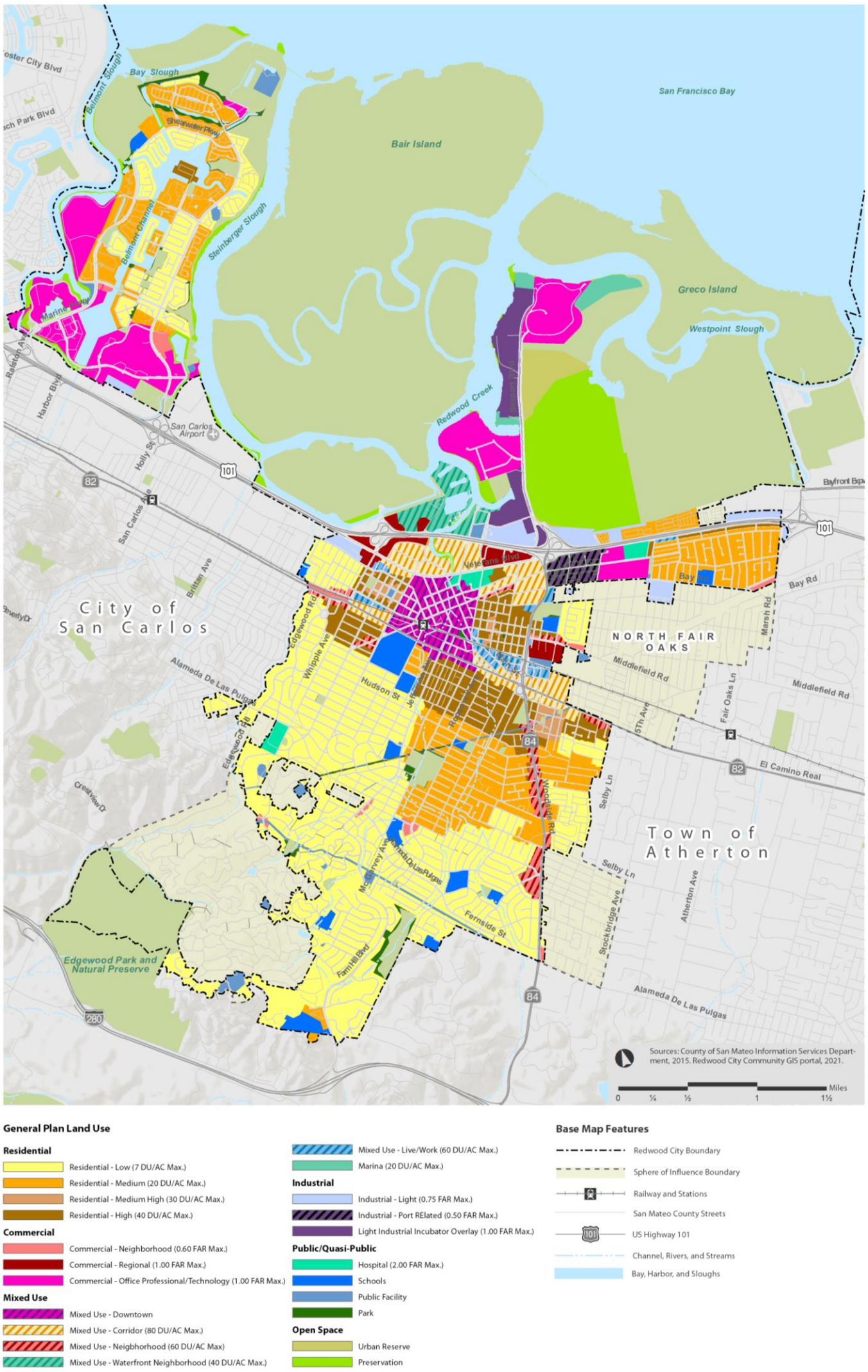

Figure BE-6: General Plan Land Use Map

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The General Plan creates the opportunity for development, redevelopment, and revitalization in designated areas and at appropriate densities and intensities of development. The Urban Form and Land Use Chapter specifies maximum densities (du/acre) for residential areas and maximum intensities (FAR) for permitted non-residential uses. More detailed development standards are set forth in the Zoning Ordinance and other regulatory documents. It is not anticipated that each General Plan designation will have a directly related zoning designation that will permit the maximum development potential identified in the General Plan. Rather, multiple zoning designations may implement a single General Plan designation. Further, it is anticipated that the Zoning Ordinance will use the General Plan designation as a guide and maximum limit, but will create zoning designations that consider existing character, access, and City priorities in determining appropriate densities and intensities as well as the opportunity for change.

Land Use Classifications

Urban Reserve

Land to be preserved for future use to expand the limits of the urbanized area of the city. Exact land use designations are to be withheld pending review of development plans and their environmental consequences.

The 1990 General Plan identified a portion of the Cargill property (located in the bayfront area) as Urban Reserve, and this designation is carried forward in this General Plan. Refer to Appendix A of this General Plan for further discussion of the General Plan policies and designations applicable to the Cargill property and the Urban Reserve land use category.

Residential Land Uses

Four residential land use categories are established to recognize long-established residential neighborhoods in Redwood City, and to preserve and enhance the character of these areas while providing housing opportunities for all household income ranges. While residential uses are the primary permitted uses, other complementary and compatible uses can be established as zoning regulations permit (such as parks, special residential uses addressed by State law, child care facilities, schools, and places of religious assembly).

Residential – Low

Residential – Low

The Residential - Low category accommodates primarily detached, low-density, residential units on individual lots with private yards and private parking. Urban residential and a~~A~~ccessory dwelling units are also permitted in this category.

Development Standards

- Density: 0 to 7 du/acre, or as mandated by State Law (SB 9)
- Maximum height: 2 stories

Residential – Medium

Residential – Medium

The Residential - Medium category accommodates detached and attached residential units, including small-lot subdivisions, duplexes and triplexes, townhouses with private open space, mobile homes, and multi-unit structures that comprise a cohesive development incorporating common open space areas. Parking facilities may either directly serve the associated residence or be centrally located.

Development Standards

- Density: 7.1 to 20 du/acre
- ~~Maximum height: 3 stories~~

Residential – Medium High

Residential – Medium High

The Residential - Medium High category accommodates single structures or a collection of cohesive structures that house multiple units, with common open space areas and amenities. Residential development types may include row houses, townhouses, stacked flats, apartments, and similar housing types. Parking facilities may either directly serve the associated residence or be centrally located.

Development Standards

- Density: 20.1 to 30 du/acre
- ~~Maximum height: 3 stories~~

Residential – High

The Residential - High category provides for higher-density, multi-story residential development, with a focus on providing an urban intensity and function at locations within easy walking distance to transit, recreation and community facilities, employment centers, and commercial services. Development is characterized by multi-story structures, with creative common areas and centrally located parking.

Residential – High

Development Standards

- Density: 30.1 to 40 du/acre
- ~~Maximum height: 4 stories~~

Commercial Land Uses

Four commercial categories establish opportunities for varied commercial enterprises. Our commercial areas provide places where residents and visitors to Redwood City can shop for goods and services, and where businesses can locate to meet the needs of local, regional, and international markets. In addition, our commercial spaces provide space for companies of all sizes to locate in office developments.

Commercial – Neighborhood

The Commercial - Neighborhood category provides areas where lower-intensity retail, office, and service-oriented businesses can locate to meet the needs of surrounding residential neighborhoods. Businesses should have limited impact on adjacent residential areas, particularly in terms of lighting, signage, traffic, odor, noise, and hours of operation. Neighborhood commercial development should be designed and intended to accommodate and encourage pedestrian access, and must be compatible with surrounding development in terms of scale, building design, materials, and color.

Commercial – Neighborhood

Development Standards

- Maximum intensity: 0.6 FAR
- Maximum height: 2 stories

Commercial – Regional

Commercial – Regional

The Commercial - Regional category provides opportunities for general retail, commercial services, restaurants, lodging, vehicle sales and service, commercial recreation, professional offices, medical and financial institutions, and other similar business activities. Representative development forms include large retail centers anchored by one or more major tenants, large stand-alone retail stores, hospitality uses, and automobile dealerships. Uses specifically prohibited include commercial warehousing, mini-storage, trucking and transportation-related uses, and heavy manufacturing.

Development Standards

- Maximum intensity: 1.0 FAR
- Maximum height: ~~5 stories within U.S. 101 corridor; 3 stories in all other locations~~

Commercial – Office Professional/Technology

Commercial – Office Professional/Technology

The Commercial - Office Professional/Technology category provides opportunities for small- and large-scale professional offices, office complexes and campuses, and related uses that support office uses. This category also facilitates districts where emerging and evolving technologies and businesses can operate in flexible building spaces. Such businesses may involve combinations of traditional office activities and small-scale manufacturing or research and development uses.

Development approaches can include low-scale buildings with limited or no outdoor use, or multi-story office buildings and structured parking. Any use involving heavy trucking activity or warehousing is specifically prohibited.

Development Standards

- Maximum intensity: 1.0 FAR
- Maximum height: 5 stories; up to 8 stories as part of a coordinated master plan

Mixed Use Land Uses

In recognition of Redwood City's continuing evolution as an urban place and the community's desire to achieve sustainable development forms, several Mixed Use land use categories are established. Mixed-use development approaches offer opportunities for people to live close to work or near transit stops, to walk to neighborhood stores and parks, to enjoy indoor and outdoor entertainment close to home, and to experience vibrant pedestrian districts.

Mixed Use – Neighborhood

The Mixed Use - Neighborhood category accommodates moderate-scale mixed-use developments that combine residential uses with neighborhood-serving commercial storefronts. Commercial retail and services should serve the immediate neighborhoods and facilitate pedestrian-friendly environments. Single-use structure heights are limited to two or three stories, as outlined below, and combined use structure heights can extend up to four stories with proper consideration given to the scale and intensity of adjacent residential neighborhoods.

Mixed Use – Neighborhood

Development Standards

- Combined Use (Commercial and Residential)
  - Maximum residential density: 640 du/acre
  - Maximum commercial intensity: 1.0 FAR
  - ~~Maximum height: 4 stories~~
- Single Use (Commercial)
  - Maximum commercial intensity: 0.6 FAR
  - ~~Maximum height: 2 stories~~
- Single Use (Residential)
  - Maximum residential density: 640 du/acre
  - ~~Maximum height: 3 stories~~

Mixed Use – Live/Work

Mixed Use – Live/Work

The Mixed Use - Live/Work category facilitates a creative mix of residences and low-intensity workplaces. Live/work environments combine residential occupancy with commercial activity in the same building space, generally with the resident using the combined or adjacent commercial space for his or her business. Typical uses include artist lofts, studio spaces, small offices, and similar low-intensity uses. Creative industrial workspace areas are also permitted, provided that activities limit or confine noise, dust, and vibration impacts. Stand-alone residential development is not permitted.

Development Standards

- Combined Use
  - Maximum residential density: ~~62~~0 du/acre
  - Maximum commercial intensity: 2.0 FAR
  - ~~Maximum height: 3 stories~~
- Single Use (Nonresidential)
  - Maximum intensity: 2.0 FAR
  - ~~Maximum height: 3 stories~~

Mixed Use – Corridor

Mixed Use – Corridor

The Mixed Use - Corridor category allows for the reinvention of key corridors to support major transit and complementary commercial and residential uses, encouraging transit use, bicycle use, and pedestrian activity. In some places, schools may be necessary and appropriate. Development approaches allow for both horizontal and vertical mixed use. Ground-floor retail/service storefronts may be required at designated nodes. Design considerations should include sensitivity to lower-intensity residential neighborhoods behind sections of the corridor, public and private amenities, and transit accessibility features. The height of single use commercial and residential structures is limited to four stories. Combined use commercial-residential structures can extend in height up to six stories, provided privacy concerns of established neighborhoods are adequately addressed through setbacks of upper stories or other design approaches. Structured parking is allowed, provided no parking levels front directly on El Camino Real, Broadway, Veterans Boulevard, or Woodside Road.

Structures that exceed the applicable height restrictions may be permitted on Broadway or Veterans Boulevards to accentuate city gateways, provided that any such project respects surrounding development and includes signature design quality.

Development Standards

- Combined Use (Commercial and Residential)
  - Maximum residential density: ~~60~~ 80 du/acre
  - Maximum commercial intensity: FAR: 1.00
  - ~~Maximum height: 6 stories~~
- Single Use (Commercial)
  - Maximum commercial intensity: FAR: 0.5
  - ~~Maximum height: 4 stories~~
- Single Use (Residential)
  - Maximum residential density: 8~~6~~0 du/acre
  - ~~Maximum height: 4 stories~~

Mixed Use – Downtown

The Mixed Use - Downtown category applies to Redwood City's historic Downtown core and is established to create a vibrant city center with offices, theaters, retail businesses, and restaurants serving the residences, day-time businesses, and night-time entertainment populations. In Downtown, open spaces are primarily public and urban in nature, with extra emphasis on high-quality public spaces and traditional urbanism. Parking is primarily in the form of shared public facilities. Uses specifically prohibited in Downtown, due to their incompatibility with a pedestrian-oriented mixed-use district, include vehicle sales and repair, industrial and manufacturing businesses, and wholesaling activities. Maximum heights Downtown will range from three stories at the edges, to 12 stories in the very center, with most areas having an 8 story height limit.

Mixed Use – Downtown

Development Standards[1]

- Maximum density: No limit on density, with a ~~maximum~~ residential capacity ~~of 2,500 additional units~~per environmental review document
- ~~Height: 3-12 stories~~
- Maximum Intensity: No limit on FAR, with a ~~maximum~~ nonresidential capacity ~~of 586,000 square feet of additional nonresidential space~~per environmental review document

[1] It should be noted that the figures shown here representing maximum density and maximum intensity may be revised based on future Downtown plans. In this event, an amendment to this document will be required, subject to applicable environmental review under CEQA and an associated public review process.

Mixed Use – Waterfront Neighborhood

Mixed Use – Waterfront Neighborhood

The Mixed Use - Waterfront Neighborhood category allows for the creation of unique neighborhoods that take advantage of Redwood City's Bay frontage. The mix of allowed uses includes housing and supporting commercial businesses, hospitality and restaurant uses that attract visitors, and businesses that support marina functions. Housing options can also include floating homes, houseboats, and live-aboard boats, in addition to residential buildings. Public access and open space amenities are required along the waterfront, and internal pedestrian circulation of the neighborhoods should link to waterfront amenities. The emphasis is on residential development, with commercial uses providing a clear supporting use.

Development Standards

- Combined Use (Commercial and Residential)
  - Maximum residential density: 40 du/acre
  - Maximum commercial intensity: 0.4 FAR
- Single Use (Commercial)
  - Maximum commercial intensity: 0.4 FAR
- Single Use (Residential)
  - Maximum residential density: 40 du/acre
- All Uses: Height
  - No maximum height is established in the General Plan. However, heights for each project will be evaluated through site plan review and must:
    - Relate to property size and terrain
    - Relate to surrounding uses and character
    - Orient toward the water, tiering heights farther away from the water's edge
- All Uses: Public Space
  - Provide public access to the water line
  - Provide public space along and/or adjacent to the waterline

Marina

The Marina category allows for public and private marinas, ferry terminals, and uses complementary to these maritime and waterfront activities. Restaurants, retail shops, and other visitor-serving uses supportive of boating and ferry transportation may also be established. Housing options can include housing within mixed-use structures, floating homes, and live-aboard boats. Public access and amenities are key uses along the waterfront. Stand-alone residential building development is not permitted.

Marina

Development Standards

- Combined Use (Commercial and Residential)
  - Residential Density: 20 du/acre
  - Commercial FAR: 0.5
  - Height: 3 stories
- Single Use (Commercial)
  - Commercial FAR: 0.5
  - Height: 3 stories

Industrial Land Uses

Redwood City's strategic location on the Bay and access to the deep-water Port facilitated industrial activity along the city's bayfront throughout our history. The Port of Redwood City is the only deepwater port in South San Francisco Bay. Heavy industrial uses, industrial goods distribution, and infrastructure materials manufacturing (including gravel and cement processing), are located near the Port. The city is also home to lighter industrial uses such as light manufacturing and repair/service shops.

Industrial – Light

The Industrial - Light category provides areas for relatively low-intensity industrial uses. Light industrial activities do not involve substantial truck traffic or outdoor fabrication or assembly, do not produce odors, generally operate only during typical weekday hours, and do not involve any operations normally considered hazardous within an urban environment. Prohibited uses within this designation include commercial warehousing, trucking and transportation-related businesses, and heavy manufacturing.

Industrial – Light

Development Standards

- Intensity: 0.75 FAR
- Maximum Height: 3 stories

Light Industrial Incubator Overlay

Light Industrial Incubator Overlay

The Light Industrial Incubator Overlay is intended to provide highly flexible space for start-up and expanding light industrial businesses. In particular, the Incubator Overlay provides opportunities for small light industrial businesses to expand to medium-sized businesses, and to continue to function and create new jobs in Redwood City. The Overlay will also allow for the conversion of older out-dated uses, as the market dictates, into needed incubator space for smaller uses supporting health research, clean industrial, green technology, or research/development businesses.

Development Standards

- Intensity: 1.0 FAR
- Maximum Height: 3 stories

Industrial – Port Related

Industrial – Port Related

The Industrial - Port Related category serves an important role: to protect and enhance the valuable deep-water Port facilities in Redwood City. This designation provides for heavy industrial activities requiring large properties and water access for materials loading, storage, and processing, combined with convenient access for trucks, rail, and port berthing facilities. Allowed uses include industrial operations involved in the loading/unloading, storing, recycling, and transferring of large quantities of dry, liquid, and neo-bulk cargoes; green energy production; rail facilities; as well as certain other maritime-oriented activities, including passenger vessels, ship repair or construction, and related ocean vessel support services.

Development Standards

- Maximum intensity: 0.5 FAR
- Maximum height: 3 stories for occupied building space; taller ancillary structures may be allowed

Public and Quasi-Public Land Uses

The Public and Quasi-Public category refers to uses operated for public benefit.

Public Facility

The Public Facility category encompasses government, civic, cultural, health, and infrastructure uses and activities which contribute to and support community needs.

Public Facility

Development Standards

- Maximum intensity: 1.0 FAR
- Maximum height: 3 stories; higher structure heights permitted for facilities within Downtown per the Downtown Precise Plan

Hospital

The Hospital category encourages the concentration of established and proposed healthcare facilities and their related uses. Appropriate uses include hospitals, large-scale professional offices and clinics offering medical, dental, or related services, and ancillary buildings and facilities. Hospitals that are part of a master plan may include a signature building that exceeds the maximum building height.


Hospital

Development Standards

- Maximum intensity: 2.0 FAR
- Maximum height: 5 stories

Schools

The Schools category applies to both public and private educational facilities, including elementary schools, middle schools, high schools, community colleges, private colleges, and other school-related facilities that contribute to and support community education needs and objectives. School facilities should reflect the development character and intensity of the neighborhoods or centers in which they are located. For example, within the city's older neighborhoods, school buildings should be lower scale. Within Downtown or along the corridors, more urban forms may be appropriate.


Schools

Development Standards

- Intensity: Varies
- Maximum height: 3 stories

Parks

Parks

This category applies to open space areas set aside for active and passive recreation, including public and private parks of all sizes, sports fields, recreational facilities, plazas, and trails.

Open Space Categories

The Open Space categories identify areas devoted to the preservation of natural resources and use for outdoor recreation (including areas of historic and cultural value). In addition, much of Redwood City's land area is actually under water—occupied by the San Francisco Bay and controlled waterways.

Preservation

Preservation

The Preservation category applies to natural and other areas set aside to allow for:

1. The protection and preservation of unique resources in Redwood City, including wildlife habitat, creeks, tidal marsh lands, protected hillsides, and geological formations.
2. Opportunities for resource enhancement, including restoration of tidal and other wetlands and creeks.
3. The preservation and management of locally available natural resources, including but not limited to timber, marine, wind, solar, and other types of resources.

Allowed uses must be complementary to resource preservation, enhancement, and management, including low-intensity recreational facilities, such as hiking and biking trails and related improvements.

Controlled Waterway

Controlled Waterway

The Controlled Waterway category applies to water features located within the Redwood Shores area. These waters are separate from the waters of the San Francisco Bay and therefore are not subject to tidal influences. Permitted uses include boating and fishing, as regulated by other government agencies. Property lines or private properties that extend into the Redwood Shores lagoon shall have the same land use designation as the landward property where the main residential structure is located.

San Francisco Bay

The San Francisco Bay category includes all natural water features subject to tidal influences, and is established to provide for the use, management, and protection of the tidelands and submerged lands of San Francisco Bay. Permitted uses include fishing, boating, and similar marine-related activities, as regulated by other government agencies.

San Francisco Bay

Areas Subject to Flooding

According to State law as revised in 2007 (AB162), land use elements must identify and annually review the areas covered by the General Plan that are subject to flooding as identified by floodplain mapping by either the Federal Emergency Management Agency (FEMA) or the Department of Water Resources (DWR). The Hazards Management Chapter of the Public Safety Element further discusses flooding hazards.

FEMA, through the National Flood Insurance Program, produces Flood Insurance Rate Maps (FIRM) that identifies properties in different flood insurance risk categories. FIRMs indicate areas that are subject to 100-year and 500-year floods (see Figure BE-7). The areas subject to 100-year floods are located nearest to the Bay, northeast of U.S. 101. The city has historically experienced mild flooding in the areas near Cordilleras Creek (descending from the Santa Cruz Mountains) and in the Friendly Acres neighborhood, southeast of Woodside Road. These areas are identified in the 500-year floodplain. Portions of Redwood Shores ~~is also~~are located in areas projected to be impacted by sea level rise~~the 500-year floodplain. It is anticipated that the current FEMA maps will be replaced by new Digital Flood Insurance Rate Map (DFIRM) in 2010. These new maps may identify different areas within the planning area that are located within floodplains.~~

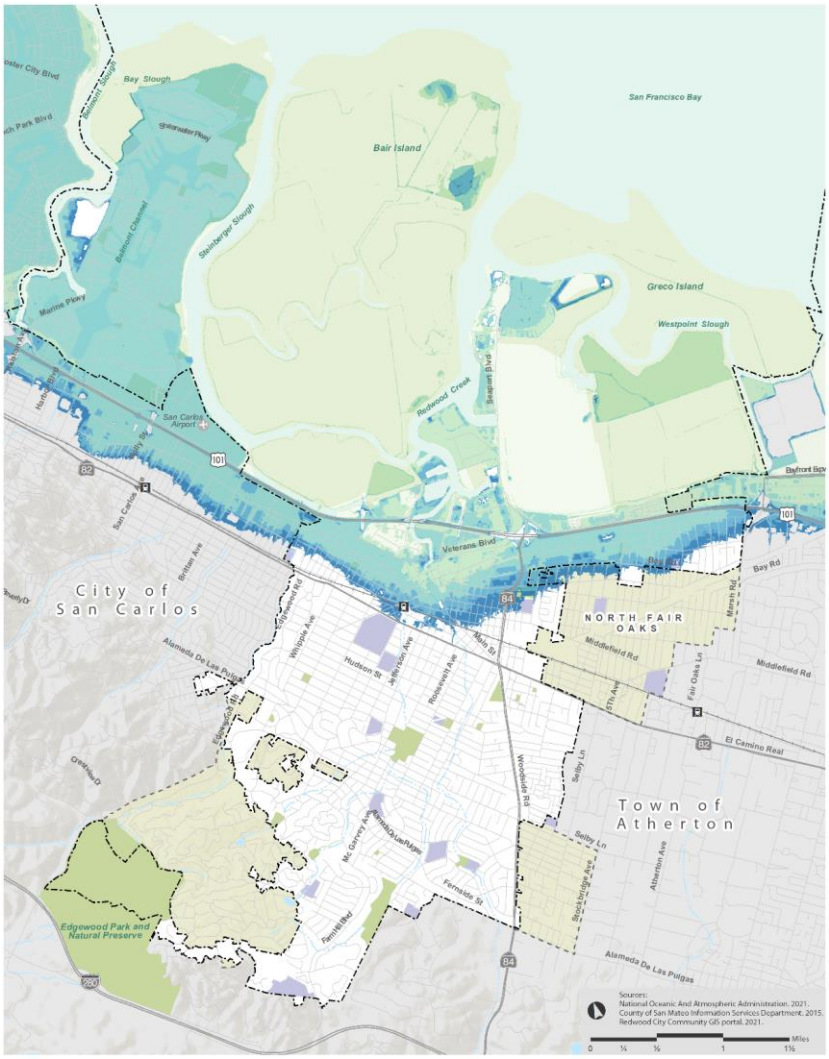
100-year floods have a 1% chance of occurring each year; 500-year floods have a 0.2% chance of occurring each year.

Sea levels are projected to increase significantly along the Redwood City shoreline and along both sides of Highway 101. Increased sea levels can cause bridges and roadways to become impassable, flood control infrastructure to not work effectively, and hazardous material facilities to increase the risk of accidentally releasing harmful substances. Natural systems, such as wetlands and tidal marshes, can be disrupted by higher tide levels. During strong storms and king tides, shoreline flooding may damage or destroy homes and commercial buildings in low-lying areas in eastern Redwood City. Refer to the Safety Element for additional sea level rise information.

~~DWR has initiated the Awareness Floodplain Mapping project, with the goal of identifying all pertinent flood hazard areas in California by 2015~~

Flooding concerns are discussed in more detail in the Hazards Management Chapter of the Public Safety Element.

~~for areas that are not mapped under the FEMA National Flood Insurance Program and to provide the community and residents with an additional tool in understanding potential flood hazards that are currently not mapped as a regulated floodplain. The awareness maps identify the 100-year flood hazard areas using approximate assessment procedures. These floodplains are shown simply as flood prone areas without specific depths and other flood hazard data. The Awareness Floodplain Maps that have been created for the Redwood City area indicate that no Awareness Floodplain areas exist within the city as of 2009. However, Awareness Floodplain mapping efforts are ongoing~~.



Sea Level Rise Scenarios

- 1 foot (Low-End Scenario)
- 3 feet
- 5 feet (Mid-Level Scenario)
- 7 feet
- 9 feet (High-End Scenario)

Base Map Features

- Redwood City Boundary
- Sphere of Influence Boundary
- Railway and Stations
- San Mateo County Streets
- US Highway 101
- Channel, Rivers, and Streams
- Bay, Harbor, and Sloughs
- Open Space and Parks
- Schools

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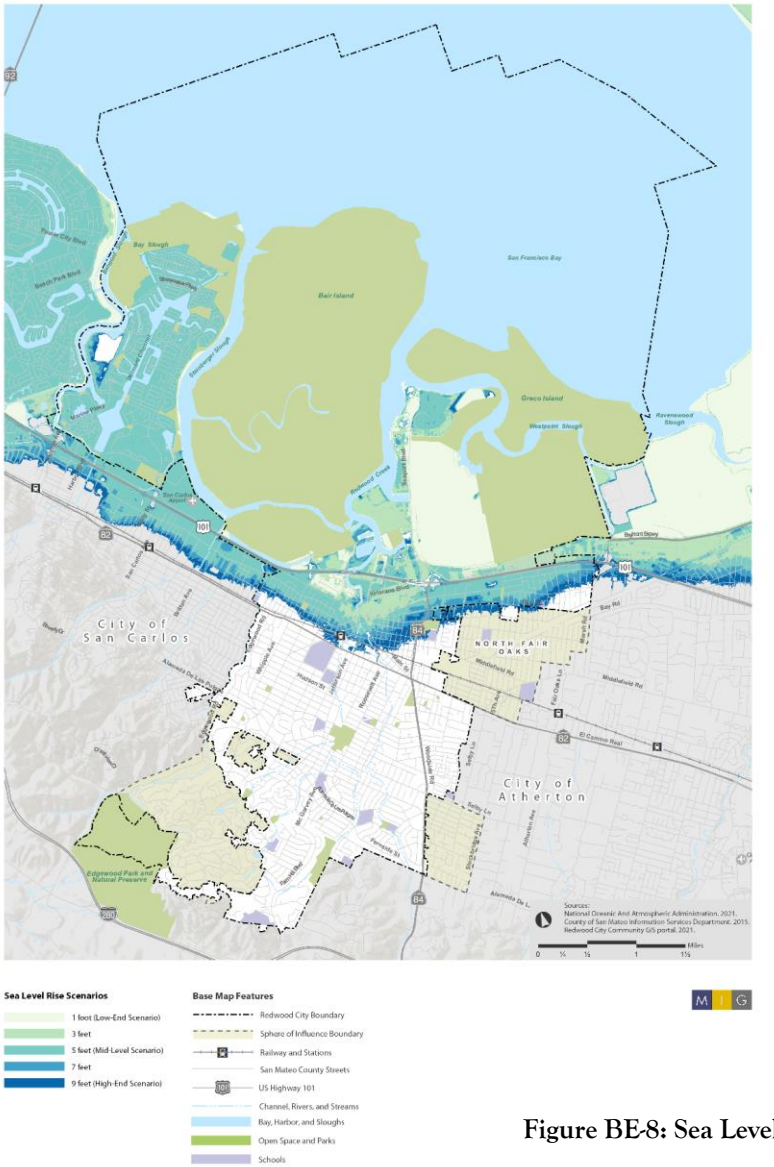
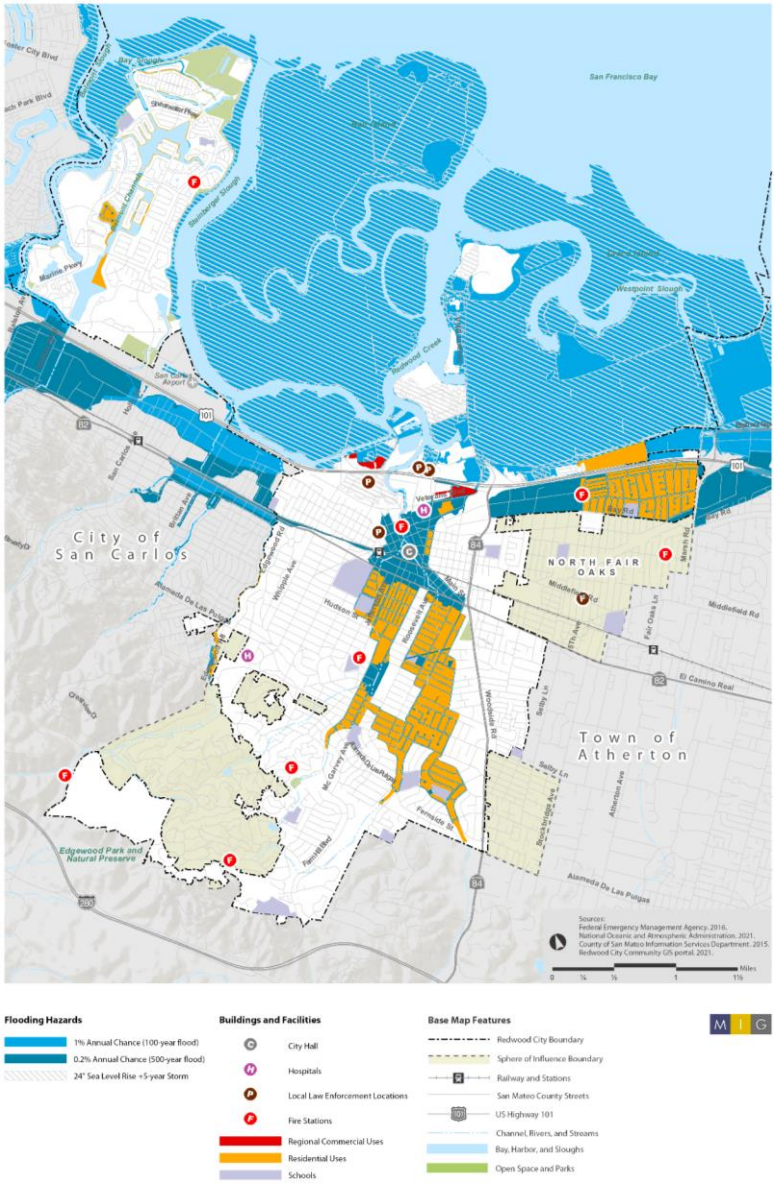


Figure BE-8: Sea Level Rise


San Francisco Bay
Westpoint Slough
Redwood Creek
Steinberger Slough
Marine Pkwy
City of San Carlos
NORTH FAIR OAKS
Town of Atherton
Edgewood Park and Natural Preserve
El Camino Real
Alameda De Las Pulgas
Middlefield Rd
Sources:
Federal Emergency Management Agency, 2016.
National Oceanic and Atmospheric Administration, 2021.
County of San Mateo Information Services Department, 2015.
Redwood City Community GIS portal, 2021.
Miles
0 ¼ ½ 1 1½
Flooding Hazards
1% Annual Chance (100-year flood)
0.2% Annual Chance (500-year flood)
24" Sea Level Rise +5-year Storm
Buildings and Facilities
City Hall
Hospitals
Local Law Enforcement Locations
Fire Stations
Regional Commercial Uses
Residential Uses
Schools
Base Map Features
Redwood City Boundary
Sphere of Influence Boundary
Railway and Stations
San Mateo County Streets
US Highway 101
Channel, Rivers, and Streams
Bay, Harbor, and Sloughs
Open Space and Parks
M I G

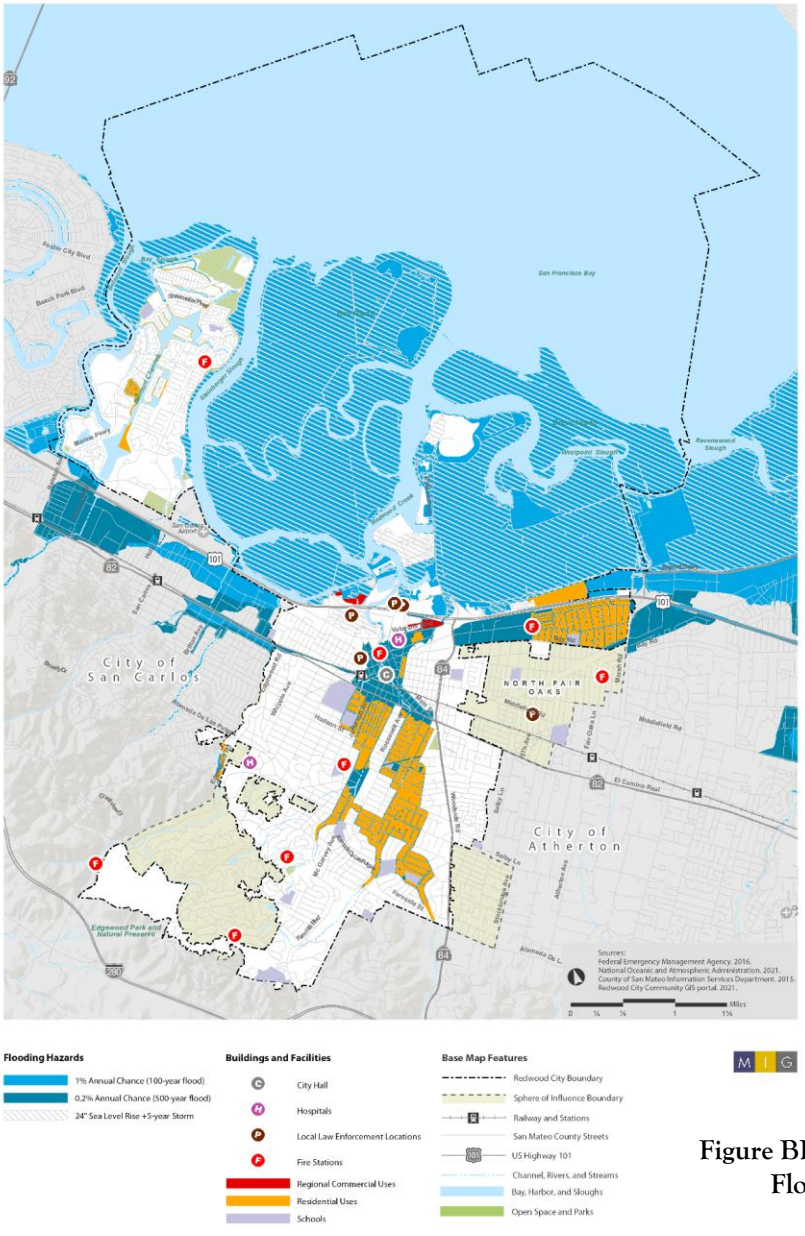


Figure BE-7: FEMA Flood Hazard

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Sustainable Change

"California must adopt the necessary changes that will encourage economic growth while reducing green house gases ... [through] ... maximum building efficiency and innovative land use."

- Jerry Brown, California Attorney General, 2008

Redwood City residents, businesses, and leaders have worked hard for over 150 years to create a great community. They recognize that much of Redwood City's success results from its ability to adapt to changing conditions and community needs relative to housing, business activity, and community facilities and services. These forces of change affect all Bay Area cities, with all working to optimize use of diminishing land and other resources as the regional population increases. Unmanaged growth can strain infrastructure, parks, water resources, government services, and school capacity, and diminish resources in a manner that limits the ability of future generations to enjoy the life quality of today. Redwood City is committed to being smart and strategic about how it plans to accommodate a growing population, and how it will provide the services, infrastructure, jobs, and development conditions needed to preserve the quality of life in Redwood City.

Smart approaches to managing long-term change include adopting policies and practices that sustain environmental, economic, and human health conditions for future Redwood City residents. This includes land use patterns and development practices that reduce greenhouse gas emissions, accommodating uses and development that support local power generation and food production, and requiring thoughtful use of resources in everyday business operations.

In support of these objectives, the Urban Form and Land Use goals, policies, and implementation programs focus new growth into mixed-use activity centers and along corridors that are pedestrian friendly, serve as centers of community, and easily link to the regional transit system. Increased development densities and intensities in the infill areas and innovative parking approaches, which will be implemented primarily through zoning regulations, will incentivize smart growth.

Sustainable change also means changing the way we construct buildings so that they are more energy efficient, less water- and resource-intensive, easily solar adaptive, and healthier for occupants. This can be accomplished most directly through our green building program that requires new buildings to "build green." Green building is an integrated approach to the design, construction, operation, and maintenance of buildings to limit a building's impact on the environment. Redwood City has adopted a Green Building Ordinance to help the City achieve its sustainable objectives.

Finally, sustainable change means consciously thinking about our daily activities and the potential impact that we may have on the environment, and adjusting our behavior to act in a sustainable way. One of the most sustainable ways to act is to walk, bike, or take transit to our destinations, rather than driving. The Urban Form and Land Use goals, policies, and implementation programs are geared to facilitate increased pedestrian access to a variety of destinations. The walkability of destinations such as libraries, community centers, grocery stores, parks, and schools is outlined in the "Walking Shed" map (Figure BE-~~9~~8). A walking shed (also known as a pedshed) shows the area within a comfortable walking distance to a particular point of interest.

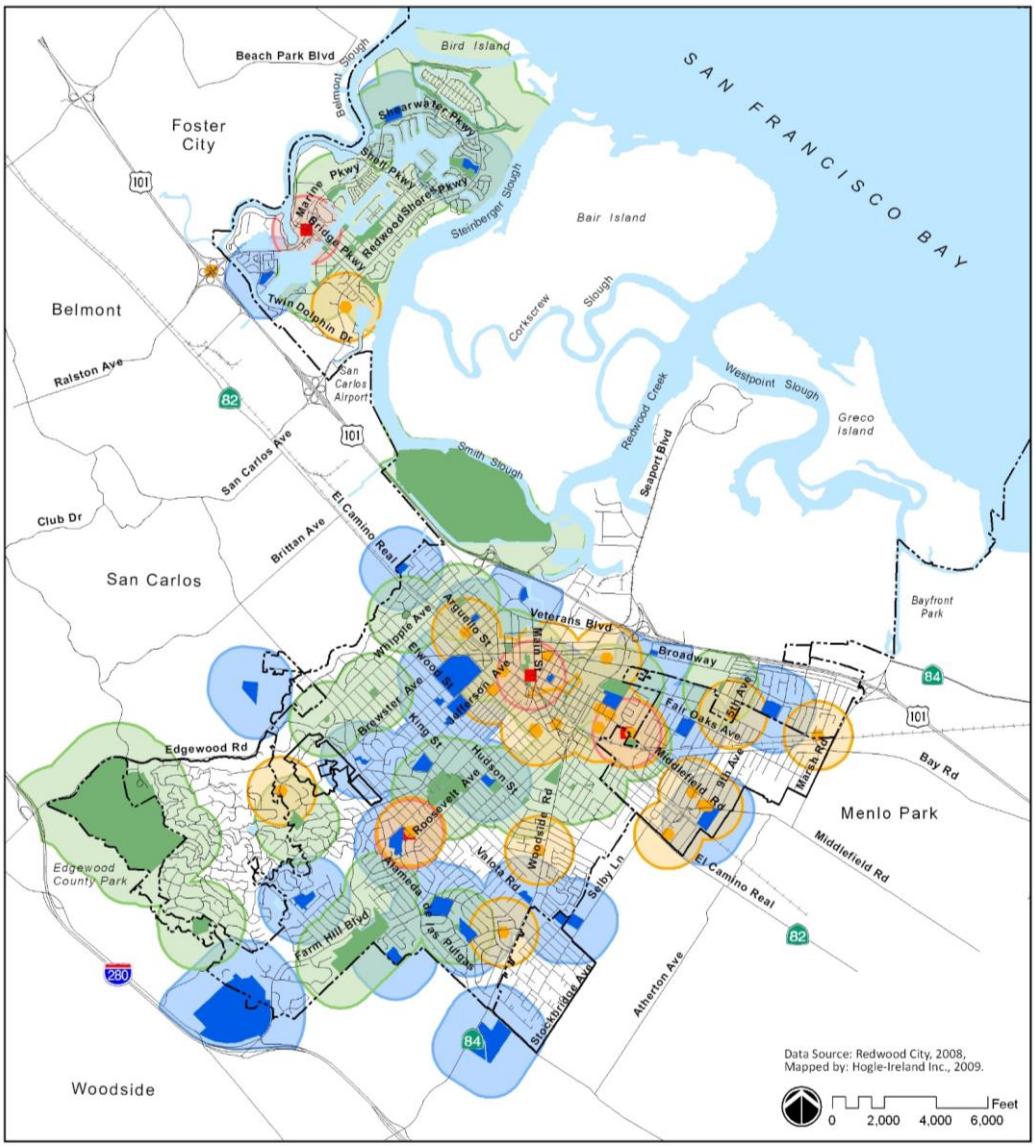
As indicated in Figure BE-~~9~~8, Downtown and areas near Downtown hold great opportunities for sustainable infill housing development, as a plethora of shopping, jobs, parks, and community destinations are located all within a short walking distance of these areas. In addition, El Camino Real and Woodside Road are well-positioned to facilitate an increase in sustainable infill development, with shopping and community destinations within walking distance of most locations along these corridors.

Jobs:Housing Balance

Today, people across the United States are driving longer distances, to more destinations, than we did 30 years ago. Nationally, vehicle trips between 1969 and 1990 increased by more than three times the population increase, while the average trip distance increased by 9 percent. Land use policies, which directly influence the distance between destinations, accounted for approximately one-third of the increase in driving, according to the Urban Land Institute.

In order to help stem this increase in driving and related traffic congestion, Redwood City seeks to be a "balanced community." A balanced community is one where residents can live, work, socialize, and recreate. Not only does this enhance quality of life by providing choices and destinations, but it also furthers sustainability goals through the availability of shortened commute times and better options for other forms of transportation, including public transit, bicycling, and walking. In addition, balancing land uses provides the City with the diversification to run a successful government, with a diversified tax base and a variety of marketable characteristics.

See the Economic Development Chapter for more information on balancing land uses and economic development opportunities.



BE-9: Walking Shed Map

A primary component of a balanced community is the availability of jobs near housing units. Linking jobs and housing holds significant potential to reduce vehicle miles traveled (VMT) and vehicle hours traveled (VHT). The term "jobs:housing balance" refers to a ratio that quantitatively expresses the relationship of where people work ("jobs") to where people live ("housing"). A jobs:housing balance does not necessarily mean that there is one job for every employed person in the city; rather it means that the City has considered and facilitates an appropriate balance of jobs and housing and uses the jobs:housing ratio as an indicator when considering policy implementation. As of 2007, ABAG estimated that the jobs:housing ratio in Redwood City in 2005 was 1.78. ABAG projected that the jobs:housing ratio would increase to 2.00 by 2030.

In 2000, the U.S. Census reported that 39,189 Redwood City residents were employed. At the same time, the Association of Bay Area Governments estimated 57,980 jobs in the city, yielding a jobs: employed residents ratio of 1.48. However, as discussed in the Economic Development Chapter, only a small portion of Redwood City residents work within the city. The city receives nearly 40,000 in- and out-commuters each day; these are residents of other cities who work within Redwood City.

Throughout the life of this General Plan, it will be important to routinely review our jobs:housing balance indicator, and adjust our land use policies accordingly to achieve sustainability objectives and provide for strategic opportunities.

Another important consideration associated with jobs:housing balance is "job match." While the ratio of jobs per employed residents gives insight to the "balance" of a city; it is more meaningful if the jobs actually match the employment skills and needs of residents. Similarly, it is also meaningful if the housing stock is affordable to and appropriately sized for employees and their families.

Implications of Urban Form and Land Use Policy

Over time, as properties recycle to new uses, the distribution of uses within the community will change. Application of land use policy will facilitate the evolution toward the mix of uses Redwood City envisions. Table BE-2 summarizes the level of capacity created for development through the 2030 planning horizon year for the General Plan, in comparison to the baseline data in 2008. This development scenario assumes significant redevelopment of private property to nearly maximum intensities and densities outlined in the General Plan land use categories. This summary should be considered as an outside envelope for capacity.

Table BE-2: 2030 Assumed Development Summary

	Dwelling Units			Population			Employment		
	City	SOI [1]	Total	City	SOI[1]	Total	City	SOI[1]	Total
Baseline: 2008	28,522	8,659	37,181	77,071	23,407	100,478	52,300	5,680	57,980
General Plan Assumed Development: 2030	36,749	9,535	46,284	92,013	24,718	116,731	77,623	8,387	86,010
Change	8,227	876	9,103	14,942	1,311	16,253	25,323	2,707	28,030
Percent Change	29%	10%	25%	19%	6%	16%	48%	48%	48%

Note: 1) SOI: Redwood City Sphere of Influence

Redwood City has exhibited a trend of moderate growth over the past 40 to 50 years, despite the fact that prior General Plans allowed for fairly aggressive growth. Contributing factors include the largely built-out nature of the city, high land and construction costs, well-established and profitable land uses that offer property owners few financial incentives to redevelop (public or private), and an intense community interest in preserving historic buildings and neighborhoods. Thus, recycling of properties to the higher intensities allowed by previous land use policy has occurred on a very limited basis.

Table BE-2 represents assumed development to 2030; an outside envelope for capacity. A variety of issues must be considered in conjunction with assumed development levels. As such, the following factors will guide implementation of General Plan land use policy:

A complete discussion of Redwood City's water demand and supply is included in the Water Resources Chapter of the Natural Resources Element.

- The availability of domestic water supplies places an absolute limit on the amount of new development that can occur in the city over the long term. Through comprehensive water conservation efforts and expanded recycled water deliveries, Redwood City intends to remain within its contractual allotment from Hetch Hetchy, and be able to supply water for new residential and commercial development in the city.

- Redwood City adopted the 2005 Urban Water Management Plan (UWMP) in accordance with the requirements of the California Urban Water Management Act. The UWMP identifies and quantifies projected water demands to the year 2030, and the existing and planned sources of water available to the city to meet those demands. The assumed development summary in Table BE-2 projects an increase in residential and nonresidential development beyond the amounts of development assumed in the water demand projections for the 2005 UWMP.

Water is a limited resource for Redwood City, and demands upon our limited supply must be carefully monitored. The UWMP will be updated again in 2010. As a part of the 2010 UWMP update, the development assumptions of the General Plan will be utilized for continuity and consistency. As more research on water demand is completed as part of the 2010 and subsequent UWMPs, assumed development totals could potentially be adjusted. Future UWMPs may also consider development priorities and recommendations. If assumed development totals are adjusted, the City will revise the General Plan accordingly; and complete any reviews as required by CEQA.

- Development priority will be given to infill sites that are well served by "complete streets"—transit, pedestrian amenities, and bike ways. Given that such facilities will be developed and enhanced over time, development will occur at a pace that responds to and supports the emerging availability of alternative transportation modes.

- The modeling completed to project housing and employment growth related to the General Plan's land use policy (assumed development potential in Table BE-2) involved conservatively high assumptions in order to accommodate potential growth and meet CEQA analysis requirements. As such, the General Plan allows substantial opportunities for economic development and related growth. The City will need to monitor development over time, assessing jobs:housing balance and sustainability indicators to ensure that policy priorities outlined in this General Plan are being achieved. This may require strategic implementation of land use policies through the Zoning Ordinance, as discussed below. In addition, indicator assumptions may change over time, and should be reviewed for relevance as well as achievements.

- The General Plan will be strategically implemented through the Zoning Ordinance, City processes, and projects, to best facilitate important goals and opportunities. Development priority, and related changes to the Zoning Ordinance, will be given to the land use categories that support residential development opportunities in Downtown, corridors, and Mixed Use - Waterfront Neighborhoods. This strategy will achieve Housing Element goals and facilitate an active, lively residential environment in our Downtown and along our major corridors. Revisions to the Zoning Ordinance to implement economic development opportunities will follow. Care and attention will be

paid to the commercial marketplace, with commercial goals implemented and adjusted over time as appropriate.

- As planned infrastructure improvements, long-term public facility and service needs, and resource use–as set forth in the other General Plan Elements–have been based upon these growth projections, the City will establish a development tracking system to monitor projected versus actual conditions and adjust policies and programs accordingly. Both water supply and our jobs:housing balance need to be carefully monitored, and development allowances adjusted as appropriate to achieve sustainability objectives and to facilitate strategic opportunities for Redwood City.

Urban Form and Land Use Goals, Policies, and Programs

The Urban Form and Land Use goals and policies implement the following Guiding Principles of this General Plan:

- ***Plan for sustainability within our finite resources including but not limited to open space, water, energy, and air quality.***
- ***Ensure that change harmonizes with existing development to preserve our historic and neighborhood character.***
- ***Partner with and embrace our neighborhoods to improve health, safety, and well-being for all in our community.***
- ***Design for active pedestrian and bicycle-friendly streets and public spaces.***

GOAL BE-1: Achieve complete and integrated neighborhoods, corridors, and centers.

Policy BE-1.1: Maintain and enhance the beneficial and unique character of the different neighborhoods, corridors, and centers, and open spaces that define Redwood City.

Policy BE-1.2: Promote the identity of Redwood City as a special place within the Bay Area.

Policy BE-1.3: Provide attractive entrance designs at city gateways that welcome visitors and promote memorable characteristics of Redwood City.

Policy BE-1.4: Require that buildings and properties be designed to ensure compatibility within and provide interfaces between neighborhoods, corridors, and centers.

Policy BE-1.5: Require that new and renovated buildings be designed to avoid styles, colors, and materials that negatively impact the environment or the design character of the neighborhood, corridor, and center in which they are located.

Policy BE-1.6: Require that new large-scale projects are developed with an interconnected pattern of small blocks to induce walking and create walkable neighborhoods and to maximize connections between neighborhoods. If a new large-scale development project is able to achieve circulation interconnectedness for all modes and maximize walkability, then the small block pattern may not be required.

Sustainability Focus

Policy BE-1.7: Require that new large-scale projects consist of buildings primarily oriented to public streets, rather than private drives, walkways, and parking lots.

Policy BE-1.8: Require that new projects are integrated as seamlessly as possible into surrounding development, creating extensions of the urban fabric.

Policy BE-1.9: Carefully consider new shade, shadow, light, and glare effects from proposed development projects and comprehensive plans.

Policy BE-1.10: Plan patterns of land use and development to create complete neighborhoods where residents of Environmental Justice communities can meet their daily needs through active transportation.

GOAL BE-2: Recognize, maintain, and celebrate the unique qualities of Redwood City's neighborhoods.

Policy BE-2.1: Create complete neighborhoods by integrating schools, parks, child care centers, community centers, infrastructure, green

spaces and parks, and other public amenities into each neighborhood.

Policy BE-2.2: Promote neighborhood identity and community engagement, encouraging residents to take pride in their neighborhoods and participate with neighborhood groups to address issues affecting their neighborhoods.

Policy BE-2.3: Develop and implement distinct plans for each Redwood City neighborhood typology that respond to and maintain the character of each.

Policy BE-2.4: Provide opportunities for housing development at a range of densities and housing types that provide various choices for current and future residents.

Policy BE-2.5: Protect neighborhoods from the encroachment of incompatible activities or land uses that may have a negative impact on the residential living environment.

Policy BE-2.6: Require commercial and industrial uses to screen service facilities from public view, and new development should enclose loading docks and bays when directly adjacent to residential uses.

Policy BE-2.7: Effectively integrate single-unit and multi-unit housing with local-serving convenience and neighborhood shopping centers, parks and recreation opportunities, child care, and other uses appropriate for neighborhoods.

Sustainability Focus

Policy BE-2.8: Make efforts to maintain and increase walking access to a variety of neighborhood destinations by encouraging uses that provide access to services, goods, and community facilities within and near neighborhoods. Figure BE-~~8~~9, Walking Shed Map, maps baseline accessibility to neighborhood destinations.

Sustainability Focus

Policy BE-2.9: Encourage home occupations that have minimal traffic, parking, or other impacts to neighbors and neighboring uses.

GOAL BE-3: Encourage high-quality design in all new and modified housing.

Policy BE-3.1: Provide high-quality public streetscapes in all neighborhoods, particularly in locations where new investment in historic property renovation and infill development are desired.

Policy BE-3.2: Encourage new development to create direct and clear visual relationships between residences and public streets, while minimizing driveways, parking areas, and garage doors in front yard spaces.

Policy BE-3.3: Require new development to provide engaging, well-landscaped outdoor spaces that invite and support outdoor activities for residents, especially areas viewed or accessible by the public.

Policy BE-3.4: Encourage building forms that create coherent and consistent street frontages on blocks that emphasize the visibility of entrance doors, porches, stoops and/or entrance patios.

Policy BE-3.5: Require building and site frontages that define public streets with high-quality architectural and landscape design, including small-scale architectural elements and plane changes.

Policy BE-3.6: Minimize the street presence and visibility of parking facilities from public streets and neighboring properties.

Policy BE-3.7: Identify positive neighborhood character elements, and use these design features as design drivers for new development.

Policy BE-3.8: Encourage use of alleys for new large scale developments to accommodate garages, parking areas, and garbage pickup.

Policy BE-3.9: Encourage new residential development to incorporate accessibility for persons with mobility constraints, including small children, seniors, and disabled persons, when completing site designs. New development should be at least "visitable" by persons with disabilities.

GOAL BE-4: Preserve community character and historic buildings while attracting new infill development and investment in Historic Influence High Density Neighborhoods.

Policy BE-4.1: Insist upon high-quality infill development, and facilitate the renovation of existing residential buildings.

Policy BE-4.2: Encourage carefully designed and sensitive infill development that creates harmony and compatibility with nearby structures of historic value and merit. Require new development to integrate with, if not enhance, the historic nature of the neighborhood through appropriate site patterns and building character.

Policy BE-4.3: Explore alternatives and adopt regulations that encourage and incentivize the reuse and rehabilitation of historic or high-quality and compatible existing buildings.

GOAL BE-5: Retain the unique character of the Historic Influence Low Density Neighborhoods.

Policy BE-5.1: Require that new construction, additions, renovations, and infill development be sensitive to neighborhood context, historic development patterns, and building form and scale (for example, second stories, detached garages, setbacks, enhanced front entrances).

Policy BE-5.2: Require that residential units be designed to sustain the high-level of architectural design quality that characterizes Redwood City's Historic Influence Low Density Neighborhoods.

Policy BE-5.3: Strengthen neighborhood identity with new development that is architecturally compatible with surrounding structures.

Policy BE-5.4: Strengthen connections between Historic Influence Low Density Neighborhoods and schools, parks, community facilities, and local commercial uses.

GOAL BE-6: Preserve the character and enhance the quality of Post-War Neighborhoods.

Policy BE-6.1: Ensure that new development is compatible with the established character of individual Post-War Neighborhoods.

Policy BE-6.2: Create new connections to commercial uses, schools, parks and recreational areas, and transit from Post-War Neighborhoods.

Policy BE-6.3: Encourage quality design in Post-War Neighborhoods, including appropriate articulation and modulation of building masses and elevations; compatibility with neighborhood development in terms of density, scale, and street-facing elevations; architectural treatment of all elevations visible from public places; and orientation to the street.

GOAL BE-7: Achieve improved aesthetic and parking conditions in Mixed Density Neighborhoods.

Policy BE-7.1: Promote high standards for both maintenance and new construction in Mixed Density Neighborhoods to address deferred maintenance and to improve neighborhood appearance.

Policy BE-7.2: Investigate and implement innovative approaches to address parking congestion.

Policy BE-7.3: Prohibit new structures that compromise neighborhood quality in terms of design, scale, character, or orientation. Study and define design issues to facilitate neighborhood continuity and identity.

Policy BE-7.4: Foster connections between Mixed Density Neighborhoods and surrounding corridors and centers, paying special attention to pedestrian access across major corridors.

GOAL BE-8: Preserve the scenic beauty and quality homes that define Hillside Neighborhoods.

Policy BE-8.1: Minimize the visual and environmental impact of development upon sensitive hillside areas.
Sustainability Focus

Policy BE-8.2: Provide connections to commercial uses, schools, trails, and local parks.

Policy BE-8.3: Address oversized and out-of-scale residential development, including appropriate neighborhood building scale and compatibility.

GOAL BE-9: Preserve the qualities that distinguish Master Planned Neighborhoods.

Policy BE-9.1: Continue to enforce development standards that apply to Master Planned Neighborhoods (including those focusing on the provision of open space) to ensure that neighborhood evolution holds to the original vision.

Policy BE-9.2: Prohibit gated streets in any new Master Planned Neighborhoods, and review carefully any proposal to provide gates in already constructed neighborhoods, with the goal of providing for connectivity and integration into surrounding areas.

Policy BE-9.3: Require a variety of homes within any new residential master planned development, with the goal of establishing new opportunities for persons of varied income ranges, ages, lifestyles, and family needs.

GOAL BE-10:

Encourage the development of pedestrian- and water-oriented mixed-use communities that provide public accessibility to the Bay in Waterfront Neighborhoods.

Policy BE-10.1: Require that Waterfront Neighborhoods provide public access along water edges, to public open spaces and trails and to vista points, as integral parts of neighborhood development.

Policy BE-10.2: Allow for a diversity of unique housing types, including floating homes and live-aboard boats. Consult with interested stakeholders to enhance existing floating communities and to establish floating community best practices and standards.

Policy BE-10.3: Ensure that development in Waterfront Neighborhoods considers and plans for potential impacts associated with climate change and sea level rise.

Policy BE-10.4: Consider the design of Mixed Use - Waterfront neighborhoods and relationship to the Port area and Port uses.

Policy BE-10.5: Establish design guidelines specific to Waterfront Neighborhoods to ensure new development exemplifies quality architecture and responds to its location on the Bay.

Policy BE-10.6: Require that development along the U.S. 101 frontage include design elements, landscaping, and signage that create a positive aesthetic condition, as viewed from the freeway corridor.

Policy BE-10.7: Improve pedestrian, bicycle, transit, and automobile linkages between the bayfront and the areas west of U.S. 101.

Sustainability Focus

Policy BE-10.8: Whenever possible, encourage new development in Waterfront Neighborhoods to take shape as extensions of the urbanism of Redwood City, with street patterns of a similar scale to historic areas, buildings fronting those streets, and with good connections between adjacent projects. If a new large-scale development project is able to achieve circulation interconnectedness for all modes and maximize walkability, then the small block pattern may not be required.

GOAL BE-11: Create memorable and engaging retail, residential, and mixed-use destinations and paths along the corridors.

Policy BE-11.1: Improve the corridors to create a network of "complete streets" that emphasize pedestrian orientation and safety, public transit access, safe bicycle movement, and other improvements, particularly in the Environmental Justice communities.

Sustainability Focus

EJ Focus

Policy BE-11.2: Improve the corridors to create a network of "green streets" that address the environmental impacts of street paving.

Policy BE-11.3: Plan for and accommodate mixed-use projects along corridors, where a site or sites are developed in an integrated, compatible, and comprehensively planned manner involving two or more land uses. Combine residential and office uses with commercial development to reduce automobile trips and encourage walking, and facilitate compact, sustainable development.

Sustainability Focus

Policy BE-11.4: Promote mixed-use developments that include higher-density residential units that transition sensitively with adjacent lower-density residential uses.

Policy BE-11.5: Improve public streetscapes along the corridors, including widened sidewalks and crosswalks, protected crosswalks, regular street tree planting, bus shelters and street furniture, and pedestrian-oriented street lighting.

Policy BE-11.6: Provide that buildings located along corridors be designed to define the public realm, activate sidewalks and pedestrian paths, and provide "eyes on the street" in accordance with the following principles:

- Emphasize pedestrian orientation in site and building design, promoting a walkable environment with active street frontages, well-scaled buildings, and usable site spaces.
- Minimize the visual impact of parking facilities on all public streets.
- Locate the frontages of buildings directly adjacent to the public sidewalk.
- Provide public open spaces for public enjoyment, and include outdoor seating or other amenities that extend interior uses to the sidewalk.

- Minimize driveways, as they interrupt the continuity of street facing building elevations; prioritize their location to side streets and alleys.
- Utilize building patterns that mix the heights of elements, and consider adjacent lower scale development as applicable.

Policy BE-11.7: Provide the appropriate density and intensity of land uses to facilitate high levels of transit use along corridors.

Sustainability Focus

Policy BE-11.8: Ensure that buildings along corridors are sensitive to adjacent neighborhoods, providing adequate scale transitions.

Policy BE-11.9: Encourage pedestrian activity by requiring all ground-floor businesses to include transparent window fronts and, to the greatest degree possible, be oriented toward commerce.

Policy BE-11.10: Study the feasibility of rebuilding the intersection of Woodside Road and El Camino Real as a surface intersection that establishes a stronger linkage between adjacent commercial districts and residential neighborhoods. Land currently devoted to entrance ramps could be developed as new commercial or mixed-use infill development, which may help to finance the improvements.

Policy BE-11.11: Explore establishing minimum development intensities and/or heights along primary corridors.

GOAL BE-12:

Transform the El Camino Real Corridor into a "Grand Boulevard" that supports walking, transit, bicycling, and economic development.

Policy BE-12.1: Integrate land use and transportation planning and development to transform El Camino Real to an urban, pedestrian-friendly, and transit-oriented boulevard for residents to live, work, shop and play.

Sustainability Focus

Policy BE-12.2: Encourage the replacement of older low-scale, auto-oriented development with well-designed new projects that offer pedestrian orientation, higher densities with more efficient use of land, and continued productive economic value.

Policy BE-12.3: Accommodate the pedestrian in all public and private improvement projects along El Camino Real.

Policy BE-12.4: Enhance the visual character of the El Camino Real Corridor by public streetscape improvements, including landscaping, coordinated street furniture and fixtures, and upgraded infrastructure.

Policy BE-12.5: Provide vibrant public spaces and gathering places along the El Camino Real Corridor.

Policy BE-12.6: Strengthen pedestrian, transit, and bicycle connections to provide convenient connectivity to the Caltrain Station.

Sustainability Focus

GOAL BE-13:

Enhance the Woodside Road Corridor as an attractive residential boulevard with walkable mixed-use neighborhood centers, a pedestrian and transit-oriented character, and consistent design elements that unify its image.

Policy BE-13.1: Promote a comprehensive streetscape and pedestrian improvement effort for Woodside Road**.** Design tree planting to promote pedestrian safety, comfort and a sense of security from moving traffic, and provide street lighting that focuses light at the pedestrian level.

Policy BE-13.2: Encourage the development of mixed-use neighborhood nodes as pedestrian-oriented "villages," providing walkable destinations for shopping, leisure, and enjoyment at designated locations along Woodside Road.

Sustainability Focus

Policy BE-13.3: Increase street tree plantings in medians to strengthen the parkway character of Woodside Road, using native and drought-tolerant species to the maximum extent possible.

Policy BE-13.4: Support new higher-density residential development on Woodside Road, while ensuring that new development is sensitive to adjacent single-unit residential neighborhoods.

Policy BE-13.5: Require quality infill between existing developments, with buildings and frontage improvements that create a coherent, attractive boulevard character.

Policy BE-13.6: Re-orient new development along Woodside Road, between El Camino Real and U.S. 101, away from the limited access expressway configuration to a full-access boulevard where buildings are oriented toward the street and pedestrians may cross safely, conveniently, and legally.

GOAL BE-14: Re-create Middlefield Road as a pedestrian-friendly, neighborhood-serving Corridor that integrates with transit.

Policy BE-14.1: On Middlefield Road southeast of Woodside Road, create a unified commercial and mixed-use district that integrates diverse land use activities and scales of development. Encourage medium-scale commercial development at designated locations to serve established neighborhoods along the Middlefield Corridor.

Policy BE-14.2: Northwest of Woodside Road, preserve and strengthen the long-established residential and historic character of the surrounding neighborhoods, maintaining a general lower-scale, yet high-density quality. Develop design guidelines that respond to established forms and styles.

Policy BE-14.3: Sustainability Focus

Enhance pedestrian and bicyclist safety along the Middlefield Corridor through streetscape improvements, additional crosswalks, and other measures appropriate for the Corridor.

Policy BE-14.4: EJ Focus

Consult with the County of San Mateo and North Fair Oaks neighborhood as they develop a cohesive Community Plan that reflects the needs and desires of the community, particularly Environmental Justice communities.

Policy BE-14.5: Explore annexation desires and options for the Sphere of Influence areas.

Policy BE-14.6: Sustainability Focus

Improve all means of transportation (pedestrian, bicycle, public transit and vehicles), and enhance pedestrian and bicycle safety.

Policy BE-14.7: Include pedestrian amenities on Middlefield Road, and create community gathering spaces as destinations. Utilize materials and public art in public spaces that promote local identity and pride.

Policy BE-14.8: Establish land uses and development that support a local streetcar line along Middlefield Road.

Policy BE-14.9: Increase efforts to discourage crime utilizing Crime Prevention through Environmental Design (CPTED) and supporting neighborhood watch groups.

Policy BE-14.10: Improve the Middlefield Road streetscape to provide an attractive entrance into Downtown. These improvements should coordinate with existing streetscape improvements to facilitate its transition into Theater Way.

GOAL BE-15: Make Veterans Boulevard an attractive gateway into Redwood City, with uses and a streetscape that welcome visitors from the region.

Policy BE-15.1: Encourage private property redevelopment initiative along the Veterans Boulevard Corridor to create new Commercial - Regional, Commercial - Office/Professional, and Mixed Uses consistent with the Land Use Map.

Policy BE-15.2: Preserve areas designated for light industrial, while ensuring that potential negative impacts to surrounding uses are mitigated.

Policy BE-15.3: Pursue streetscape enhancements along Veterans Boulevard that create a parkway of higher-density buildings framed by an attractive, coordinated landscape of trees and pedestrian-oriented open spaces. Increase the number of controlled intersections and crosswalks to reduce the street's effect as a barrier to pedestrian movement.

GOAL BE-16: Re-create Broadway as a multi-modal Corridor that links Downtown to properties across Woodside Road.

Policy BE-16.1: Pursue new land use approaches along the different segments of the Broadway Corridor consistent with the Land Use Map. These land use approaches are designed to encourage development at an intensity and pattern that supports a street car transit system.

Sustainability Focus

Policy BE-16.2: Prepare and implement a streetscape plan to create a stronger entrance into Downtown and to integrate the diverse size and scale of the commercial and mixed-use activities.

Policy BE-16.3: Pursue infrastructure and mobility enhancements that will facilitate movement across Woodside Road and that promote walking, bicycling, and transit use, including a streetcar system.

Sustainability Focus

GOAL BE-17: Develop and enhance successful, vital, and engaging centers of activity in Redwood City.

Policy BE-17.1: Accommodate outdoor cafes and similar neighborhood-serving uses in the public right-of-way as a means of promoting pedestrian activity and center vitality. Ensure that access and noise considerations relative to surrounding uses are sufficiently addressed.

Policy BE-17.2: Promote the revitalization, upgrading, and beautification of commercial retail centers and the conversion of strip commercial areas to coordinated, complementary retail and service uses.

Sustainability Focus

EJ Focus

Policy BE-17.3: Encourage and facilitate the establishment of child-care facilities in proximity to Environmental Justice communities, large employment areas such as Downtown, south Broadway, Redwood Shores, the Kaiser and Sequoia Hospital areas, and near high-density residential areas and transit nodes.

Policy BE-17.4: Facilitate a new Redwood Creek/Harbor Center that embraces Redwood Creek and the Bay, fostering an exciting waterfront destination and neighborhood with a mix of uses.

GOAL BE-18: Make Downtown the premier urban location on the Peninsula for business, government functions, shopping, dining, living, and entertainment, with attractive buildings and streetscapes that respect and respond to Redwood City's history.

Policy BE-18.1: Adopt and implement the new Downtown Precise Plan.

Policy BE-18.2: Allow for a range of uses, building types, and building heights, to promote diverse mixed-use development, pedestrian activity, and a vibrant city center.

Policy BE-18.3: Enhance functioning commercial areas within Downtown to help define community identity.

EJ Focus

Policy BE-18.4: ~~Require~~ Encourage pedestrian activity through street character, plazas, and other features and amenities that enhance the viability of Downtown and the Environmental Justice communities. ~~residential, office, and governmental agency buildings and sites to be designed to encourage pedestrian activity, through street character, plazas, and other features and~~

~~amenities that enhance the viability of Downtown's viability~~Downtown and surrounding Environmental Justice communities~~.~~

Policy BE-18.5: Encourage development and growth in the Downtown such that it serves as the city's major center of local and regional-serving retail, including encouraging relocation of retail into the Downtown core.

EJ Focus

Policy BE-18.6: Continue to foster pedestrian-oriented redevelopment in areas surrounding the Caltrain Station. Prioritize redevelopment of the Middlefield Parking Lot and other publicly owned land in the vicinity to support activity in Downtown and surrounding Environmental Justice communities ~~activity~~.

Policy BE-18.7: Pursue mixed-use housing and commercial development in Downtown and Environmental Justice communities that includes a range of housing options and affordability levels.

Sustainability Focus

EJ Focus

Policy BE-18.8: Provide the amenities and range of entertainment, shopping, and cultural offerings that will make Downtown a vital regional and local destination.

Policy BE-18.9: Create a network of attractive, interesting public places and spaces that encourage walking and lingering through connections to Broadway, adjacent neighborhoods, transit, and El Camino Real.

Sustainability Focus

Policy BE-18.10: Plan, manage, and operate the overall supply of parking to provide "just enough" parking at the right price to serve the needs of people living, working, and visiting Downtown and surrounding Environmental Justice communities.

EJ Focus

GOAL BE-19: Provide areas for diverse employment and business opportunities with optimum commute access.

Policy BE-19.1: Encourage the success and vitality of Employment Centers that provide quality work and working environments for employees.

Policy BE-19.2: Consider the establishment of biotechnology/hospital districts around the Kaiser Hospital and Stanford Medical Clinic properties.

Policy BE-19.3: Promote enhanced accessibility to Employment Centers through alternative modes of transportation, including walking, bicycling, carpooling, a local streetcar or similar system, and other transit alternatives.

Sustainability Focus

Policy BE-19.4: Encourage Employment Centers to incorporate accessory uses such as public open space and/or trails, transit amenities, child care facilities, and supportive retail uses based on the size and location of the development.

Sustainability Focus

Policy BE-19.5: Require that new and renovated Employment Center developments be designed to accommodate safe and convenient walking, biking, and transit use, and exhibit design features that encourage connections, including interconnected systems of streets and walkable blocks; innovative parking solutions that reduce surface parking lots; buildings with primary entrances on public streets and sited around common plazas, courtyards, walkways, and open spaces; extensive on-site landscaping; a coordinated and well-designed signage program; and attractive streetscapes and lighting to promote pedestrian activity.

Policy BE-19.6: Maintain healthy jobs:housing ratio that supports the General Fund and its capacity to pay for essential services and programs for the city's existing and future population, while providing housing choice options for employees of local businesses.

Policy BE-19.7: Support the use of the Light Industrial Incubator Overlay to ensure retention of light industrial lands in Redwood City, and accommodate small incubator space for young businesses in green, biotechnology, software, and other emerging industries.

Policy BE-19.8: Require that new and renovated industrial properties and structures exhibit quality design and continued to be maintained.

Policy BE-19.9: Require industrial development in Employment Centers to incorporate measures to minimize negative impacts on nearby land uses.

GOAL BE-20:

Develop economically thriving and attractive Gateway Centers near the U.S. 101 entrances to the city at Whipple Avenue and Woodside Road.

Policy BE-20.1: Consolidate automobile sales and support uses in the Gateway Center near Whipple Avenue, supporting adequate capacity and freeway visibility.

Policy BE-20.2: Accommodate uses in the Gateway Centers that provide long-term tax revenues and that appeal to a regional market. As centers age, re-evaluate and/or encourage properties to update and renovate, thereby capturing the latest development and design trends.

Policy BE-20.3: Provide for enhanced connections from the Gateway Centers to Downtown and other Employment Centers to create opportunities for synergy among businesses.

Policy BE-20.4: Develop and implement a signage and way-finding program for the Gateway Centers that creates distinct identity and cohesion, identifying Redwood City and guiding visitors to destinations. Coordinate new signage with a comprehensive streetscape design, providing a clear identity for the city at these points of access.

Policy BE-20.5: Enhance the appearance of Redwood City and views of the Don Edwards San Francisco National Wildlife Refuge from U.S. 101.

Policy BE-20.6: Require that commercial centers, when upgraded by property owners, be subject to design review processes that ensure high quality architectural treatments and sensible site design.

Policy BE-20.7: Encourage high-quality residential development in mixed-use areas within Gateway Centers.

GOAL BE-21: Maintain the viability of the Port of Redwood City as a center for goods and people movement and large-scale industrial activity.

Policy BE-21.1: Allow for growth and intensification of industrial uses in the Port Industrial Center.

Policy BE-21.2: Ensure efficient and productive use of Port lands.

Policy BE-21.3 Prepare a plan that accommodates a passenger ferry terminal at the Port, and that:

- Applies to all of the area immediately adjacent to the ferry terminal;

- Facilitates a variety of travel mode connections to various parts of Redwood City; and
- Establishes architectural and site planning standards for new buildings.

Policy BE-21.4: Maintain railroad rights-of-way for materials transport and potential transit use.

GOAL BE-22: Achieve land use patterns and development approaches that incorporate sustainability principles.

Policy BE-22.1: Strive for consistency between the General Plan and the Zoning Ordinance and other local regulatory documents that implement General Plan policies.

Policy BE-22.2: Apply the following performance criteria and standards, as applicable, to all new development projects, with the level of application commensurate with the scale of development:

Sustainability Focus

- The development must result in a net positive fiscal impact to the City unless the City Council identifies unique circumstances for waiving this requirement.
- Adequate long-term water supplies must be available to serve the new development without impinging upon service to established and approved uses and developments. Adequacy must be fully documented to the satisfaction of the responsible City departments.
- The City's adopted service standards for pedestrian, bicycle, public transit usage, and motorized vehicle mobility must be achieved. Any circulation improvements or programs needed to maintain the established level of service standard must be programmed and funding committed for construction or implementation at the appropriate time.
- New development must plan for access to public transportation, including the potential streetcar system, transportation hub, and ferry terminal, as appropriate.
- Limit new development within the floodplain or ensure new development incorporates extra precautions into the site and building design to account for floodplain location.

- Storm drain, sewerage, and similar infrastructure improvements necessary to serve the development must be fully funded at the appropriate time, and any such improvements shall not place burdens upon nor otherwise impact tributary facilities.

- Sufficient measures must be incorporated into project design and fully funded at the appropriate time to provide adaptation to and/or guard against potential damage from anticipated rises in sea levels.

- Minimize direct or indirect impact to sensitive biological resources while optimizing the potential for mitigation.

- Uses proposed must clearly be compatible with surrounding established and planned uses.

- Development must support the City's vision for the district or area in which it is proposed to be located.

- Development must incorporate sustainability features, including features that minimize energy and water use, limit carbon emissions, provide opportunities for local power generation and food production, and provide areas for recreation.

- The development must provide a measurable and/or clearly identifiable community benefit in the form of affordable housing, jobs generation, available parkland or open space, environmental hazard protection, and/or other criteria established by the City.

- Require new development to pay its fair share of the cost of public facilities, services, and infrastructure, including but not limited to transportation, incremental water supply, sewer and wastewater treatment, solid waste, flood control and drainage, schools, fire and police protection, and parks and recreation. Allow for individual affordable housing projects to be exempted from the full cost of impact fees, subject to meeting specified criteria.

Policy BE-22.3: Ensure that new development within San Carlos Airport airspace protection zones seeks input from the Federal Aviation Administration prior to approval.

Policy BE-22.4: Consider creative ways to introduce new parkland in Redwood City, including acquiring flood zone property, using rooftops, and undergrounding existing surface parking to use the previous lots as parks.

Policy BE-22.5: Track new residential and non-residential development and link the information to available water resources and the jobs: housing balance.

Sustainability Focus

GOAL BE-23: Provide a balance of business opportunities and housing choices that make it easy for persons of all income ranges to live and work in Redwood City.

Policy BE-23.1: Accommodate a range of land uses to meet the economic, environmental, and social needs of Redwood City.

Policy BE-23.2: Coordinate land use and transportation planning to ensure land use patterns and intensities can support a regionally integrated transportation network that includes bicycles and pedestrians, and provides equal access to jobs, recreation, quality education, child care, and healthcare systems.

Sustainability Focus

Policy BE-23.3: Build and support a local economy that promotes commercial, office, and industrial businesses that provide employment for a broad spectrum of skilled and professional labor.

Policy BE-23.4: Support revitalization, provide a catalyst for economic development, and connect neighborhoods and activity centers through establishment of a streetcar system, transportation hub, and ferry terminal in Redwood City.

Policy BE-23.5: Accommodate business paradigms and infrastructure enhancements that minimize the need for automobile trips, such as live/work, home-based businesses, high-speed telecommunications support, and satellite work centers, in addition to mixed-use development strategies.

Sustainability Focus

Policy BE-23.6: Accommodate mixed-use projects pursuant to the Land Use Map and any implementing regulations.

Policy BE-23.7: Promote higher residential densities at locations near or within commercial, financial, and compatible employment centers, and also transportation corridors where neighborhood services are available.

Sustainability Focus

Policy BE-23.8: Designate commercial land in a manner that maximizes community accessibility to a variety of retail commercial outlets and services, and minimizes the need for automobile travel.

Policy BE-23.9: Protect and enhance the natural environmental features in Redwood City. Preserve open space resources as visual, recreational, and habitat resources, finding creative ways to provide habitat areas and species protection.

Sustainability Focus

Policy BE-23.10: Allow development projects to exceed maximum densities if the development is within a designated planning area (such as certain precise plans) and the project demonstrates some or all of the following features that provide significant community benefits:

- Superior design and integration of a mix of uses
- Incorporation of affordable housing
- Incorporation of public or community facilities
- Transportation demand management
- Innovative use of shared parking
- Efficient and innovative use of infrastructure and renewable resources
- Supportive of new transit such as streetcars

GOAL BE-24: Be a regional leader with regard to sustainable development practices.

Policy BE-24.1: Ensure that change and development occur in a fashion that enhances and blends with Redwood City's established social fabric, natural environment, and built environment.

Policy BE-24.2: Focus infill growth in the city's centers and along the corridors with the twin objectives of addressing global warming issues and maximizing use of limited resources.

Sustainability Focus

Policy BE-24.3: Prioritize improvements to public infrastructure in higher-density neighborhoods, corridors, and centers.

Policy BE-24.4: Consult with other agencies to address common regional issues and opportunities related to growth, transportation, infrastructure, and other planning issues.

Sustainability Focus

Policy BE-24.5: Support land use, mobility, and business practices that enable Redwood City residents to minimize their need to travel via automobile and or/truck to obtain and/or deliver goods.

Sustainability Focus

Policy BE-24.6: Continue to develop and standardize the City's green building program.

Sustainability Focus

Sustainability Focus

Consult with organizations, neighborhoods, developers, and businesses to offer green building educational programs.

Policy BE-24.8: Support building designs that assist with the management of storm water runoff, preserve and enhance soil permeability, and reduce other negative effects of urban development.

Sustainability Focus

Policy BE-24.9: Promote the use of locally shared solar, wind, and other alternative energy generation systems as part of new planned developments.

Sustainability Focus

Policy BE-24.10: Ensure, to the extent feasible and as applicable to the urban context and consistent with other goals and policies, that developments are configured and designed to protect solar access.

Policy BE-24.11: Consider the impacts of global warming, such as rising sea levels and floodplain areas, when reviewing plans for new development.

Policy BE-24.12: Seek energy demand reductions in both residential buildings and large industrial and commercial buildings, where reductions by a single user could have a large effect.

Sustainability Focus

Policy BE-24.13: Explore all opportunities to improve connections among the centers, corridors, and neighborhoods, creating ideal environments for walking and bicycling.

Sustainability Focus

Implementation Programs

Procedures, Permits, Agreements, Ordinances

Program BE-1: **Amend Zoning Ordinance and Map.** Update the Zoning Ordinance and Zoning map to reflect the General Plan Land Use Map upon adoption of the General Plan. Create zoning districts as needed to implement the Land Use and Urban Form Chapter. Establish specific development standards for each newly created zoning district.

Sustainability Focus

- Using the Downtown Precise Plan as an example, explore the potential for form-based standards that would emphasize pedestrian orientation, access to transit, and integration of land uses. Implement the updated Zoning Ordinance and Map over time.
- Complete Zoning Ordinance revisions to implement the General Plan as expediently as possible, utilizing a phased approach to allow priority development areas to be implemented first. Specifically, prioritize adoption of the Downtown Precise Plan and zoning designations for Mixed Use - Corridor, Mixed Use - Neighborhood, and Mixed Use - Waterfront (within one year of adoption of the General Plan). The 2015-2023 Housing Element identifieds vacant and underutilized sites that would accommodate an estimated 6,348 new units. The vast majority of these sites (95 percent of potential 6,348 units) have one of the four above-mentioned General Plan land use designations. In general, prioritize zoning designation revisions that support housing, i.e. zoning designations that would implement residential and mixed use General Plan designations and would facilitate development of opportunity sites identified in the Housing Element. Complete commercial and industrial zoning revisions subsequently, while monitoring the city's jobs:housing balance, vacancy rates, water demand and availability, and opportunities over time. Continue to track the jobs:housing balance and water availability throughout the life of the Plan, and adjust zoning allowances accordingly to achieve sustainability objectives and support strategic opportunities.
- Establish transition zones or buffers between differing land use types and/or densities and intensities.
- Facilitate complete neighborhoods, including allowing corner grocery convenience stores in residential neighborhoods; and minimize the impact of alcohol and/or tobacco sales establishments and fast food outlets near schools and community centers.
- Review regulations governing building setbacks, the location of parking lots, and reduced parking requirements to create a more pedestrian-oriented and walkable built environment. These amended zoning requirements shall be applied to selected areas of Redwood City such as transit corridors (El Camino Real, Woodside Road, Broadway) and high-density neighborhoods where transit- and pedestrian-oriented mixed use and high-density residential development could take place.

- Structure zoning and business permit regulations to encourage home occupations while minimizing vehicle and other impacts on neighboring residents and residential uses.
- Study and consider ways to encourage new development to incorporate accessibility features for mobility impaired residents, including small children, seniors, and disabled persons. Incentives could be included as part of sustainability practices, such as the Green Building Ordinance, or other efforts to ensure access to housing (such as a future Reasonable Accommodation Ordinance).
- Establish a zone where live/work, studios, and crafts spaces are allowed. Establish standards and permitting procedures for those uses, including roadside signage, parking, and other standards as appropriate.
- Structure zoning regulations to allow a broad range of commercial and industrial uses consistent with economic development goals and land use objectives.
- Reduce parking requirements in areas located in proximity to quality transit, particularly high-density residential and mixed-use infill development.
- Reconsider floor area ratios and building scale in established neighborhoods.
- Establish floor area ratios (FAR) limits on residential development. FAR limits may vary based on neighborhood typology context, and site-specific conditions including slope.
- Consider the impact of new development standards creating nonconforming uses throughout the community.
- Consider modifications to the Zoning Ordinance to facilitate renovation and investment in Historic Influence High Density Neighborhoods. For example, consider revising the Zoning Ordinance to allow the division of large-scale historic structures into separate units.
- Consider modifying second unit standards to facilitate increased density while preserving older structures.
- Consider allowing for replacement of 1950s and '60s era construction with the same development or greater intensity and reduced parking if design quality is greater and/or supports historic character. Consider reducing the height limit, as appropriate.
- Consider revising zoning to encourage large floor plate (large, open floor space) uses in the Downtown.

Timeframe: Immediate, Short Range, Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-2: **Environmental Review.**

- Require environmental review of individual development applications pursuant to the California Environmental Quality Act (CEQA). The City will require that such review assess potential impacts to sensitive ecological and biological resources. The City will look for development approaches that avoid sensitive habitat and wildlife corridors. However, where avoidance is not possible, the City will require habitat enhancement or restoration, off-site mitigation, or any combination of these means. Other solutions emphasizing enhancement and restoration may result in the establishment of larger habitat areas or habitat of superior quality. In such cases, these approaches may be determined to be superior to avoidance. Use CEQA infill exemptions in precise plan and corridor areas, and as otherwise may be allowed pursuant to SB 375.
- Prepare guidelines that describe the City's process for qualifying for CEQA streamlining for residential mixed-use projects, urban infill, and "Transportation Priority Projects" as provided under State law.
- Establish internal guidelines equivalent to the BAAQMD CEQA Guidelines to evaluate the significance of air quality impacts from projects or plans, and to establish appropriate minimum submittal and mitigation requirements necessary for project or plan approval.

Timeframe: Ongoing and Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-3: **Floodplain and Sea Level Rise ~~Annual~~ Review.** Consistent with Government Code §65302(a), annually review those areas covered by the General Plan that are subject to flooding identified by floodplain and sea level rise mapping prepared by the Federal Emergency Management Agency (FEMA), Department of Water Resources (DWR), and the National Oceanic and Atmospheric Association.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-4: **Neighborhood Maintenance.** Pursue code enforcement actions to advance the proper rehabilitation of homes, buildings, yards, and neighborhoods in all areas of the city.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-5: **Context Sensitivity in Historic Influence High Density Neighborhoods.** In Historic Influence High Density Neighborhoods, review development proposals for compatible site design, building form, and scale relationships with the frontages of historic buildings. Require that new development in Historic Influence High Density Neighborhoods consider relationships to neighboring properties. Require each development proposal to document how contextual qualities of neighboring properties were considered and accommodated, showing a deliberate effort to design careful relationships between the new project and its neighbors. Give consideration to the following elements of neighboring development:

- The overall site plan
- The building placement on the site
- The height, form, and massing of buildings
- The character of street frontages
- The pattern of landscaping and types of plant species

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-6: **Variety in Master Planned Neighborhoods.** Prohibit dwellings with identical elevations on adjacent lots. Avoid repetitive placement of garage doors and reduce their visual prominence.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-7: **Access to Residential Waterfront Neighborhoods.** Continue to pursue an extension of Blomquist Street to link the bayfront over Redwood Creek.

Timeframe: Ongoing
Responsible Party: Community Development; Public Works Services Department
Funding Sources: Grants, Transportation Agencies

Program BE-8: **Transit Amenities.** Require incorporation of transit-oriented design features, and attractive and appropriate transit amenities (including shaded bus stops) into public and private development projects, as appropriate, to promote and support public transit use.

Timeframe: Long Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund

Program BE-9: **Priority Development Areas.** Develop City practices that clearly support the priority growth areas, and make efficient use of land and infrastructure. Develop a process to identify and prioritize key areas (e.g., Downtown, ~~and~~ mixed-use corridors, and Environmental Justice communities), development sites, and infill areas for rezoning to promote infill development and ensure consistency with the General Plan. Prioritize development of sites identified in the Housing Element as most suitable for redevelopment as high-density residential and mixed use; encourage the inclusion of affordable housing on these sites. Consult with ABAG's Focus Growth Program.

Sustainability Focus

EJ Focus

Timeframe: Immediate
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-10: **Revitalize Targeted Sites.** Continue to use the full complement of planning tools and legal authority available to revitalize targeted retail sites and areas with older lodging facilities. Create incentives for landowners to upgrade or redevelop their properties.

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-11: **Shade Analysis Downtown.** Require all new development and redevelopment within the Mixed Use - Downtown land use designation to complete a shade and shadow study unless and until implementing zoning incorporates mitigation to address impacts as defined below, unless the City's Zoning Administrator determines, based on the scale and scope of the proposed project and the criteria set forth herein, that no shade and shadow study is necessary. Significant impacts shall be mitigated to the extent feasible. The following impacts will normally be considered significant:

- Introduction of landscape that would now or in the future cast substantial shadows on existing solar collectors.
- Casting of shadows covering more than 50 percent of Courthouse Square, Theatre Way, City Hall Park, Library Plaza, Hamilton Green, Depot Circle, Little River Park, Redwood Creek, or City Center Plaza at 12:00 P.M. on the Spring Equinox.
- Casting of shadows that cause a solar-sensitive character-defining feature (e.g. the stained-glass dome of the historic San Mateo County Courthouse building) of any historic resource to be more than 50 percent in shadow at 12:00 P.M. on the Spring Equinox.
- Casting of shadows from parcels with a higher maximum permitted height onto adjacent parcels with a lower maximum permitted height that cause solar-sensitive portions of the parcel with the lower maximum permitted height to be more than 50 percent in shadow at 12:00 P.M. on the Spring Equinox.
- Casting of shadows from parcels within the Mixed Use - Downtown land use designation onto adjacent parcels designated Residential - Low, - Medium, - Medium High, and/or - High that cause solar sensitive portions of such residential parcels (e.g. private and common yards and balconies) to be more than 50 percent in shadow at 12:00 p.m. on the Spring Equinox.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-12: **Shade Analysis within Mixed Use - Corridor and Mixed Use - Neighborhood.** Require all new development and redevelopment within Mixed Use - Corridor and Mixed Use - Neighborhood land use designations to complete a shade and

shadow study unless and until implementing zoning incorporates mitigation to address impacts as defined below, unless the City's Zoning Administrator determines, based on the scale and scope of the proposed project and the criteria set forth herein, that no shade and shadow study is necessary. Significant impacts shall be mitigated to the extent feasible. The following impacts will normally be considered significant:

- Introduction of landscape that would now or in the future cast substantial shadows on existing solar collectors.
- Casting of shadows that substantially impair the beneficial use of shadow-sensitive public open space.
- Casting of shadows from parcels within the major transportation corridor onto adjacent residential parcels that substantially impair the beneficial use of the residential parcels.
- Casting of shadows that materially impair the historic significance of an historic resource.
- Casting of shadows from parcels within a major transportation corridor onto adjacent parcels designated Residential - Low, - Medium, - Medium High, and/or - High that substantially impair the beneficial use of the residential parcels.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-13: **Shade Analysis within Mixed-Use Waterfront Neighborhood.** Require all new development and redevelopment within the Mixed Use - Waterfront Neighborhood land use designation to complete a shade and shadow study unless and until implementing zoning incorporates mitigation to address impacts as defined below, unless the City's Zoning Administrator determines, based on the scale and scope of the proposed project and the criteria set forth herein, that no shade and shadow study is necessary. Significant impacts shall be mitigated to the extent feasible. The following impacts will normally be considered significant:

- Introduction of landscape that would now or in the future cast substantial shadows on existing solar collectors.
- Casting of shadows that substantially impair the beneficial use of shadow-sensitive public open space.
- Casting of shadows from parcels within the Mixed Use - Waterfront Neighborhood land use designation onto existing

adjacent residential development that substantially impair the beneficial use of these residential parcels.
- Casting of shadows that substantially impair the viability of a sensitive natural habitat.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-14: **Shade Analysis within Public Facility, Schools, and Commercial - Neighborhood.** Require all new development and redevelopment within the Public Facility, Schools, and Commercial - Neighborhood land use designations to complete a shade and shadow study unless and until implementing zoning incorporates mitigation to address impacts as defined below, unless the City's Zoning Administrator determines, based on the scale and scope of the proposed project and the criteria set forth herein, that no shade and shadow study is necessary. Significant impacts shall be mitigated to the extent feasible. The following impacts will normally be considered significant:
- Introduction of landscape that would now or in the future cast substantial shadows on existing solar collectors.
- Casting of shadows that substantially impair the beneficial use of shadow-sensitive public open space.
- Casting of shadows from parcels within the Public Facility, Schools, and/or Commercial - Neighborhood land use designations onto adjacent Residential - Low or Residential - Medium parcels that substantially impair the beneficial use of the residential parcels.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-15: **Title 24 Lighting Zone.** Require all new development and redevelopment within Redwood City to be in compliance with Title 24 Lighting Zone (LZ-3) requirements. Encourage the use of low mounted, downward casting exterior lighting for all new development in the city, so as to reduce light trespass onto adjacent properties. Further, require new developments to submit lighting and photometric site plans for City review and approval prior to the issuance of individual building permits.

Timeframe: Ongoing

Responsible Party: Community Development
Funding Sources: General Fund

Program BE-16: EJ Focus

Redwood City/Sphere Compatibility. Consult with San Mateo County regarding compatibility and vision for areas within Redwood City's Sphere of Influence, including needed infrastructure improvements, design, and land use policy. For those properties located in the San Mateo County jurisdiction and seeking City of Redwood City services, encourage development that retains the character of the surrounding neighborhood, particularly of Environmental Justice communities, and includes infrastructure improvements the City would approve upon annexation. Furthermore, require properties to develop to Redwood City standards, as a condition of issuance of City sewer or water permits.

Timeframe: Ongoing
Responsible Party: Public Works Services Department; Community Development
Funding Sources: General Fund

Plans and Studies

Program BE-17: EJ Focus

Objective Design ~~Guidelines~~Standards. Prepare, for City Council consideration, ~~design~~ objective design standards ~~guidelines~~ that identify the City's expectations for planning, designing, and reviewing residential development proposals. ~~Include form based guidelines for neighborhoods, corridors, and centers to be implemented in all areas of the city. The design guidelines may take the form of citywide guidelines or guidelines developed for identified neighborhoods, centers, and corridors. Use the urban design recommendations in this General Plan as the foundation for comprehensive guidelines.~~ Utilize the structure of neighborhoods, corridors, and centers provided in the Land Use and Urban Form Element to formulate objective design ~~guidelines~~ standards for all of Redwood City's housing development. As part of the process, work with the City's boards and the residents of different neighborhoods, especially those belonging to Environmental Justice communities, in developing these ~~guidelines~~standards.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-18: **Redwood Creek/Harbor Master Plan.** Develop a Master Plan for the areas surrounding Redwood Creek, linking the harbor area, Redwood Creek, and Downtown Redwood City. The Master Plan should create a "destination" harbor center. It should address connections between Downtown and the Bay, and focus on placemaking, "destination" land uses, design, incentives, trails and connections, and necessary infrastructure improvements. The Master Plan should attempt to redress the barrier and disconnection created by U.S. 101 between Downtown and the Bay. It should attempt to reinforce an east-west focus rather than north-south. The Master Plan should consider creating bridges across the creek that may be parallel but separate from Blomquist extension to further enhance trails, open space accessibility, and connectivity.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-19: **Port Area Master Plan.** Work with the Port to prepare a Port Master Plan for the future.

Timeframe: Mid Range
Responsible Party: Community Development; Port of Redwood City
Funding Sources: General Fund and the Port

Program BE-20: **Jobs:Housing Balance.** Develop a system to periodically review total new commercial development square footage and new residential dwelling units. Track changes to the city's jobs:housing balance, and adjust the Zoning Ordinance as appropriate to ensure adequate housing is developed to provide housing choice options for local businesses' employees.

Timeframe: Short Range, Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-21: **Gateways.** Create plans for and install strong, unifying gateways with signage and other public improvements. Consider installation of entrance designs at the following city gateways:

- Edgewood Road at Alameda de las Pulgas
- Farm Hill Boulevard at Woodleaf Avenue

- Woodside Road at Alameda de las Pulgas
- El Camino Real at the San Carlos City limit
- El Camino Real near Oakwood Drive
- Middlefield Road near 7th Avenue
- Woodside Road at U.S. 101
- Seaport Boulevard at U.S. 101 (Port Gateway)
- Whipple Avenue at U.S. 101
- Redwood Shores Parkway and Marine Parkway, at U.S. 101 (at the City boundary)

Include in each entry design colorful graphic signage that incorporates directions to important attractions, adequate lighting to illuminate signage, and landscape features, including clusters of trees. Emphasize low maintenance and drought-tolerant plant selection.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-22: **Land Use/Neighborhood Transitions.** Through design guidelines, strive to attain development in Waterfront Neighborhoods that minimizes potential conflicts with the Port area's industrial uses. Require that the scale and massing of new development in higher-density/intensity centers and corridors provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-23: **Enhance the Pedestrian Experience.** Through the Complete Streets Master Plan (as discussed in the Circulation Chapter and Program BE-58), develop and maintain a comprehensive citywide Pedestrian Plan. Identify funding to provide pedestrian amenities, shade trees, appropriate lighting, and store-front retail opportunities along corridors. Establish priority pedestrian improvement areas and phase construction based on those priorities.

Sustainability Focus

Continue to explore opportunities to create pedestrian connections as follows:

- From neighborhoods to schools, parks, trails, commercial centers, and other activity centers
- Within mixed-use areas
- From higher density residential areas to transit services
- Between different modes of transit

Utilize the Walking Shed Map (Figure BE-~~8~~9) to identify areas that do not have pedestrian destinations and outreach to those areas to better understand their needs. Update the Walking Shed Map as appropriate. Consider creating, on a neighborhood basis, a Walking Path Map, providing walking routes to specific destinations.

Consult with business associations, tenants, and property owners to identify and implement streetscape improvements that contribute to each corridor's pedestrian character.

Timeframe: Short Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, grants

Program BE-24:
EJ Focus

Design Guidelines for Middlefield. Develop design guidelines for nonresidential development the Middlefield Corridor. In the guidelines, emphasize pedestrian orientation in site and building design, context sensitivity (being especially mindful of surrounding Environmental Justice communities), and location of parking areas to the side or rear of buildings to minimize their visibility from streets.

Timeframe: Long Range
Responsible Party: Community Development
Funding Sources: General Fund

Special Programs/Projects

~~**Program BE-25:**~~
~~Sustainability Focus~~
~~EJ Focus~~

~~**Grand Boulevard Initiative.** Continue to participate in the Grand Boulevard Initiative to ensure that El Camino Real achieves its full potential as a place for residents to work, live, shop, and play; creating links between communities that promote walking and transit and an improved and meaningful quality of life. Explore options in conjunction with other participating cities and public~~

~~agencies and ensure public participation from residents, especially from Environmental Justice communities, to help reduce dependency on single-occupancy vehicle travel.~~

~~*Timeframe:* Ongoing~~
~~*Responsible Party:* Community Development; City Manager Office/Economic Development~~
Funding Sources: General Fund

Program BE-~~26~~25: Sustainability Focus **Green Building Program.** Implement a citywide green building program that requires innovative measures to create buildings that are more energy efficient, less water- and resource-intensive, and healthier for occupants through the Green Building Ordinance and other mechanisms.

Timeframe: Immediate
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~27~~26: Sustainability Focus **New Development and Available Water Resources Tracking.** Track the number of new residential units and square footage of non-residential development and limit new development to available water resources, taking into account the demands of existing and planned uses, including agricultural and industrial uses.

Timeframe: Immediate
Responsible Party: Community Development; Public Works Services Department
Funding Sources: Development fees

Program BE-~~28~~27: **Fiscal Impact Analysis.** Consider developing fiscal impact analysis guidelines and procedures for use in reviewing development proposals.

Timeframe: Short Range
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~29~~28: Sustainability Focus **Jobs:Housing Balance Definition.** Consider developing Redwood City's definition of a "healthy" jobs:housing balance.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Physical Improvements

Program BE-~~30~~29: Public Amenities in Corridors. Continue to install public amenities such as streetlights, benches, trash containers, art, drinking fountains, landscaping, etc., to provide pleasant and comfortable environments for visitors and users of transit. Develop a program whereby businesses or residents may sponsor street furniture and/or a landscaped area.

Timeframe: Short Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, grants, developer fees

Program BE-~~31~~30: Streetscape Plans and Improvements.

EJ Focus

- **Gateways.** Plan and fund a signage program to create a visible identity for Redwood City at the U.S. 101 interchanges with Woodside Road and Whipple Avenue. Coordinate with comprehensive streetscape design to support the city's identity.
- **El Camino Real.** Improve and strengthen the El Camino Real streetscape, consistent with the ideals of the Grand Boulevard Initiative.
- **Woodside Road.** Plan and fund a streetscape improvement program to create a strengthened pattern of street trees throughout the length of Woodside Road. Unify the landscape image with a consistent planting design concept. Widen sidewalks where possible, and add more pedestrian crossings. Simultaneously provide design variation to identify different neighborhoods and focus points along the route.
- **Middlefield Road.** Improve and strengthen the Middlefield Road streetscapes to integrate the diverse scale of the commercial and mixed-use areas. Provide consistent street tree planting, widened sidewalks, crosswalks, pedestrian amenities, and pedestrian-oriented street lighting, and other features to improve the streetscape. These improvements should be coordinated with streetscape improvements already completed in Downtown.

- **Veterans.** Improve and strengthen the Veterans Boulevard streetscape, enhancing the image of this important gateway street. Provide consistent street tree planting and amenities, facilitating connections between Downtown and the Bay.
- **Broadway.** Develop a cohesive streetscape plan for Broadway. Provide consistent street tree planting, widened sidewalks, crosswalks, and pedestrian-oriented street lighting.
- **Neighborhoods.** Improve streetscapes in neighborhoods with a focus on Environmental Justice communities, as appropriate, including supporting efforts to underground utilities.

Timeframe: Long Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund

Program BE-~~32~~31: **Active Pedestrian Environment Streetscape Improvements.** For areas designated by the General Plan to achieve an active pedestrian environment or improvement of their image and quality, prepare design plans, street tree plans, and financing plans for the comprehensive streetscape improvements.

Sustainability Focus

Timeframe: Short Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund

Outreach, Education

Program BE-~~33~~32: **Public Outreach.** Provide public outreach, and encourage public involvement at the neighborhood level including residents affected by proposed projects.

Timeframe: Ongoing
Responsible Party: All Departments
Funding Sources: General Fund

Program BE-~~34~~33: **Automobile Sales and Related Uses Consolidation.** Continue conversations with business and property owners regarding consolidation of automobile sales and related uses, to best understand needs and site opportunities.

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~35~~34: Green Building Outreach. Provide information, and raise public awareness of the benefits of sustainable design and construction, including green building best practices in existing buildings and requirements of the Green Building Ordinance.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Inter-Agency and Other Organizations Consultation

Program BE-~~36~~35: Participate with Local, Regional, State, and Federal Agencies and Other Organizations.

- Consult with San Mateo County regarding site and building design, land use, and economic development opportunities on County-owned properties and areas within the Sphere of Influence.
- Consult with San Mateo County and C/CAG jurisdictions, and with State and federal agencies, regarding regional land use and transportation planning, including issues related to the San Carlos Airport.
- Consult with the Bay Conservation and Development Commission (BCDC) regarding new development within their jurisdiction. Promote consistency with the Bay Plan by approving conforming projects or seeking amendments to the Bay Plan.
- Consult with the Metropolitan Transportation Commission (MTC) regarding maritime issues affecting Redwood City within its regional transportation plan.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

EJ Focus

~~**Program BE-37: Annexation.** Consult with San Mateo County to outreach to unincorporated areas, including mobile home parks in San Mateo County near Menlo Park and the North Fair Oaks neighborhood, and Environmental Justice communities to discuss annexation desires and options to facilitate safety and ease in permit review.~~

~~Educate residents living in the Redwood City Sphere of Influence on the cost/benefits of annexation. Prepare informational handouts to give to residents in the unincorporated areas.~~

~~*Timeframe:* Short Range~~
~~*Responsible Party:* Community Development~~
~~*Funding Sources:* General Fund~~

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Circulation

Moving around, to, and through Redwood City is facilitated by many modes of transport: car, bus, shuttle, train, bike, electric bike/scooter, boat, and our own two feet. Redwood City residents and businesses also have ready access to nearby San Carlos Airport, as well as major international airports in San Francisco and San Jose. Coordinated transportation planning has created a relatively efficient system of freeways, roads, rail, sidewalks, trails, and waterway facilities that give residents and the business community many mobility choices, including choices for recreation. Even so, the private automobile continues to dominate as the mode of choice; and local, regional, and national agencies traditionally have focused both planning efforts and spending on freeway and roadway improvements. This auto- and truck-centric model has contributed to congestion, pollution, and elevated CO_2 levels, leading to increasing concerns regarding health and the environment. As such, Redwood City's model for mobility in the 21st century deviates from traditional transportation planning. We propose to shift circulation and associated land use planning toward options that will improve environmental quality, encourage healthier lifestyles, support economic development, and provide options for safe alternative modes of transportation.

We recognize that the freedom of movement cars provide–and the fact that people often use cars as expressions of status and personality–will continue to influence circulation infrastructure investment choices, and that significant funds will be spent over the next 20 to 30 years on roads and freeways. For example, the U.S. 101/Woodside Road (State Route 84) interchange requires an extensive and expensive overhaul to improve operations, reduce associated congestion on Redwood City streets, remove barriers to non-motorized travel, and mitigate impacts on nearby businesses. Similarly, the Whipple Road interchange with U.S. 101 can be a confusing intersection for drivers not familiar with the area. The City supports investment to remedy these and other traffic problem spots. However, in Redwood City, such spending will be balanced with commitments to improve access to bus and rail transit, improve bicycle access and safety, and enhance the pedestrian experience.

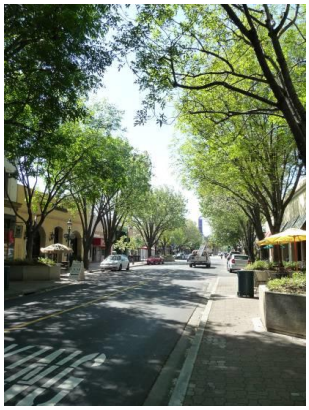
Redwood City's overarching transportation goal is to establish and maintain a balanced, multi-modal transportation network that gets us where we want to go safely and minimizes environmental and neighborhood impacts.

Imagine Redwood City in 2030

Redwood City residents, employees, and visitors have their choice of transportation systems–whether it is bicycle, pedestrian, bus, train, streetcar, automobile, or ferry. We have substantially reduced our dependency on private, single-occupant vehicles through the integration of land use and transportation planning. The city's transportation network serves different users and various modes of travel, which is especially important for the city's youth and elderly, as well as Redwood City residents who prefer not to drive.

Pedestrian and bicycle connectivity is just as important as how quickly and efficiently automobiles move about the city. Our developments and public spaces are designed with pedestrians and cyclists in mind. Existing facilities have been enhanced to better accommodate pedestrians and cyclists. Our circulation system is balanced, safe, and efficient, and encourages travel by non-automobile modes, including walking, biking, and transit via shuttle, bus, streetcar, rail, and ferry.

Pedestrian Circulation: Convenience, Comfort, and Safety



Downtown Redwood City streets are walkable and comfortable for pedestrians.

Most trips begin and/or end with a person walking to/from a destination, at least for a short distance. Thus, the walking environment is one of the most basic elements of public space. The pedestrian network in Redwood City consists primarily of sidewalks provided along most roadways in commercial districts and residential neighborhoods. Sidewalks vary in width and physical conditions, making some more attractive to walking than others. Sidewalks also provide a primary transportation mode for mobility-impaired population groups such as youth, seniors, and disabled persons. In addition, Class I bicycle paths are designed as multi-use trails that pedestrians can also use.

The many neighborhoods, centers, and corridors throughout the city offer different levels of "walkability." Factors affecting walkability include sidewalk condition, destinations to walk to (parks, schools, and commercial areas), ease in crossing streets, connectivity between areas and modes of transportation, good lighting, and an overall perception of safety.

Downtown is one of Redwood City's most walkable areas: pedestrian visibility and access are prioritized at most pedestrian/vehicle conflict locations. As a result, Downtown has a high level of pedestrian activity. The commercial and entertainment destinations in Downtown, combined

with easy access to transit, flat terrain, short blocks, wide sidewalks, street trees, pedestrian-scale lighting, on-street parking, crosswalks on all approaches of most intersections, and low-speed roadways all contribute to create a safe and inviting pedestrian environment that encourages walking. Initiatives in the Downtown Precise Plan will continue to guide roadway, bikeway, and pedestrian-way development in Downtown, and help link the Downtown core to surrounding neighborhoods.

Downtown and the neighborhoods immediately adjacent to Downtown were established in the 19th and early 20th century based on the classic grid street pattern. This grid pattern was intended to accommodate walking, as few people had cars. Similarly, the neighborhoods immediately southwest of El Camino Real (generally 50+ years old) display a grid pattern. However, here there are some barriers to pedestrian movement, including busy collector streets, some sidewalks that are in poor condition or too narrow, lack of crosswalks on some approaches of larger intersections, and longer block lengths. Additional pedestrian barriers are evident in the design of some of the relatively newer neighborhoods west of Alameda de Las Pulgas, including hilly terrain, lack of sidewalks in some areas, roadway designs that encourage higher traffic speeds, and street networks that feature long blocks and circuitous routes.

Pedestrian crossing in Downtown Redwood City

Physical barriers–such as freeways, major roadways with limited pedestrian crossings, railroad tracks, and creeks–also limit pedestrian activity in many parts of the city. These barriers discourage or in some places prohibit pedestrian access, and they limit pedestrian connectivity between many neighborhoods. Wide roadways with high speeds and long blocks, such as segments of Veterans Boulevard and Woodside Road, discourage pedestrian crossings. Many intersections along wide arterials prohibit pedestrian crossings at one or more approaches to signalized intersections, forcing pedestrians to take indirect routes or dash dangerously across busy roadways outside of crosswalks. Woodside Road is an example of a roadway that presents a significant barrier to pedestrian travel. Pedestrian improvements are important to better facilitate movement between the residential neighborhoods flanking the commercial corridor, proposed mixed-use development nodes, and existing commercial destinations. Identified pedestrian improvements to Woodside Road and Middlefield Road provide a model that can be applied citywide to improve pedestrian circulation in a manner that will benefit residents and local businesses. Figures BE-~~9~~ 10 and BE-~~10~~ 11 indicate how the Woodside Road/Middlefield Road intersection and portions of mid-corridor areas can be reconfigured to

Figure BE-~~10~~9: Proposed Middlefield Road Intersection Bicycle and Pedestrian Improvements

provide at-grade crossings without degrading vehicular operations. Relatively simple improvements recommended in this area include reducing pedestrian crossing distances by narrowing travel lanes, reducing corner curb radii, and adding sidewalk "bulbouts" at corners.

Redwood City will apply the analysis and solutions proposed for Woodside Road and Middlefield Road to other arterial and secondary roadways, including El Camino Real and Jefferson Avenue, to create better pedestrian and bicycling environments that encourage walking and cycling.

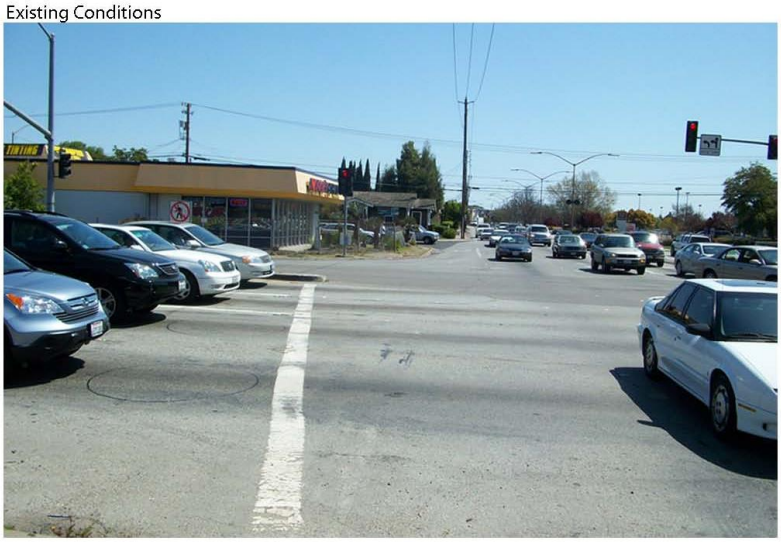
A key opportunity for improving connectivity among neighborhoods west of El Camino Real is the Hetch Hetchy easement, which has two paths across Redwood City. Redwood City will vigorously pursue options to create pedestrian and bicycle paths along the easement, as well as connections to other pedestrian-ways and bikeways citywide.

Bulbouts, also known as curb extensions, extend the sidewalk or curb out into the street, reducing the street pavement width. Bulbouts calm traffic speeds and improve pedestrian crossings by shortening crossing distances and reducing the time pedestrians are exposed to traffic. They also improve visibility for pedestrians and motorists. For cyclists, however, bulbouts may present an impediment as a bike lane may be reduced or removed at the location of a bulbout.

Pedestrian Safety

In addition to being convenient and comfortable, walking needs to be safe. In 2008, Redwood City conducted a *Pedestrian Safety Assessment*. The *Pedestrian Safety Assessment* created a framework for analyzing programs, policies, and practices related to pedestrian safety throughout the community. It also identified desired enhancements and opportunities for new program elements. Areas of focused attention include:

Existing Conditions



After Installation of Pedestrian Improvements

Figure BE-1~~0~~1: Proposed Woodside Road/Middlefield Road Intersection Pedestrian Improvements

- Kaiser Medical Center/Veterans Boulevard
- Sequoia High School area
- Woodside Road between Union Avenue and Gordon Street

These areas have demonstrated long-standing pedestrian safety concerns, and are located near schools, hospitals, and retail centers with extensive pedestrian activity. To address pedestrian safety concerns at these locations and others identified over time, the City will pursue enhancements and other pedestrian safety measures, including:

- Pedestrian count-down signal heads (which let pedestrians know how much time is remaining to cross the street)
- Corner bulbouts at intersections with limited sight distance
- Median "refuge" islands at unsignalized crossings
- Two-stage mid-block pedestrian signals on wide arterials
- Pedestrian-scale lighting (lighting focused on illuminating the sidewalk)

Redwood City will also pursue more rigorous analysis of pedestrian conditions, such as measuring the pedestrian "level of service" for new development projects, to help the City move toward implementing citywide pedestrian improvements.

Bicycle Circulation

Cyclist in Redwood City

Redwood City has many features that make cycling pleasurable: a mild climate, relatively flat terrain (east of Alameda de Las Pulgas), and proximity to many recreational and shopping destinations.

Bicyclists generally can be grouped into four categories, with each category of rider having different expectations and tolerances for riding conditions:

- *The Casual Recreational Rider:* The casual recreational rider hops on a bike for short errands or fun, generally on weekends and in good weather. Destinations are generally close by, such as parks and picnic areas. Bike routes chosen often follow a marked route and avoid roadway traffic. At times, the casual recreational rider may transport the bicycle to a bike path or trail.

- *The Bicycle Commuter:* The bicycle commuter uses his or her bicycle to get to and from work or school. While the commuting cyclist generally will use marked bike routes, he or she is skilled at finding roadways that provide the shortest time distance between two points. Even so, bicycle commuters appreciate

well-marked, shared routes where car drivers are alerted frequently to the presence of bicyclists.

- *The Bicycle Transportationist:* Bicycle transportationists are people who get around on their bikes for most trips. Some are very educated about the rules of the road, and some may need additional information to help them be more visible and safe.

- *The Bicycle Enthusiast:* On any terrain, in any conditions: this is the mantra of the bicycle enthusiast. This rider can tolerate fast, heavy traffic, like that along El Camino Real during rush hour. Enthusiasts ride in all weather and often travel at high speeds. They are skilled and often ride in pairs or groups.

Bicycles are a convenient means of transportation for short trips within cities, especially those less than three miles in length. According to the U.S. Department of Transportation, one-quarter of all trips (by all modes) in this country are under one mile; about 40 percent of all trips are two miles or shorter. In addition, bicycles are also a convenient form of transportation for children to travel between home, school, parks, and other local neighborhood destinations.

Redwood City's commitment is to accommodate all categories of bicycle riders, to encourage healthier lifestyles and a healthier environment. Redwood City seeks to make safety a goal for "8-80" riders, making bicycle riding in the city comfortable and safe for 8 year old children as well as 80 year old adults.

Bicycle lane on Redwood Shores Parkway

Local Bike Facilities

Redwood City has adopted three classes of bicycle facilities, which mirror the standard classifications used by Caltrans and commonly adopted by other jurisdictions (see Figure BE-12~~1~~):

- **Class I Bikeway (Bike Path):** A completely separate facility designated for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian cross-flow minimized. Examples of Class I facilities in Redwood City include the Redwood Shores trail and the Bay Trail along U.S. 101 between the Whipple Avenue and Holly Street interchanges.

- **Class II Bikeway (Bike Lane):** A striped lane designated for the use of bicycles on a street. Vehicle parking and vehicle/pedestrian cross-flow are permitted at designated locations. Examples of Class II facilities in Redwood City include

Bicycle parking facility at the Redwood Shores Library

the bike lanes on Alameda de Las Pulgas between Woodside Road and Jefferson Avenue, and Industrial Way between Whipple Avenue and the San Carlos city limit.

- **Class III Bikeway (Bike Route):** A route designated by signs or pavement markings for bicyclists within the vehicular travel lane (i.e. shared use) of a roadway. Portions of Broadway and Roosevelt Avenue are examples of bicycle routes.

As part of a pavement resurfacing project in the Redwood Shores area, the City restriped some roadways to provide bicycle facilities. This effort consisted of narrowing vehicle travel lanes to provide 5-foot Class II bicycle lanes on Marine Parkway and 4-foot wide shoulders on Redwood Shores Parkway and Twin Dolphin Drive.

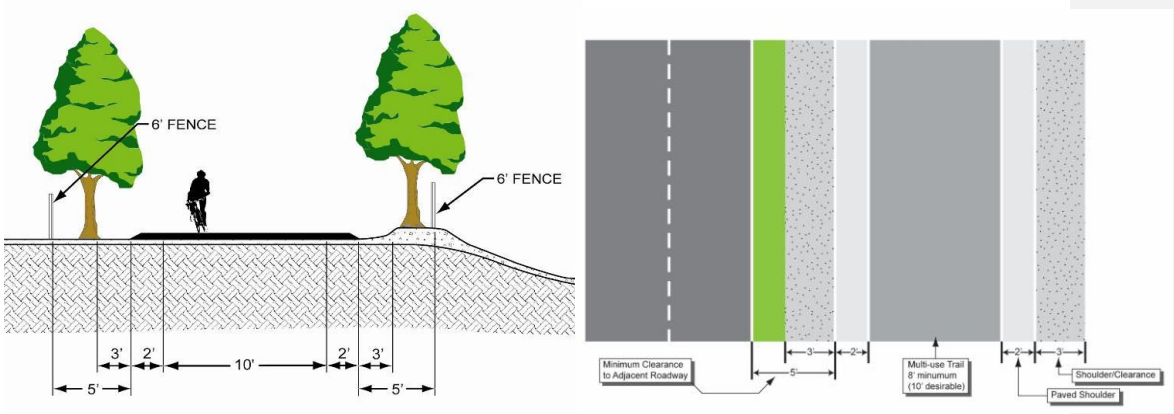
In addition, several recreational paths are provided in Redwood City, including those as Stulsaft Park and the Bay Trail. However, bicycle access to these paths from other parts of Redwood City is limited.

Although bicycle facilities are provided along many roadways, the bicycle network in Redwood City does not serve all areas. Figure BE-~~12~~ 13 identifies a conceptual bikeway network, developed through comprehensive outreach with Redwood City stakeholders. Prior to development and implementation of a complete Bicycle Master Plan, further study regarding feasibility of routes, safety, and adequate rights-of-way will be required.

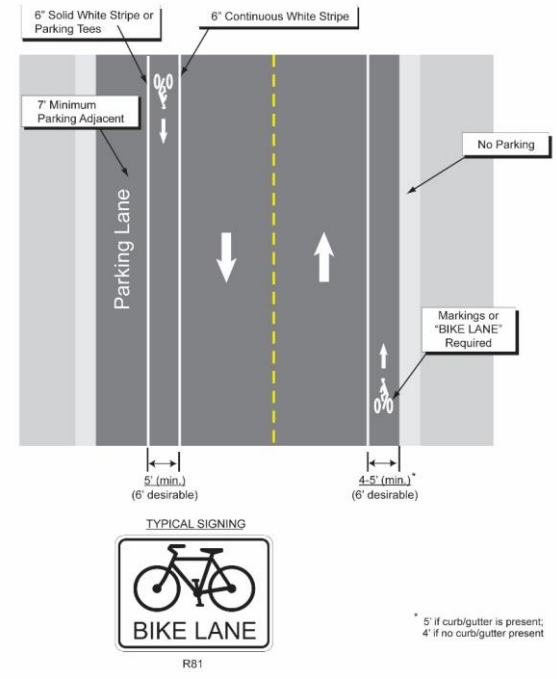
Barriers to bicycling include those cited above with regard to pedestrian connectivity, potential conflicts with buses or trucks on heavily traveled commercial corridors, turning vehicles, and steep terrain beyond Alameda de Las Pulgas. Many bicyclists–and casual recreational bicyclists in particular–prefer to take longer routes on flat terrain rather than direct routes on steep hills.

Section 2100 of the California Vehicle Code permits bicycles to ride on all surface roadways unless explicitly prohibited by signage. Although arterials such as El Camino Real and Woodside Road often provide the most direct routes, few cyclists use them. Most riders are reluctant to use these roadways due to potential safety concerns, noise, exhaust fumes, and pollution. Instead, many bicyclists choose to use parallel local or collector roadways that carry less vehicular traffic and provide a more comfortable and safe, but often less direct, route.

Class I Bike Path



Class II Bike Lane



Class III Bike Route

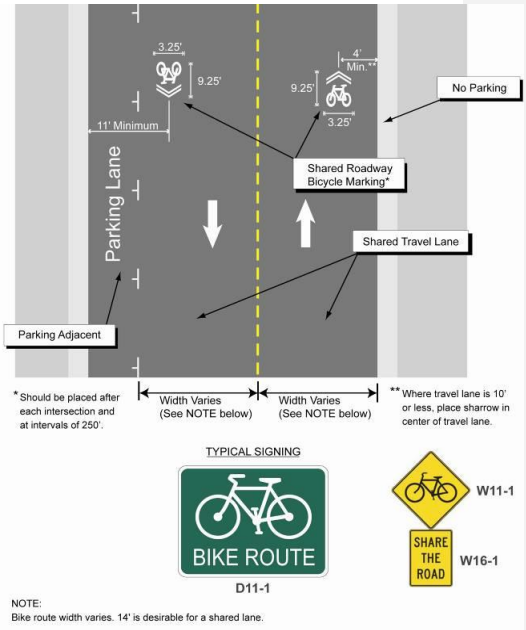
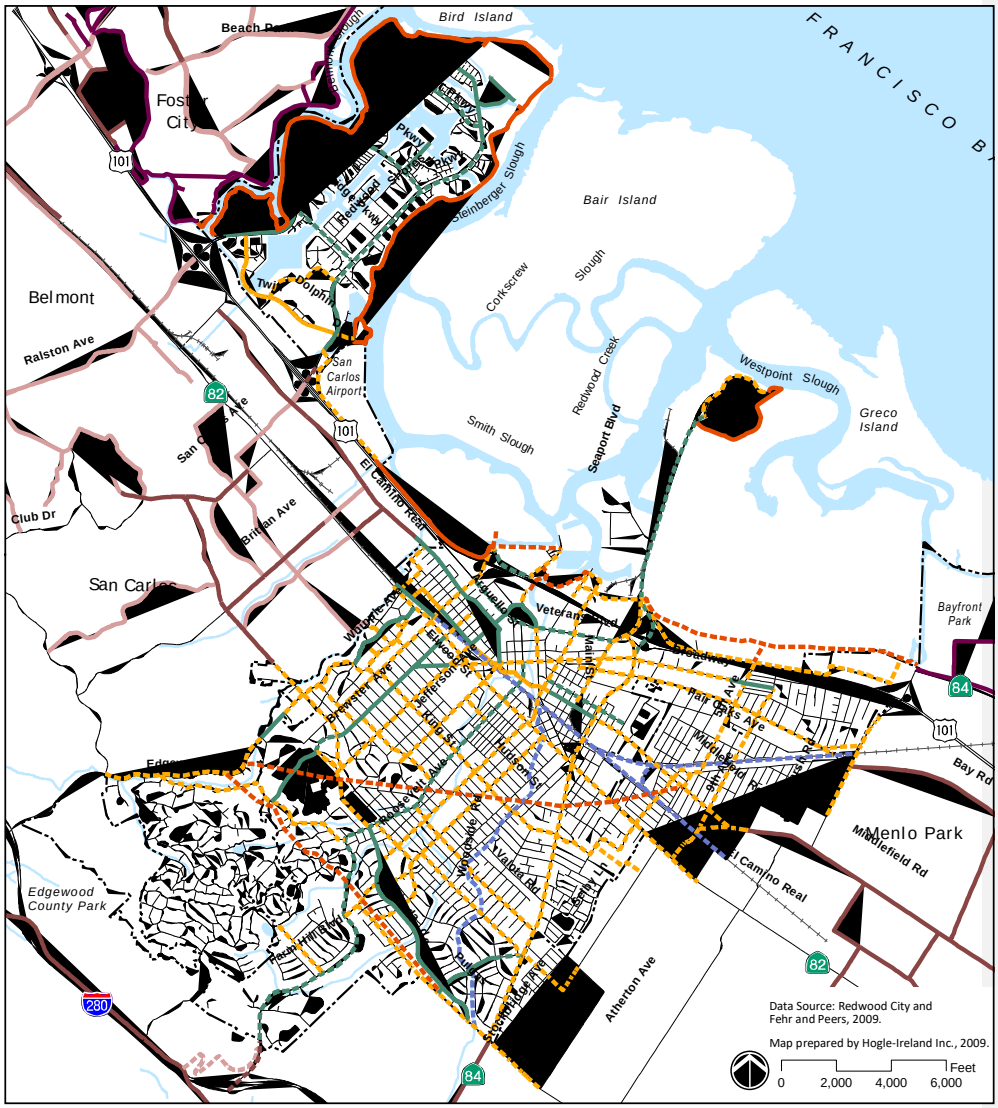


Figure BE-~~11~~12: Bikeway



Redwood City Bikeways

- Existing Class I - Bike Path/Recreation Path
- Community Proposed Class I - Bike Path/Recreation Path
- Existing Class II - Bike Lane
- Community Proposed Class II - Bike Lane
- Existing Class III - Bike Route
- Community Proposed Class II or III - Bike Lane or Route
- Community Proposed Bike Path/Bikeway (Highly Constrained)

Bikeways Outside City

- Existing Class I
- Existing Class II
- Community Proposed Class II
- Community Proposed Class II
- Existing Class III

- City Boundary
- Sphere of Influence
- Freeway/Highway
- Roadways
- Railroad
- Waterways

Note: The bikeway classifications and designated rights-of-way are considered representative rather than final plans. Additional evaluation will be required for implementation.

Figure BE-~~12~~13: Bikeway Plan

Although Downtown is a walkable destination, bicycle access and circulation can sometimes be a challenge here. However, bicycle lanes have recently been installed on some larger roadways including segments of Middlefield Road, Winslow Street, and Brewster Avenue; many Downtown streets are narrow and slow enough to be welcoming to cyclists. Bicycle parking has not been provided uniformly; expanding bicycle parking facilities is a simple and effective way to improve access. In addition, the odd-angled intersections within the Downtown limit sight distance for cyclists.

San Francisco Bay Trail

The San Francisco Bay Trail is a planned 400-mile paved path network around San Francisco Bay for use by pedestrians and bicyclists. Segments of the trail between Whipple Avenue and Holly Street and around Redwood Shores and Pacific Shores have already been completed. However, these segments of the Bay Trail are not currently connected to each other, or to other portions of the trail in Menlo Park. Once the Bay Trail is complete, it will provide recreational and commute travel options by both bicyclists and pedestrians to and from a variety of destinations along the Bay.

San Mateo County Comprehensive Bicycle Route Plan

The 2000 *San Mateo County Comprehensive Bicycle Route Plan* was developed to create a safe and effective bikeway network to serve commuter and recreational bikers throughout the county. The plan includes the following projects in Redwood City:

- *North-South Bikeway Project:* The initial phase consists of installing a north-south bikeway (including both Class II bike lanes and Class III bike routes) between San Francisco and Palo Alto with bikeway signs and signal detectors. This effort is ongoing; Redwood City recently received grant funding to complete signage and other improvements along the portions of the bikeway within Redwood City. Future phases include other improvements such as new bike lanes, wider shoulder lanes, and other on-street bicycle improvements.

- *Bay Trail Gap Closure:* This project will complete the gaps in the Bay Trail to provide a continuous trail within San Mateo County.

Cyclist in Redwood City

Planned Bikeway Network and Support Facilities

A comprehensive bikeway network for Redwood City would include a viable network of north-south and east-west facilities, incorporating components of the *San Mateo County Comprehensive Bicycle Route Plan* and planning for local routes to meet the needs of all cyclists: casual recreational riders, commuters, transportationists, and enthusiasts. Also necessary are potential locations for staging areas and other accommodations for cyclists, such as parking at key commute and recreation destinations.

The *Caltrain Bicycle Master Plan* includes provisions to improve bicycle access and parking at Caltrain commuter rail stations. For Redwood City, this will include:

- Relocating bicycle lockers to the parking lot near the southbound platform to provide a more convenient location
- Providing bicycle parking facilities on the northbound side of tracks

Caltrain in Redwood City

It is also useful to note that Redwood City's size, topography, and climate, which make it an ideal city for bicycling, also makes it a great place for electric bike/scooter (Segway) riding. Construction of a comprehensive citywide network and support facilities, such as bicycle and electric bike/scooter parking at employment locations and other destinations, could greatly increase this mode share, and would have sustainability benefits.

Public Transit

Public transit takes many forms, including heavy rail, light rail, bus, shuttle, paratransit, streetcar, and ferry service. The San Francisco Bay Area has an extensive transit network managed by various agencies. With Redwood City's focus on environmental sustainability, creating easier access to all types of transit is a key goal.

While public transit is provided and maintained by other agencies, the City can greatly influence ridership through land use and zoning decisions, connectivity to other modes (including biking and walking), and improving traffic operations within key corridors to facilitate bus headways. The City can also dedicate rights-of-way for new systems where appropriate and continue extensive consultation with various agencies to expand transit service and accessibility.

Commuter Rail

The Peninsula Corridor Joint Powers Board operates commuter rail service (Caltrain) between San Jose and San Francisco. During the peak commute period, Caltrain also provides extended service south of San Jose to Morgan Hill and Gilroy. Within Redwood City, the rail line runs parallel to and northeast of El Camino Real, with a station in Downtown between Jefferson Avenue and Broadway. Redwood Shores is closer to the San Carlos, Belmont, and Hillsdale stations than the Downtown Redwood City station. On a typical weekday, up to 80 trains serve the Redwood City station, including the "Baby Bullet" service, an express train with limited mid-Peninsula stops.

Caltrain Redwood City station

Planned Caltrain Improvements

Every year, Caltrain updates its Short-Range Transit Plan (SRTP). The SRTP includes the goal to achieve a 58 percent increase in ridership between 2008 and 2017. Redwood City's goal is to work in tandem with Caltrain to accommodate infrastructure and equipment through electrification (see below), improve station access for all travel modes including pedestrians and bicycles, and operate more frequent feeder shuttles.

Electrification

Caltrain plans to replace diesel locomotives with electric-powered vehicles. Since electric trains can accelerate and decelerate faster than diesel trains, travel times are expected to be shorter along the Caltrain

corridor, resulting in a potential increase in ridership. In addition, electric trains are quieter and emit less pollution than diesel trains, which will have positive impacts for those living, working, and visiting Downtown.

Dumbarton Rail Service

San Mateo County Transportation Authority is planning to establish rail service along the Dumbarton Bridge corridor, linking the Peninsula Caltrain system with the East Bay including connections with Altamont Commuter Express (ACE) and Capitol Corridor Trains. The new rail line is planned to connect with the existing Caltrain tracks at the Redwood City station. Full funding for the project was not yet committed at the time of this writing, although support for the project from various segments remains strong.

High-Speed Rail

High-speed rail is a statewide initiative to supplement air travel by providing rail connections between northern, central, and southern California. High-speed rail trains travel at top speeds of 220 miles per hour in less populated areas and at slower speeds through more urban centers. The High-Speed Rail Authority is currently envisioning high-speed rail in the San Francisco Peninsula to be accommodated in the existing Caltrain right of way, with San Francisco as the ultimate northern destination. For safety and efficiency, high-speed rail requires complete grade separation of rail and surface streets.

The type of grade separations used will have dramatic impacts on Redwood City, particularly the Downtown area, which is bisected by the tracks. While the exact manner of grade separation will have to be determined at a later date, it is clear that certain methods would be harmful to Redwood City's urban environment. As of this writing, it is the City's preference that the grade separation takes the form of a covered trench. In any case, the grade-separated railway can and must be carefully designed to become one of Downtown's greatest assets and must also enact the principles of connectivity and compatibility to ensure that it respects all of the neighborhoods and planning areas along the corridor.

Redwood City is a potential location for the Mid-Peninsula high-speed rail station. Such stations are likely to require more extensive parking facilities than are provided for Caltrain service, plus circulation accommodations for feeder transit service (such as buses, light rail, or streetcars). Redwood City will need to make an effort to ensure that if a high-speed rail station is located in our city, it is done in a manner that does not impede pedestrian travel or create an inactive zone, in terms of

the location of tracks and station parking and amenities. Redwood City will need to make an effort to ensure that the high-speed rail, with or without a station, unites rather than divides the community.

Bus and Shuttle Transit

Bus Service

The San Mateo County Transit District (SamTrans) operates fixed-route bus service in Redwood City along a variety of routes:

- ***Community Routes***: These routes serve local community destinations such as schools, shopping areas, and residential areas.
- ***Express Routes***: These routes typically operate during weekday morning and evening peak commute times only, and provide service to at least one BART station, San Francisco, or San Francisco International Airport.
- ***Caltrain Connection Routes***: These routes provide service to Caltrain stations. They typically operate throughout the weekday and weekends with shorter headways (distance between buses) during peak commute times.
- ***BART and Caltrain Connection Routes***: These routes provide service between Caltrain and Bay Area Rapid Transit (BART) stations, and provide regional bus service on weekdays and weekends.

Bus transit in Redwood City

Past transit surveys have revealed that the majority of riders in Redwood City use the Caltrain Connection or BART and Caltrain Connection routes. Interestingly, however, the bus routes along El Camino Real that parallel the Caltrain route have the highest ridership levels, indicating that El Camino Real is indeed a key connecter route through Redwood City.

SamTrans projects a 20 percent increase in ridership between 2008 and 2017.

Paratransit

The Americans with Disabilities Act (ADA) is federal legislation that guarantees persons with disabilities full and equal access to the same services and accommodations that are available to people without disabilities. As such, ADA requires public transit operators to provide paratransit service to persons with disabilities comparable to the level of

fixed-route service. Persons with disabilities who cannot independently ride fixed-route transit may be eligible for paratransit service.

Although all SamTrans buses are ADA accessible, SamTrans also provides paratransit service to those individuals who cannot independently use the regular bus service. Redi-Wheels, SamTrans' paratransit service, serves San Mateo County, including Redwood City, and select surrounding cities.

Shuttles

Veterans Memorial Senior Center shuttle

Caltrain and the Peninsula Traffic Congestion Relief Alliance operate several shuttles in Redwood City. Most shuttles operate during peak commute times between the Caltrain stations in Redwood City, San Carlos, the Hillsdale Shopping Center, and major employers in the area. These shuttles are partially funded by participating employers and other agencies such as the Bay Area Air Quality Management District and the Peninsula Joint Powers Board.

A mid-day on-demand community shuttle service started operations in Redwood City in 2008. The shuttle operates in the area approximately bounded by El Camino Real, Marsh Road, U.S. 101, and Whipple Avenue. The shuttle, available between 10:00 A.M. and 5:00 P.M. from Tuesdays to Saturdays, is free and open to the general public. However, riders must call on the day before their trip to reserve a pick-up and drop-off time within the service area.

As part of the overall strategy to encourage transit use, the City may need to promote expanded shuttle service over time, particularly if commuter ferry service locates in Redwood City and bus rapid transit delivers additional commuters along El Camino Real. In addition to expanded services, it will be important to implement "best management" practices for shuttle services, including marketing and effective signage to help with wayfinding and schedule determination.

Streetcar

Streetcars are typically small (about 50 passengers), light-weight, electric-powered rail vehicles that run on fixed tracks, primarily on shared lanes in public streets. Typically, streetcars are intended for trips that are a couple of miles long within a city. These are trips that are too long for walking and too short for regional transit, such as heavy rail. In general, streetcars have a similar role as buses. However, streetcars can be more appropriate for corridors with higher densities due to their ability to attract higher ridership than buses because of their more comfortable ride and reduced noise and pollution.

Although streetcars cost more to construct and operate than typical bus systems, they cost dramatically less than heavy rail systems. Streetcar systems generally do not require right-of-way purchases, grade separations, or major reinforcement under the tracks; and as such are relatively inexpensive and quick to construct. Streetcars fill an important link in the transportation system, and have proven to be a great stimulus for walkable urban development in cities such as Portland, Seattle, and Little Rock.

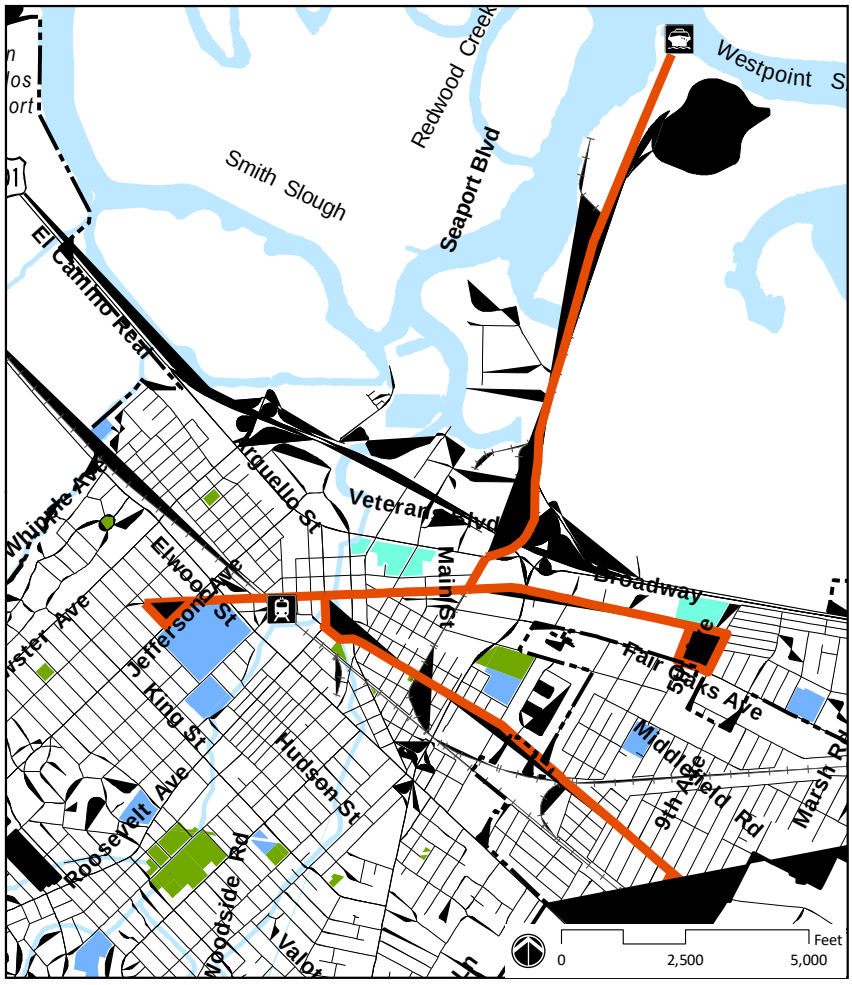
Example of a streetcar

Figure BE-1~~4~~3 shows corridors in Redwood City on which streetcars can potentially be implemented. The Broadway and Middlefield corridors were selected because they would connect existing and future high-density neighborhoods to each other and to major activity centers such as Downtown and the Caltrain Station. The Seaport Corridor is selected because it would connect the proposed ferry and employment concentrations along Seaport Boulevard, the Port, Downtown, and Caltrain Station.

Commuter Ferry

Our mid-Peninsula location and deep-water Port make Redwood City attractive as a potential commuter ferry terminal location. The San Francisco Water Emergency Transportation Authority, formed by the State Legislature in 2007 to consult and consolidate ferry transportation in the San Francisco Bay and to improve the region's emergency response planning, established a priority to expand commuter ferry service to new areas. A potential ferry terminal in Redwood City, adjacent to the Pacific Shores Center, could initially provide service to and from San Francisco, with possible routes to and from the East Bay as well. With a ferry trip between San Francisco and Redwood City estimated to take about 45 minutes, commuters would have comparable travel times to drivers using U.S. 101 during peak commute times.

Redwood City supports establishment of local ferry service as an environmentally sustainable and pleasant alternative to car commutes, with the added benefit of a water-based emergency evacuation route in the event of a disaster. Planning for the ferry and its terminal will require dredging or other methods to create a deeper basin, coordinating with the Army Corps of Engineers, and linking bicycle facilities and local transit



modes, such as shuttles and a possible

Figure BE-1~~4~~3: Streetcar Network

streetcar line, from the terminal to local employment centers and other destinations.

Street System

Redwood City's well-developed street system allows people to travel from their homes and businesses to destinations within the community with relative ease and to access the freeways and expressways that link the community to the region.

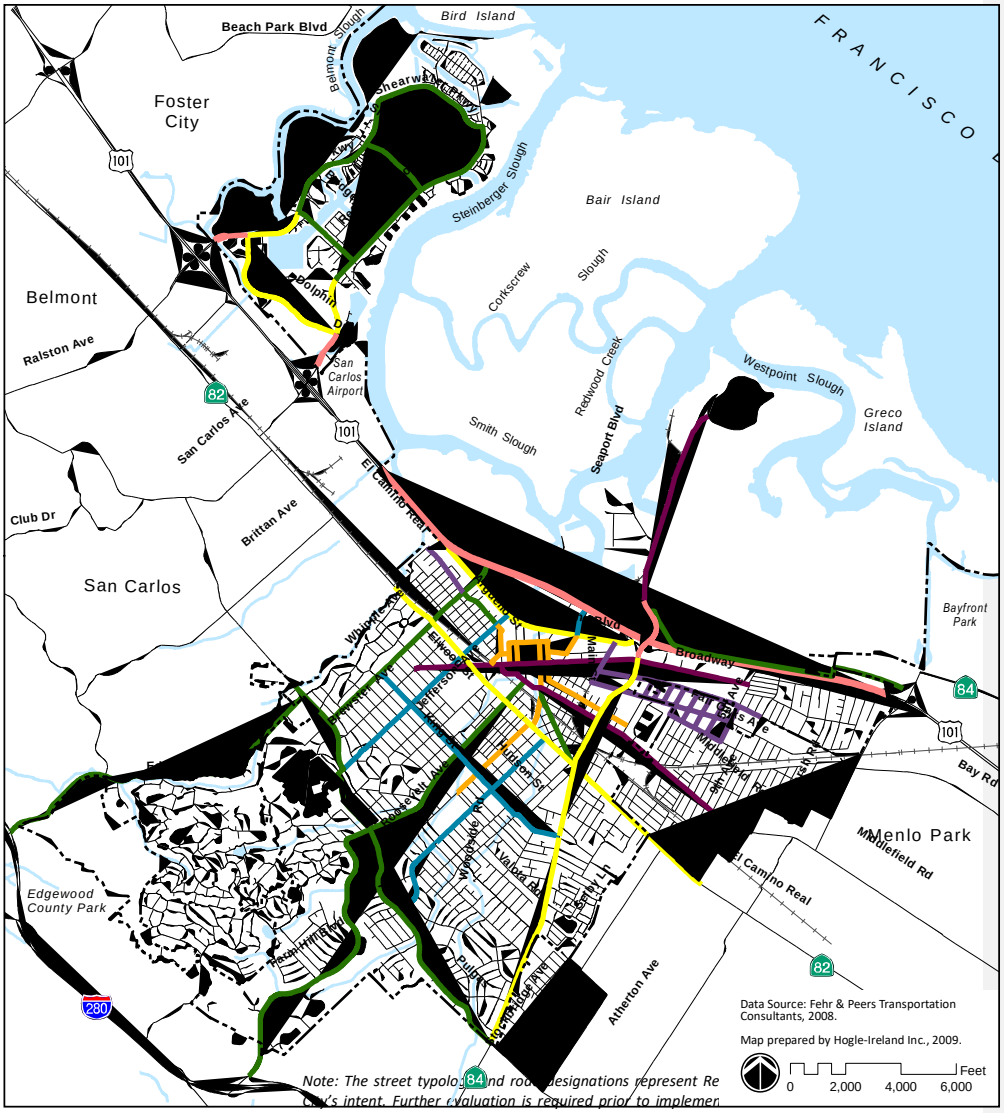
Street Typology

Historically, Redwood City defined its roadway network according to the classification system used by State highway departments: freeways, expressways, arterials, collectors, and local streets. This traditional approach is primarily focused on ensuring access and mobility for automobiles, and generally does not account for other travel modes or the surrounding context. Redwood City has a variety of different contexts, however, and each one deserves a different type of transportation focus. For instance, in the Downtown Redwood City context, a much greater emphasis is placed on pedestrian mobility, amenities, and on-street parking, whereas in an industrial or strip commercial district, focus is typically on automobile mobility and off-street surface parking.

"Complete Streets": a comprehensive approach to the practice and related policies of mobility planning. The complete street concept recognizes that transportation corridors have multiple users with different abilities and mode preferences (e.g., pedestrians, bicyclists, transit riders, and drivers) that need to be accounted for.

To ensure a balanced, multi-modal transportation network, the Redwood City General Plan organizes streets and other transportation facilities according to typologies that consider the context and prioritize different travel modes for each street. Together, the typologies provide a network of "complete streets" to accommodate all types of local transportation modes. These typologies will guide the development of standards, to ensure transportation plans and improvements consider relationships to surrounding land uses, appropriate travel speeds, and the need to accommodate multiple travel modes and various users.

The following typology definitions apply to the streets and other facilities that make up Redwood City's circulation plan, shown in Figure BE-154. A sample cross-section for each typology is provided in Figures BE-165 through BE-221. These cross-sections show a prototypical configuration for each typology. The specific configuration for each individual street may be slightly different due to the unique needs and surrounding land uses on each street.

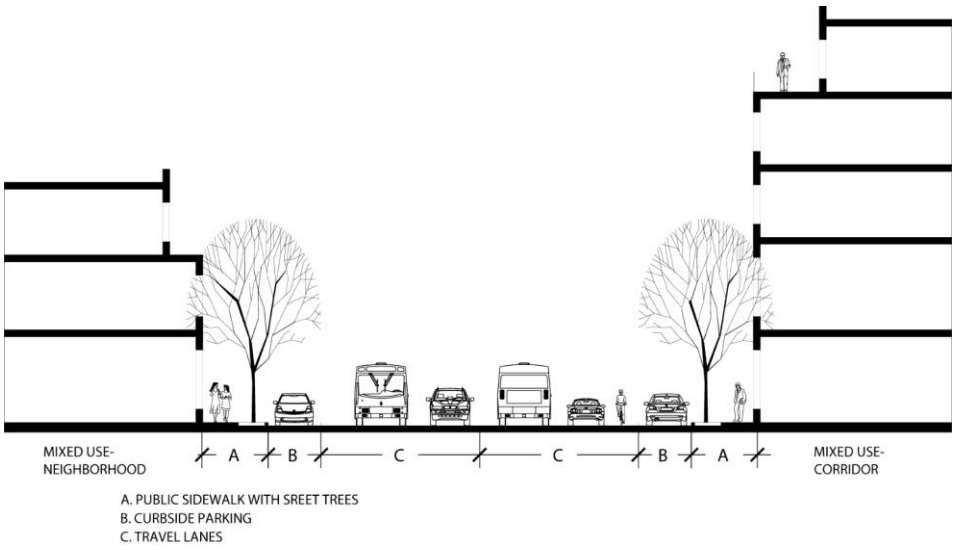


Note: The street typology and road designations represent Re City's intent. Further evaluation is required prior to implemen Vera Avenue, Valota Road, and King Street have been suggested to replace Brewster Avenue, Roosevelt Avenue, and Hudson Street as Bicycle Boulevards.

Figure BE-154: Street Typology

Transit Street

Transit Streets are primary routes intended for a future streetcar system. Signal preemption for streetcars (where red lights are shortened and switched to green as a streetcar approaches), and streetcar stops are provided. Other travel modes, including automobiles, trucks, and bicycles are accommodated on a Transit Street, but if there are conflicts, transit has priority. These streets accommodate moderate to high volumes of through-traffic within and beyond the city.



Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-16~~5~~: Sample Transit Street Cross Section

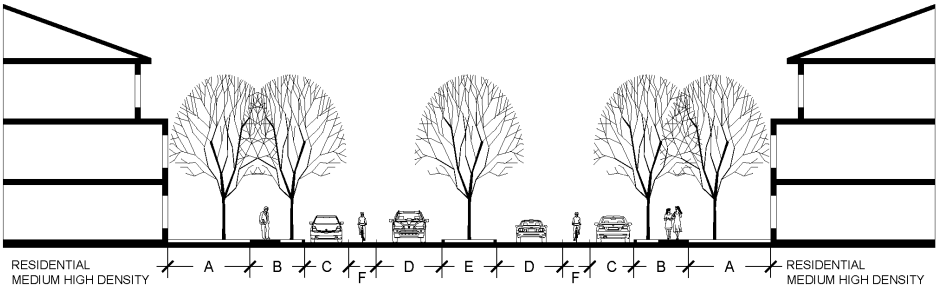
As most transit trips also involve some walking, pedestrians are accommodated with ample sidewalks on both sides of the street, and pedestrian amenities are enhanced around transit stops.

Bicycle Boulevard

Bicycle Boulevards are through-routes for bicycles, providing continuous access and connections to the local and regional bicycle route network. Local automobile, truck, and transit traffic are accommodated in the roadway, but in the event of conflicts, bicycles have priority.

Neighborhood traffic management strategies slow and calm automobile and truck traffic. Pedestrians are also accommodated. In parts of Redwood City, where routes for Bicycle Boulevards are only available on very narrow rights-of-way, alternate creative cross-sections will need to be developed.

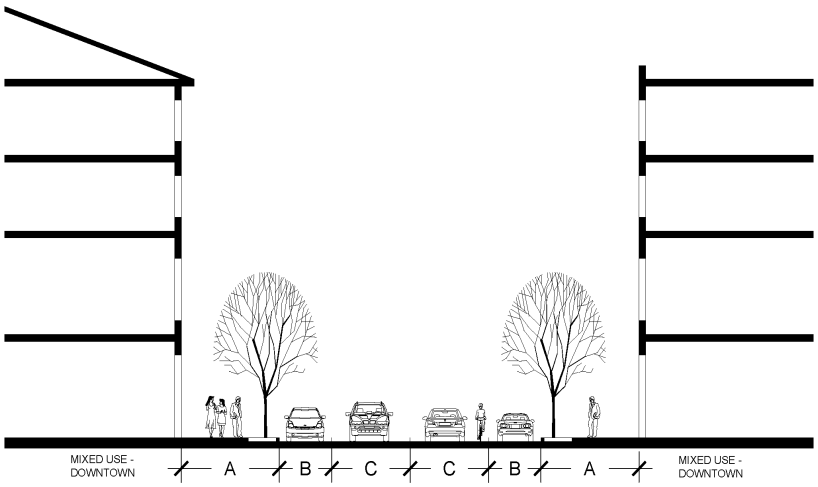
Pedestrian Street



Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-~~16~~17: Sample Bicycle Boulevard Cross Section

Pedestrian Streets are streets on which exceptionally high volumes of pedestrian traffic are encouraged. Pedestrian streets are located primarily in Downtown. Sidewalks are wider with ample pedestrian amenities, building frontages provide a high level of pedestrian interest, and pedestrian crossings have a high priority at intersections. In some locations, well-protected mid-block crosswalks may be appropriate. These streets also discourage high volume and high-speed vehicular traffic, adding to pedestrian comfort and convenience. In the event of conflicts, pedestrians have priority.



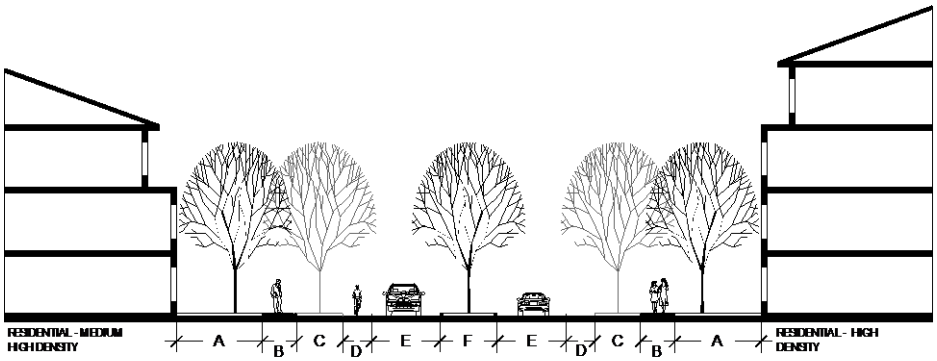
Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-~~17~~18: Sample Pedestrian Street Cross Section

While oriented primarily around pedestrians, the low auto volumes and speed make pedestrian streets good for bicycling, as well.

Connector Street

Automobiles, transit, bicycles, and pedestrians are accommodated equally on a Connecter Street. Some transit options may also be provided. These streets accommodate moderate to high volumes of through traffic within and through the city. Pedestrians are accommodated with sidewalks. Bicycle lanes are provided where feasible.



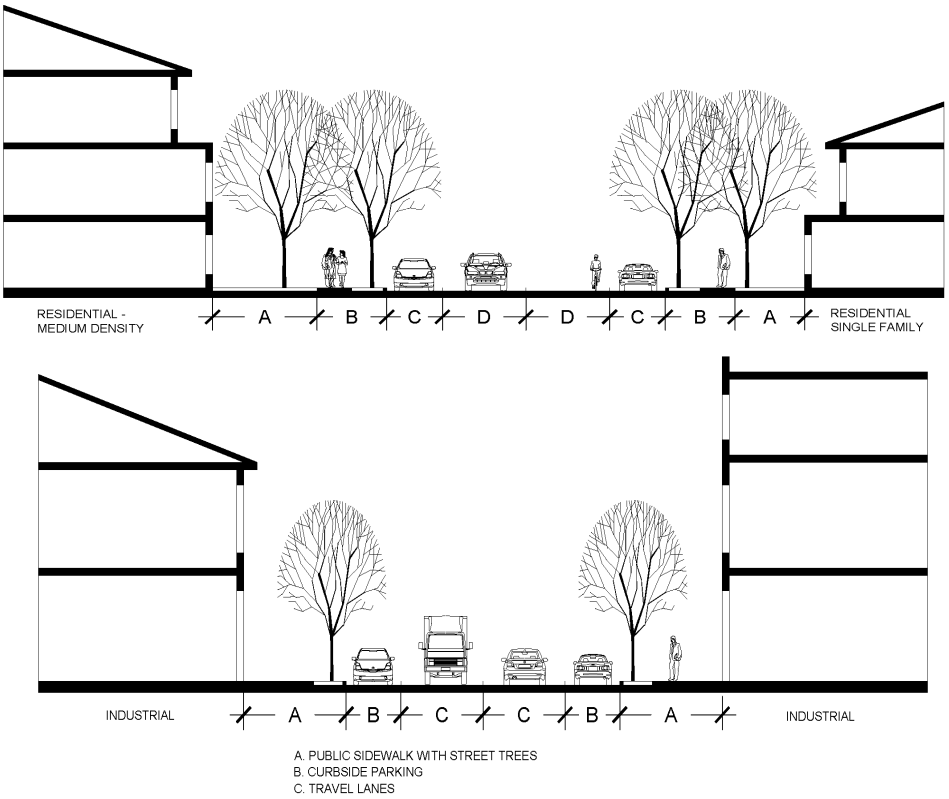
A. PLANTED YARD (DEPENDING ON CONTEXT)
B. PUBLIC SIDEWALK
C. CURBSIDE PARKING WITH POTENTIAL PLANTED BULBOUTS
D. BIKE LANES (WHERE SPACE PERMITS)
E. TRAVEL LANES
F. PLANTED MEDIAN AND TURNING LANE (WHERE SPACE PERMITS)

Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-~~18~~19: Sample Connector Street Cross Section

Local Street

Automobiles, bicycles, and pedestrians are accommodated equally on a Local Street. Transit use, if any, is incidental. These streets accommodate low volumes of local traffic and primarily provide access to abutting property. Through-traffic is discouraged, and truck traffic is prohibited. Neighborhood traffic management strategies to slow and discourage through-automobile and truck traffic may be appropriate. Pedestrians are accommodated with sidewalks.

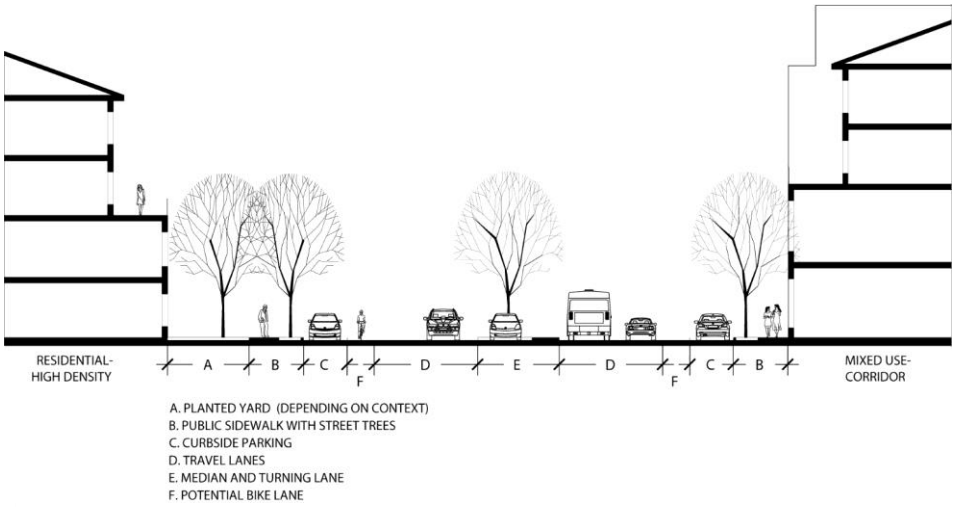


Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-2~~1~~0: Sample Industrial Street Cross Section

Boulevard

Boulevards are major roadways that serve a gateway or civic purpose, and will be considered for special treatments such as expansive landscaped medians and wide sidewalks. Traffic flow is maintained and transit access prioritized.



Note: This graphic is illustrative; additional study will be required before implementation. Additionally, this graphic exemplifies goals, however not all streets of this class may be able to attain these conditions due to existing rights-of-way and conditions.

Figure BE-~~21~~22: Sample Boulevard Cross Section

An optional design element for Boulevards is a median that separates travel lanes from parking access lanes, reducing delays caused by on-street parking and providing an additional buffer for adjacent land uses.

Auto Dominant Highway/Expressway

Auto Dominant Highways are expressways, freeways, and other roads that serve high volumes of fast-moving regional motor vehicle traffic. Express transit buses are also accommodated. Bicycle and pedestrian travel are typically prohibited, accommodated on separate parallel facilities, or provided with minimal facilities.

Two freeways serve Redwood City: U.S. 101 and I-280, with U.S. 101 running through the city and I-280 southwest of our border. The California Department of Transportation (Caltrans) has responsibility for planning, operations, and maintenance along these freeways.

U.S. 101 is a major north-south regional route that passes through Redwood City on its course along the west coast of the United States. U.S. 101 is the primary San Francisco Peninsula commute route, bringing workers–and associated traffic congestion–into the city every day. Interchanges at Marsh Road (in Menlo Park), Woodside Road (State Route 84), and Whipple Avenue provide regional access to various parts of the city. Interchanges at Holly Street/Redwood Shores Parkway and Ralston Avenue/Marine Parkway provide access to the Redwood Shores area.

Along the west edge of the city, I-280 provides a more scenic commute route than U.S. 101, but does not provide immediate access to the local employment centers. Interchanges at Woodside Road, Farm Hill Boulevard, and Edgewood Road access Redwood City directly.

Table BE-3 indicates how different modes of transportation are accommodated on various facility types and which modes have priority. For reference purposes, Table BE-4 shows the relationship between these street typologies and the prior functional classification system maintained by Redwood City Community Development.

Table BE-3: Street Typologies and Travel Mode Priorities

Facility	Transit	Bicycles	Pedestrians	Autos	Trucks
Transit Street [1, 2]	■	■	■	■	■
Bicycle Boulevard	◘	■	■	■	✱
Pedestrian Street[1]	◘	■	■	■	◘
Connector Street [1,2]	■	■	■	■	◘
Local Street[1]	◘	■	■	■	✱
Industrial Street [2]	◘	■	■	■	■
Boulevard [1,2]	■	■	■	■	■
Auto Dominant Road [2, 3]	■	◘	◘	■	■

■ = Dominant, ■ = Accommodated, ◘ = Incidental, ✱ = Prohibited

1. Bike routes (Class II and III) can be overlaid on these street types.
2. Truck routes can be overlaid on these street types.
3. Bicycles and pedestrians are typically prohibited, accommodated on separate parallel facilities, or provided with minimal facilities.

Table BE-4: Street Typologies and the Functional Classification System

Street Typologies	Functional Classification System				
	Expressway	Arterial	Major Collector	Minor Collector	Local Street
Transit Street	■	▪	■	■	✱
Bicycle Boulevard	✱	✱	■	■	▪
Pedestrian Street	✱	✱	■	▪	■
Connector Street	✱	■	▪	▪	■
Local Street	✱	✱	✱	■	▪
Industrial Street	✱	■	▪	■	■
Boulevard	■	▪	■	✱	✱
Auto Dominant Road	▪	■	■	■	✱

▪ = Primary Correspondence, ■ = Secondary Correspondence,
✱ = No Correspondence

Truck Routes

Freight movement largely originates from and travels to the industrial businesses located at the Port of Redwood City and adjacent areas, and along Seaport Boulevard, Bayshore Road, and Broadway. The Port, a heavy rail line, and established truck routes accommodate this movement, although conflicts with local traffic can occur during periods of intense trucking activities.

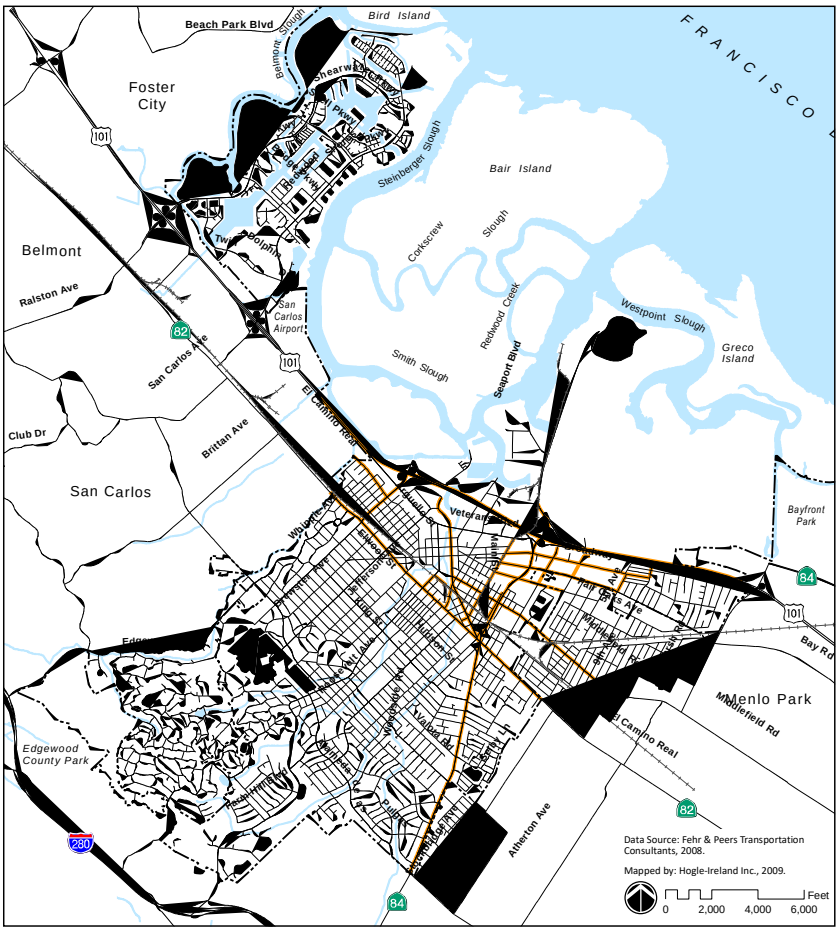
The Redwood City Municipal Code establishes truck traffic routes for the movement of vehicles exceeding a maximum gross weight of three tons. Routes are designated based on the industrial districts served, access to freeways, industrial, and connector streets, and avoidance of residential neighborhoods. Identifying truck routes is important not just to preserve dedicated routes to serve industrial districts and reduce land use conflicts, but also to allow for proper street construction and maintenance, given that heavy truck traffic impacts physical street conditions more quickly than automobile traffic.

Streets currently designated as truck routes are shown on Figure BE-2~~3~~4. Currently, there are no designated truck routes in Redwood Shores.

Truck routes will continue to be defined by ordinance via the Municipal Code and will require City Council approval for modification. At a minimum, the following roadways will continue to serve as truck routes to support industrial business activity:

- Seaport Boulevard
- East Bayshore Road
- El Camino Real
- Woodside Road
- Middlefield Road
- Bay Road
- Broadway, south of Chestnut Street
- Chestnut Street

An effective and efficient goods movement system is essential to the economic livelihood of all districts in the city. Policies for goods movement address all transportation facilities' abilities to accommodate the effective and efficient movement of goods, while balancing the needs of other travel modes.



Legend

- City Boundary
- Sphere of Influence
- Freeway/Highway
- Major Roads
- Railroad
- Waterways
- Truck Route

Note: Truck routes shown here represent the City's intent; however, additional evaluation will be required prior to implementation.

Figure BE-2~~3~~2: Truck Routes

Airports

The San Carlos Airport, which separates Redwood Shores from the rest of Redwood City, is a general aviation airport. This airport, located in San Carlos and maintained and operated by the San Mateo County Public Works Department, generates about 155,000 annual aircraft operations (i.e. landings and take-offs), with about half of the operations serving local businesses through corporate or charter services. There is an airport noise abatement program in place to minimize aircraft noise impacts on surrounding communities.

The San Francisco, San Jose, and Oakland International Airports, located about 15, 20, and 30 miles away respectively, are the nearest commercial airports providing regular freight and passenger service.

Water Transportation

Port of Redwood City

Use of our waterways for transportation dates back to the city's early years, when logging companies moved harvested redwoods to bayside docks for easy transport via water to distant markets. Today, the deep waters of the Port of Redwood City continue this important function, allowing bulk, neo-bulk, and liquid cargoes to be loaded onto and from large sea vessels. In 2008, about 1.5 million metric tons, consisting largely of recycled metal exports and building material imports, passed through the Port. As noted in the Economic Development Chapter of this Element, bulk recycling "green" businesses will be important businesses for years to come, and the continued ability of the Port to accommodate these and other Port-dependent industries will help keep Redwood City's economy diverse and sustainable. Thus, City policy supports Seaport Boulevard and U.S. 101 as critical freight movement routes necessary and complementary to Port operations.

Recreational Boating

Local public and private marinas along the San Francisco Bay provide a way for recreational boaters and windsurfers to experience the beauty and fun of being on the water. Several generations of Redwood City youth have learned to sail and kayak near their homes. Redwood City has a unique community of floating homes at Docktown, as well as a number of live-aboards at private marinas. These water connections expand opportunities for both recreation and housing for people of diverse income levels.

Redwood City supports the managed use of water-adjacent properties for recreation, unique residential lifestyles, and tourism, with the important aim of keeping access open to persons of all incomes. The long-considered reconnection of Downtown and the Bay via small boats on Redwood Creek will be pursued.

Transportation Demand Management

Transportation Demand Management (TDM) refers to a set of comprehensive strategies to reduce vehicle trips and vehicle miles traveled (VMT) by promoting alternatives such as public transit, carpooling, bicycling, walking, and telecommuting. TDM programs encourage multi-modal travel by incentivizing options beyond single-occupancy auto trips. As new developments occur, TDM programs can be expanded, formalized, and strengthened. TDM program efforts practiced in Redwood City at the time of this writing include:

- TDM requirements with significant new development (100 peak hour net new trips)
- Discount transit passes for City employees
- Parking pricing in Downtown
- Reduced parking provision requirements for Downtown and new mixed-use developments
- Employer-based commute shuttle service
- On-demand community shuttle

The following strategies can encourage the implementation and enhancement of TDM programs:

- Developing a Transportation Management Association (TMA), responsible for the implementation and coordination of TDM programs in areas such as Downtown, where several employers can consolidate their efforts
- Establishing a Trip Reduction Ordinance to require major employers to reduce companywide vehicle miles traveled or single-occupancy vehicle trips
- Developing a formal TDM Plan to be applied uniformly to new development
- Appointing a City TDM coordinator/information officer
- Introducing car-sharing programs in various residential and non-residential neighborhoods
- Using shared neighborhood electric vehicles (NEVs) and/or Segways for short trips within residential neighborhoods or office parks.

Many of the features that are incorporated into this Built Environment Element are part of the City's TDM strategy, including:

- A street typology system that assigns priority to alternate modes of travel, including the concept of complete streets
- Pedestrian and bicycle facilities, including Safe Routes to Schools and safe routes to transit
- Expanded and enhanced public transit service, including exclusive bus lanes
- Traffic-calming measures
- Implementation of TDM measures such as shuttle services, discounted transit passes, carpooling and car-sharing that reduce vehicle trips
- Compact land use pattern that reduces trip length and allows for "park once and walk" destinations
- Balance of housing and jobs

These measures are included in the plan for the City's physical transportation infrastructure and implementing actions such as zoning requirements and supporting public transit operations.

Key Circulation Considerations

Redwood City's primary circulation issues over the next 20 years will likely be related to concerns over continued vehicular congestion, pedestrian and bicycle connectivity, rail/road conflicts, through-traffic in neighborhoods, and increasing transit access.

Vehicular Congestion

From a vehicular standpoint, a number of areas experience regular weekday peak period congestion. These include Woodside Road between El Camino Real and U.S. 101, the U.S. 101/Whipple Avenue Interchange, and Whipple Avenue at El Camino Real near the at-grade railroad crossing. In addition, U.S. 101 through Redwood City is often congested throughout the day. Operations at several at-grade rail crossings (most notably the El Camino Real/Whipple Avenue intersection) are temporarily disrupted (including signal pre-emption for buses) as trains pass through the city.

It is also important to note that maintaining acceptable traffic operations has historically come at the expense of pedestrians and cyclists when intersections are widened to accommodate additional vehicle lanes.

Redwood City must ensure that pedestrians, bicycles, and transit are considered when new transportation improvements are planned.

Between 1978 and 2008, Redwood City's population increased by nearly 40 percent. A general trend nationwide has been that increases in vehicle trips and trip length proceed at a higher rate than growth in population. This is due to many complex factors, including an increase in two-income families, the construction of streets and street patterns which do not accommodate pedestrians, a greater emphasis on road projects than transit projects, and the construction of housing further and further from job centers and services. The city's roadways experience congestion during peak travel periods. Even with substantial increases in alternative mode shares expected in the years ahead, automobile travel in Redwood City will remain the form of transportation used for most trips. To this end, policies focus on maximizing efficiency of the existing street system and making minor capacity enhancements where feasible and not to the detriment of other modes.

Pedestrian and Bicycle Connectivity

Some parts of Redwood City provide great pedestrian or bicycle amenities, such as the Bay Trail for bicycles and the Downtown area for pedestrians. However, major barriers impede pedestrian movement between certain areas and bicycle circulation and connectivity. Many of these barriers, such as U.S. 101, El Camino Real, and Woodside Road are designed to best accommodate vehicular traffic.

In general, most people will walk when their destination is about one-quarter of a mile away or less. However, long blocks, lack of crosswalks, and deficient street amenities in some parts of the city make walking unattractive to most people and discourage people from parking their vehicle once and walking to multiple destinations.

As previously discussed, Woodside Road between U.S. 101 and El Camino Real is one of the most significant barriers to pedestrian and bicycle travel. Lack of sidewalks, lack of safe crossings, and high vehicle volumes and speeds are inconvenient, present safety concerns, and discourage pedestrians and bicyclists from traveling along or across Woodside Road. The proposed improvements at the Woodside Road/Middlefield Road intersection (as demonstrated in Figure BE-~~10~~ 11 above) are a good example of techniques to improve pedestrian and bicycle circulation along Woodside Road and other major arterials.

At the time of this writing, there is no direct pedestrian or bicycle access between El Camino Real and Woodside Road, two major corridors in the

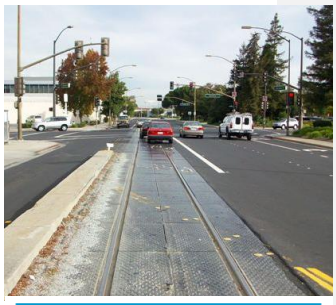
city that are grade separated. The connectivity between these two major corridors could potentially be improved by demolishing the grade separation and providing an at-grade intersection.

There is also very limited pedestrian and bicycle linkage across U.S. 101. Pedestrians and bicyclists wishing to travel across U.S. 101 must use existing roadways such as Woodside Road that do not provide sidewalks or bike lanes. Providing additional pedestrian and bicycle facilities across U.S. 101 both northwest and southeast of Woodside Road would encourage more people to walk or bike within a better connected multi-modal network, which will one day include the Bay Trail when it is completed in this area. In addition, a connection across U.S. 101 near Downtown is highly important to facilitate better connections between Downtown and the emerging Redwood Creek/Bayfront Center, as discussed in the Urban Form and Land Use Chapter. Maple Street is one possible location for a stronger connection.

Rail/Road Conflicts

Railroad tracks that cross streets at street grade can create traffic delays and potential safety issues. Gates at at-grade crossings close and prohibit vehicles, cyclists, and pedestrians from crossing the tracks when trains are passing. As a result, vehicle queues can stack up into intersections and disrupt the traffic flow of vehicles, bicycles, and pedestrians.

As of 2009, only three of the roadways that cross Caltrain tracks within Redwood City and the Sphere of Influence are grade separated. Woodside Road crosses over the tracks and Jefferson Avenue crosses under the tracks. In the Sphere of Influence, Fifth Avenue also crosses under the tracks. All other railroad crossings are at grade, and with the numerous commuter trains passing through the city daily, the potential for delays and collisions is always present. In addition, the Union Pacific Railroad freight spur from the Port operates in the middle of Chestnut Street. Agreements to limit freight movement to night-time hours minimize potential conflicts with this rail spur.



Union Pacific freight rail spur on Chestnut Street

Regardless of the establishment of high-speed rail service, Redwood City supports the elimination of all at-grade crossings in the city to increase safety for pedestrians, bicycles, and vehicles. To the extent feasible, the City will consult with the High-Speed Rail Authority to determine the appropriate grade-separations through Redwood City. In the absence of high-speed rail or long-term delay of such a project, Redwood City will prioritize and pursue with Caltrain additional grade separations to achieve improved local traffic flow.

Novelty traffic signs located throughout Redwood City residential neighborhoods

"Pedestrian Enhanced Design" (PED) describes reduction in the number and/or width of travel lanes on a roadway. Potential benefits of a PED include lower vehicle speeds, more space available for bike lanes, sidewalks, or landscaping, and improved safety for all users. PEDs often reduce the capacity of the roadway and may increase vehicle delay, including transit vehicles. Typically, the amount of public right-of-way is maintained but vehicular right-of-way is converted to other uses.

However, Redwood City also recognizes the impediments to pedestrian activity and land use viability that can come with grade separations. For example, when train tracks are kept at grade and roads are lowered beneath the tracks, valuable land area can be lost and pedestrians are often visually deterred from the area. Where possible, it is essential that grade separations be done in a manner that is aesthetically attractive and that provides maximum connectivity across the rail corridor for all modes (e.g. pedestrians, bicycles, and autos).

Through-Traffic in Neighborhoods

Commute traffic along El Camino Real and Woodside Road frequently trails off into adjoining neighborhoods, seeking less-congested travel paths; in the process, residential neighborhoods are subjected to additional, and sometimes speeding, through-traffic. Traffic calming, sometimes called neighborhood traffic management, provides a set of strategies that can reduce vehicle speeds or volumes to improve the quality of life in neighborhoods and increase safety for vehicles, pedestrians, and bicyclists.

Redwood City has implemented traffic calming measures on specific streets within neighborhoods based on requests of local residents and results of focused studies, and subject to approval by the participating residents and stakeholders. For example:

- The City has installed novelty traffic signs throughout many neighborhoods to alert drivers of speed limits and generally encourage safe driving habits.
- Several "Pedestrian Enhanced Designs" have been implemented, mostly near Downtown, including Industrial Way between Whipple Avenue and the City limits, as well as along segments of Jefferson Avenue and Broadway.

Despite the absence of adopted, uniform policies and processes, several successful traffic calming projects have been implemented. The City can use these experiences to help define a long-term process and develop a formal Neighborhood Traffic Management strategy and program.

Grand Boulevard Initiative

The Grand Boulevard Initiative is a collaboration of 19 cities, San Mateo and Santa Clara Counties, and other local and regional agencies to transform El Camino Real between San Francisco and San Jose from an auto-oriented commercial corridor into an attractive multi-modal boulevard by coordinating various local efforts. Currently, El Camino Real is a State highway (State Route 82) and local jurisdictions do not have control over many design features on the roadway. Since many of the State requirements may not be sensitive to specific community needs, the Grand Boulevard Initiative seeks more coordination with local jurisdictions to transform El Camino Real to a pedestrian- and transit-friendly multi-modal corridor. The Initiative focuses on guiding member agencies to develop programs, policies, and strategies to allow for new design treatments, including those that require exceptions from Caltrans standards, and identifying future transit service along the corridor. The Grand Boulevard Initiative would not have control over local land use planning; but one key goal is to encourage cities to support high-density housing and employment growth along the corridor, much like what is proposed in this General Plan.

A "multi-modal transportation system" consists of a variety of urban transportation modes including walking, bicycling, public transit, private automobiles, and trucks.

Redwood City is fully active in the Grand Boulevard Initiative and participates in the policy and technical advisory committees. The Redwood City General Plan establishes programs to implement the Grand Boulevard vision by encouraging mixed-use urban development along El Camino Real, in Downtown, and around the Caltrain station.

Refer to the Public Safety Element's Atmosphere and Climate Chapter for more information and policies regarding VMT.

Circulation Goals, Policies, and Programs

The City's goal is to establish and maintain a comprehensive, multi-modal transportation system that improves safety and is achievable, efficient, environmentally and financially sound, accessible, and coordinated with land use policies. The Circulation goals, policies, and programs implement four of the General Plan's Guiding Principles:

- ***Work to develop attractive and convenient transportation alternatives, including transportation hub and ferry system.***
- ***Design for pedestrian and bicycle-friendly streets and public spaces.***
- ***Plan for sustainable open space, water, energy, and air quality within our finite resources.***

- ***Strengthen economic vitality to provide jobs, services, revenues, and opportunities.***

Goal BE-25: Maintain a local transportation system that balances the needs of bicyclists, pedestrians, and public transit with those of private cars.

Policy BE-25.1: Sustainability Focus EJ Focus

Accommodate and encourage alternative transportation modes to achieve Redwood City's mobility goals and reduce vehicle trip generation and vehicle miles traveled (VMT), particularly in the Environmental Justice communities.~~)~~.

Policy BE-25.2: Facilitate convenient and timely transfers between various travel modes. Emphasis should be on transfers between alternative transportation modes that minimize the need for use of single-occupant vehicles.

Policy BE-25.3: Sustainability Focus EJ Focus

Support using the concept of complete streets to design, construct, operate, and maintain city and private streets to enable safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages, abilities, and preferences. Use the complete streets concept to better link the Port, Seaport Center, Pacific Shores, and other employment centers with Downtown, the Environmental Justice communities, and other nearby areas.

Policy BE-25.4: Consider impacts on overall mobility and various travel modes when evaluating transportation impacts of new developments or infrastructure projects.

Policy BE-25.5: Sustainability Focus

Continue to implement Pedestrian Enhanced Designs (PEDs), especially on streets with projected excess vehicle capacity, to reduce either the number of travel lanes or the roadway width, and use the available public right-of-way to provide wider sidewalks, bicycle lanes, transit amenities, or landscaping.

Policy BE-25.6: Ensure that the City's transportation impact fee program provides adequate funding for necessary transportation improvements that will benefit all travel modes, while also incentivizing development that is less dependent on expensive new transportation infrastructure.

Policy BE-25.7: Sustainability Focus

Consult with neighboring jurisdictions and County, State, and federal agencies toward maintaining and improving the existing regional transportation network, and identifying, funding, and

implementing regional improvements to the transportation network.

Goal BE-26:

Improve walking, bicycling, and electric bicycle/scooter facilities to be more convenient, comfortable, and safe, and therefore more common transportation modes in Redwood City.

Sustainability Focus

EJ Focus

Policy BE-26.1: Coordinate the planning, funding, prioritization, and implementation of bicycle, electric bicycle/scooter, and pedestrian policies, programs, and supporting infrastructure, with a particular focus on the Environmental Justice communities.

Policy BE-26.2: Develop and maintain comprehensive master plans for the citywide bicycle, electric bicycle/scooter, and pedestrian networks to identify short- and long-range policies, programs, and improvement projects that will improve walking and bicycling.

Sustainability Focus

EJ Focus

Policy BE-26.3: Encourage ~~citizen~~ resident participation~~,~~, particularly from residents of Environmental Justice communities~~' residents,~~ in improving the city's "complete streets" and bicycle and pedestrian networks.

Policy BE-26.4: Consider street modifications to improve bicyclist, electric bicycle/scooter, and pedestrian safety through such measures as the use of neighborhood traffic management strategies, the development of complete streets concepts, and implementation of Bicycle Boulevards.

Policy BE-26.5: Integrate financing and implementation of pedestrian, bicycle, and electric bicycle/scooter improvement projects with other related street modifications projects.

Sustainability Focus

Policy BE-26.6: Require new development projects to provide pedestrian, bicycle, and electric bicycle/scooter facilities that connect to existing and planned pedestrian and bicycle facilities; and require large parking facilities to accommodate pedestrian, bicycle, and electric bicycle/scooter circulation.

Policy BE-26.7: Promote the collection and maintenance of data on pedestrian, bicycle, and electric bicycle/scooter activity to better understand where heaviest use and safety and improvement needs are and to assist in prioritizing improvement projects.

Policy BE-26.8: Identify funding for the regular maintenance of all public bicycle, electric bicycle/scooter, and pedestrian facilities.

Policy BE-26.9: Use portions of railroad and utility rights-of-way for use as exclusive or shared bicycle, electric bicycle/scooter, and pedestrian facilities, as feasible.

Policy BE-26.10: Prioritize bicycle, electric bicycle/scooter, and pedestrian safety improvements at street crossings~~.~~, particularly in the Environmental Justice communities.

EJ Focus

Policy BE-26.11: Prioritize implementation of pedestrian, bicycle, and electric bicycle/scooter improvements near schools, transit, shopping, hospitals, and mixed-use areas with higher pedestrian concentrations~~.~~ including the Environmental Justice communities.

EJ Focus

Policy BE-26.12: Encourage more students to walk and bicycle to and from schools.

Sustainability Focus

Policy BE-26.13: Explore the implementation of uniform way-finding signs to guide bicycles, electric bicycles/scooters, and pedestrians to recommended travel routes and destinations throughout the community. Ensure consistency with countywide/regional signage wherever feasible.

Policy BE-26.14: Support completion of the pedestrian network by providing sidewalks or paths on at least one side of the street (preferably both sides ~~where feasible~~) where they are missing and feasible~~.~~, particularly in the Environmental Justice communities. Crosswalks and sidewalks shall be universally accessible and designed for people of all abilities, wherever feasible.

Sustainability Focus

EJ Focus

Policy BE-26.15: Improve the pedestrian experience through the use of landscaping, medians, crosswalks, mid-block crossings, pedestrian-scale lighting, pedestrian traffic signals, appropriate street furniture, orienting new development toward the street, and increased education and enforcement.

Policy BE-26.16: Encourage pedestrian activity by installing, maintaining, and where appropriate, enhancing existing crosswalks at both mid-block locations and all approaches of major intersections where feasible and where enhanced traffic control devices or roadway amenities would improve pedestrian access and safety~~.~~, particularly in the Environmental Justice communities.

EJ Focus

Policy BE-26.17: Encourage pedestrian activity by accommodating pedestrian crossings on all intersection approaches and/or mid-block with maximum spacing of 500 feet, where feasible, including enhanced traffic control devices or roadway amenities where appropriate to improve pedestrian access and safety, on all street types other than Auto Dominated Highways. Where necessary, traffic flow should be preserved with roundabouts or signal coordination rather than increased intersection spacing.

Sustainability Focus

Policy BE-26.18: Maintain and encourage the use of existing pedestrian walkways that enhance pedestrian connectivity throughout the city.

Policy BE-26.19: Expand the bicycle system to provide a continuous system within Redwood City by eliminating missing segments. Additionally, provide continuous bicycle facilities, where appropriate, through eliminating parking on one or both sides of the street and/or other roadway modifications. If exclusive bicycle facilities (i.e. Class I or II) are not feasible, provide shared facilities by posting appropriate signs and shared lane markings.

Sustainability Focus

Policy BE-26.20: Eliminate or minimize physical obstacles and barriers on city streets that impede bicycle movement, including consideration of grade-separated crossings at railroad tracks and freeways.

Policy BE-26.21: Designate a system of Bicycle Boulevards with increased amenities and safety features such as bicycle detectors at signalized intersections.

Sustainability Focus

Policy BE-26.22: Encourage bicycling by increasing bicycle safety and comfort at signalized intersections.

Policy BE-26.23: Encourage bicycling and use of electric bicycles/scooters to public transit nodes by providing appropriate amenities at stations and on-board transit vehicles.

Policy BE-26.24: Encourage bicycling and use of electric bicycles/scooters by providing adequate bicycle parking.

Policy BE-26.25: Encourage bicycling and use of electric bicycles/scooters by prioritizing routine street maintenance and sweeping for streets that are designated as bike facilities.

Policy BE-26.26: Promote comprehensive pedestrian, bicycle, and electric bicycle/scooter education throughout the community for pedestrians, cyclists, and drivers.

Goal BE-27: Create conditions to improve utilization of existing public transportation services to increase ridership.

Policy BE-27.1: Encourage SamTrans to ~~L~~locate bus, shuttle, and rail services on designated streets as near as possible to areas with the highest ridership potential, particularly in the Environmental Justice communities.

EJ Focus

Policy BE-27.2: Pursue development of streetcar lines in areas for targeted development intensification and to connect major destinations.

Sustainability Focus

Policy BE-27.3: Provide for roadways designated as transit routes to accommodate transit vehicle circulation and adequate access to and from transit stops.

Policy BE-27.4: Consider prioritizing bus mobility along El Camino Real and other heavily traveled transit corridors.

Policy BE-27.5: Require that new development and projects improve access to and accommodations for public transit.

Policy BE-27.6: Encourage SamTrans to s~~S~~ite transit stops at safe, efficient, and convenient locations, particularly in the Environmental Justice ~~.~~communities. Encourage SamTrans to ~~Provide~~ provide transit stop amenities to facilitate access to and from transit stops and transfers between buses. Encourage SamTrans to m~~M~~ake transit an attractive alternative to driving.

EJ Focus

Policy BE-27.7: Pursue expanding the community-serving shuttle program to access neighborhoods throughout Redwood City.

Sustainability Focus

Policy BE-27.8: Consult with employers and transit providers to establish and maintain shuttle service serving major vehicle trip-generating destinations in the city.

Sustainability Focus

Policy BE-27.9: Encourage new transit providers in Redwood City.

Policy BE-27.10: Maintain and improve access and mobility for the mobility impaired population groups such as youth, the disabled, and seniors.

Goal BE-28: Reduce traffic density, and improve air quality and safety in Environmental Justice communities.

Policy BE-28.1: Increase active transportation, reduce motor vehicle miles traveled, and improve bicyclist and pedestrian safety in and around Environmental Justice communities.

Goal BE-~~28~~29: Provide maximum opportunities for upgrading passenger rail service for faster and more frequent trains, while making this improved service a positive asset to Redwood City that is attractive, accessible, and safe.

Policy BE-2~~8~~.1: Support Caltrain to improve service and amenities that increase daily ridership and reduce potential negative effects on the community.

Sustainability Focus

Policy BE-~~28~~29.2: Support attractive and pedestrian-friendly railroad track grade-separated crossings and other appropriate measures to mitigate potential noise, air pollution, safety, and traffic impacts of increased Caltrain service and new high-speed rail service.

Policy BE-~~28~~29.3: Support the development of related uses and amenities that contribute to increased ridership of potential high-speed rail, while balancing the needs of the greater community.

Sustainability Focus

Policy BE-~~28~~29.4: Balance high-speed rail and freight rail needs, opportunities, and advantages.

Goal BE-~~29~~30: Maintain the city's street network to promote the safe and efficient movement of people.

Policy BE-~~29~~30.1: Develop and maintain a roadway network that categorizes streets according to function and type, considering the surrounding land use context and location, particularly within Environmental Justice communities.

EJ Focus

Policy BE-30~~29~~.2: Pursue programs that reduce vehicle speeds and cut-through traffic on local streets.

Policy BE-30~~29~~.3: Support programs that identify safety issues and develop appropriate countermeasures in Redwood City.

The vehicular Level of Service (LOS) grading system qualitatively characterizes traffic conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long queues and delays).

Policy BE-30~~29~~.4: Encourage implementation of Intelligent Transportation Systems (ITS) strategies to maximize the efficiency of the existing transportation systems.

Policy BE-30~~29~~.5: Support re-evaluation of the City's Level of Service (LOS) policies for motor vehicle circulation to ensure efficient traffic flow and balance multi-modal mobility goals.

Policy BE-30~~29~~.6: Develop a new Level of Service (LOS) policy for Downtown that includes the following components:

- Emphasis on pedestrian and bicycle access and circulation
- Maintenance of appropriate emergency vehicle access and response time
- Support for reduced vehicle miles traveled
- Considers, but does not deem, auto congestion Downtown to be an impact
- Emphasis on the impacts to and needs of ~~surrounding~~the Environmental Justice communities

Policy BE-30~~29~~.7: Maintain and enhance the interconnected network of streets and short blocks that support all modes of travel.

Policy BE-30~~29~~.8: Consider infrastructure projects that increase the efficiency of the Woodside Road corridor (including the replacement of the El Camino Real/Woodside Road grade separation with an at-grade intersection) and balance the needs of all travel modes.

Policy BE-30~~29~~.9: Support increasing the connectivity of all travel modes in the areas east of U.S. 101.

Sustainability Focus

Goal BE-~~30~~31: Provide for safe and efficient movement of goods to support commerce and industry.

Policy BE-~~30~~31.1: Minimize potential conflicts between trucks and pedestrian, bicycle, and transit access and circulation on streets designated as truck routes.

Policy BE-31~~30~~.2: Minimize potential conflicts between truck loading and unloading and pedestrian, bicycle, and transit access and circulation.

Policy BE-31~~30~~.3: Ensure that adequate freight movement capacity is provided at the Port of Redwood City, balanced with the overall transportation needs within the Seaport Boulevard corridor.

Policy BE-~~3130~~.4: Maximize the efficiency of goods movement while working to minimize related environmental impacts.

Goal BE-~~3132~~: Encourage developments and implementation of strategies that minimize vehicle trips and vehicle miles traveled.

Policy BE-~~3132~~.1: Explore alternative techniques and requirements as they pertain to various transportation modes including parking, land use, and traffic mitigation that would encourage the use of alternative transportation modes.

Policy BE-~~3231~~.2: Promote transit-oriented development with reduced parking requirements and other amenities around appropriate transit hubs and stations to facilitate the use of available transit services.

Policy BE-~~3231~~.3: Encourage developments that minimize vehicle trips and vehicle miles traveled.

Sustainability Focus

Policy BE-~~3231~~.4: Support implementation of a citywide or areawide TDM program.

Sustainability Focus

Policy BE-~~3231~~.5: Ensure that TDM programs initiated by private parties reduce projected traffic impacts.

Sustainability Focus

Policy BE-~~3231~~.6: Encourage City employees to use other transportation modes rather than single-occupant automobiles.

Sustainability Focus

Policy BE-~~3231~~.7: Balance business viability and land resources by maintaining an adequate supply of parking to serve demand while avoiding excessive parking supply that discourages non-automobile travel modes usage.

Policy BE-~~3231~~.8: Support using parking supply and pricing as a strategy to encourage use of non-automobile modes where feasible.

Policy BE-~~3231~~.9: Consider reducing parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive TDM program, or developments located near major transit hubs.

Policy BE-~~3231~~.10: Encourage private property owners to share their underutilized parking with the general public and/or other adjacent private developments.

Policy BE-~~32~~31.11: Explore "Parking Benefit Districts" that use revenues from parking in the district to benefit the district.

Implementation Programs

Procedures, Permits, Agreements, Ordinances

Program BE-~~38~~37: **Transportation Impact Fee.** Review and, if necessary, update the City's transportation impact fee program to ensure that funding is provided for necessary transportation improvements that will benefit all travel modes.

Timeframe: Immediate and Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~39~~38: **Transportation Funding Prioritization.** Develop an overall policy to prioritize funding and timing for implementing transportation improvements. Consider prioritizing multi-modal projects that provide the most benefit to all users~~.~~, particularly Environmental Justice community residents. Also, account for other potential funding sources where feasible.

Sustainability Focus

Timeframe: Short Range
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~40~~39: **Complete Streets Coordinator.** Designate a citywide bicycle and pedestrian coordinator to administer the planning, funding, prioritization, and implementation of bicycle and pedestrian policies, programs, and supporting infrastructure.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~41~~40: **Pedestrian and Bicycle Facilities Maintenance.** Identify funding sources for the regular maintenance and cleaning of all public bicycle, electric bicycle/scooter, and pedestrian facilities as part of the City's regular budget. Prioritize routine street maintenance for streets designated as bike facilities.

Timeframe: Ongoing
Responsible Party: Community Development; Finance Department; Public Works Services Department
Funding Sources: General Fund, Redevelopment funds, grants, County, State, and federal funds

Program BE-~~42~~41: **Pedestrian Connectivity.** Develop a plan to maintain and enhance existing pedestrian walkways through the city that connect neighborhoods to parks, schools, other public/quasi-public facilities and key destinations. Work with adjacent property owners to identify creative methods of preventing associated issues of security, vandalism, and litter. Eliminate walkways only to improve pedestrian safety.

Sustainability Focus

Timeframe: Mid Range
Responsible Party: Community Development; Public Works Services Department; Police Department
Funding Sources: General Fund, grants, federal and State funds

Program BE-~~43~~42: **Bicycle Detection Devices.** Review 1) all new traffic signal installations, 2) existing traffic signal modifications, and 3) projects included in the Capital Improvement Plan to include installation of bicycle detection devices where feasible.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, grants, County, State, and federal funds

Program BE-~~44~~43: **Off-Street Bicycle and Electric Bicycle/Scooter Parking and Storage Requirements.**

- Encourage all public off-street parking facilities, including those owned by Redwood City, San Mateo County, and the San Mateo County Transit District (SamTrans), to set aside areas for aesthetically designed, secure, and convenient bicycle and electric bicycle/scooter parking in strategic and highly visible locations.
- Require all new developments and reuse/redevelopment projects to provide safe, secure, and convenient long-term and short-term bicycle and electric bicycle/scooter storage facilities and other appropriate amenities.

Timeframe: Short Range

Responsible Party: Community Development
Funding Sources: General Fund, grants, County, State, and federal funds

Program BE-~~45~~44: **Bus Facilities Funding.** As part of the project development review process, require developers of new building and redevelopment/reuse projects located along bus routes to pay their fare share of the cost of providing improved bus stop facilities and related street furniture or, where appropriate, dedicate land for improved bus stop facilities. If new streets are proposed as part of new developments, determine the suitability of expanding transit service. If appropriate, the new streets shall be designed to accommodate transit vehicles and provide appropriate amenities.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Development agreements

Program BE-~~46~~45: **New Development Shuttle Service.** As part of the entitlement process for large developments, explore the feasibility of providing shuttle service to and from other transportation hubs and activity centers such as Canada College, Caltrain Station, and Downtown.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: Development agreements

Program BE-~~47~~46: **Neighborhood Traffic Management Program.** Update the City's Neighborhood Traffic Management Program to formalize:

- Comprehensive strategies to improve safety and livability of local and collector streets
- Procedures that can uniformly be applied to all neighborhoods to identify and prioritize traffic management measures
- A program that can be clearly followed by residents, City staff, and other stakeholders

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~48~~47: **Smaller Street Blocks.** As part of the development review process for redevelopment/reuse of existing developments and for new development, encourage the construction or conversion of larger blocks into smaller blocks separated by a network of narrow short streets and/or pedestrian and bicycle corridors.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~49~~48: **U.S. 101/Woodside Road Redesign.** Continue to actively participate in the process for the redesign of U.S. 101/Woodside Road interchange, and ensure that it provides access and circulation for all travel modes.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~50~~49: **Off-Street Loading Requirements.** As part of the project development review process, ensure that adequate off-street loading areas in new large commercial, industrial, and residential developments are provided, and that they do not conflict with pedestrian, bicycle, or transit access and circulation.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~51~~50: **Parking Standards Update.** Update existing parking standards that reduce parking requirements for transit-oriented developments and mixed-use projects, and that address shared parking and TDM programs. The standards should also require amenities and programs to support the reduced parking requirements.

Timeframe: Immediate
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~52~~51: **Parking Demand Analysis.** As part of the entitlement process, require large developments to complete a parking demand analysis that accounts for shared parking, TDM programs, and parking pricing to determine the appropriate parking supply. Encourage the use of parking reserve in landscaping concept (i.e.

landscaping that can be converted to parking in the future if necessary) to ensure that excessive parking is not provided.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Plans and Studies

Program BE-~~53~~52: New Development Roadway Consistency. Require new development's roads and all other roadway improvements to be consistent with the adopted street typologies.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, project applicants

Program BE-~~54~~53: Street Standards. Update and enforce the City's engineering standards for public and private streets to require safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages, abilities, and travel mode preferences when new streets are established or existing streets are modified. High-quality pedestrian facilities (such as sidewalks that provide direct walking routes with adequate width, pedestrian-scale lighting, landscaping, and other appropriate amenities) shall be provided as part of all new development.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, project applicants

Program BE-~~55~~54: Level of Service Policy Evaluation. Evaluate Redwood City's current Level of Service (LOS) policies for motor vehicle circulation. The evaluation shall consider the following to ensure efficient traffic flow and balance multi-modal mobility goals:

- Maintaining LOS D or better for motor vehicles in all areas of the city, except the Downtown area as defined by the Downtown Precise Plan. In Downtown, no minimum vehicular LOS standard will be maintained but vehicular LOS will be calculated and alternate LOS standards for other travel modes will be established.
- Explore other areas of the city where vehicular LOS standard would either be lowered or eliminated. These areas may

include gateway intersections providing access into the city, freeway ramps, or along Transit Streets including the proposed streetcar corridors.
- Consider the effect of potential mitigation measures to improve vehicle LOS on the operations of other travel modes.
- Evaluate the potential for elimination of vehicle LOS as the primary measure of impact assessment for developments in parts or the entire city.

Timeframe: Immediate
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~56~~55: **Multi-Modal Level of Service Standards.** Develop and adopt multi-modal level of service (LOS) standards that address each travel mode. Vary the standard by facility type, travel mode, and location. This approach will help to apply a preference for selected modes based on the street type and/or location.

Timeframe: Short Range and Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~57~~56: **Pedestrian Enhanced Design (PED) Criteria.** Establish criteria to identify roadways for implementing pedestrian enhanced design, especially for roadways located in Environmental Justice communities. Conduct engineering studies to determine feasibility of implementing PEDs that provide multi-modal amenities within the public right-of-way by reducing the number and/or width of travel lanes on the following streets that are projected to have excess vehicle capacity:

Sustainability Focus

EJ Focus

- Veterans Boulevard (from 6 lanes to 4 lanes east of Brewster Avenue)
- Middlefield Road east of Woodside Road (from 4 or 5 lanes to 3 lanes)
- Jefferson Avenue between Hudson Street and Alameda de Las Pulgas and between Marshall Street and Veterans Boulevard (from 4 lanes to 3 lanes), and potentially between Hudson Street and Clinton Street if traffic signals on El Camino Real can be appropriately timed to accommodate it.
- Broadway between Maple Street and a quarter-mile east of Douglas Avenue—where Broadway already provides a three lane cross-section (from 4 lanes to 3 lanes)
- Brewster Avenue between El Camino Real and Elwood Street (from 4 lanes to 3 lanes)

- Farm Hill Boulevard (from 4 lanes to 3 or 2 lanes)

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~58~~57: **Complete Streets Master Plan.** Fund, implement, and regularly update master plans for the bicycle (including electric bicycle/scooter), and pedestrian systems in Redwood City. These documents shall accomplish the following:

Sustainability Focus

- Identify streets, pedestrian walks, Bicycle Boulevards, and bicycle routes that create a fully connected network throughout the city, and connect to neighboring communities and existing and planned regional trails. Corridors for potential bike facilities to provide a more complete interconnected network are illustrated on Figure BE-~~12~~13.
- Identify and promote policies and programs that encourage walking, biking, and use of electric bicycles/scooters, and improve safety.
- Develop design standards for various pedestrian, bicycle, and electric bicycle/scooter facilities, including sidewalks, off-street paths, bicycle lanes, and bicycle paths. These standards shall be applicable to existing and future roadways.
- Identify methodology to determine timing for implementation of infrastructure projects, with priority for projects that enhance pedestrian and bicycle safety and projects located in areas with potentially high pedestrian and bicycle usage.
- Establish a citywide crosswalk policy to address installation, maintenance, removal, and enhancements of crosswalks at intersections and mid-block locations. Crosswalk locations and treatment shall be based on criteria including, but not limited to safety, traffic volume, and concentration of pedestrian activity. Potential enhancements shall include leading pedestrian intervals at signalized intersections, bulb-outs, and median refuges to reduce crossing distances. Crosswalks shall not be removed to improve automobile flow. Crosswalks may be removed to increase pedestrian safety, based on an engineering study finding that enhanced traffic control devices or roadway amenities to improve pedestrian safety are not feasible as an alternative to removal, and subsequent to the public notice and

opportunity to be heard required by the California Vehicle Code.

- Establish a uniform way-finding program to guide bicycles, electric bicycle/scooters, and pedestrians to recommended travel routes and destinations citywide, and ensure consistency with countywide/regional signage where feasible.
- Develop bicycle and electric bicycle/scooter parking standards.
- Study the feasibility of providing the following infrastructure improvement projects:
  - Install a pedestrian walkway and bikeway along the portion of Redwood Creek between Main Street and Bair Island Road.
  - Provide a bicycle/pedestrian only or bicycle/pedestrian/ automobile connection across U.S. 101 south of Woodside Road within a better connected multi-modal network, which should include the Bay Trail when it is complete.
  - Enhance bicycle and pedestrian connections across U.S. 101 between Woodside Road and Whipple Avenue.
  - Develop bicycle paths along the Hetch Hetchy easement and the corridor parallel to Alameda de Las Pulgas rights-of-way.
  - Daylight creeks in connection with proposed bicycle and pedestrian pathways.
- Explore establishing pedestrian- and bicycle-friendly travel ways that connect various part of the city. Potential corridors include:
  - Vera Avenue between Alameda de Las Pulgas and El Camino Real, including an improved pathway through Red Morton Park. An alternative to Vera Avenue would be Madison Avenue between Alameda de Las Pulgas and El Camino Real; or, designate Vera Avenue and Madison Avenue as one-way couplets for bicycles, with each street designed to accommodate bicycle traffic in one direction.
  - Maple Street between El Camino Real and Veterans Boulevard.
  - Industrial Way/Winslow Street/Middlefield Road between north and south City limits.
  - Broadway between Hopkins Avenue and 5th Avenue.
  - King Street between Whipple Avenue and Jefferson Avenue.

- Harrison Avenue between El Camino Real and Alameda de Las Pulgas.
- A variety of northwest/southeast corridors that cross Woodside Road.
- During development of a Bicycle Master Plan, consult with applicable agencies with jurisdiction over rights-of-way identified for use as pathways in the bicycle network. Evaluate any potential safety concerns and if necessary, identify safety mitigation measures.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund, grants

Program BE-~~59~~58: Capital Improvement Program. Incorporate bicycle and pedestrian facilities into the Capital Improvement Program.

Timeframe: Ongoing
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, Redevelopment funds, grants, County, State, and federal funds

Sustainability Focus

Program BE-~~60~~59: On-site Pedestrian, Bicycle, and Electric Bicycle/Scooter Facilities. As part of the project development review process, require developers of new development and redevelopment/reuse projects, including parking facilities, to provide appropriate on-site facilities such as bicycle and scooter storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, and/or pay a pro-rata or other share of the cost of improvements.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Development agreements

Program BE-~~61~~60: Pedestrian, Bicycle, and Electric Bicycle/Scooter Counts and Survey. Collect pedestrian, bicycle, and electrical scooter counts as part of routine traffic counts. Quantifying pedestrian, bicycle, and electric scooter activities will measure the amount of pedestrian, bicycle, and electric bicycle/scooter usage throughout the city and assist in determining and prioritizing infrastructure improvement projects. In addition, survey

bicyclists and electric bicycle/scooter users regarding their safety concerns.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, project applicants

Program BE-~~62~~61: Sustainability Focus **Street Modification Procedures.** Develop standard procedures for evaluating and implementing street modifications that enhance bicycle and pedestrian facilities. Planning for each street modification shall require participation by the public, particularly local residents, business operators, students, property owners, and other stakeholders who will be directly affected by the proposal.

Timeframe: Mid Range
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, grants, federal and State funds

Program BE-~~63~~62: Sustainability Focus **Streetcar Route.** Study the feasibility of implementing a streetcar or similar system in the following corridors: Broadway, Seaport Boulevard, and Middlefield Road as shown on Figure BE-~~13~~14. This system is proposed as a long-term community asset that will enhance non-automobile connectivity between neighborhoods; bus, rail, and water transit hubs; and the Downtown core. Work with the Federal Railroad Administration and the California Public Utilities Commission to determine appropriate alignments and consider grade crossing safety when analyzing feasibility of the streetcar system.

Timeframe: Long Range
Responsible Party: Community Development
Funding Sources: General Fund, grants, County, State, and federal funds

Program BE-~~64~~63: Sustainability Focus **Community Shuttle Study.** Conduct a feasibility study of providing and funding community-serving shuttles to health facilities, community centers, parks, libraries, schools, and neighborhoods throughout Redwood City, including Redwood Shores. Consider specific routes and fares that facilitate use of a shuttle by seniors and teens. Likely destinations for both of these groups may include parks, centers, community libraries, theaters, and shopping destinations.

Timeframe: Mid Range
Responsible Party: Community Development; Finance Department; Parks, Recreation and Community Services Department
Funding Sources: General Fund, Redevelopment funds, grants, County, State, and federal funds

Program BE-~~65~~64: **High-Speed Rail Adjacent Land Use.** If a high-speed rail station is planned for Redwood City, conduct studies to determine the appropriate uses and amenities necessary to increase ridership, while balancing the needs of the greater community, without causing harm to the long-term land use planning efforts in Downtown.

Sustainability Focus

Timeframe: Short Range
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund, County, State, and federal funds

Program BE-~~66~~65: **Intelligent Transportation System.** Conduct a study of Intelligent Transportation Systems (ITS) strategies, such as adaptive signal controls, real-time transit information, and real-time parking availability information, which may maximize the efficiency of the existing transportation systems throughout Redwood City. Implement those improvements that would be most effective.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund, grants, County, State, and federal funds

Program BE-~~67~~66: **Grade Separation Removal Study.** Study the feasibility of removing the grade separation at the Woodside Road/El Camino Real intersection.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~68~~67: **Blomquist Street Extension.** Develop plans to extend Blomquist Street to East Bayshore Road to provide a continuous roadway east of U.S. 101 between Woodside Road and Whipple Avenue interchanges.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund, impact mitigation fees

Program BE-~~69~~68: **Skyway Extension.** Study the feasibility of extending Skyway to Whipple Avenue to provide an additional vehicular, including transit, connection between Redwood Shores and the rest of Redwood City.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~70~~69: **Transportation Impact Fee Reduction.** As part of the City's transportation impact fee program update, reduce transportation impact fees for new developments that demonstrate a commitment to effective TDM strategies. Alternatively, explore the feasibility of providing reimbursements after monitoring shows effectiveness of TDM strategies.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Special Programs/Projects

Program BE-~~71~~70: **Pedestrian, Bicycle, and Electric Bicycle/Scooter Safety Programs.** Partner with other agencies and/or organizations to establish a comprehensive pedestrian, bicycle, and electric bicycle/scooter safety education program for pedestrians, bicyclists, scooter users, and motorists of all ages. Increase driver awareness of pedestrian safety and educate drivers about the legal obligation to yield to pedestrians at marked and unmarked crosswalks. Provide bicycle safety education at all public and private schools, parks, and community centers. Disseminate information through libraries, brochure mailings, and electronic media. Continue to enforce the California Vehicle Code and other applicable laws that promote safe bicycle and automobile operation. In addition, enforce pedestrian right-of-way at crosswalks through rigorous targeted police operations.

Timeframe: Short Range

Responsible Party: Community Development; Parks, Recreation and Community Services Department; City Manager Office/Economic Development; Public Works Services Department
Funding Sources: General Fund, grants, County, State, and federal funds

Program BE-~~72~~71: **Collision Data Evaluation.** Develop a program to regularly evaluate traffic collision data. Identify top collision locations for automobiles, bicycles, and pedestrians in Redwood City, and develop appropriate countermeasures.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~73~~72: **Truck Route Designation Review.** Regularly review the City's designated truck routes (*City's Municipal Code* Chapter 20, Section IV-20.52) to ensure that truck freight movement is accommodated with minimal conflicts with pedestrian, bicycle, and transit access and circulation throughout the city, including Redwood Shores. As part of the review process for major developments, review if current truck routes should be eliminated or new truck routes should be designated. In addition, explore prohibiting trucks and deliveries on specific roadways during particular times of day such as on Downtown streets during the busy evening periods.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~74~~73: **TDM Programs and Monitoring.**

Sustainability Focus

- Establish a citywide or areawide TDM program potentially funded by annual fees or assessments on existing and new developments, or grants. The program may include free shuttle service, ridesharing, preferential carpool parking, flexible work schedules, car-sharing, parking pricing, and other measures. Explore the feasibility of neighborhood electric vehicles (NEVs) or Segways for short trips within residential neighborhoods or office parks.
- Establish a department procedure that reviews and monitors private party TDM programs to ensure that the programs are operational and are effective in reducing traffic impacts. If departmental review finds TDM programs are not

operational or are not effective, consult with private party to initiate new programs before instituting a fee.

- Update and enhance the existing TDM program for City of Redwood City employees. The program may include free shuttle service, preferential carpool parking, ridesharing, flexible work schedules, parking pricing, car sharing, and other measures.

Timeframe: Immediate, Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund, grants

Program BE-~~75~~74: **Shared Parking Incentive.** Establish a program and provide potential incentives for private property owners to share their underutilized parking with the general public and/or other adjacent private developments.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund, grants

Program BE-~~76~~75: **Parking Benefit District.** Establish Parking Benefit Districts that use revenues from parking in the district to enhance non-motorized connections, security, and the physical environment of the district. A feasibility study can be completed as part of specific plans or master plans that are prepared for particular districts.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund, parking revenues

Physical Improvements

Program BE-~~77~~76: **Street Typologies.** Implement the street typologies presented in this General Plan.

Timeframe: Following General Plan adoption
Responsible Party: Community Development
Funding Sources: General Fund, impact fees

Program BE-~~78~~77: **Bus Route Street Improvements and Pavement Requirements.** Review all capital improvement projects to ensure improvements

located on existing and planned bus routes include modification of street, curb, and sidewalk configurations to allow for easier and more efficient bus operation and improved passenger access and safety while maintaining overall pedestrian and bicycle safety and convenience.

As part of routine street maintenance and repair programs, design streets designated as bus routes with a structural pavement cross-section of sufficient strength to accommodate buses. Design the portion of the street used as a bus stop with additional pavement treatment to minimize street deterioration.

Timeframe: Ongoing
Responsible Party: Community Development; Public Works Services Department
Funding Sources: General Fund, Redevelopment funds, grants, County, State, and federal funds

Outreach, Education

Program BE-~~79~~78: "Complete Streets" Advisory Committee. Create a "Complete Streets" Advisory Committee to provide opportunities for citizen input on bicycle and pedestrian facilities and planned improvements.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Inter-Agency and Other Organizations Consultation

Program BE-~~80~~79: Participate with Local, Regional, State, and Federal Agencies and Other Organizations.

Sustainability Focus

- Actively participate in regional transportation and land use planning organizations to ensure development and maintenance of a transportation network and land uses that encourage non-automobile travel. This includes consultation with adjacent jurisdictions.
- Consult with local and regional transit providers including the Joint Powers Authority, to locate, plan, and design transit stops that facilitate transfers between various modes and various transit services (e.g., providing adequate bicycle parking at the Caltrain station or reasonable walking paths to bus stops)

- Regularly participate with regional transportation planning and funding agencies such as the San Mateo County City/County Association of Governments and Metropolitan Transportation Commission.
- Continue negotiations and discussions with the Caltrans on the following matters:
  - Maintenance of pavement surfaces under their jurisdiction
  - Median and street landscaping
  - Design standards modifications
  - Traffic lights sensitive to accommodating cyclists on the roadway
  - Better pedestrian accommodations to allow crossing at angles and all four corners of intersections
  - Context-sensitive measures to improve pedestrian and bicycle safety and circulation on El Camino Real and Woodside Road
- Meet regularly with local schools to develop programs that encourage more students to walk and bicycle to and from schools. Also, participate in and support recommendations of the Safe Routes to School Program.
- Consult with Caltrans and Samtrans to study the feasibility of prioritizing bus mobility along El Camino Real and other heavily traveled transit corridors by installing transit signal priority, queue jump lanes at congested intersections, and/or exclusive bus lanes.
- Regularly consult with the San Francisco Water Emergency Transportation Authority to coordinate planning efforts for the proposed ferry station with appropriate land use designations and transportation connections.
- Regularly consult with the Peninsula Corridor Joint Powers Board to coordinate planning efforts for the proposed Dumbarton Rail Corridor with appropriate land use designations and transportation connections.
- Regularly consult with the paratransit service providers to meet the changing needs of the mobility impaired population in Redwood City.
- Continue to regularly consult with Joint Powers Authority on the following matters:
  - Maintenance of rail lines, landscaping, and easements
  - Potential for rail electrification to increase the frequency of train service
  - Potential for lobbying for full grade separations to improve street connectivity and pedestrian and bicycle mobility at ground level

  - Potential for providing timed transfers with other transit providers in the area
- Anticipate, analyze, and mitigate potential negative impacts resulting from increased train service, corridor expansion, and the eventual upgrading of the rail line. Seek to balance opportunities provided by both freight rail and high-speed rail.
- Consult with the California High-Speed Rail Authority to ensure that any modifications to rail corridors within the city are planned and constructed in a manner that prevents or minimizes physical or visual barriers.
- Consult with the Port of Redwood City to ensure that adequate capacity is provided for freight movement at the Port; determine the overall transportation needs within the Seaport Boulevard corridor.
- Consult with ship operators and the trucking industry to ensure that the benefits of goods movements are maximized to the extent feasible, while environmental impacts are minimized.
- Consult with rail operators to ensure that the benefits of goods movements are maximized to the extent feasible, while environmental impacts are minimized and goods movements on freight rail are balanced with high-speed rail needs.
- Establish procedures whereby Redwood City Community Development and the Planning section of the San Mateo County Transit District have full knowledge of each agency's short- and long-range plans for bus routes, bus stop locations, timed transfers, street improvements, land use policies, and new building projects so that each agency's plans are complementary.
- Consult with the San Mateo County Transit District, Corridor Joint Powers Board, and local shuttle operators to:
  - Encourage these agencies to permit riders to transport bicycle and electric bicycles/scooters on the transit vehicles
  - Provide appropriate facilities for bikes and electric bikes/scooters
  - Provide secure bicycle and electric bicycle/scooter storage lockers for long-term parking at all park-and-ride facilities and train stations for transit riders
- Regularly consult with transit providers to:
  - Site transit stops at safe, efficient, and convenient locations

  - Provide transit stop amenities such as pedestrian pathways approaching stops, benches and shelters, traveler information systems, and bike storage to facilitate access to and from transit stops. Bus stops should accommodate timed transfers between buses and other transit services where necessary.
  - Provide service to health centers and health facilities
- Consult with Caltrans and San Carlos and Belmont to improve safety for cyclists near U.S. 101 interchanges in Redwood City.
- Consult with SamTrans and Caltrain in the development of a Bicycle Master Plan that identifies bike paths within these agencies' rights-of-way. In the event that a bike route is established within a rail agency right-of-way in the Bicycle Master Plan, evaluate safety hazards and identify any needed safety mitigation in consultation with SamTrans and Caltrain.

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development; Port of Redwood City; Public Works Services Department
Funding Sources: General Fund, Redevelopment funds, grants, County, State, and federal funds

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Economic Development

Since its beginnings, Redwood City has taken a leadership role in establishing new markets and new jobs for Peninsula residents: first as a lumber producer, then as a deep water port–a function that continues today–to a manufacturing and wholesale industrial economy, to the center of government for San Mateo County, and as we entered the 21st century, as a premier location for knowledge and medical and biomedical industries in Silicon Valley. The local economy continues to evolve in response to changing regional and national economic trends. As a jobs-rich community, Redwood City businesses provide opportunities for people of diverse backgrounds and skills to find jobs of varying income levels. Through revenue generation, taxes, and direct contributions to City initiatives, local businesses support our economy and fund the services and facilities that our residents appreciate.

Redwood City recognizes that land use and other policies must continue to maintain and encourage a diverse and entrepreneurial economy to ensure that the community thrives. This Economic Development Chapter establishes Redwood City's vision for long-range economic growth, sets forth the policy framework supportive of that vision, and identifies actions that Redwood City leaders will take to achieve these goals. In particular, this Chapter identifies growing economic sectors that the City looks to accommodate, and outlines economic development strategies that will match local residents with the job skills required by employers.

Imagine Redwood City in 2030

Redwood City's economy is diverse and healthy, blending traditional industries with today's high technology and emerging businesses in an entrepreneurial setting that supports culturally diverse employees and residents. Redwood City's economic vitality is based on:

- *Housing opportunities for a diverse population of all ages and incomes*
- *A regionally integrated transportation network*
- *Equal access to quality education, child care, and healthcare systems*
- *A workforce with appropriate education and skills to meet the changing needs of businesses*
- *A land use plan that ensures opportunities for economic growth while sustaining a quality of life for all*

- *An awareness that the city's geographic location on the San Francisco Peninsula provides a competitive advantage in attracting businesses*

Economic Profile - 2006

Employment

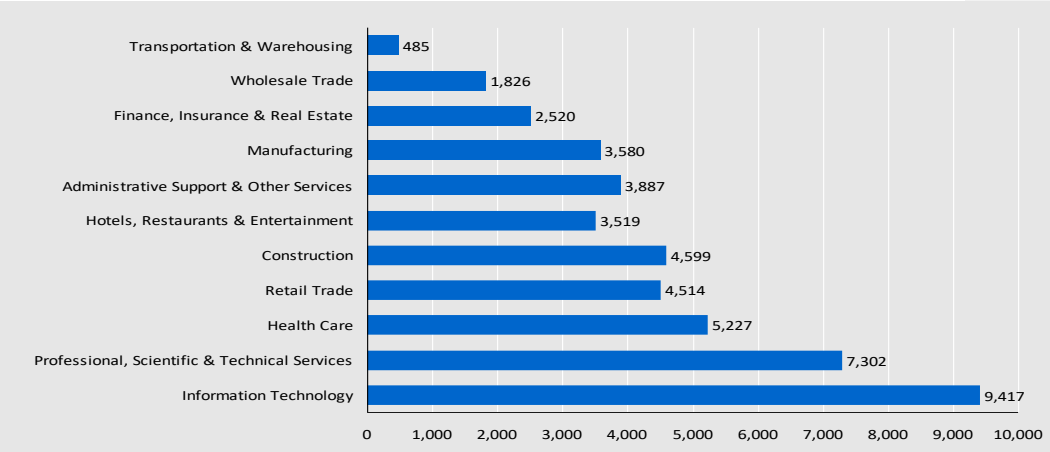
Throughout its history, Redwood City's economic position within the county and on the Peninsula has shifted. As the county seat, many local jobs consist of positions in government occupations. However, the private sector continues to account for a significant portion of local jobs. In 2006, approximately 47,000 private sector jobs were available in Redwood City, accounting for 15 percent of total jobs in San Mateo County.[2] In Redwood City, the top private employment sectors include:

- Information Technology
- Professional, Scientific, and Technical Services
- Healthcare
- Retail Trade
- Construction

Combined, these five sectors (in 2006) accounted for over 31,000 local jobs, or 66 percent of all jobs in Redwood City (Figure BE-~~23~~24). The largest employers by number of employees based in Redwood City (in 2009) are listed in Table BE-5.

[2] The NETS data is derived from Walls & Associates, and is based on business information collected by Dun & Bradstreet. NETS is a time-series analysis of employment by industry. Each business address in the database was mapped for the analysis. Notably, NETS does not include data for public sector employees and businesses with two or fewer employees.

Figure BE-~~23~~24: Private Employment by Industry in Redwood City, 2006



Notes: Manufacturing includes utilities, mining and agriculture sectors. Electronic Arts and other multimedia firms are included in the Professional, Scientific & Technical Services and Information industries. Data for public sector employees and businesses with two or fewer employees are not included.

Source: Walls & Associates

Table BE-5: Largest Redwood City Employers, 2009

Employer	Industry	Employees
Oracle	Enterprise Software	6,700
Electronic Arts	Entertainment Software	3,150
County of San Mateo	Government	2,200
Kaiser Permanente	Hospital	2,050
Sequoia Hospital	Hospital	1,000
Redwood City School District	Public Education	1,000
BroadVision	Enterprise Software	750
Sequoia Union High School District	Public Education	700
City of Redwood City	Government	600
Informatica Corporation	Data Software	400

Source: Redwood City Chamber of Commerce

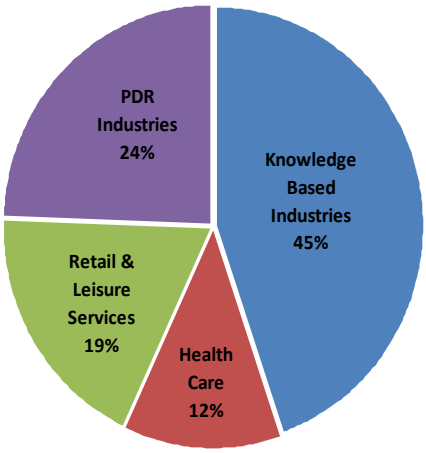
Industry Clusters

The Redwood City economy has developed into several important industry clusters,[3] described below and summarized in Table BE-6 and Figure BE-~~24~~25.

Knowledge-based Industries

The knowledge-based industrial cluster includes three business groups: 1) Information Technology; 2) Professional, Scientific, and Technical Services; and 3) Finance, Insurance and Real Estate. All industries in this cluster require fairly intensive human capital, and they focus on creating value through innovation. Knowledge-based industry employees are highly educated and highly skilled. Redwood City's location within the Silicon Valley has allowed it to attract many software and biotechnology firms such as Oracle and Abbott Laboratories. In addition, certain financial and professional businesses that support those industries, such as venture capital firms, have found it strategically advantageous to establish addresses in Redwood City near the knowledge businesses.

Figure BE-~~24~~25: Distribution of Redwood City Employment by Industry Cluster, 2006



Source: Walls & Associates; Strategic Economics

Knowledge-based industries form the largest cluster in Redwood City, constituting more than 19,000 jobs (as of 2006), or 41 percent of private sector employment. The firms in this cluster are concentrated in the Redwood Shores and Downtown employment zones, with a group of technology firms located at Seaport Center and Pacific Shores. From 1999 to 2006, employment in local knowledge-based industries grew by 5,900 jobs (an increase of 45 percent) even though the number of establishments declined by 87 firms. Job gains were in the Information Technology and Professional, and Scientific and Technical Services industries.

[3] A cluster is defined as a network of businesses within an economic region that are interconnected by the markets they serve, their inputs and outputs, and trade associations and educational institutions.

An analysis of "births and deaths" of firms shows that despite the net loss in the number of companies, the number of jobs created from new businesses in this cluster more than made up for losses. Each firm that started up or moved into Redwood City created an average of 20.5 jobs.

Table BE-6: Redwood City Industry Clusters, 1999-2006

	Employment				Establishments			
Industry Cluster	1999	2006	Absolute Change '99-06	Percent Change '99-06	1999	2006	Absolute Change '99-06	Percent Change '99-06
Knowledge Based Industries	13,302	19,239	5,937	45%	680	593	-87	-13%
Retail & Leisure Services	7,453	8,033	580	8%	519	505	-14	-3%
Healthcare	4,639	5,227	588	13%	245	268	23	9%
Production, Distribution & Repair Industries	11,469	10,490	-979	-9%	665	565	-100	-15%

Source: Walls & Associates; Strategic Economics

Retail and Entertainment

The retail and entertainment cluster consists of: 1) Retail Trade and Hotels and 2) Restaurants and Entertainment. At any given point in time, the relative health of this cluster is tied closely to consumers' discretionary income, and the deep recession that began in 2008 adversely impacted these businesses. Retail and entertainment businesses offer many entry-level job opportunities to unskilled and inexperienced workers, who are often paid the minimum wage. While opportunities exist to earn higher wages with benefits, this usually requires extensive training.

In 2006, Retail and Entertainment accounted for more than 8,000 jobs (13 percent of citywide employment). Businesses in this cluster are scattered throughout the city, with significant concentrations in the Redwood Shores, El Camino Real, Veterans Boulevard, and Woodside Road employment zones (Figure BE-~~25~~26).

Healthcare

The Healthcare industry includes hospitals, medical laboratories/imaging centers, medical offices, outpatient services, and long-term care facilities. Due to its proximity to the region's world-class research institutions and hospitals, Redwood City has been able to attract very specialized healthcare services. Two of the largest employers are within this sector: Kaiser Permanente (over 2,000 employees) and Sequoia Hospital (over 1,000 employees). The Stanford Clinics offer specialized outpatient services in orthopedics, sports medicine, sleep medicine, pain management, dermatology, digital health, and imaging. Stanford, which recently located in Redwood City and therefore is not included in Table BE-6, contributes approximately 600 additional healthcare jobs as of 2009. Wages are wide ranging, with comparatively high wages for physicians and lower wages for clerical staff.

The Healthcare cluster provides more than 5,000 local jobs (2006 data). These jobs are highly concentrated in the Veterans Boulevard and Sequoia Hospital employment zones, with future growth anticipated around the Stanford Clinics on Broadway. Subsectors that are expected to experience growth opportunities include physical, occupational, and speech therapy; outpatient care centers; diagnostic imaging; home healthcare services; and care facilities for the elderly. The low number of business relocations experienced in the early 2000s indicates that Redwood City has a competitive advantage in this sector and has been successful at retaining expanding healthcare businesses.

Production, Distribution and Repair Services Industries

The Production, Distribution and Repair Services (PDR) cluster includes: 1) Construction; 2) Manufacturing; 3) Wholesale Trade; and 4) Transportation and Warehousing industries. Business types range from auto repair shops to food distribution centers. Most PDR businesses require ready access to transportation routes, proximity to a large labor pool, and locations preferably away from residential areas. PDR businesses help diversify the local economy by employing workers with low educational attainment, yet they pay substantially higher wages than the Retail and Entertainment service-based industries. Many PDR industries provide on-the-job skills training for their workers. In Redwood City, PDR businesses employ over 10,000 workers (2006 data). PDR jobs are concentrated in the Southeast Woodside, Seaport Boulevard, and Veterans Boulevard employment zones. From 1999 to 2006, Redwood City lost almost 1,000 PDR jobs, largely due to firm closures, although 70 PDR firms relocated out of Redwood City. Some of the relocations were

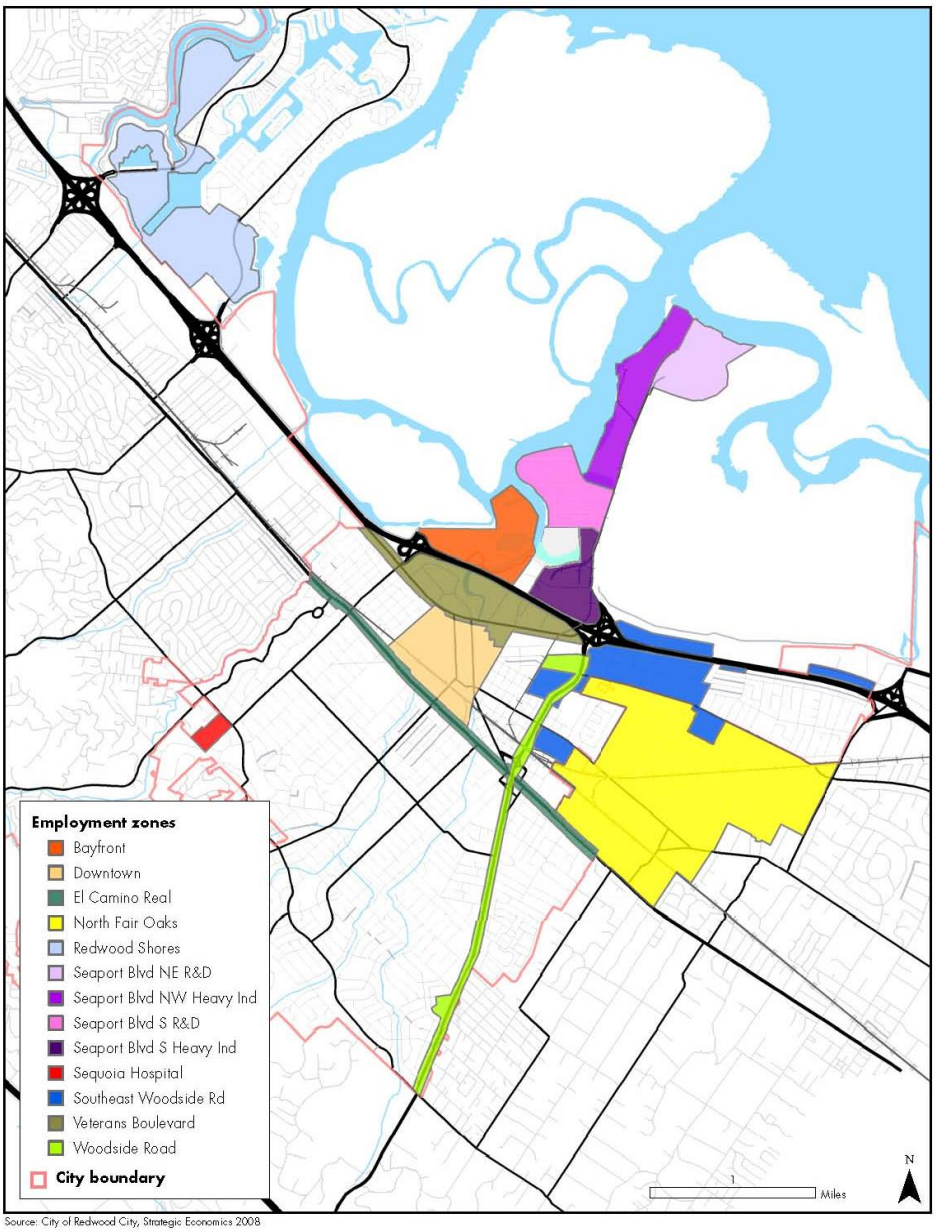
likely due to rising operational costs and the availability of lower lease rates outside the Peninsula. The pressure to convert industrial land and buildings–which can occupy sizable pieces of property–to commercial uses has been a contributing factor in pushing large PDR businesses out of Redwood City and out of the mid-Peninsula region.

In general, the wholesale trade, transportation, and warehousing industries appear to be in decline in Redwood City. However, the city is still competitive in attracting and retaining subsectors of the manufacturing and construction industries. Manufacturing firms linked to other high-growth industry clusters (knowledge-based industries and healthcare) and those that support the Silicon Valley economy continue to grow, including industrial machinery manufacturing, medical equipment manufacturing, and electronic components manufacturing.

There have been some shifts in the economy between 2006 and 2010. The California Employment Development Department reports that there have been job gains in Redwood City in healthcare (21.7 percent increase), largely due to the expansion of the Stanford Medical campus, and knowledge-based industries (approximately 3.4 percent increase). At the same time, the retail and leisure industries and production, distribution and repair services (PDR) industries have both decreased by approximately four percent. However, the distribution of private employment in Redwood City remains substantially the same, percentage-wise.

Employment Zones

All of the clusters discussed above frequently co-locate within "employment zones" (Figure BE-2~~65~~). The employment zones are differentiated from each other based primarily on the existing industries located within them. The following discussion briefly describes the employment characteristics of these areas and relates this background information to the land use strategies presented in the Urban Form and Land Use Chapter of this Built Environment Element. Employment data in the following section is from the year 2006. Sales tax data reflects information available for the year 2008.



Source: City of Redwood City, Strategic Economics 2008

Figure BE-2~~6~~5: Employment Zones

Downtown

The City has been focused on improving Downtown for many years. The approach is multifaceted and has included significant investment in infrastructure, land use planning, and programming. From an economic development perspective, and despite many positive outcomes, Downtown continues to experience unrealized potential as an employment center for the city. The shift to the new economy that emphasizes knowledge workers, quality, speed to market, flexibility, and networking opportunities necessitates that the City continue improving the livability of the city, including Downtown. The new economy values skilled workers and entrepreneurs who seek to live in cities that offer lively amenities and opportunities for interaction. A livable city has the characteristics and principles that support smart growth such as the integration of mixed land uses, compact development, a mixture of housing types and affordability, walkable neighborhoods, public transportation options, and a sense of place. This also reflects the vision of a land use plan that ensures opportunities for economic growth while sustaining a quality of life for all, a regionally integrated transportation network, and equal access to quality education, child care, and healthcare systems.

Businesses, especially those who employ knowledge-based workers, value the diverse amenities of unique areas. These areas promote interaction, accessibility, and creativity on which these workers depend. Creativity is encouraged by working and living environments that allow for lots of interaction among people. For instance, chance encounters in restaurants and in public spaces can stimulate conversations that lead to new partnerships and solutions.

As the revitalization and transformation of Downtown that began at the turn of the 21st century continues, Downtown will become a premier location for Class A office space and a regional destination for unique cultural, dining, and entertainment experiences. Urban-style housing, supportive public spaces and amenities, innovative parking strategies, and transit links to other business locations in Redwood City will work in tandem with business growth to achieve the City's Downtown vision.

Redwood Shores

Redwood Shores is characterized by a significant amount of high quality, newer retail, office, and commercial developments including several major campus headquarters. As an employment zone, Redwood Shores is of special interest in that it includes 12,700 jobs (nearly one-fourth of

all private sector jobs) with an emphasis in the technical, professional, information technology, scientific, hotels/restaurants/entertainment, and finance/real estate sectors. This employment zone provides approximately five percent of the retail sales tax and 33 percent of the business-to-business tax revenue in the City of Redwood City. Limited new development is anticipated to occur in Redwood Shores during the planning horizon of this General Plan. That being said, larger companies requiring 20,000 square feet for immediate occupancy, and another 20,000 square feet (or more) for future expansion can be encouraged to locate in Redwood Shores facilities. Given Redwood Shore's high quality and moderately recent development, it is unlikely that uses will significantly recycle within the planning period.

El Camino Real

El Camino Real, throughout Redwood City, is an employment zone. The land use strategy for this area supports the regional Grand Boulevard Initiative with transit, mixed use, etc. As an employment zone, this area includes auto-oriented businesses in the retail, restaurant, commercial service, and lodging industries. Other uses include car dealerships, high-density residential near Downtown, a bowling alley, and a high school. Residential uses in 2009 are generally tucked behind the El Camino Real corridor. This employment zone has some 2,300 employees and generates approximately 29 percent of the city's retail sales tax and two percent of the business-to-business tax revenue. The land use strategy will increase allowable residential densities and should be expected to encourage redevelopment of a number of properties with new residential, mixed-use, and commercial buildings. The employment outlook capacity will improve and favor small- to medium-scale office, medical office, and neighborhood serving retail uses. Also, new opportunities provided by the Mixed Use - Live/Work land use designation will allow some specialized employment in a range of industries such as fabrication and the arts.

Woodside Road

Woodside Road throughout Redwood City is an employment zone. The land use strategy for this area includes reorganization of the land uses to create focal points of mixed use or concentrated retail with medium- or high-density residential filling in between these focal points. This will allow for the strengthening of employment and economic generating areas and the enhancement of residential use along and behind the Woodside Road corridor. It is anticipated that the concentrations of both mixed use and retail in specific areas, the enhancement in residential, and

land recycling over the long-term would not impact the overall composition as a whole in terms of employment, but rather would encourage new businesses and more investment and re-investment in housing. As an employment zone, the area includes approximately 1,900 employees in retail, health, and professional sectors, and generates about 12 percent of the retail sales tax revenue in the city.

Veterans/Broadway

The Veterans/Broadway area includes the Veterans Boulevard, Southeast Woodside Road, and the northern portion of the Woodside Road employment zones. This combination of employment zones has a wide range of job types including retail, health services, construction, and manufacturing. There are some 8,500 employees working in this area. The circulation strategy for this area includes a proposed streetcar system. Such systems have been found to have a profound impact on stimulating new development where they have been established in other cities. Urban form and land use policies envision a vibrant, mixed-use corridor with a variety of retail services supporting proximate residential uses and regional visitors. It also will allow for the conversion of older out-dated uses, as the market dictates, into needed incubator space for smaller supporting health research and services providers, and clean industrial or research/development businesses. A dynamic sense of entry into Redwood City could be facilitated on what is now the City's corporation yards near the U.S. 101 interchange on Woodside Road (with a hotel, new commercial development, and public improvements).

Bayfront

On the bayfront side of U.S. 101, there are five employment zones–Bair Island Road and four distinct clusters along Seaport Boulevard. The Port of Redwood City along with the city's only heavy industrial area occupies a large portion of the area. A cluster of auto dealerships along U.S. 101 as well as the business park centers of Seaport Center and Pacific Shores provide approximately 5,000 jobs in construction, wholesale, manufacturing, retail, and professional sectors. The land use strategy for this area includes clustering regional retail near the Whipple interchange, thereby establishing a strong gateway into Redwood City; allowing for a new Mixed Use - Waterfront Neighborhood capitalizing on the Bay adjacency; maintaining and enhancing existing industrial and Port uses; enhancing the office park type uses; and supporting the proposed ferry terminal.

North Fair Oaks

North Fair Oaks is one of three unincorporated areas located within the City's Sphere of Influence. Since this area contains a significant range of commercial and industrial lands and uses, it has an important role in Redwood City's economy. The area is characterized by some 2,500 jobs mostly in the construction and manufacturing sectors. The County of San Mateo, at the time of this writing, is updating the North Fair Oaks Community Plan to encourage "transit-centered" neighborhood development. It seeks to provide new housing and commercial services in mixed-use developments, additional housing at a variety of price points, improved transit access, improved bicycle and pedestrian routes, and enhanced urban design and pedestrian amenities. The new community plan will focus on "healthy community" concepts thereby bringing healthy food choices and medical/community/social services to the neighborhood.

Sequoia Hospital

This employment zone consists of medical and hospital uses. All 1,600 jobs within in this zone are related to the medical field. In 2007, Sequoia Hospital sought and gained expansion and revitalization approvals for this area. Beyond these recent approvals, there is limited potential for additional development of this area during the planning horizon.

Commute Trends

The U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) provides data that facilitates the analysis of commute patterns for Redwood City residents and workers. The "commute shed" describes the place of work for residents who live in Redwood City but do not necessarily work here. The "labor shed" refers to the place of residence for employees of businesses in Redwood City who do not necessarily live here.

Commute Shed

As of 2000, approximately 15 percent of commuting Redwood City residents was employed within the city–with the ability to walk or bike to work (Table BE-7). Almost one quarter of residents have jobs in either Redwood City or immediately adjacent communities, and 35 percent commute to other areas of San Mateo County or to Santa Clara County.

Residents with longer commutes work in San Francisco and destinations in Alameda, Contra Costa, Sacramento, and Marin counties.

Table BE-7: Redwood City Commute Patterns – Workplace Destinations, 2000

Commute Shed Data	Number of Redwood City Residents	
Workplace Destination	**Count**	**% Share**
Total	31,036	100.0%
Redwood City	4,578	14.8%
Palo Alto	2,283	7.4%
San Francisco	2,200	7.1%
San Jose	1,579	5.1%
San Mateo	1,473	4.7%
San Carlos	1,372	4.4%
Menlo Park	1,200	3.9%
Burlingame	826	2.7%
Mountain View	808	2.6%
South San Francisco	704	2.3%
Other San Mateo County	3,464	11.2%
Other Santa Clara County	2,729	8.8%
Alameda County	2,045	6.6%
Contra Costa County	656	2.1%
Sacramento County	494	1.6%
Marin County	257	0.8%
All Other Locations	4,368	14.0%

Note: Destination refers to the place of work of Redwood City residents.

Labor Shed

The top three places of residence for employees who work in Redwood City are Redwood City, San Francisco, and San Jose (Table BE-8). Of all persons working at businesses in the city, approximately 15 percent live in either Redwood City or an adjacent community, and nearly 40 percent live elsewhere in San Mateo County. Other key places of residence include San Francisco and Santa Clara, Alameda, and Contra Costa counties.

Table BE-8: Redwood City Commute Patterns – Place of Residence

Labor Shed Data	Number of Redwood City Workers	
Place of Residence	**Count**	**% Share**
Total	45,169	100.0%
Redwood City	4,578	10.1%
San Francisco	3,438	7.6%
San Jose	2,850	6.3%
San Mateo	2,620	5.8%
Fremont	1,661	3.7%
Foster City	1,167	2.6%
San Carlos	1,164	2.6%
Belmont	1,157	2.6%
Sunnyvale	1,149	2.5%
Daly City	934	2.1%
Other San Mateo County	6,299	13.9%
Other Alameda County	4,546	10.1%
Other Santa Clara County	3,910	8.7%
Contra Costa County	1,496	3.3%
Sacramento County	830	1.8%
Solano	478	1.1%
Sonoma County	447	1.0%
All Other Locations	6,445	14.3%

Source: U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) 2004, Strategic Economics 2008

Balancing Land Uses

The City's ability to recruit and retain businesses to Redwood City–and to make the city an attractive place for workers–critically depends upon ensuring that sufficient land area is reserved for commercial and industrial uses. Equally important, assuming that given a choice, people prefer to avoid long commutes, is to plan for residential densities that allow housing to be provided for all income ranges and to also allow for mixed use and a mix of uses to encourage proximity between home and work place.

Industrial and Warehouse Markets

Industrial and warehouse space within Redwood City totals approximately 3.4 million square feet, accounting for only about nine percent of all such space in San Mateo County (year 2008). As noted above, industrial/warehousing space can support businesses synergistic to the growing biotechnology and healthcare industries that have a strong presence in Redwood City. In addition, the maritime and industrial businesses located at the Port and in adjacent areas are important contributors to the local and regional economy. The existing Port businesses import bulk materials to support the construction industry in the Bay Area and support "green" businesses by recycling metals and other materials for export.

Industrial &Warehouse Advantages and Opportunities

Redwood City has a number of competitive advantages to retaining and attracting industrial and warehouse businesses.

- Redwood City has a locational advantage, being located between South Bay and San Francisco and with visibility from U.S. 101.
- The Port of Redwood City attracts maritime businesses that have no other access options on San Francisco Bay. In particular, Port facilities allow for easy on- and off-loading of dry bulk building materials, which can be delivered via rail or truck throughout the region. Other potential businesses could include warehouse space, auto storage, and container storage, which would allow for new businesses such as recyclables beyond metals, auto imports, and other types of storage to locate at the Port.[4]
- Parcel sizes can facilitate complementary industries for small PDR firms. PDR businesses that continue to stay in Redwood City are local-serving firms preferring to remain near their customer base despite high costs compared to other Bay Area markets. This is particularly true for companies with linkages to the knowledge-based and healthcare sectors (manufacturers of electronic components and medical equipment) and firms in specialty building trades (such as plumbing suppliers, electricians and electrical suppliers, door and window fabricators, cabinet manufacturers, closet re-fitting companies).

[4] TranSystems, "Strategic Assessment of Maritime Business." February 2008.

Based on these advantages and projected regional economic growth, Redwood City could absorb a 24 percent net increase in the city's inventory of industrial space by 2030, if the space is built.[5] Much of this net increase in industrial occupancy will be by users that have strong linkages to the knowledge-based and healthcare industry clusters, or that are more oriented toward local markets (such as manufacturers of building and construction materials), rather than traditional heavy manufacturing and warehousing businesses. The demand will therefore be stronger for smaller floor-plate industrial buildings rather than large warehouses.

Industrial & Warehouse Challenges

Redwood City faces challenges in attracting and retaining industrial and warehousing firms. While the Port area historically has been a key location for industry, the Port is physically constrained, with limited potential to expand due to traffic congestion on U.S. 101, a shallow channel with irregular dredging, and scarcity of land for new and expanding businesses.

Industrial uses near the Port of Redwood City

Much of the city's industrial land and space has experienced encroachment from other uses. During the late 1990s, the rapid growth of software, Internet, and similar companies sparked demand for office uses on industrial sites and as land values continue to climb, some transportation and warehousing, wholesale trade, and manufacturing businesses in Redwood City have relocated to other places in the Bay

[5] In the Baseline Economic Conditions report, Strategic Economics' demand projections show that the demand for industrial space may increase by a total of 830,000 square feet between 2008 and 2030.

Area or out of the region entirely. Sites along the I-880 corridor in the East Bay are much more financially attractive and offer excellent access to markets throughout the Bay Area, including the Peninsula. However, as these businesses increasingly move away from the central bayside areas, they create other negative impacts on the region, such as highway congestion, deteriorating roads, emissions, and higher costs for businesses.[6]

Research & Development/Life Science

As of 2008, Redwood City had approximately 2.8 million square feet of research and development (R&D) space, or about 15 percent of the total inventory in San Mateo County. Almost half of the R&D inventory in the county has located in the submarkets of South San Francisco/Burlingame, which have a much higher concentration of biotechnology firms.

Research & Development Advantages and Opportunities

Redwood City benefits from having the right mix of assets, including proximity to research institutions with a large number of principal investors (Stanford University and UCSF), a skilled workforce in life sciences and computer sciences, and a real estate development and construction industry with special expertise in building R&D and bioscience lab space.

The typical growth cycle for R&D and life science users is to begin as a startup utilizing less than 5,000 square feet of building space, and then to expand to around 10,000 square feet. Once a company achieves success and grows beyond the 10,000-square-foot stage, it generally seeks a facility with 20,000 square feet for immediate occupancy, and at least 20,000 additional square feet for future expansion. After growing beyond 40,000 square feet, users tend to move to facilities that allow them to expand to 100,000 square feet or more. Redwood City is fortunate in that sites exist that can be developed to offer R&D and life science users building and expansion space for every phase of the growth cycle. For example, small-scale "incubator" users could be accommodated in the Southeast Woodside employment zone, taking advantage of the proximity to the Stanford Clinics. Growing startups could move into new R&D space developed along the Broadway corridor. Large users can find

[6] Metropolitan Transportation Commission, "Regional Goods Movement Study for the San Francisco Bay Area." December 2004.

campus-like facilities on Seaport Boulevard or at Redwood Shores. By presenting the market with an entire portfolio of development options that caters to growing R&D and life science users, the City can improve its ability to attract and retain these companies, and to bring in additional high wage and high skill jobs.

The San Francisco Peninsula is the preferred location for these industries due the inventory of space, amenities, infrastructure, access to research institutions, political climate, and workforce.[7] Redwood City is therefore well positioned to continue attracting life sciences and other technology firms, particularly those at the beginning stages of the business life cycle that require slightly lower lease rates than those found in north San Mateo County locations.

Research & Development Challenges

Research and development space, when built, can consist of highly specialized construction that can be difficult to sub-lease or re-tenant when vacated. Short-term market fluctuations can cause such space to sit empty and thus hamper any new construction, except for new projects for well-capitalized, self-financed companies that require their own dedicated facilities. Thus, it is important that the City not implement land use regulations that might limit long-term flexibility in the use of R&D space.

Office

The Redwood City office market, including Redwood Shores, contains over nine million square feet (30 percent of the county's office inventory). The Redwood Shores employment zone commands higher lease rates than the county market overall, while the other employment zones in Redwood City have lower rents than the county average. Historically, Downtown office users have consisted primarily of small professional service firms that benefit from a close location to the County Government Center and City Hall.

Office Advantages and Opportunities

[7] According to a survey of life sciences firms conducted in 2005 by BayBio, an independent, nonprofit 501(c) (6) trade association serving the life science industry in Northern California.

With the economic resurgence and amenities of Downtown, Redwood City has the potential to capture large office users in the long term. Prospective office users view Downtown Redwood City as an attractive, affordable alternative to Palo Alto and Menlo Park, offering shopping, dining, entertainment, and excellent access to Caltrain. By 2030, Redwood City could capture up to 1.8 million square feet of quality office space, an increase of 20 percent relative to 2008 inventory if built.[8]

Office Challenges

Redwood City's ability to accommodate new office tenants is constrained by the lack of large Class A office spaces, especially in Downtown. Many office-based businesses select multi-tenant buildings in Redwood Shores as an alternative, but may prefer to be in the Downtown due to its amenities and services.

Retail

Although Redwood City does not boast a regional mall, the local retail sector is quite healthy, with just under two million square feet of shopping center space and low vacancy rates. Retail stores line the key corridors—Veterans Boulevard, El Camino Real, and Woodside Road–and have a growing presence in Downtown. The key retail zones account for over 60 percent of the sales tax generated by retail stores. Small neighborhood shops and centers throughout the city provide more limited but convenient goods and services.

Retail Advantages and Opportunities

Redwood City's diversity of retail districts allows the City to recruit a variety of retailers. Veterans Boulevard benefits from freeway visibility and access, and therefore can continue to attract regional large floor-plate retailers and auto dealers. El Camino Real captures retail traffic from commuters and residents of neighborhoods surrounding the corridor. By allowing mixed-use development along El Camino Real, the City will boost the consumer base for businesses. Woodside Road serves as an important regional connection to U.S 101 and I-280, and the retail/service centers here will have a continued attraction for retailers.

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[8] In the Baseline Economic Conditions Report, Strategic Economics estimates that the demand for new office space between 2008 and 2030 in Redwood City totals 1.84 square feet, mostly attributable to the growth in employment in the knowledge-based and healthcare industry clusters.

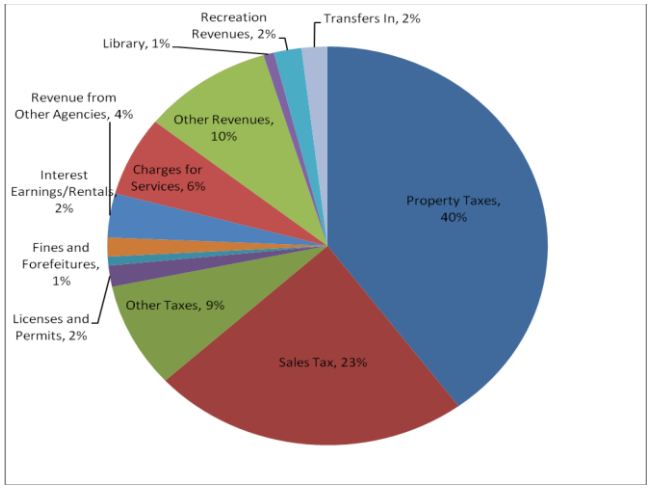
Despite the challenges Downtown faces, over the years, as more residential and office construction occurs Downtown, the retail vacancies will be filled and rental rates will increase, allowing for additional development opportunities. The Grand Boulevard Initiative for El Camino Real should also help to formulate strategies to focus retail at appropriate nodes. Areas with high visibility from the U.S. 101 corridor, such as Veterans Boulevard, have a strong potential for additional regional retail.

Retail Challenges

The City's effort to create a balance of uses in Downtown has been challenged by a high level of competition from other retail locations locally and regionally (e.g., shopping malls, strip centers, other Downtown venues). Retail recruitment has been difficult because prospective tenants do not view Downtown Redwood City as a prime location. Also, rents for new retail space have priced out start-up and independent retailers, while larger regional and national chains that can afford these rates prefer to be in locations with better visibility and higher traffic counts and are also often more comfortable with a suburban style development format that includes adjacent surface parking lots as opposed to an urban setting. Recent challenges to the retail market in Redwood City and beyond include the recession that began in 2008. This recession caused a decrease in consumer spending due to job reductions and a reduction in commercial lending. As such, retail sales are down across the country.

Revenue

Redwood City's capacity to provide services and programs for its community such as police, fire, public spaces, libraries, and parks is primarily derived through the City's general fund, which is determined largely by the dollars generated by the city's economic base and revenue structure. Property tax and sales tax provide a significant amount of City revenue. In fiscal year 2008/2009, almost two-thirds of general fund revenue was generated by property and sales tax as shown in Figure BE-2~~7~~6.



Source: City of Redwood City FY 2008-2010 Adopted Budget, p. xii-xiii.

Figure BE-276: Estimated General Fund Revenue by

Redevelopment and Investment

Redevelopment is a process created by the State of California to assist local governments in eliminating blight and revitalizing specific areas. Redevelopment provides communities with a funding mechanism to make infrastructure improvements, acquire property, and support new development and rehabilitation. A portion of redevelopment funds must also be used to promote affordable housing opportunities in the city. The Redwood City Redevelopment Agency (RDA) was formed in 1982. The Redevelopment Project Area originally encompassed 332 acres, which was expanded to a total of 1,016 acres in 1989. The Redevelopment Project Area is divided into three sub areas: Downtown, Marina, and Seaport (Figure BE-287).

Redevelopment is often accomplished through a partnership with the private sector, where public funds are used to generate private investment for the public good by creating an atmosphere where businesses and residents can thrive. The Redwood City RDA is committed to the creating such an atmosphere. Redevelopment projects such as Sequoia Station, Civic Center Plaza, Villa Montgomery Apartments, and the On-Broadway retail-cinema project are helping to revitalize Downtown; bringing a renewed energy and interest to Redwood City.

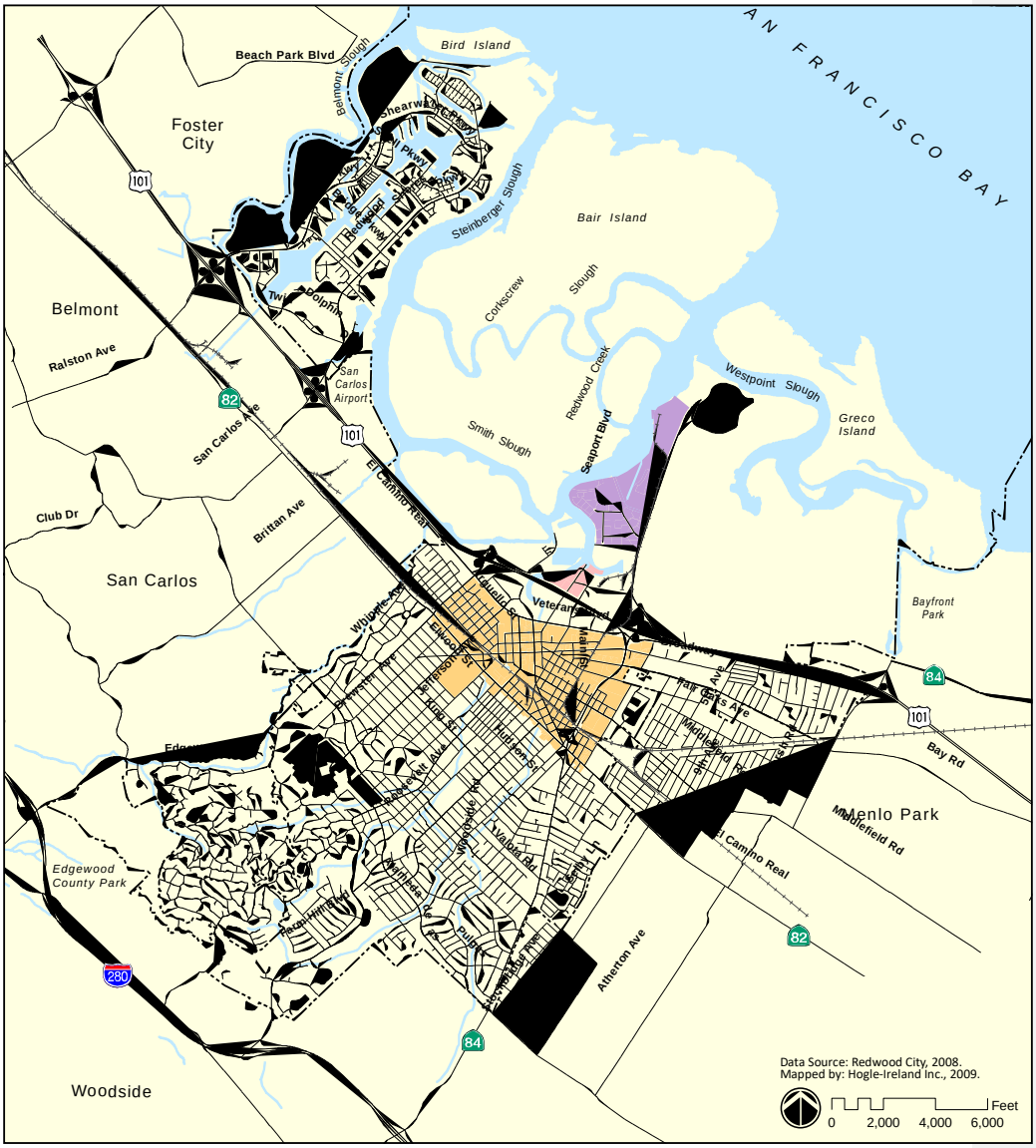


Figure BE-2~~87~~: Redevelopment Project Areas

Key Economic Development Considerations

- The City anticipates an increase in industrial demand by users that have strong linkages to the knowledge-based and healthcare industry clusters, or that are more oriented toward local markets (such as manufacturers of building and construction materials), rather than traditional heavy manufacturing and warehousing businesses. The demand will, therefore, be stronger for smaller floor-plate industrial buildings rather than large warehouses.

- The Port represents a unique and valuable regional asset. Port-related industries are extremely important to the Bay Area economy, generating diverse, local jobs at many skill levels.[9] The volume of cargo handled at Bay Area seaports is forecast to grow rapidly, creating opportunities for expansion at the Port of Redwood City.[10] Lands immediately surrounding the Port are designated for Port-dependent and industrial uses, and land use compatibility will be determined within and near the Port area as appropriate.

- Growth will occur in the life science industries, and discussions with developers and investors indicate interest in the Peninsula for future development. Redwood City is therefore poised to continue attracting life sciences firms, particularly those at the beginning stages of the business life cycle that require slightly lower lease rates than found elsewhere on the Peninsula.

- The demand for new office space will increase, mostly due to growth in employment in the knowledge-based and healthcare industry clusters. By concentrating most new office development in Downtown and Redwood Shores, Redwood City will be building on the competitive advantages of established and desirable office and high-tech zones. The Downtown locations will also be served by the most transit options. The city's Downtown has been the center of commerce and government

[9] In addition to creating direct jobs and wages, Port and maritime businesses also generate a "multiplier effect" on jobs and wages. For example, Port businesses purchase equipment and supplies at local businesses, thereby creating jobs for equipment suppliers and container repair. It is estimated that for every one Port job, between one and two additional jobs are created through the multiplier effect.

[10] TranSystems, "Strategic Assessment of Maritime Business." February 2008.

but has declined over the years from numerous retail and office vacancies. Since the early 2000, the City and its Redevelopment Agency has focused on revitalizing the Downtown by investing in public improvements to attract private investments. Moreover, through the proposed Downtown Precise Plan, the City desires the Downtown to be a place not only to work but also to live and shop. This reflects the vision of having housing opportunities for a diverse population of all ages and incomes.

- Over half of the jobs in Redwood City are in high-skilled knowledge-based and healthcare industries. Employment in the lower-skilled industry clusters has experienced decline. Workforce development programs and educational institutions are increasingly challenged to provide adequate and appropriate resources to train employees for these emerging skills-based industries.

- Over the long term, as more residential and office construction occurs in Downtown, retail vacancies here will be filled and rental rates will increase, allowing for additional development opportunities. The Grand Boulevard Initiative for El Camino Real, coupled with land use policies for mixed use along the corridor, will guide strategies to focus retail at appropriate nodes.

- The high visibility of the Veterans Boulevard corridor from U.S. 101 will facilitate regional retail opportunities.

- As the planning for High-Speed Rail continues, the City must consider a variety of strategies to ensure that the Rail's benefits to Redwood City outweigh the disadvantages.

- Redwood City needs to ensure its short- and long-term fiscal capacity to cover City programs and services. Citizens and businesses must acknowledge that local fees, taxes, and charges for services are necessary, with no individual or business benefiting at the expense of others. Policies in this Chapter direct the City to explore ways to achieve fiscal stability, and to provide quality municipal services that meet the needs of the residents.

- Economic growth can bring many benefits to the city, including jobs, housing, and new revenue. New growth will lead to increased revenue, thus benefiting residents and the community. For these reasons, Redwood City needs to promote and enhance business development citywide. This reflects the vision of

Redwood City as an entrepreneurial city with a diverse and healthy economy.

Economic Development Goals, Policies, and Programs

The City and the Redwood City-San Mateo County Chamber of Commerce agree that a diverse economy helps to preserve the City's fiscal health, and can lessen the severity and length of an economic downturn. Redwood City will continue to promote business development programs for existing and new businesses that recognize and respond to size, industry, and markets.

This General Plan Chapter is intended to serve as a foundation for an Economic Development Strategy for Redwood City that details actions needed to further the vision, goals, and policies in this Chapter.

The Economic Development goals and policies assist in the implementation of the following Guiding Principles:

- ***Strengthen economic vitality to provide jobs, services, revenues, and opportunities.***
- ***Preserve and generate awareness of cultural, educational, economic, recreational diversity and historic heritage.***
- ***Work to develop attractive, convenient transportation alternatives, including a transportation hub and ferry system.***

Goal BE-~~32~~33: Strive for and maintain a diverse and healthy economy.

Policy BE-3~~2~~1.1: Promote long-term partnerships and programs that facilitate business recruitment, retention, and expansion through partnerships with businesses; property owners; The Redwood City-San Mateo County Chamber of Commerce; the educational, arts, and environmental communities, and other stakeholder groups.

Policy BE-~~32~~32.2: Improve infrastructure and public facilities in targeted areas where necessary to support economic development.

Policy BE-~~32~~32.3: Support the continuance of existing and the establishment of new Production, Distribution and Repair Services businesses uses by minimizing the potential for conflicts from surrounding land uses.

Policy BE-~~32~~32.4: Maintain the Port of Redwood City as a critically important use, and protect long-term Port, Port-related, and surrounding industrial uses from the encroachment of incompatible land uses as appropriate.

Policy BE-~~32~~32.5: Encourage emerging industries and businesses.

Goal BE-~~33~~34: Position and promote Downtown as a center for employment, housing, retail, and entertainment on the Peninsula.

Policy BE-~~33~~34.1: Encourage and facilitate the development of new commercial office space Downtown to provide opportunities to recruit large and mid-sized businesses and to retain expanding firms.

Policy BE-~~34~~33.2: EJ Focus

Improve public design features (public plazas and spaces) and related infrastructure to match the collective needs of ~~Downtown~~ residents, employees, and retailers in Downtown and in the surrounding Environmental Justice communities rather than individual projects.

Policy BE-~~34~~33.3: EJ Focus

Pursue mixed-use ~~housing~~development with a range of affordability options and ~~commercial~~ neighborhood services (grocery stores, etc.) in ~~development~~ Downtown and in the surrounding Environmental Justice communities ~~with a range of affordability options~~.

Policy BE-~~34~~33.4: Create a transit-oriented/pedestrian focus for future development.
Sustainability Focus

Policy BE-~~34~~33.5: Allow for shared and/or public parking arrangements for new development.

Goal BE-~~34~~35: Maintain a skilled and adaptable local workforce.

Education provides the basis for a skilled workforce, and leads to community success. Education is discussed in more detail in the Lifelong Learning, Libraries, and Schools Chapter of the Building Community Element.

Policy BE-~~34~~35.1: Promote workforce investment policies that match training programs to existing and planned job requirements, ensuring that a skilled workforce is available to businesses in Redwood City.

Policy BE-~~35~~34.2: Continue to support industries that provide a range of jobs at prevailing living wages through land use policies and other City activities.

Policy BE-~~35~~34.3: Ensure the availability of support services that will help employees succeed.

Policy BE-~~35~~34.4: Encourage adequate child care capacity to support the city's local workforce.

Policy BE-~~35~~34.5: Promote a healthy work force by supporting healthcare providers, programs, and services.

Policy BE-~~35~~34.6: Promote a mix of housing types at a range of affordability options.

Policy BE-~~35~~34.7: Strive to increase the number of Redwood City residents who work in Redwood City; people who work in Redwood City should be able to find housing options in Redwood City.
Sustainability Focus

Goal BE-~~35~~36: Maintain the City's fiscal health.

Policy BE-~~35~~36.1: Focus economic development activities toward particular industries or service areas contributing to the city's economy.

Policy BE-~~36~~35.2: Strive to be as responsive to small business development as possible.

Policy BE-~~36~~35.3: Foster regional collaboration on housing, transportation, and infrastructure.
Sustainability Focus

Policy BE-~~36~~35.4: Work to ensure that Redwood City capitalizes on any benefits that can be derived from High-Speed Rail and minimizes any potential disadvantages.

Policy BE-~~36~~35.5: Strive toward a balanced budget through a diversified and stable, long-term economic basis.

Policy BE-~~36~~35.6: Strive to maintain the City's reserve funding.

Policy BE-~~36~~35.7: Create a sense of place by enhancing educational, cultural, and environmental resources to attract employers.

Implementation Programs

Procedures, Permits, Agreements, Ordinances

Program BE-~~81~~80: **Commercial Sites Identification.** Identify appropriate sites for commercial development and redevelopment based on considerations of efficiency, circulation, compatibility with nearby uses, availability of services, safety, impact on habitat, and proximity to residents and workers.

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: Redevelopment funds, General Fund

Program BE-~~82~~81: **Large Industrial Uses' Site Identification.** Identify appropriate locations for large industrial uses, and maintain and expand the supply of land available for these types of uses, focusing on existing businesses that provide high-wage jobs and support existing and emerging industry clusters.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, Redevelopment funds

Program BE-~~83~~82: **Entitlement Processing.** Improve the entitlements and approvals process to be more efficient, transparent, and predictable.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~84~~83: Infrastructure Investment Funding.

- Identify and secure ongoing funding for the introduction of design improvements, the maintenance, and the replacement of infrastructure investment. Pursue State, federal, and other grants.
- Prioritize capital improvement projects that support increased non-motorized and sustainable modes of transportation in Environmental Justice communities.
- Invest in and design transportation infrastructure to improve safety in Environmental Justice communities, especially for vulnerable road users such as pedestrians, bicyclists, children, seniors, and people with disabilities.

Timeframe: Ongoing
Responsible Party: Community Development; Public Works Director, City Manager Office/Economic Development
Funding Sources: General Fund, Redevelopment funds, grants

Program BE-~~85~~84: Local Resident Hiring. Continue to consult with countywide workforce development activities, but also continue to encourage local employers to hire locally. This should also include encouraging the City to hire locally for its contracts and services.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, CDBG

Program BE-~~86~~85: Zoning Implementation. Implement zoning that provides for integration of land uses, mixed-income housing of all types and densities, pedestrian-friendly neighborhoods, transit-oriented development, and enhanced public transportation options.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~87~~86: **Service Infrastructure Impacts Benchmarks.** Develop benchmarks to measure the impacts of major projects on the environment and service infrastructure.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~88~~87: Public Investment Cost Recovery. Explore equitable methods to recover costs of public investments for construction and maintenance of infrastructure and facilities. Pursue grants from State, federal, and other agencies.

Timeframe: Short Range
Responsible Party: Public Works Services Department; Community Development
Funding Sources: General Fund, grants

Program BE-~~89~~88: Freeway Visibility. Use zoning and similar mechanisms to maintain locations with good freeway visibility for regional retail opportunities.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, Redevelopment funds

Plans and Studies

Program BE-~~90~~89: Caltrain–Employment Zones Transit Connection. Study the creation of stronger transit connections between Caltrain and the employment zones of Redwood Shores, Seaport Center, Downtown, and Stanford Medical Complex.

Sustainability Focus

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: General Fund, Redevelopment funds

~~**Program BE-91: Grand Boulevard Initiative.** Continue to consult with Grand Boulevard Initiative and local residents, especially those living in Environmental Justice communities, to revitalize El Camino Real, and focus retail in appropriate nodes. Pursue grants from State, federal, and other agencies.~~

~~*Timeframe:* Ongoing~~
~~*Responsible Party:* Community Development; City Manager Office/Economic Development~~
~~*Funding Sources:* General Fund, Redevelopment funds, grants~~

Program BE-~~92~~90: **Business-to-Business Sales Tax Study.** Study the business-to-business sales tax trends to identify important sectors contributing to the City's fiscal health.

Timeframe: Short Range
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~93~~91: **Small-Scale Strategic Plans.** Pursue small-scale strategic plans through such programs as incubators and Main Street USA.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, Redevelopment funds

Program BE-~~94~~92: **Economic Development Strategy.** Prepare and update, as needed, the Economic Development Strategy. As part of the Strategy, include a component that increases residents' awareness about the benefits of shopping and dining in Redwood City.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, Redevelopment funds

Special Programs/Projects

Program BE-~~95~~93: Downtown Marketing and Branding Events. Continue to conduct special events and develop strategic marketing and branding programs to promote Downtown retail and restaurant businesses, and other small businesses through partnerships with stakeholders, the Downtown Business Group, and others.

Timeframe: Ongoing

Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund, private sources (Business Improvement District), Redevelopment funds

Program BE-~~96~~94: **Residents' Education/Skill Study.** Periodically study the skills and education levels of Redwood City residents, and use the information as a guide for recruiting new firms to the city.

Timeframe: Short Range
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~97~~95: **Job Training.** Initiate consultation between local industries and local educational institutions to:

- Develop job training programs for youth and adults
- Help improve individuals' ability to do their current jobs and/or help them develop new skills, and
- Pursue grants and other funding sources.

Timeframe: Short Range
Responsible Party: City Manager Office/Economic Development; Parks, Recreation, and Community Services Department; Library Department
Funding Sources: General Fund, grants, CDBG

Inter-Agency and Other Organizations Consultation

Program BE-~~98~~96: **Nonprofit and Private Organizations Consultation.** Consult with nonprofit organizations and private expertise to offer technical assistance to businesses in obtaining economic development grants, loans, and other funds from federal, State, local, and private sources.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, CDBG, Redevelopment funds

Program BE-~~99~~97: **Port of Redwood City Consultation.** Consult with the Port about the most efficient use of Port land for Port, recycling, and/or industrial uses. Consult with the Port, marine-related businesses, and other stakeholders to promote the geographic location and

optimize maritime infrastructure of the Port in order to attract and/or expand marine-related industries.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development; Port of Redwood City
Funding Sources: General Fund, Redevelopment funds

Program BE-98~~100~~: Industry Leaders Consultation. Conduct quarterly work groups with industry leaders to address ongoing issues.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~101~~99: Child Care Consultation. Consult with child care advocates, employers, and developers to 1) address barriers that may be preventing the development of child care supply near jobs and 2) establish child care services in proximity to jobs.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development; Parks, Recreation, and Community Services Department
Funding Sources: General Fund

Program BE-~~102~~100: Small Businesses Assistance. Consult with the local business community to encourage small business development and to address small business needs. When appropriate, pursue grants from State, federal, and other agencies.

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development
Funding Sources: General Fund, Redevelopment funds, grants

Program BE-~~103~~101: High-Speed Rail Planning. Continue to consult with regional transportation agencies to ensure Redwood City gains benefits from the High-Speed Rail. As appropriate, continue to plan the area around a potential rail stop to maximize benefits. When appropriate, pursue grants from State, federal, and other agencies.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, grants, Redevelopment funds

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Historic Resources

Redwood City residents value our historic resources for what they tell us: the story about our past, who we are, and how we came to be. Historic buildings such as the historic County Courthouse and period homes in the Historic Influence neighborhoods illustrate the craftsmanship and styles of different eras. Venerable places like the Union Cemetery historic site teach us lessons. With its rich history as one of the earliest post-gold rush settlements on the San Francisco Peninsula, and many still-standing physical reminders of that history, Redwood City has a duty to preserve these resources for generations to come.

Historic Resource: A building, structure, object, or district that has been evaluated as historically significant within a specific historic context and theme of development.

Redwood City has a long, rich history. Many of the decisions of the past are still reflected in the environment that shapes the city today. Many significant historic resources (i.e. buildings, structures, objects, historic sites, or districts) exist throughout the city. City leaders and the community have made tremendous efforts to protect these resources while balancing the needs of a growing and evolving community.

The City has an established Historic Preservation Ordinance, several programs, incentives, trained staff, and the Historic Resources Advisory Committee to encourage the preservation, rehabilitation, and reuse of historic resources. The City also provides access to the following information sources and guidance: the Redwood City Historic Inventory of Structures of Historic and Architectural Merit; the Historic Preservation Ordinance, which incorporates the U.S. Secretary of the Interior's Standards; the Historic Resources Advisory Committee; the State of California's historical registration programs; the Mills Act program; the California Historical Building Code; the National Register of Historic Places; the significant rehabilitation tax credit program; and a programmatic agreement with the U.S. Department of Housing and Urban Development (HUD) to address historic properties for the provision of housing to low- and moderate-income households. Due to vigorous and vigilant programs and the will of many people, historic resources such as the Lathrop House, the old County Courthouse/San Mateo County History Museum, the Fox Theater, and numerous resources contained in three historic districts still stand today to educate and inform younger generations.

Imagine Redwood City in 2030

We safeguard our city's heritage by protecting historical sites, buildings, physical elements, trees, signs, parks, and other resources representing significant elements and the physical patterns of our history. We allow new compatible development to be built within the context of our unique historic environment. The City, property owners, and developers collaborate to ensure that our historic resources are maintained and enhanced and, where applicable, use the Secretary of the Interior's Standards for rehabilitation. Our historic residential neighborhoods and our Downtown's character are protected, and we have reestablished Redwood Creek's historical significance. Our community is educated about Redwood City's history and our neighborhoods have historical context. We continue to update our historic resources by adding new sites and resources that are now or will become 50 years old or older.

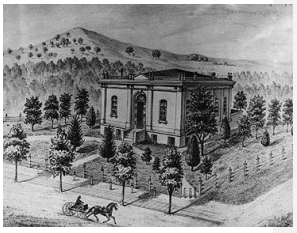
Historic Context: A narrative description of the broad patterns of historical development in a community or its region that is represented by cultural resources. An historic context statement is organized by themes such as economic, residential, and commercial development.

An Historical Overview

To understand why it is important to protect an historic resource–either because of 1) its association with historically significant events or trends or a significant individual, or 2) its design or technological importance–it is necessary to understand the history of the community within which these resources were constructed.

Top illustration: The first County jail, circa 1872

Bottom illustration: Drawing of the first courthouse, circa 1871



Downtown

The earliest landowners and residents of Redwood City shipped timber and agricultural products from "El Embarcadero," near what is now the intersection of Broadway and Main Street in Downtown Redwood City. Commercial and residential buildings built in Redwood City during the 1850s and 1860s reflected popular Victorian Era design and construction. The oldest commercial building in Redwood City from this period is a general store built in 1859, at 726 Main Street. The John Offerman House, at 1018 Main Street, is another building that dates to the 1850s. This two-story wood frame Greek Revival residence was expanded in size in about 1889. The City itself was established as the seat of County Government in 1856 (12 years before its incorporation on March 27th 1868).

Gentlemen posing in front of the Diller – Chamberlain general store building built in 1859. This building still stands on Main Street.

This key role as the judicial and administrative center of San Mateo County is reflected in the fact that four generations of courthouses were constructed on the same site. Two courthouse annexes were added by the Works Progress Administration (WPA). By the 1870s and 1880s, Main Street and Broadway boasted several hotels, saloons, and stables, as well as tin shops, butcher shops, barber shops, breweries, a flour mill, and a drug store. Some of the major businesses included the Grand Hotel, the Redwood City Hotel, the Eureka Brewery, the Frank and the Beeger tanneries, and the Redwood City Flour Mill.

By the end of World War II, the center for economic activity shifted from the historic Main Street and Broadway business center closer to new residential areas southwest of El Camino Real and along Woodside Road, as well as areas along U.S. 101. Development continued along this route as the highway was modernized into a freeway in the 1960s and El Camino Real redesignated as State Route 82 and as Woodside Road became State Route 84.

Periods of Significance and Associated Property Types

Prior to 1906 Earthquake:

- Wood frame residential in various Victorian Era styles, e.g., Italianate, Queen Ann, Eastlake, National Folk Revival
- Commercial: brick and wood frame, largely one story, storefront
- Early industrial on the creek channel and on the bay shore, wood frame with wood and/or metal siding

1906 – World War II:

- Wood frame residential: bungalow and Spanish/Mediterranean revival styles predominate
- Commercial: brick and wood frame (some reinforced concrete), larger than previous period; designs include Art Moderne and International
- Industrial on channel and along Bay tending toward metal sided or masonry construction

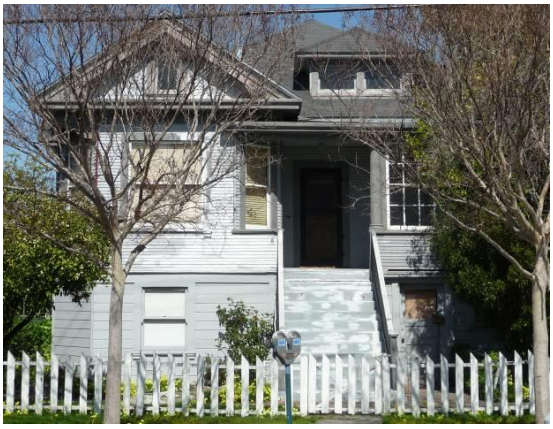
Post World War II:

- Wood frame residential: major shift toward suburban tract developments and various California Ranch and other Contemporary styles
- Commercial: steel frame and/or reinforced concrete, various Modern and/or Contemporary styles
- Industrial buildings of steel frame or reinforced concrete, and utilitarian, very little design expression; now along freeways in addition to water front locations

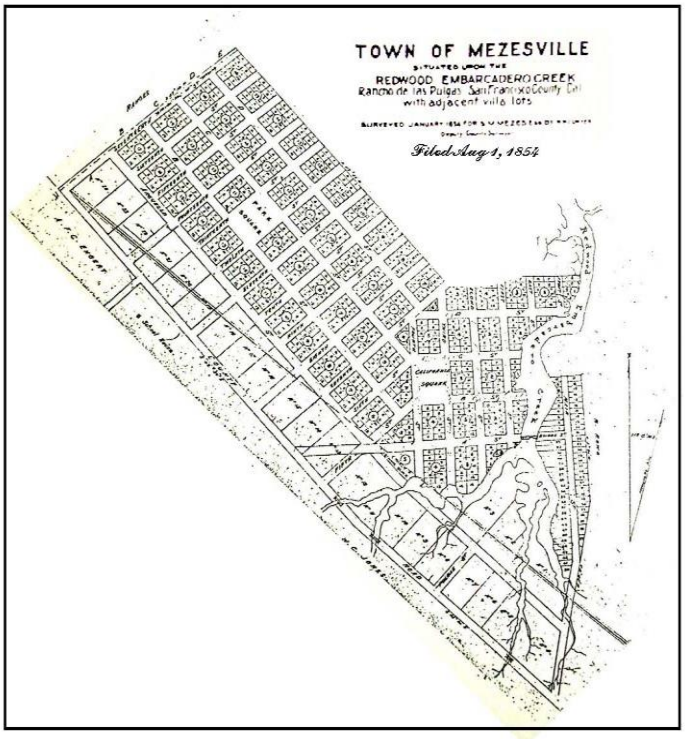
Early Historic Neighborhoods

Residential neighborhoods formed around the city's historic core in the 1850s. Simon M. Mezes, legal agent responsible for clearing the title of the Arguello Family "Rancho de las Pulgas," platted "Mezesville" in 1854, and a portion of this area is now the Mezesville Historic District. Soon after Mezesville was surveyed, San Mateo County was created from a division of San Francisco County and Redwood City became the new county seat. The little town grew slowly in population and amenities, with commerce still centered near the wharf throughout the 1860s. Today, a portion of Mezesville is now a local historic district that is located within the Centennial Neighborhood. The district contains a mix of early 20th and mid-century homes that are one- or two-story, wood-frame buildings in a variety of architectural styles.

The Stambaugh-Heller Historic District, located southeast of historic Main Street, is contained in the city's second subdivision called "The Eastern Addition." The area contains the largest number of pre-1900 buildings in Redwood City.



Historic home within the boundaries of the former Town of Mezesville on Warren Street



Town of Mezesville and Redwood Embarcadero Creek

Redwood City Industries

The earliest waterfront facilities at the "Embarcadero" consisted of a series of wood plank and pile wharves that were essential to Redwood City's economy, particularly for the local lumber and tanning industries. Among the largest were the Hanson-Ackerson Lumber Company (founded in the 1860s) and the S. H. Frank Tannery (founded in 1874). By the time the tannery opened, as many as 28 ships a day entered the Embarcadero to load products, many of which were sent to Bay Area markets.

Redwood City industries had long been located in the tideland areas flanking Redwood Creek, and this trend continued through the turn of the 20th century. Fishing and fish packing companies operated from Greco Island and Steinberger Slough by 1905 and were soon joined by several sea salt harvesting companies. Leslie Salt Company bought many of the smaller companies and eventually operated thousands of acres of salt ponds on the margins of the San Francisco Bay northeast of the city from 1907 to 1978. The early tideland enterprises were followed in the 1910s by manufacturers of aniline dyes, magnesia (insulation), and cement from local oyster shells and aggregate products.

Redwood City's bayfront industries all required access to the wharves on the creek, and profited from the eventual construction in the 1930s of a deep water port farther from Downtown and closer to the Bay along Redwood Creek. Road and rail connections were extended farther east alongside the new deepwater channel to serve the port industries along Harbor Boulevard (now Seaport Blvd), including the salt company, a cement plant, and various fishing companies.

During the last half of the 20th century, Redwood City became one of several cities on the San Francisco Peninsula to develop a thriving technological sector. The Ampex Corporation opened its headquarters in Redwood City on Broadway in 1951, and became a leading innovator in tape recording equipment, including the first practical videotape recorder. Ampex became one of the 500 largest U.S. corporations within the decade and remained one of the largest employers in Redwood City through the 1980s.

Twentieth Century Residential Growth

Redwood City southwest of El Camino Real did not develop as a residential area before 1900 because it was held in large private estates, but eventually these large tracts were divided and sold. The first residential development southwest of El Camino Real began in earnest in the early 1900s and 1910s, spurred by 1) the 1906 earthquake, which displaced thousands of Bay Area residents, many of whom relocated to

Top photo: North Turning Basin portion of the Embarcadero facing the Bay (east), circa 1892

Middle photo: Dredging Redwood Creek, circa 1896

Bottom photo: Capitol Hotel, and North Turning Basin near Redwood Creek facing west, circa 1900

Redwood City and other cities on the Peninsula; and 2) the vacationers who built summer homes and cabins later converted to single-family dwellings.

By 1920, the city's 5,500 residents demanded construction of several new schools, including Lincoln, Washington, and John Gill. The City built Sequoia High School in 1923-1924, relocating it from the former Downtown building on Broadway to Brewster Avenue. The new campus is listed on the National Register of Historic Places and is a local historic landmark.

Top photo: Sequoia High School

Bottom photo: Bird's eyeview of Finger Park Tract and Wellesley Park Tract historic neighborhoods (El Camino Real can be seen on the upper right, and Wellesley Crescent Park is located on the right.)

In the aftermath of the 1906 earthquake, the Bohemian Club of San Francisco re-subdivided land between Arlington and Edgewood roads known as Wellesley Park, or Edgewood Park. The subdivision featured curvilinear streets and a small circular park with animal statuary, and attracted scores of new residents who built homes in a variety of architectural styles. Wellesley Park residents were mostly middle class, while the Emerald Hills subdivision farther southwest attracted wealthier buyers. Initial construction in Emerald Hills started out as summer homes built around Emerald Lake, but after World War II, residences were more commonly designed as year-round homes. Emerald Hills grew slowly until utility improvements of the 1980s enabled more lots to be developed. Other sections of the city southwest of El Camino Real that developed in the early 20th century included several working-class central subdivisions like the Oakwood neighborhood, which also included multiple architectural styles.

Mount Carmel, located northeast of Wellesley Park and Edgewood Park and southwest of El Camino Real, is largely a pre-World War II neighborhood (more than 40 percent of the housing stock was built before World War II) with distinctive architecture.

Redwood City remained a major employment center throughout the Great Depression and expanded at a rapid pace during and after World War II. The city's population of 12,500 at the beginning of the war grew to more than 46,000 by 1960. The city grew in concentric rings radiating from the Downtown, following the periods of significance. The City annexed adjacent areas until it shared boundaries with Menlo Park and Atherton to the southeast and San Carlos to the northwest. The City also expanded into previously unincorporated San Mateo County to the northwest and southwest of El Camino Real. Neighborhoods such as the Central Neighborhood area (west of El Camino Real and south of Jefferson) date to the pre-World War II growth of the city. The booming post-war era brought residential development that reached farther inland into the hillsides with residential tracts like Woodside Plaza and Farm Hill Neighborhoods.

Redwood Shores

In the mid-1960s, Redwood City annexed 25 square miles of tidelands and salt ponds located east of the U.S. 101, more than doubling the area of the city. A portion of the new annexation was developed as a large master-planned community known as Redwood Shores. The community includes homes, condominiums, parks, offices, and commercial buildings constructed in the 1960s through the 1980s, as well as the first site of the Marine World amusement park. Oracle Corporation Campus Headquarters moved into the former Marine World property in 1989 and eventually purchased it. Other housing and corporate center projects have continued through the 1990s and 2000s. Today Redwood Shores contains its own shopping center, fire station, community center, library, and schools, and more than 8,000 residents and 6.5 million square feet of commercial/office space.

Historic Preservation Efforts

Although local government and Redwood City residents have long recognized the importance of their local history and architectural heritage, modern historic preservation began in earnest in the 1970s. Four commercial buildings in the Main Street and Broadway area were designated as a National Historic Registered District in 1977, and that recognition was later expanded when the City Council approved the creation of the Main Street Historic District #1 in 2002. The City Council adopted the first Historic Preservation Ordinance and established the Historic Resources Advisory Committee (HRAC) in 1980; in 1992, the Committee attained National Park Service Certified Local Government (CLG) status, a program administered by the California Office of Historic Preservation.

Preservation Framework

The following programs are incentives that have been used to preserve and recognize local historic resources.

Federal and State Programs

National Historic Preservation Act

Section 106 of the National Historic Preservation Act requires federal agencies to take into consideration the potential effects of proposed federal undertakings on cultural resources listed on or determined eligible for inclusion in the National Register of Historic Places. Section 106 also provides the Advisory Council on Historic Preservation the opportunity to comment on the proposed undertaking. The regulations implementing Section 106 are promulgated by the Secretary of the Interior, as codified in Title 36 Code of Federal Regulations, Part 800. Section 106 requirements apply to properties not formally determined eligible, but which are considered to meet eligibility requirements. HUD projects are processed using a programmatic agreement between cities and HUD.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- Are associated with events that have made a significant contribution to the broad patterns of our history; or
- Are associated with the lives of persons significant in our past; or
- Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

The Lathrop House, the New Sequoia Theater Building (Fox Theatre), the buildings of the Redwood City Historic Commercial Buildings District, the San Mateo County Courthouse, the Sequoia Union High School, and the Union Cemetery are all listed in the National Register of Historic Places. Both Main Street and Stambaugh-Heller historic districts are National

Register eligible, thus qualifying for State and federal historic preservation incentive programs.

California Register of Historical Resources

The California Register of Historical Resources program is designed to allow State and local agencies, private groups, and citizens to identify, evaluate, register, and protect historical resources. It is also an authoritative guide to the State's significant historical and archeological resources.

The California Register of Historical Resources includes buildings, structures, objects, sites, and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

The John Offerman House and the Lathrop-Connor House are both listed as Historic Points of Interest. The Redwood City Union Cemetery is listed as a State Landmark.

California Historical Landmarks are buildings, sites, features, or events that are of statewide significance.

California Points of Historical Interest are buildings, sites, features, or events that are of local (city or county) significance.

Mills Act

In 1972, California State Senator James Mills introduced a bill, known as the Mills Act, to grant property tax relief to owners of qualified historic properties. The Mills Act is a preservation tool created by the California legislature to encourage the preservation and restoration of historic properties. The act enables cities to enter into historical property agreements with owners of qualifying properties; these agreements will result in reductions in the owner's property taxes. The agreements provide a benefit to cities in that they ensure preservation and guarantee authentic rehabilitations and a high level of maintenance of cultural resources important to communities.

In 1990, Redwood City modified its Historic Preservation Ordinance in order to process historic preservation agreements (known as Mills Act contracts). In Redwood City, the review criteria limit eligibility to residential properties designated as local historic landmarks and/or contributors to locally designated historic districts.

Local Efforts: Historic Preservation Ordinance and Historic Resource Advisory Committee

Historic Preservation Ordinance

An "improvement," as defined by the Redwood City Municipal Code, is any building, structure, place, parking facility, fence, gate, wall, work of art or other object constituting a physical betterment of real property, or any part of such betterment.

Chapter 40 of the Redwood City Municipal Code establishes the Redwood City Historic Preservation Ordinance, which is intended to safeguard the city's heritage by providing for the protection of historic landmarks, encouraging public knowledge of the city's history, and fostering a sense of identity in the community. An *improvement* may be designated an historic landmark or historic site by the City Council and any area within the city may be designated an historic district by the City Council pursuant to Section 40.7 of Chapter 40, if it meets the following criteria or other criteria established by the Planning Commission pursuant to Section 40.5 of Chapter 40:

- It exemplifies or reflects special elements of the city's cultural, aesthetic, or architectural history; or
- It is identified with persons or events significant in local, State, or national history; or
- It embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or
- It is representative of the notable work of a builder, designer or architect.

Historic Resources Advisory Committee

The Historic Resources Advisory Committee (HRAC) advises the Redwood City Planning Commission regarding the implementation of the City's Historic Preservation Ordinance. The Committee recommends historic designation of local landmarks and districts, performs design review of changes to historic buildings and adjacent affected sites, and is involved in other historic preservation-related activities. The Historic Resources Advisory Committee's charge is to:

- Implement the goals and policies of the Historic Element of the General Plan (all policies outlined in the 1989 plan were implemented)
- Safeguard the city's heritage by providing for the protection of landmarks representing significant elements of its history
- Encourage public knowledge, understanding, and appreciation of Redwood City's role in local and regional history
- Foster civic and neighborhood pride and a sense of identity based on the recognition and use of historic and cultural resources

- Promote the enjoyment and use of historic and cultural resources appropriate for the education and recreation of the citizenry
- Strengthen the economy of the city by protecting and enhancing the city's historical features for residents, visitors and tourists

The City's HRAC promotes education in the field of historic preservation through participation in the yearly "National Preservation Month" activities, whereby hundreds of elementary students from the Redwood City School District are offered historic Downtown tours as part of the curriculum.

Inventory of Historic Resources

Redwood City maintains a list of individual historic landmarks, resources, and districts. The City keeps the inventory of listed sites and resources. The list is constantly being updated as new sites and landmarks are added to the inventory.

Historic Landmarks and Districts

Any person may submit an application to potentially list a landmark or site–or designate an entire district. Historic districts include any areas that have special character, historic interest, aesthetic value or that represent one or more architectural periods or styles typical to the history of the city. Five historic districts have been identified in Redwood City, as shown in Table BE-9 and Figure BE-298.

The potential exists for creating additional historic districts within the city, particularly in areas around Downtown and El Camino Real, as well as in early neighborhoods located southwest of El Camino Real.

To designate an individual landmark or an historic district, the subject property must meet strict standards for eligibility that include historic significance in: architecture/design/builder, place/event or person/resident; and the property must have "physical integrity" (not be architecturally compromised). The designation process involves a Historic Resource Advisory Committee recommendation to the Planning Commission, which then goes to the City Council for a public hearing and consideration.

Table BE-9: Redwood City Historic Districts

District	Historic Designations	Year Listed
Redwood City Historic Commercial Buildings District	▪ National Register of Historic Places District ▪ California Register of Historical Resources	1977
Stambaugh-Heller Historic Residential District	▪ Local National Register – eligible District (City Council Res. No. 11047) ▪ California Register of Historical Resources	1989
Sequoia Union High School Historic District	▪ National Register of Historic Places District ▪ Local Landmark (City Council Res. No. 10967)	1989
Main Street Historic District	▪ Local National Register – eligible District (City Council Res. No. 14474) ▪ Includes Redwood City Historic Commercial Buildings District (above)	2002
Mezesville Historic District	▪ Local District (City Council Res. No. 14723)	2006

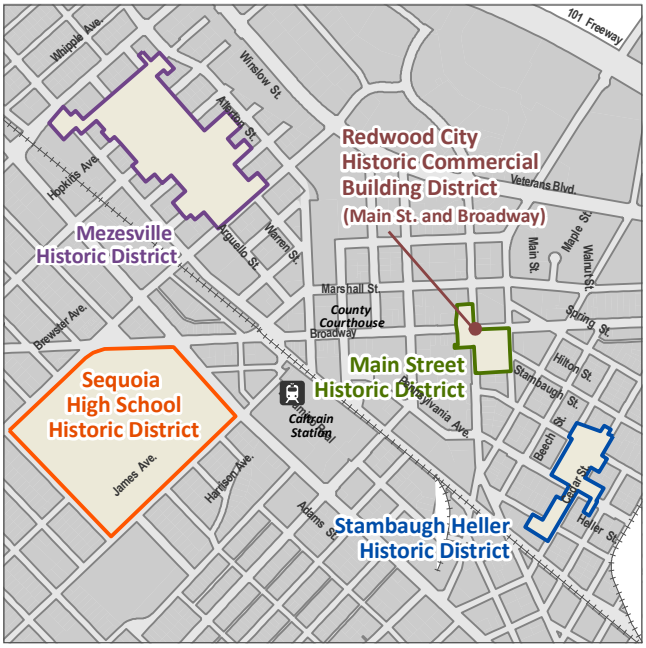


Figure BE-2~~9~~8: Historic Districts

Historical and Cultural Resources

Historical and cultural resources can be buildings, structures, signs, features, sites, places, areas, landscapes, or other objects of historical aesthetic, educational, cultural, or architectural significance to the residents of Redwood City–those that are not listed as a district, site, or landmark on the city's inventory. Redwood City catalogs as many resources as possible through an Historic Resources Inventory. This inventory is continually receiving updates.

The State standard for "older homes" is over 50 years of age; however, Redwood City's policy is "constructed before WWII." Not all "older" homes are "historic" homes, since historic information on older homes has not been inventoried. These properties are at first categorized as *potential* historic resources. When pursuing an historic designation, the next step is to document the characteristics of the subject property using standardized State forms, which include an historic designation rating such as: Inventory, landmark (local or State level), and National Register.

Key Historic Preservation Considerations

The following issues will guide policy regarding historical resources:

- Balancing new development, environmental review, and historic preservation processes
- Maintaining a comprehensive Historic Resources Inventory that meets State and national criteria and is kept in digital format that can easily be updated and tracked
- The continued survey and evaluation of historic resources necessary to keep the Historic Resources Inventory updated, and to account for buildings and/or landscapes that become 50 years old or older, including the documentation of the pattern of development and historical character of residential subdivisions and industrial sites, as applicable
- Identification and evaluation of additional historic districts and features (e.g., signs)
- Recognition and identification of archeological and historic archeological resources
- The development of an overall historical context and survey to help set a foundation for understanding the community's historic assets, identifying what warrants preservation and why
- The preparation of a clear and appropriate process and guidelines by the Historic Resources Advisory Committee with which to review and make recommendations regarding historic resources using the Secretary of the Interior's Standards
- A method to address CEQA-related environmental issues

Historic Resources, Goals, Policies, and Programs

The following goals, policies, and programs implement the following Guiding Principles:

- ***Ensure that change harmonizes with existing development to preserve our historic and neighborhood character.***
- ***Preserve and generate awareness of our cultural, educational, economic, recreational diversity, and historic heritage.***

Goal BE-~~36~~37: Identify, study, and document historic resources.

Policy BE-~~36~~37.1: Develop a detailed strategy for ongoing survey and identification of historic resources.

Policy BE-37~~36~~.2: Develop citywide narrative context for historic resources.

Policy BE-37~~36~~.3: Continue to maintain the Historic Resources Inventory in a digital format that can be easily updated and tracked.

Goal BE-~~37~~38: Protect, preserve, restore, rehabilitate, and/or enhance historic resources.

Policy BE-~~37~~38.1: Enhance, restore, preserve, and protect, as appropriate, historic resources throughout the city.

Policy BE-38~~37~~.2: Preserve historic landmark structures, landscapes (including trees), trails, and sites that serve additional community needs, such as recreational open space and/or cultural needs.

Policy BE-38~~37~~.3: Encourage the retention and/or adaptive reuse of historic residential, commercial, and industrial buildings.

Policy BE-38~~37~~.4: Consider relocation of landmark structures to vacant sites within established landmark districts when no other alternative exists for their preservation, or if a particular structure is not protected by ordinance.

Policy BE-38~~37~~.5: Provide incentives, support, and guidance to the owners of designated historic landmark sites to preserve and rehabilitate structures.

Policy BE-~~38~~37.6: Allow only compatible, historically appropriate development on vacant parcels within or adjacent to designated historic areas, neighborhoods, and/or sites in compliance with the Secretary of the Interior's Standards.

"Compatible" is defined as in accordance with Historic Preservation Ordinance, the Secretary of the Interior's Standards, and/or CEQA consistency.

Policy BE-~~38~~37.7: Strive for compatibility with existing historic resources when planning for infrastructure improvements, restorations, new construction, alterations, or similar projects in designated historic districts.

Policy BE-~~38~~37.8: Permit removal of non-contributing elements of structures in or adjacent to designated historic resources to allow replacement by compatible, historically appropriate structures.

Goal BE-~~38~~39: Establish robust programs and activities that educate the public about the history and historic resources of Redwood City.

Policy BE-~~38~~39.1: Encourage public knowledge, understanding, and appreciation of Redwood City's role in local and regional history.

Policy BE-~~39~~38.2: Foster civic and neighborhood pride and a sense of identity based on the recognition and use of historical and cultural resources.

Policy BE-~~39~~38.3: Advocate for the preservation and appropriate rehabilitation of historically significant properties and structures.

Policy BE-~~39~~38.4: Support and consult with private associations, groups, nonprofit organizations, corporations, school districts, and public agencies with an interest in historic preservation of significant historic resources.

Policy BE-~~39~~38.5: Continue to offer educational benefits on local history through National Historic Preservation Month activities.

Policy BE-~~39~~38.6: Develop historical walking programs using historical markers, plaques, and maps for public benefit.

Goal BE-~~39~~40: Emphasize and showcase the historic resources and unique character of Downtown Redwood City.

Policy BE-~~40~~39.1: Encourage historical resources and sites to be rehabilitated or reused in an historically compatible manner.

Policy BE-~~40~~39.2: Encourage uses that generate pedestrian activity within the designated Downtown historic commercial districts and landmarks.

Policy BE-~~40~~39.3: Ensure that infrastructure, streetscape, signage, and other improvements and amenities respect the historic character of Downtown.

Policy BE-~~40~~39.4: Reestablish public awareness, where appropriate, of the historical significance of Redwood Creek within Downtown.

Implementation Programs

Procedures, Permits, Agreements, Ordinances

Program BE-~~104~~102: **Historic Preservation Ordinance.** Enforce the Historic Preservation Ordinance, and work with the Historic Resources Advisory Committee to continue to review and make recommendations regarding historic resources.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, developer fees

Program BE-~~105~~103: **Funding Resources.** Seek funding resources, such as grants or tax incentives (i.e. Mills Act) for historic building rehabilitation or to promote historic preservation.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Grants, General Fund, Mills Act

Program BE-~~106~~104: **Low-Interest Loans.** Offer low-interest loans for the purchase, rehabilitation, and restoration of compatible structures in or being relocated to landmark districts and sites, if feasible.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Grants

Program BE-~~107~~105: **Secretary of the Interior's Standards.** Continue to evaluate "projects" affecting historic resources using architectural standards from the Secretary of the Interior's Standards for landmark districts to help determine compatibility of existing structures and future construction, including such things as periods of construction; architectural styles; types of materials, textures, signs, fences and front yard hardware; character of street improvements; location; and relationship to other structures.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-10~~68~~: **Review Process.** Establish processes for appropriate review and delay of demolition or alteration of structures or sites that are potential landmarks with historic and/or architectural significance, but which are not protected by ordinance and do not have landmark status.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-10~~79~~: **Cultural Resources Management Plan.** Continue application of the Cultural Resources Management Plan, in compliance with the applicable California Environmental Quality Act regulations, for all historic sites that have a potential for the on-site discovery, reconnaissance, and identification of cultural resources.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, developer fees

Program BE-10~~810~~: **Redwood City Downtown Precise Plan.** Once adopted, implement the Redwood City Downtown Precise Plan regarding historic resources.

Timeframe: Ongoing

Responsible Party: Community Development
Funding Sources: General Fund, developer fees

Program BE-10~~911~~: California Historical Building Code. Continue to implement the California Historical Building Code in review, approval, and design of projects involving historic resources.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, developer fees

Program BE-~~112~~110: Additions/New Construction in Neighborhoods. Establish clear design guidelines or an ordinance for additions/new construction in Historic Influence neighborhoods.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~113~~111: Certified Local Government. Continue to maintain the Certified Local Government (CLG) status.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~114~~112: Sign Ordinance. Continue application of the Sign Ordinance to identify and protect historic signs. Use the Historic Resources Advisory Committee criteria for determining historic signs.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Plans and Studies

Program BE-~~115~~113: Maintenance and Repair Guidelines. Develop maintenance and repair guidelines for historically designated districts, sites, and structures.

Timeframe: Mid Range
Responsible Party: Community Development

Funding Sources: General Fund

Special Programs/Projects

Program BE-~~116~~114: **Historic Context Statements**. Develop relevant historic context statements for the various parts of the city and the various historic property types identified therein. Where possible, seek community involvement to develop and facilitate historical context statements.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~117~~115: **Historical Resources Inventory.** Continue to update the city's Historical Resources Inventory, and continue to survey historic resources in Redwood City, particularly focusing on potential resources that predate World War II. Surveys and evaluations of historic resources can be prepared using DPR523 Form series. Where appropriate, seek community volunteers to conduct Historical Resources Inventory surveys.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund, grants

Program BE-~~118~~116: **Historical Resource Survey Prioritization.** Consulting with the community, develop prioritization for historical resource surveys to ensure consistent progress in the identification of historical resources. Develop clear criteria for how survey areas will be prioritized, such as concentration of potential resources and endangered existing or potential historic resources.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund, grants

Program BE-~~119~~117: **Historic Resources Collection.** Continue to promote, preserve, and expand the collection of literature, photographs, and information on local history at the Redwood City Public Library and the San Mateo County History Museum.

Timeframe: Ongoing

Responsible Party: Library Department
Funding Sources: Grants, General Fund

Program BE-~~120~~118: **Historic Resource Recognition.** Strive for State and federal recognition of Redwood City landmarks and historically designated areas, neighborhoods, sites, and structures by applying for inclusion on the National Register of Historic Places and/or California Register of Historical Resources.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Grants, General Fund

Program BE-~~121~~119: **Continuing Education on Historic Resources.** Continue to provide City workshops, walking tours, and other initiatives that help educate the community about historic resources in Redwood City.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Grants, General Fund

Program BE-~~122~~120: **Non-Governmental Landmark Preservation Revolving Fund.** Establish a non-governmental landmark preservation revolving fund for historic district land bank programs, purchase of façade easements, purchase and restoration of key landmarks when no other alternative exists, and restoration of public historic landmarks.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Revolving Fund

Program BE-~~123~~121: **Preserve America.** Consider pursuing Redwood City's designation as a Preserve America Community to assist with the city's heritage tourism and wayfinding efforts and potential project funding.

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Physical Improvements

Program BE-~~124~~122: Historical Significance of Redwood Creek. Promote the historical importance of Redwood Creek by establishing linkages and access to the creek, and where feasible by daylighting certain portions of Redwood Creek, especially in Downtown. New development should recognize and embrace Redwood Creek, particularly north of Bradford Street.

Timeframe: Long Term
Responsible Party: Community Development
Funding Sources: Grants

Inter-Agency and Other Organizations Consultation

Program BE-~~125~~123: Consultation with Historic, Preservation, or Heritage Organizations and Agencies. Consult with the San Mateo County Historical Association and the Redwood City Heritage Association and the Archive Committee of the Redwood City Public Library to provide interpretive historic displays and identify additional methods to educate the community about historic resources. Consult with and encourage local historic/preservation organizations to purchase and maintain historic resources.

Timeframe: Ongoing
Responsible Party: Community Development; Library Department
Funding Sources: General Fund

Infrastructure

Water pipes in Redwood City

An efficient and reliable infrastructure system is vital to any city's health, safety, livability, and its economic well-being. The Infrastructure Chapter addresses the physical facilities needed for the conveyance of vital services and functions such as water storage and distribution, wastewater collection and treatment, storm drainage and flood control, energy, communications, and solid waste disposal. Infrastructure related to transportation, such as our streets, is addressed in the Circulation Chapter of this Element.

These infrastructure systems represent the vital support network upon which we rely to maintain our daily activities. To preserve high levels of service in Redwood City, ongoing maintenance, improvement, and replacement is required; and new development must ensure that new needs are met without burdening the current users.

Imagine Redwood City in 2030

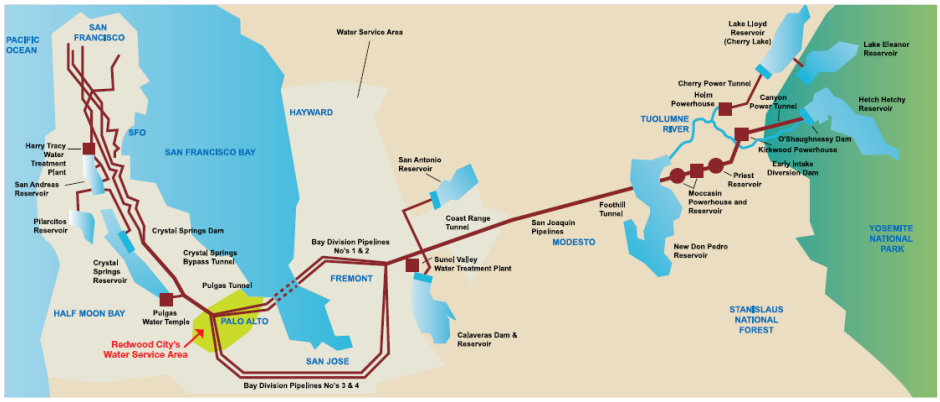
Redwood City's unseen infrastructure keeps the city running smoothly. Our water storage and distribution system is safe and well-maintained. Our recycled water service area is expansive, and we are a leader in the region in facilitating recycled water use. Wastewater has been minimized with conservation, as we continue to meet public health and wastewater treatment needs. Redwood City facilitates alternative and renewable energies, which have become a primary portion of our energy portfolio. Our utility lines run underground, preserving community aesthetics while supporting our businesses' and residences' communications and function.

Water Storage and Distribution

Redwood City's water system is maintained and routinely monitored by the Public Works Services Department.

As described in the Water Supply Chapter of the Natural Resources Element, Redwood City obtains all of its potable water from the San Francisco Public Utilities Commission (SFPUC) through the Hetch Hetchy regional water system. The supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo counties. These facilities include Calaveras Reservoir in southern Alameda County and San Andreas, Crystal Springs, and Pilarcitos Reservoirs on the Peninsula (Figure BE-~~29~~30). In the event of an interruption to the water delivery system, these holding reservoirs can serve as an emergency water supply. The regional

water system includes over 280 miles of pipelines, 60 miles of tunnels, five pumping stations, and two water treatment plants.

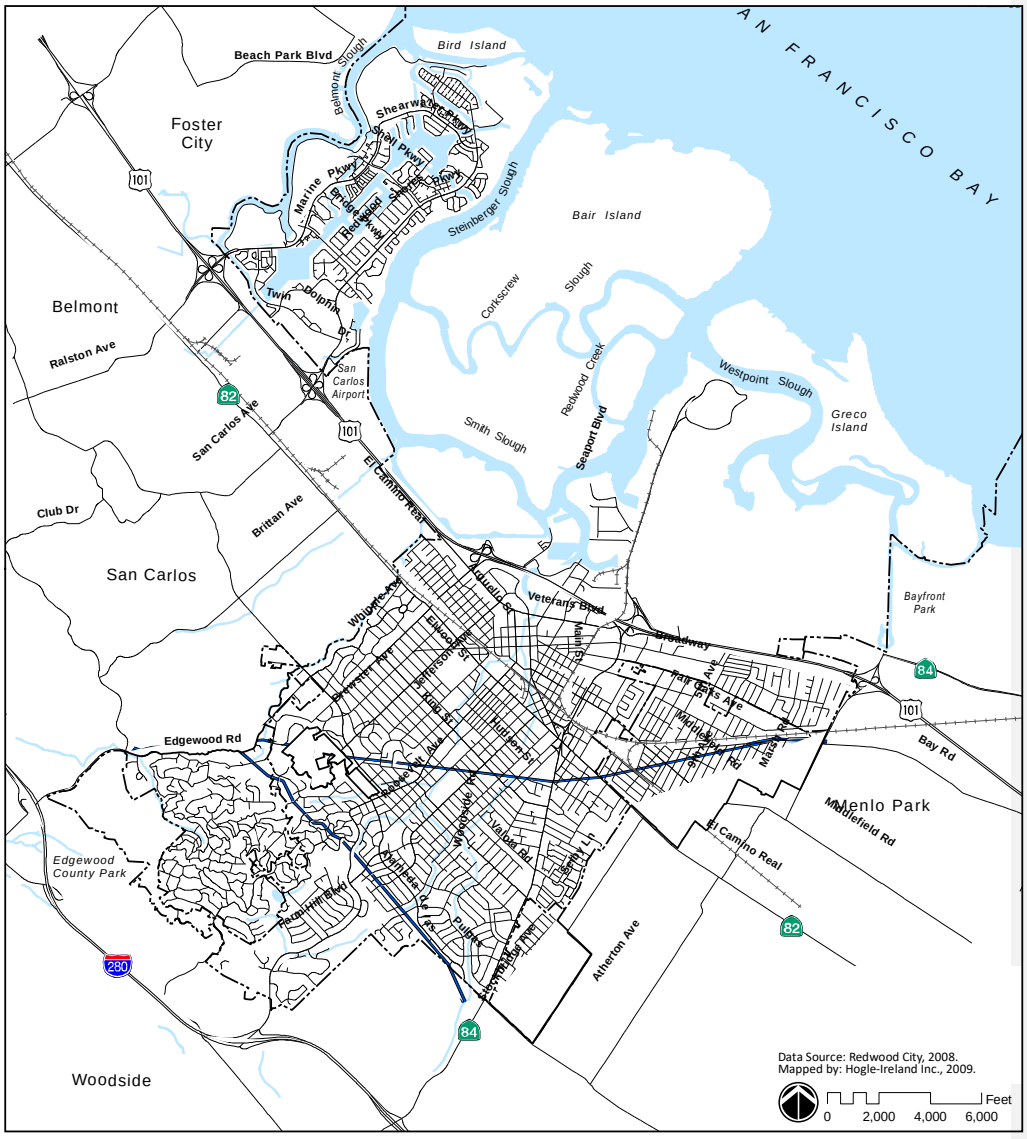


Source: Redwood City 2007 Annual Water Quality Report; SFPUC.

Figure BE-~~29~~30: San Francisco Regional Water System

Water from the regional system is delivered to Redwood City through the four Bay Division Pipelines (BDPLs) which run underground through the city. In Redwood City, BDPLs No. 1 and No. 2 are located in SFPUC right-of-way that runs diagonally through the city from southeast to northwest, and then parallels Edgewood Road before entering Pulgas Portal. BDPLs No. 3 and No. 4 run roughly parallel to Alameda de las Pulgas and Fernside Street. Figure BE-~~30~~ 31 shows the alignment of both pipeline corridors through Redwood City.

In 2002, the SFPUC approved a $4.4 billion Capital Improvement Program known as the Water System Improvement Program (WSIP), to repair and upgrade the Hetch Hetchy water system. The WSIP includes the repair, replacement, and seismic upgrades of the system's deteriorating pipelines, tunnels, reservoirs, pump stations, storage tanks, and dams. The program is scheduled for completion in 2015. As part of the WSIP, a fifth Bay Division Pipeline (BDPL No. 5) will be constructed adjacent to BDPLs No. 1 and No. 2. Construction of the portion of pipeline through Redwood City is tentatively scheduled to begin sometime in 2010.



Legend

- Bay Division Pipelines
- Freeway/Highway
- Major Roads
- Railroad
- Waterways

Figure BE-~~30~~31: Bay Division Pipeline Alignments

The Local Water System

Redwood City's water system is operated by the Redwood City Public Works Services Department - Water Services Division. The system's service area is approximately 14 square miles and includes Redwood City's incorporated area, portions of San Carlos and Woodside and some adjacent unincorporated areas including the Emerald Hills area, Cañada College, and portions of the Fair Oaks area. Redwood City draws its water from the regional water system pipelines at 13 metered connections. Redwood City's water distribution system is comprised of 262 miles of distribution mains, 10 pump stations, 2,385 fire hydrants, and 26 pressure reducing valve stations. Discussion of Redwood City's water supply is covered in detail in the Natural Resources Element, Water Supply Chapter.

Water Storage and Pumping Facilities

Redwood City has 12 water storage facilities that vary in size from 100,000 gallons to four million gallons (MG) with a combined storage capacity of 21.24 MG. Ten storage facilities are located in the higher elevations of Redwood City, and two are located in Redwood Shores. Ten pump stations are located throughout the distribution system, four of which have permanent stand-by generators. Two portable generators are available for emergency use.

Redwood City continues to refine and improve its water system maintenance and operation procedures to ensure reliability. The City's maintenance practices help reduce water loss from leaks in the distribution system, which contributes to the amount of available potable water in the city. Redwood City makes every effort to reduce water leaks and retain precious drinking water supplies. The City strives to keep "unaccounted for" water significantly below the industry standard of 10 percent. Unaccounted for water includes water used for fire suppression, distribution main flushing, storage tank cleaning, under-reported meters, and system leaks. When system leaks are detected, they are repaired immediately.

Water tank in Redwood City

Water Quality

Monitoring the quality of the regional water supply in the transmission system is the responsibility of the SFPUC, while Redwood City is responsible for monitoring water quality in its water distribution system.

Redwood City conducts weekly water testing at various sampling points throughout the system. The City's water quality monitoring program assesses the general physical quality of the water as well as levels of contaminants including bacteria, chlorine, asbestos, lead, and copper. The water consistently meets or exceeds primary and secondary drinking water standards. Distribution pipelines are regularly flushed to remove deposits, sediments, encrustations, and other materials. Flushing is suspended during water shortages to conserve water. Backflow, or the reverse flow of water from end users' systems back into the city's drinking water distribution system, may contain pollutants that are harmful to human health. Therefore, the City administers a Cross Connection Control Program that prevents backflow from occurring. The City uses certified staff and contractors to annually test backflow prevention devices.

Emergency Water Storage

Redwood City recently improved its storage and distribution system to ensure that emergency water supply is available if the regional water system fails. Redwood City's 17 pressure zones are now connected to storage tanks so that water can be pumped from one zone to another if the regional water supply is disrupted. Redwood City reviews the emergency storage system and proposes new or rebuilt storage tanks as needed.

Future Local Water System Improvements

Through the Water System Capital Improvement Program (CIP), the City annually replaces aging and undersized pipes, rehabilitates storage water tanks and reservoirs, rebuilds pump stations and pressure reducing valve stations, installs emergency generators, performs system seismic improvements, and conducts master and emergency planning efforts.

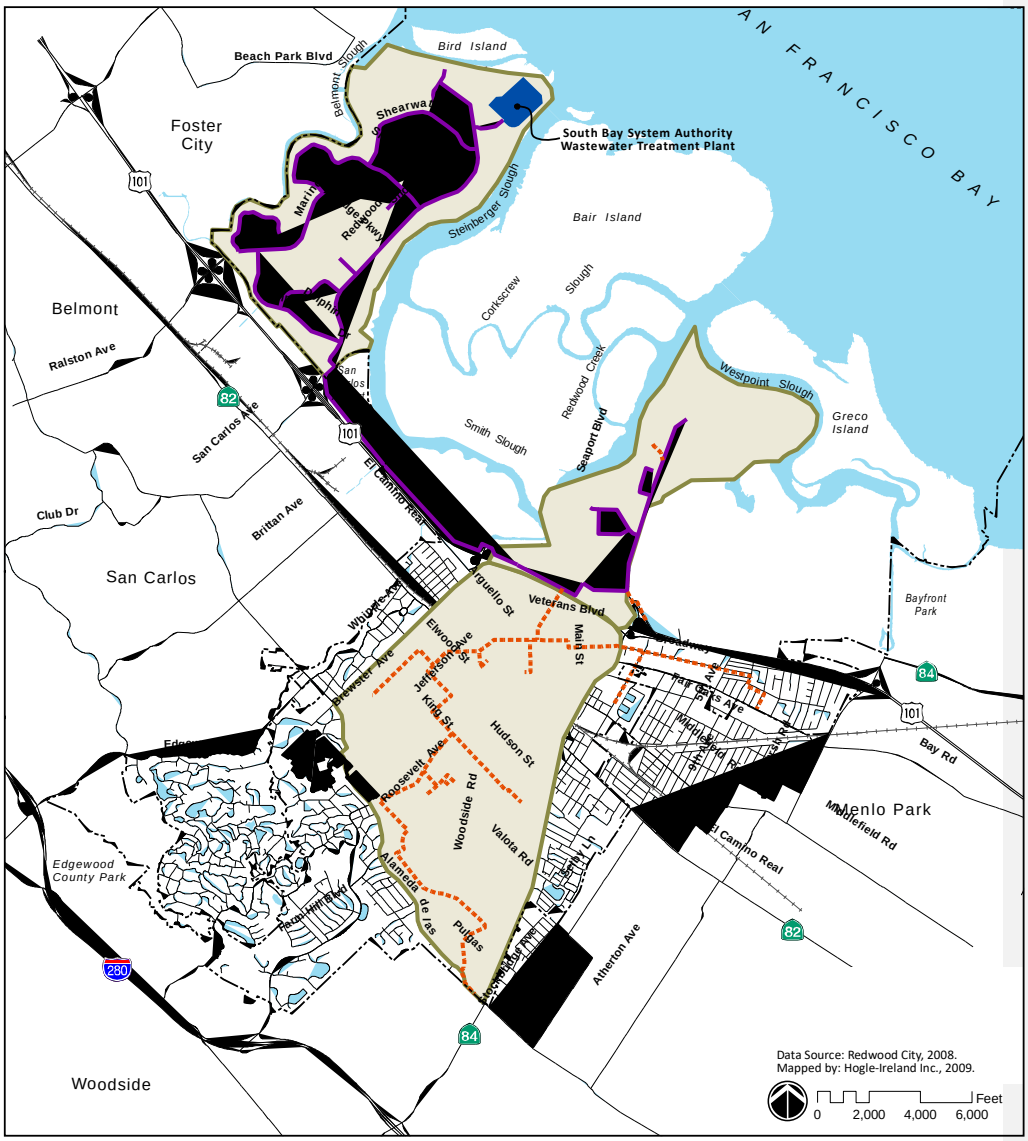
Redwood City's water distribution system is a complex system consisting of many pipe sizes and different materials. The ages of the pipes vary throughout the system with some being as old, or older, than 100 years. The annual Water System CIP is aimed at replacing these pipes with polyvinyl chloride (PVC) pipes, taking into consideration the current pipeline technologies and appropriate sizes of pipes needed for future uses.

Future improvements proposed for Redwood City's water system include new storage tanks in Friendly Acres and the bayfront area. The proposed tanks will provide additional capacity and water pressure for those areas susceptible to low service pressure during prolonged interruptions due to scheduled or emergency maintenance and repairs. The tanks would also provide additional water for emergency responses and supply capacity. As sufficient funding becomes available, these tanks will be constructed.

Recycled Water

In order to diversify its water supply portfolio and reduce its reliance on water supplies from the regional water system, Redwood City teamed with the South Bayside System Authority to initiate a pilot water recycling project in 2000. The South Bayside System Authority (SBSA) is a sub-regional wastewater treatment facility, of which the City is a joint powers authority part owner. The pilot project successfully demonstrated the feasibility of producing recycled water that met health requirements and goals for distribution. Subsequent to the successful pilot project, the recycled water system in Redwood City has continued to expand. The recycled water system requires both a recycled water treatment facility and a separate system of pipes to distribute recycled water to customers.

In 2006, the recycled water treatment facility at the SBSA plant was completed. The facility, located in Redwood Shores (see Figure BE-32~~1~~), is permitted by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the California Department of Health Services (DHS) to produce recycled water that meets the State's stringent environmental health requirements for unrestricted uses. SBSA is responsible for treating the wastewater for recycling, while Redwood City is responsible for distributing the recycled water. In 2009, the recycled water distribution system also included pipelines in Redwood Shores, the bayfront area, and the Port of Redwood City. Pipelines are proposed to reach much of the rest of Redwood City.



Note: Proposed facilities are subject to change as a result of further study and future conditions.

Legend

Recycled Water Service Area
- Recycled Water Service Area
- Wastewater Treatment Plant

Recycled Water Backbone Pipe System
- Existing Pipes (2009)
- Proposed Pipes

Base Map Features
- City Boundary
- Sphere of Influence
- Railroad

Figure BE-31: Recycled Water Facilities

Within the timeframe of the City's General Plan (2030), the recycled water system is expected to provide nearly 2,000 af/yr to Redwood City customers, more than offsetting the city's water annual deficit of approximately 800 af/yr from the regional water system.

Phase 1 of the system, including Redwood Shores, is currently operating, with the Seaport area expected to come online in early 2010. The water recycling system also has sufficient capacity available to supply recycled water to adjacent communities. Recycled water can be used for a variety of applications including landscape irrigation, industrial processes, firefighting, and dust control. In 2008, Redwood City adopted a Recycled Water Use Ordinance that requires the use of recycled water in internal separate plumbing for urinals, internal cooling towers and external landscaping on new apartments, townhouses and condominiums, and on industrial, commercial, and governmental projects. It also requires the use of recycled water for external landscaping on existing and remodeled commercial and industrial buildings.

Recycled water pipes are also known as "purple pipes." Purple is the standard color of pipe adopted by the international utility industry to distribute treated recycled water.

Wastewater Collection and Treatment

Wastewater is the water that drains from our showers, sinks, and toilets into the sewers. In Redwood City, wastewater is collected and conveyed through a sewer pipeline system operated and maintained by the City to the South Bayside System Authority (SBSA), which treats and disposes of the city's sewage. The city's system is comprised of 192 miles of sewer mains and 31 sewer lift stations. Redwood City also has agreements with the County of San Mateo and the town of Woodside that permit these jurisdictions to convey wastewater through the city system to the SBSA treatment plant in Redwood Shores. SBSA is managed by a Joint Powers Authority (JPA) made up of Redwood City, San Carlos, Belmont and the West Bay Sanitary District. The JPA entities own the SBSA, with Redwood City's ownership at approximately 47 percent. SBSA is responsible for operation of four pump stations (one of which is in Redwood City), the force main, and the wastewater treatment plant. After treatment, the wastewater (called effluent) is discharged through an outfall into San Francisco Bay, as permitted by the San Francisco Regional Water Quality Control Board (RWQCB).

The treatment plant's operating capacity is 29 million gallons per day of average dry weather flow. Between June and October 2008, the average dry weather flow was 15.8 million gallons per day, or 54 percent of the operating capacity. Wet weather condition is significantly different given rain and groundwater infiltration into the collection system. Even though

the plant is operating well below capacity for dry weather flow, Redwood City is aware of wet weather condition capacity issues. While Redwood City has wet weather condition problems, it is considered to be among the industry's average.

Redwood City's sewer system is monitored to detect pipeline conditions. Condition assessment of the sewer pipeline is conducted using closed circuit television to determine the defects in the sewer pipelines. Typical problems can include pipeline cracks and improperly sealed joints that can cause groundwater infiltration during periods of wet weather. Excessive groundwater infiltration into sewer pipelines can overtax the capacity of the sewer system and treatment plant. Tree roots can intrude into pipelines causing blockage. Accumulations of fats, oils, and grease can coagulate and also block sewage flow.

Redwood City has a CIP developed for the wastewater system. Every year, the wastewater projects are reviewed, prioritized, and implemented to provide a safe and reliable system. Improvement projects ranging from rehabilitation of existing pump stations and replacement of aging sewer infrastructure are conducted yearly. In August 2008, Redwood City completed an evaluation of the sewer capacity analysis that provided a list of improvements that are required to sustain the growth to year 2030.

Storm Drainage and Flood Control

Storm drainage and flood control is discussed in detail in the Public Safety Element.

Energy

For more information regarding energy use, see the Public Safety Element, Atmosphere and Climate Chapter.

Redwood City's electric service is provided by Pacific Gas and Electric Company (PG&E), which has supplied much of Northern California with gas and electricity since the early 20th century. PG&E obtains electricity from different generation sources, including hydroelectric, fossil fuels, nuclear, wind, and geothermal. The generated electricity from these sources is transmitted through a grid, a complex network of high-voltage transmission lines, switching facilities, and substations. Most of the electric utility lines (as well as cable TV and telephone lines) are routed along city streets or other publically-owned rights-of-way to reach Redwood City users.

Constructing new high-voltage transmission lines to improve capacity and reliability is expensive and can be particularly difficult in developed urbanized areas. In order to reduce the need to construct new

transmission lines, PG&E has increased electric transmission capacity on some of its existing lines, replacing older electric cables with higher capacity cables. Some transmission line circuits have also been upgraded to higher voltages. As of 2008, no new major transmission lines in Redwood City are planned.

Like electricity, natural gas is supplied by PG&E. Natural gas is conveyed through a network of pipelines that connect gas fields located hundreds of miles away to Redwood City. Three main natural gas pipelines run the length of the Peninsula, terminating in San Francisco. One pipeline parallels U.S. 101 and two parallel pipelines run adjacent to Interstate 280. A cross-connection between these pipelines runs through San Carlos. A regulator station draws the gas from this pipeline to supply Redwood City. A lateral network of smaller diameter pipelines distributes the gas for local use to individual customers.

Renewable Energy and Conservation

Global climate change is an increasingly acknowledged environmental problem. There is scientific consensus that it is caused by greenhouse gases being released into the atmosphere faster than the earth's natural systems can re-absorb them. Besides a small portion of emissions resulting from waste decomposition, soil disruption, or the release of industrial chemicals, energy use (in buildings, transportation, or elsewhere) is the primary source of greenhouse gas emissions in most U.S. cities, including Redwood City. Both decreased energy consumption and increased renewable energy production are key components to reducing greenhouse gas emissions, and one without the other is unlikely to achieve a sustainable energy economy.

PG&E's energy supply mix dictates Redwood City's energy supply mix. PG&E has a relatively low-emission energy production portfolio, though much of its contracted renewable energy capacity has not yet come on line. Redwood City does not have direct control over how PG&E produces energy, but the City actively and publicly encourages the company to make its energy portfolio increasingly less emissions-intensive.

Solar panels in Redwood City

Due to the relatively sunny climate, solar energy is a viable source of energy in Redwood City. Solar energy is defined as the amount of energy that can be produced from solar sources like photovoltaic panels and passive water-heating solar panels. While solar power installed in Redwood City is increasing, (between 1999 and 2009, Redwood City has installed a total of 555,877 watts of solar capacity and an average of 61,764 watts of solar energy capacity per year) solar only provides about one out of every million units of energy used in the city.

Undergrounding of Utilities

The proliferation of overhead utility lines and poles has long been cited as a source of urban visual pollution. Since the 1960s, most new development in Redwood City has included underground electric and telephone service, largely due to technical advances that reduced the cost of undergrounding utility lines. However, undergrounding existing overhead utilities can be complicated and expensive. Existing City codes require new building projects to underground overhead utilities that are located within their property or on their frontage, although exceptions may be made for affordable housing, other public-benefit projects, and when undergrounding is deemed impractical for one property frontage due to the complexity of the overhead system. Undergrounding overhead utilities also occurs in conjunction with major street improvements.

Each year, PG&E places approximately 30 miles of overhead electric facilities underground within its service area. This work is done under provisions of the company's Rule 20A, an electric tariff filed with the California Public Utilities Commission. The costs for undergrounding under Rule 20A are recovered through electric rates after the project is completed.

In recent years as part of roadway reconstruction, Redwood City has worked with PG&E, AT&T, and other cable companies in undergrounding utilities on portions of Chestnut Street, Roosevelt Avenue, James Avenue, and parts of the Downtown core.

Above-ground utility lines and poles in a Redwood City neighborhood

Unlike local electric distribution lines and telephone cables, undergrounding high-voltage transmission lines is an expensive undertaking because of more stringent insulation requirements. In

general, undergrounding high voltage lines occurs in developed urban areas that lack sufficient right-of-way space for overhead high-voltage lines. In Redwood City, portions of some existing high-voltage transmission lines could potentially be placed underground. An example is the bayfront area that is traversed by two parallel double-circuit transmission lines supported on steel towers. Placing these lines underground would improve the attractiveness of the area.

Communications and Information Technology

An effective communications system is essential to the efficient operation of business, government, and for individual convenience. Improvements in communications and information technologies during the latter half of the 20th century such as satellites, the Internet, and the widespread use of personal computers and cellular telephones has radically changed how daily affairs are conducted. These newer technologies require an infrastructure with sufficient capacity to provide fast and reliable communications. Expanding access to and capabilities of technology assists Redwood City in achieving goals of livability and economic growth.

Miles of telephone lines, television cables, Internet fiber-optic networks, and wireless technology connect us together and provide us with access to a wealth of information. Existing telephone lines have been the most common means of transmission infrastructure for Internet communications in the past, but this is being supplanted by fiber optic cable technology. Unlike conventional telephone lines, fiber optic cables are thinner, lighter, and have a greater bandwidth for more capacity. Fiber optic cables can be routed underground or placed on existing overhead utility lines. In recent years PG&E has installed fiber optic cables on its towers in some of its existing electric transmission line corridors. At least three underground fiber optic communications lines run along the Caltrain right-of-way through Redwood City. In addition, Redwood City recently completed the installation of a new fiber optic network, connecting different public facilities in the city for video, voice, and data communication.

However, these networks are not without their visual impacts. For example, poorly-sited telephone antennas can contribute to visual pollution. Using existing structures for installing communications antennas rather than freestanding towers can reduce visual impacts. At the same time, efforts must be made to make these installations as uncluttered and unobtrusive as possible. This can include camouflaging

equipment and integrating equipment into a building's architecture. In addition to their visual impacts, these installations can also emit low levels of noise from the control equipment. Although this may not be a problem in commercial and industrial areas, it can create potential problems in residential and mixed-use areas. Consequently, residential installations must not exceed ambient noise levels within existing residential neighborhoods (refer to the Noise Chapter of the Public Safety Element).

Wireless Internet communications, known as "wireless fidelity" or simply Wi-Fi, have become one of the most common means of accessing the Internet. The major advantage of wireless infrastructure is its flexibility, where one can access resources while in the field, or easily collaborate with people without having to travel. All of the public libraries in San Mateo County, including those in Redwood City, currently have wireless Internet access. Redwood City supports efforts to develop Wi-Fi accessibility in public spaces.

Wireless Silicon Valley is a program to develop a large-scale wireless network covering approximately 1,500 square miles that would include most of the Peninsula, and portions of Santa Clara, Santa Cruz, and Alameda counties. Redwood City is one of 39 cities participating in this program. The project is sponsored by Joint Venture, an organization made up of business, government, labor, and education representatives. Joint Venture was established to identify and resolve issues or problems impeding Silicon Valley competitiveness. The wireless network would provide free or low-cost Internet access to residents and businesses in Redwood City.

Solid Waste and Recycling

Minimizing the volume of trash that enters landfills conserves resources and protects the environment from the negative impacts associated with waste disposal. As landfill space diminishes, reuse and recycling become ever more necessary to reduce demand on non-renewable resources. Using recycled products also lowers energy consumption, as manufacturing new products from recycled materials often uses significantly less energy than manufacturing from raw materials. Reducing the amount of waste going to landfills also helps curb global warming, as waste in landfills decomposes anaerobically and produces methane – which has around 23 times more greenhouse gas effect than CO_2. In Redwood City's 2005 Community Greenhouse Gas Emissions inventory, waste accounted for 6 percent of total greenhouse gas emissions. Waste reduction and recycling is also a proven tool for raising awareness about other elements of environmental sustainability.

In addition to using disposed material for recycling, organic solid waste such as food scraps, fallen leaves, grass clippings and plant and tree trimmings can be used for compost. Construction and building demolition debris produces large quantities of solid waste, much of which can be recycled or processed for reuse. One of the basic principles of "Green Building," which is discussed in the Built Environment and Natural Resources Elements, is to use recycled and re-used materials in new construction.

Recycling and trash ready for pickup on a residential street in Redwood City

Redwood City is one of 12 member agencies that make up the South Bayside Waste Management Authority (SBWMA). The SBWMA, a Joint Powers Authority that was created in 1982, facilitates and manages recycling and other waste management programs. The SBWMA contracts with private companies to collect, haul, and dispose of solid waste. Pursuant to SBWMA contracts, solid waste generated in Redwood City is hauled to Ox Mountain landfill near Half Moon Bay, Hillside landfill in Colma, or to other landfills further away if necessary.

Redwood City's Port Industrial Center area provides opportunities for new recycling and salvage operations. The recycling and salvage operations uses are consistent with surrounding heavy industrial uses; ready access to rail and Port vessels can reduce transportation costs associated with moving recycled and salvaged materials.

In order to reduce the amount of solid waste generated in California, the California Integrated Waste Management Board (CIWMB) was created in 1989 to oversee the reporting of solid waste disposal by cities and counties. The CIWMB required the amount of solid waste sent to landfills be reduced by 50 percent by the year 2000. Redwood City implemented a series of programs for recycling materials that significantly decreased the amount of waste the city sent to landfills. In 2000, Redwood City was diverting 47 percent of its waste from landfills. By 2006, Redwood City diverted 61 percent of its waste from landfills through recycling and reuse. Redwood City continues to look for and implement new programs to minimize waste generation and increase recycling.

In 2005, Redwood City adopted a waste reduction and recycling directive "to make resource conservation an integral part of the physical operation of the waste reduction and recycling programs..." Recyclable household waste is picked up every other week at residential curbsides; also, there are a variety of recyclable material drop-off locations in Redwood City and San Mateo County. Redwood City, along with a number of local organizations, also sponsors residential and commercial recycling information and education programs. To increase recycling in Redwood

City, in 2009 the City initiated a new contract with Recology, a solid waste and recycling management company, to manage the solid waste for all areas of the city. This company focuses on resource recovery and composting, with a goal of Waste Zero. Services in Redwood City residential areas will include:

- Weekly solid waste collection
- Weekly single stream recycling collection
- Weekly organics recycling collection
- Weekly plant materials recycling collection
- Weekly Household Batteries and Cell Phones Recycling Collection

Services for commercial users will include solid waste collection, single stream and source separated recycling collection, organics recycling collection, and plant materials recycling collection. Additional programs are also being considered.

Household Hazardous Waste

A considerable amount of solid waste is made up of hazardous materials. A typical household contains toxic substances such as paint, cleaners, pesticides, batteries, oil, and fluorescent tubes that can pose a hazard if they are disposed improperly. San Mateo County sponsors the Household Hazardous Waste (HHW) Program, which educates the public about toxic household waste dangers and proper disposal. Hazardous waste and materials are addressed in more detail in the Environmental Hazards in Public Safety Element.

Electronic Waste

Electronic waste (E-waste) is becoming an increasingly significant solid waste source in recent years. Continued improvements in electronic technologies have resulted in rapid obsolescence of electronic equipment including personal computers, televisions, stereo equipment, and cell phones, which are being discarded at an increasing rate. In addition to the volume of waste generated, E-waste contains significant amounts of hazardous material such as lead, mercury, and cadmium.

Some computer manufacturers have initiated “buyback” programs for obsolete equipment. In addition, some manufacturers design equipment that can be easily disassembled for recycling. More effort must be made to provide opportunities to encourage manufacturers to participate in curbing the stream of E-waste to avoid potential pollution problems.

Key Infrastructure Considerations

The water storage and distribution, wastewater, energy, communications, and solid waste systems must be maintained to accommodate existing and future development. Over the next 20 years, key infrastructure considerations and concerns will be intricately tied to sustainability. As concerns about global warming and climate change increase, we must carefully plan our infrastructure to accommodate a lower reliance on traditional methods of energy production, water use, and waste management. Our Infrastructure goals, policies, and implementation programs focus on utilizing sustainable practices, maintenance, and educating users to maintain service levels. Furthermore, by improving infrastructure in the Downtown, in other urban centers and corridors, and around transit, we can support infill and intensified development consistent with priorities for smart growth.

Infrastructure Goals, Policies, and Policies

Redwood City recognizes the importance of and is committed to the provision of adequate infrastructure and services to support the needs of residents and businesses and ensure a high quality of life. This vision is reflected in the General Plan as one of the Guiding Principles:

- ***Plan for sustainable open space, water, energy, and air quality within our finite resources.***

GOAL BE-40: Provide safe and reliable potable and recycled water storage and distribution systems that will meet current and future needs.

Policy BE-40.1: Improve the level of service, reliability, quality, and life cycle of the city's potable and recycled water storage and distribution system.
Sustainability Focus

Policy BE-40.2: Maintain the city's water system to ensure adequate fire flow.

Policy BE-40.3: Locate and design new capital-intensive potable and recycled water storage and distribution facilities, particularly storage tanks, in a manner that minimizes visual, cost, and environmental impacts to the surrounding area.
Sustainability Focus

Policy BE-40.4: Design Redwood City's water storage and distribution system to induce rapid recovery and to provide a reliable and sufficient emergency water supply in the event of a disaster.

Policy BE-40.5: Continue to make every practical effort to minimize leaks in the water and recycled water distribution system, through regular monitoring and maintenance.

Policy BE-40.6: Support the expansion of the city's Recycled Water Service Area, and actively promote widespread use of recycled water in and around Redwood City.

Sustainability Focus

GOAL BE-41: Provide adequate and reliable wastewater collection and treatment facilities that meet current and future needs.

Policy BE-41.1: Continue to ensure adequate treatment capacity and collection system for Redwood City's wastewater conveyed to at South Bayside System Authority (SBSA) treatment facilities while protecting water quality and public health, and minimizing adverse impacts to the environment.

Sustainability Focus

Policy BE-41.2: Work with South Bayside System Authority (SBSA) member agencies to ensure that the treatment facility has sufficient capacity to meet future wastewater treatment needs.

Policy BE-41.3: Minimize groundwater infiltration and inflow to the wastewater collection system to maintain sufficient peak wet weather capacity and continue to explore other possible options to reduce peak wet weather flow.

GOAL BE-42: Support reliable, high quality, and environmentally sound energy distribution systems to meet current and future needs.

Policy BE-42.1: Require that improvements and maintenance to electric and gas transmission and distribution systems that are made to accommodate new growth be performed in a manner that maintains safety, reliability, and environmental compatibility.

Sustainability Focus

Policy BE-42.2: Support efforts to increase the use of renewable energy and low-emission power sources. Encourage the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities.

Policy BE-42.3: Accommodate alternative energy infrastructure as new technology evolves.

Policy BE-42.4: Ensure that pipeline owners protect and maintain underground high-pressure gas pipelines to ensure maximum safety.

GOAL BE-43: Advocate for access to high-quality established and emerging communications technologies to facilitate efficient and affordable communication for individuals, businesses, education, and government functions.

Policy BE-43.1: Support efforts to develop improved communications technology in a manner that minimizes visual and environmental impacts to the surrounding area, while benefiting government, business, education, and public safety.

Policy BE-43.2: Require new buildings, particularly taller buildings, to be designed with sufficient space to accommodate wireless communications equipment.

Sustainability Focus

Policy BE-43.3: Make efforts to accommodate future communications and information technologies as they develop and to replace or remove redundant or outdated technology and its associated equipment.

Sustainability Focus

GOAL BE-44: Preserve community aesthetics while providing for utility needs.

Policy BE-44.1: Reduce the visual impact of aboveground and overhead utilities, including electric lines, by working with Pacific Gas and Electric Company (PG&E) to maximize opportunities to place utilities underground.

Policy BE-44.2: Continue to require the placement of utilities underground with new development.

Policy BE-44.3: Permit new freestanding telecommunications towers only when there are no feasible alternatives.

Policy BE-44.4: Strengthen requirements for underground utilities in older sections of the city as part of redevelopment projects to address public safety issues and to improve the aesthetic quality of streets and neighborhoods.

GOAL BE-45: Minimize the volume of solid waste that enters regional landfills.

Policy BE-45.1: Meet or exceed State mandates regarding the diversion of waste from landfills.

Sustainability Focus

Policy BE-45.2: Encourage recycling, composting, and source reduction by residential and non-residential sources in Redwood City.

Sustainability Focus

Policy BE-45.3: Promote green building practices with respect to recycling material from building demolition and using recycled building materials in new construction.

Sustainability Focus

Policy BE-45.4: Support retention and expansion of businesses and industries in Redwood City involved in recycling materials, especially in areas proximate to the Port of Redwood City.

Sustainability Focus

Policy BE-45.5: Take a leading role in waste reduction by promoting recycling and composting, purchasing post-consumer recycled products for City facilities, using recycled materials in City operations, and reducing the overall amount of solid waste that is produced.

Sustainability Focus

Policy BE-45.6: Promote recycling by supporting local public and private recycling programs that provide opportunities for businesses and the general public to recycle waste.

Sustainability Focus

Implementation Programs

Procedures, Permits, Agreements, Ordinances

Program BE-~~126~~124: Funding for Water System Maintenance and Upgrades. As appropriate, allocate increased funding in Redwood City's Capital Improvement Program to upgrade and/or replace pipes, storage tanks, and pump stations in the Redwood City water system; monitor for water losses; and carry out preventive measures to avoid major disruptions or water losses to the water storage and distribution system. Prioritize investment in water supply delivery upgrades in areas where sub-standard size water mains currently exist.

Timeframe: Ongoing
Responsible Party: Community Development; Finance Department
Funding Sources: Water Enterprise Fund

Sustainability Focus

Program BE-~~127~~125: Wastewater System Maintenance. Continue to provide funding to repair, maintain, and upgrade the city's wastewater collection system. Annually survey at least 15 miles of sewer pipeline to identify necessary repairs to pipeline cracks and improperly sealed joints that may cause groundwater infiltration. If pipeline deterioration accelerates, increase the rate of pipeline replacement accordingly. Enforce regulations that restrict the discharge of substances such as grease, oil, mud, silt, and pollutants into the sewer system.

Timeframe: Ongoing
Responsible Party: Public Works Services Department; Community Development
Funding Sources: Sewer Enterprise Fund

Program BE-~~128~~126: Future Wastewater Collection Agreements. When parties outside of the service area seek wastewater collection and conveyance agreements, analyze capacity and consider potential future impact to the City. Ensure that adequate capacity is available for future development as identified in this General Plan.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: Sewer Enterprise Fund

Program BE-~~129~~127: Utility Project Review. Review proposed new utility projects to ensure that they are safe, environmentally sound, and compatible with surrounding land uses.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~130~~128: Underground Utilities.

- Review PG&E maintenance procedures to ensure underground high-pressure gas pipelines in Redwood City are protected and maintained. Maintain maps of high-pressure pipelines in Redwood City for review when new development is proposed.
- Consult with PG&E to analyze the feasibility and cost of undergrounding portions of its overhead high-voltage transmission lines within existing developed areas and areas designated for new development.

- Continue to enforce policies for undergrounding utilities in conjunction with new development and major street and roadway improvements. Explore potential programs and funding alternatives to underground existing overhead utilities in older areas of the city such as through assessment districts or redevelopment.

Timeframe: Ongoing, Mid Range, Short Range
Responsible Party: Community Development
Funding Sources: PG&E, General Fund - Capital Improvement Program, private development and assessment districts

Program BE-~~131~~129: Telecommunications Infrastructure Review. Review the installation of new communications infrastructure to ensure compatibility with surrounding uses and minimize visual impacts or other adverse impacts. Modify the Zoning Ordinance as necessary to allow for installation of improved telecommunications and wireless infrastructure while minimizing visual, noise, and other impacts of such installations.

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Program BE-~~132~~130: Expand Public Access to Wireless Internet. Pursue opportunities to expand the public's access to wireless communication services in public spaces and community gathering places, as identified in the Building Community Element. Encourage private businesses to establish their own local area networks. Support the goals of Joint Venture's Wireless Silicon Valley project to obtain high quality wireless Internet access to benefit business, government, and education while providing improved communications opportunities for all of Redwood City's population.

Timeframe: Mid Range
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund - Capital Improvement Program

Program BE-~~133~~131: Require Technology Installation in Large-Scale Projects. Establish requirements for the installation of high quality internal telecommunications technologies in new large-scale planned communities and office and commercial developments.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: Development fees, private development

Program BE-~~134~~132: Green Building Ordinance. As appropriate, amend the Green Building Ordinance to keep pace with new technologies and procedural/process advancements.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~135~~133: Recycling Collection Facilities in New Development. Revise the Zoning Ordinance to require development projects to incorporate collection facilities for recyclable materials in development projects. The collection facilities may be established as part of trash enclosure areas.

Sustainability Focus

Timeframe: Short Range
Responsible Party: Community Development
Funding Sources: General Fund

Program BE-~~136~~134: Alternative Energy/Building Performance Initiatives. Consider adopting building efficiency technology and standards to maximize energy performance including but not limited to window glazing and efficiency improvements. Also consider offering or consulting with PG&E to offer financial incentives for retrofitting existing buildings.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Sustainability Focus

Program BE-~~137~~135: Solar Power Agreements. Consider requiring large development projects and large redevelopment projects to be required to enter into Solar Power Agreements.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Sources: General Fund

Plans and Studies

Program BE-~~138~~136: Water Master Plan. Complete a Water Master Plan that includes recommendations to improve the water distribution capacity, develop criteria for replacement strategy, and provide system reliability during a seismic event. Review and implement recommendations and update the Water Master Plan every five years to recognize accomplishments and changes to the water system. Assess parameters and assumptions inherent in Attachment Q. Utilize water demand assumptions from future UWMPs and this General Plan, and adjust Attachment Q as appropriate.

Timeframe: Short Range; Ongoing
Responsible Party: Community Development
Funding Sources: Water Enterprise Fund

Sustainability Focus

Program BE-~~139~~137: Expand Recycled Water Use.

- Complete construction of the proposed pipes to expand the City's recycled water services to the majority of Redwood City. Explore opportunities to export recycled water to adjacent communities and/or exchange recycled water for drinking water.
- Conduct a feasibility study to assess costs and impediments to expanding the Recycled Water Service area to include lands southeast of Woodside Road.
- Implement the Recycled Water Use Ordinance to require new development to use recycled water for landscape irrigation and other non-potable uses, where available.

Timeframe: Short Range, Long Range, Ongoing
Responsible Party: Public Works Services Department; Community Development
Funding Sources: General Fund, Grants, Water fund, developer fees

Program BE-~~140~~138: **Sewer Master Plan.** Consider completing a Sewer Master Plan that includes recommendations for replacement, maintenance, and improvement of sewer services. If completed, implement recommendations and periodically update the Sewer Master Plan.

Timeframe: Mid Range
Responsible Party: Community Development
Funding Sources: Sewer Enterprise Fund

Program BE-~~141~~139: **Support Recycling Industries.** Ensure the retention of industrial lands near the Port of Redwood City, and encourage the location of recycling and salvage businesses in the area.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: Community Development; City Manager Office/Economic Development
Funding Sources: General Fund

Special Programs/Projects

Program BE-~~142~~140: **Accommodate Alternative Energy Infrastructure.** Analyze current and projected demand for plug-in stations for electric, plug-in hybrid, and other alternative vehicle infrastructure in City parking structures.

Sustainability Focus

Timeframe: Short Range
Responsible Party: Public Works Services Department; Community Development
Funding Sources: General Fund

Program BE-~~143~~141: **Waste Diversion.** Increase efforts to divert waste from landfills. Concentrate on major waste diversion opportunities in the non-residential sector, identifying and consulting with the city's largest non-residential waste generators to reduce their waste generation and rates of waste disposal.

Sustainability Focus

Timeframe: Short Range
Responsible Party: City Manager Office/Economic Development; Public Works Services Department
Funding Sources: General Fund

Program BE-~~144~~142: **Recycling and Composting Education and Incentives.**

Sustainability Focus

- Consult with San Mateo County RecycleWorks to provide educational programs to schools, businesses, and the general public on the benefits of recycling and the various recycling opportunities available in San Mateo County. Encourage local school districts to participate in Redwood City and San Mateo County recycling programs. Ensure that all new businesses upon issuance of any City permit or payment of fees are aware of mandate to recycle and are provided information on Green Business Certification. To act as an example of sustainability, review City purchasing procedures to ensure the maximum amount of recycled materials are used in City operations.
- Confirm that the City's contract with its waste services provider incentivizes higher composting and recycling rates and decreases the volume of waste sent to landfill.
- Partner with San Mateo County RecycleWorks to provide information and resources to help increase the number of homes, restaurants, and community members with backyard or indoor composting. Work with RecycleWorks and Recology to develop a bin distribution program for Redwood City.
- Support a range of potential community-oriented recycling and re-use activities, such as citywide e-waste recycling events; block or neighborhood-wide garage sales; and household hazardous materials drop-offs. Encourage local school districts to participate in recycling programs.

Timeframe: Ongoing, Immediate, Short Range, Mid Range
Responsible Party: City Manager Office/Economic Development; Finance Department; Public Works Services Department; Port of Redwood City
Funding Sources: General Fund

Inter-Agency and Other Organizations Consultation

Program BE-~~145~~143: **Water System Agency Consultation.** Consult with the San Francisco Public Utilities Commission (SFPUC) in carrying out its Water System Improvement Program to upgrade the regional water system storage and delivery infrastructure to improve reliability. Encourage the SFPUC to minimize any adverse environmental impacts and to implement appropriate mitigation measures that may result from major capital improvements to the regional water system in Redwood City.

Timeframe: Ongoing
Responsible Party: Community Development
Funding Source: General Fund

Program BE-~~146~~144: **Renewable and Low-Emission Power.** Be an active and vocal PG&E customer, encouraging the company to continue introducing new renewable and low-emission power sources into its energy mix. Participate in renewable-purchasing programs PG&E may develop, as appropriate.

Sustainability Focus

Timeframe: Ongoing
Responsible Party: City Manager Office/Economic Development; Community Development
Funding Sources: General Fund