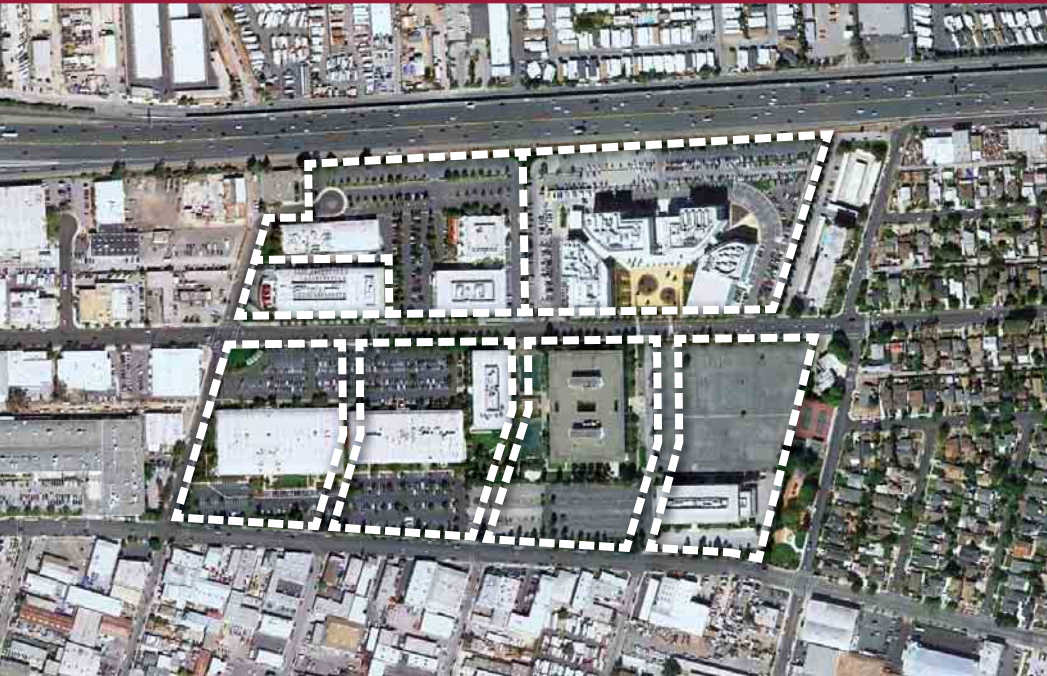


CITY OF REDWOOD CITY

**STANFORD IN REDWOOD CITY
PRECISE PLAN**



Adopted by City Council on September 9, 2013

*Prepared by the City of Redwood City
with assistance from
Bottomley Associates Urban Design & City Planning*

STANFORD IN REDWOOD CITY PRECISE PLAN

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STANFORD IN REDWOOD CITY PRECISE PLAN

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Chapter I – Background, Issues & Goals

Introduction

As the Bay Area continues to grow, so will reliance on infill development. Reducing sprawl, encouraging transit use, promoting local investment, and slowing the production of greenhouse gases require that communities be developed in a more intensive, pedestrian-oriented manner than they have in the past. High land costs in Redwood City and other Peninsula cities further support this trend. The “repurposing” of underdeveloped properties – those with large expanses of surface parking, for example – are one of the principal means to accommodate new investment.

The *Stanford in Redwood City Precise Plan* contains land use, urban design, and circulation policies to create a distinctive facility on the site of the former Mid-Point Technology Park. The *Precise Plan*’s policies are intended to guide the transition of this low-rise, parking lot-oriented complex to a campus workplace that is denser, greener, and more attractive architecturally. Transit-supportive planning approaches are intended to minimize the effect of this



Bird's eye view of the Precise Plan Area.

change on nearby neighborhoods. Utilization of flexible building forms will allow long-term tenancing and re-tenancing by office, medical office, research and development, and other uses to maximize viability. The *Precise Plan*’s policies are consistent with the newly-adopted *Redwood City General Plan* policies for the area, and supersede the area’s prior zoning requirements. CEQA-related mitigation measures and specific zoning conditions are incorporated as appropriate.

The *Precise Plan* is a zoning document with policies, guidelines, and standards, rather than a development blueprint. It establishes the City’s development goals and requirements with the understanding that the nature of workplace facilities can change over time. The *Precise Plan*’s policy envelope for development intensity, building heights and orientation, parking, architectural design, and other elements is intended to be flexible enough to allow for changing conditions, but definitive enough to ensure that the City’s vision for the Precise Plan Area is achieved by the City and Stanford University, Stanford University tenants and/or Stanford University successors (Applicant).

The *Precise Plan* focuses on the issue areas listed below. These issues and the *Precise Plan* goals related to them are discussed later in this chapter.

- Neighborhood Compatibility
- The Broadway Corridor
- Campus Access, Circulation, and Parking
- Building Orientation, Pedestrian Ways, and Open Space
- Architectural Character
- Environmental Sustainability
- Relationship to Downtown and Surrounding Areas
- Ongoing Role in the Community
- Development Agreement

Precise Plan Background and Process

Stanford University purchased an approximately 35-acre portion of the former Mid-Point Technology Park properties, with the intention of relocating administrative functions that do not require a presence on the University's main campus near Palo Alto. Potential additional uses envisioned for the site include offices, medical clinics and/or laboratory related research and development facilities. A separate Stanford entity, the Stanford Hospital and Clinics, purchased an adjacent portion of the former Mid-Point Technology Park and renovated the former 11-acre Excite@Home headquarters for medical clinics, called the Stanford Medical Outpatient Clinics (SMOC), which opened in February 2009.¹ The remaining portion of the former Mid-Point Technology Park, at 550 Broadway, is a separately owned, developed 2.3-acre parcel.

Stanford University applied for General Plan and Zoning changes to accommodate potential new development of its 35-acre por-

1. In this document, "Stanford" refers to Stanford University only, not to Stanford Medical Outpatient Clinics (SMOC).

tion of the Mid-Point properties in May 2008. In July, the Planning Commission recommended that the City Council initiate a General Plan/Zoning Map Amendment & Precise Plan study, and in August 2008, the City Council approved initiation of the study. A Planning Commission-sponsored public scoping session for the *Precise Plan Environmental Impact Report (EIR)* was held in October 2008.

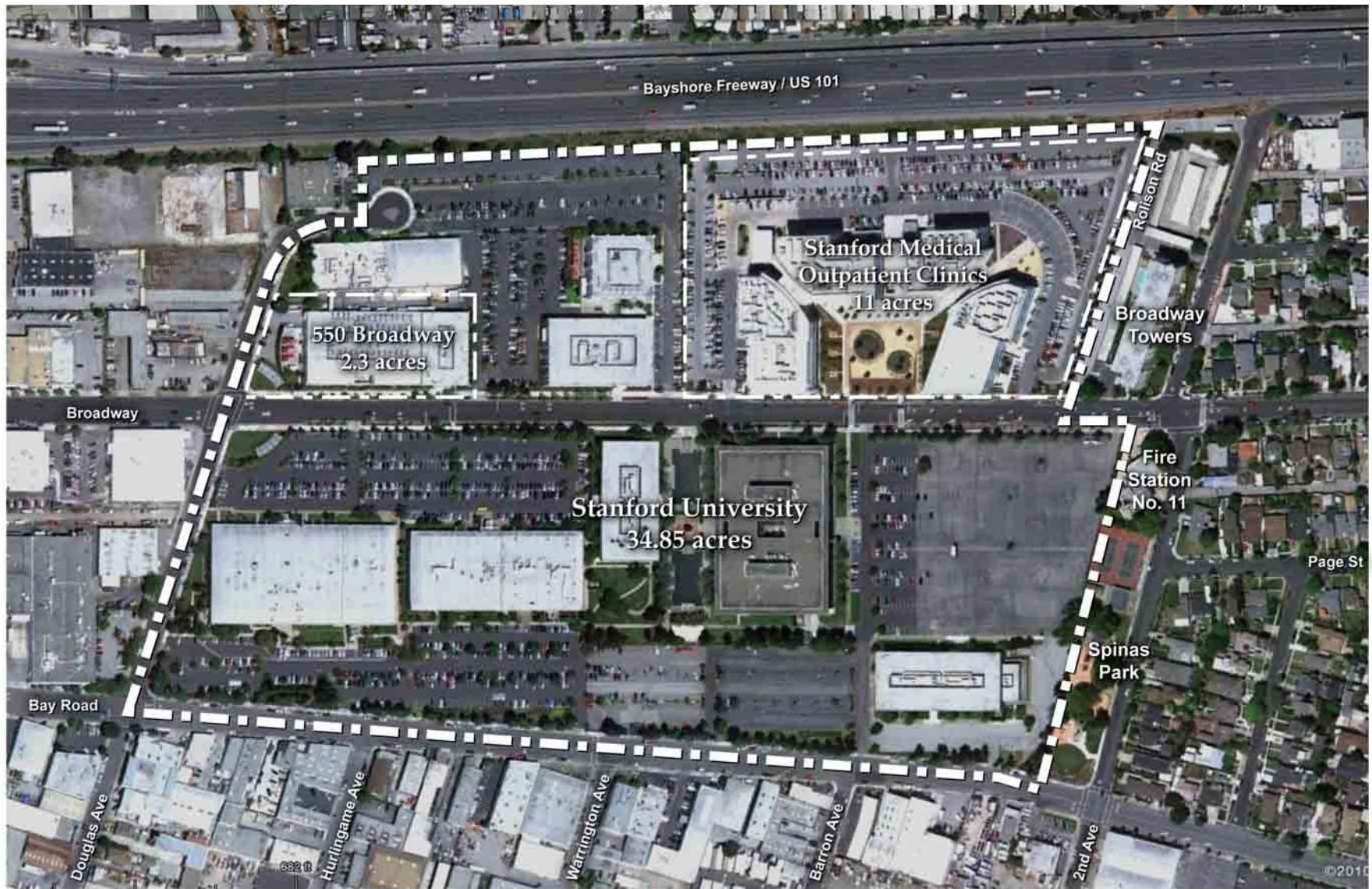
Three Neighborhood/Community Meetings were sponsored by the City to review planning issues and initial design and development concepts: November 20, 2008, at the Police Activities League building; December 3, 2008, at Summit Preparatory School; and January 9, 2009, at Hoover School. Community input from these meetings was posted on the City's website, with key issues including potential traffic levels, pedestrian safety, building heights, and neighborhood access to open space. Stanford University's planning team also conducted additional outreach meetings with various community-based organizations, including the Friendly Acres and Redwood Village Neighborhood Associations, and the Redwood City Chamber of Commerce. City staff has worked with Stanford University to refine its development concept based on these out-



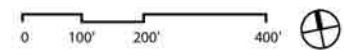
View of Broadway, looking west.



View of Douglas Avenue, looking south.



Total Precise Plan Area: 48.3 acres



Existing Conditions

reach meetings, and to establish the basic regulatory framework for the *Precise Plan*.

In 2010, while preparation of the *Precise Plan* was underway, the City completed and adopted its new *Redwood City General Plan*. The *Redwood City General Plan* designates the former Mid-Point Technology Park properties for Commercial-Office Professional/Technology uses, with the exception of the SMOC site, which is designated for Hospital uses. Because the uses envisioned by this *Precise Plan* are consistent with the new *Redwood City General Plan*'s land use designations, the general plan amendment that Stanford University previously requested is no longer necessary.

The *Redwood City General Plan EIR* evaluated, at a conceptual level, the floor area ratio and building heights authorized by the *Redwood City General Plan*. The *Stanford in Redwood City Precise Plan EIR* constitutes a CEQA evaluation of full build out of the 35-acre portion of the Mid-Point Technology Park that Stanford proposes to develop, consistent with this *Precise Plan*. No new development is proposed for 550 Broadway or SMOC; future development of those two sites would necessitate additional project-specific CEQA review.



View of Redwood City Fire Station 11.

The Precise Plan Area

The Precise Plan Area is approximately 48.3 acres in size and includes all portions of the former Mid-Point Technology Park. It is generally flat, with no native vegetation, creeks, or other significant natural features. It is bordered by the Bayshore Freeway/US 101 on the north; Bay Road on the south; Rolison Road, Fire Department Station No. 11 and Spinas Park on the east; and Douglas Avenue on the west. Broadway extends east to west through the center of the Precise Plan Area, linking it directly to Downtown Redwood City, which is approximately 1 mile to the west.

Elements that are adjacent to, but not within, the Precise Plan Area include Fire Station No. 11 and Spinas Park; both are located along Second Avenue. Spinas Park includes tennis courts, a play structure, and planters, and provides a buffer to the nearby Friendly Acres neighborhood. North across Broadway from the fire station, located between 2nd Avenue and Douglas Avenue, is a seven-story apartment building, the tallest structure in the vicinity.

Approximately 11 of the Precise Plan Area's 48.3 total acres are occupied by SMOC, and 2.3 acres are occupied by the 550 Broad-



View of Spinas Park, looking north along 2nd Avenue.



Context Map

way facility. Neither of these two facilities has indicated plans to change land use, and the 35 remaining acres are the focus of many of the *Precise Plan's* policies. Unless otherwise specified, the policies in Chapter II of the *Precise Plan* apply to all of the properties within the Precise Plan Area, while the policies in Chapters III and IV apply to the 35 acres proposed for development.

The Precise Plan Area as a whole currently contains a total of approximately 1,018,000 square feet of building space, and has an average floor-area ratio (FAR) of approximately 0.5. The former Mid-Point buildings on the 35 acres proposed for development contain approximately 536,000 square feet; SMOC contains approximately 360,000 square feet; and the facility at 550 Broadway contains approximately 68,000 square feet. The 550 Broadway and SMOC sites each have a developed FAR of approximately 0.7. Existing buildings range from one to four stories in height. The 550 Broadway facility is a tall one-story building, SMOC consists of three- and four-story buildings, and the remaining former Mid-Point buildings are one and two stories.

Building coverage for the 48-acre campus is approximately 25%. Asphalt parking lots surround most buildings and occupy approximately 60% of the total surface area; pervious (i.e. landscaped) surface areas total approximately 15%.

Local Context

The Precise Plan Area is located on the eastern edge of a light industrial area that extends to Chestnut Street on the west and Spring Street and Fair Oaks Avenue on the south. Broadway provides access west from the Precise Plan Area to Woodside Road and Downtown Redwood City; Broadway terminates just east of the Precise Plan Area at 5th Avenue. The *Redwood City General Plan* envisions the Broadway Corridor between the Precise Plan Area and Downtown for higher-density, transit-oriented, mixed-use development. Bay Road also provides access west to Woodside Road and access east to Marsh Road via Florence Street. Rolison Road provides access east along the US 101 frontage to Marsh Road as well. Major US 101 interchanges are located at Woodside Road and at Marsh Road.

A variety of different land uses surround the Precise Plan Area. North across US 101 are islands, sloughs and salt ponds bordering San Francisco Bay. South across Bay Road is an unincorporated area of San Mateo County that contains a mix of small-scale industrial businesses. South and west of this industrial area is the Redwood Village neighborhood, located in Redwood City and extending into unincorporated San Mateo County. South and east is the Fair Oaks neighborhood, which is located within an unincorporated portion of San Mateo County. The Friendly Acres neighborhood is located immediately east of the Precise Plan Area. Taft Elementary School is located at the southwest corner of 10th Avenue and Bay Road.

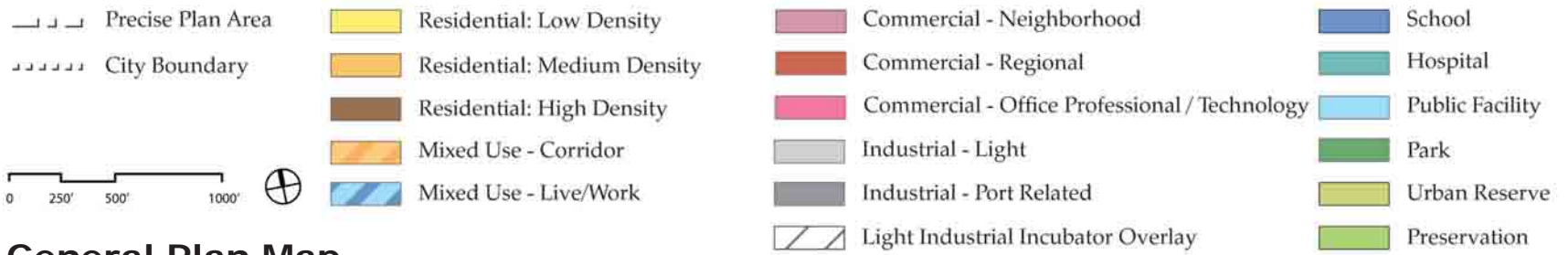
Light industrial and mixed commercial businesses extend west to Woodside Road. Woodside Road contains a concentration of big box retail and other large-footprint office and commercial development, with a recent renovation to Costco near the intersection with Middlefield Road.

The Precise Plan Area is located within the Douglas drainage basin, which is prone to flooding during significant storm events, particularly those coinciding with high tides.

Existing Plans and Regulations

General Plan – The newly adopted *Redwood City General Plan* designates the Precise Plan Area for “Commercial – Office Professional/ Technology” and “Hospital” land uses, as indicated by the Redwood City General Plan Map which follows. Land use designations in the surrounding area are mixed, including low-, medium-, and high-density residential. The *Precise Plan's* permitted land uses are consistent with this designation.

The Precise Plan Area streets have a range of “Street Typology” and circulation-related designations. The *Redwood City General Plan* designates Broadway as a “Transit Street,” with a “Potential Streetcar Network” loop that includes 2nd Avenue and Bay Road. It designates Bay Road as an “Industrial Street,” and Broadway, Bay, and 2nd all are designated “Truck Routes.” Broadway, Bay, and 2nd each are designated “Class II or Class III Bike Lane or Route.”



General Plan Map

Zoning – One zoning district, “IR – Industrial Restricted,” currently applies to the entire Precise Plan Area, as illustrated by the Zoning Map which follows. The IR District generally has a maximum 0.7 floor-area-ratio (FAR) (with up to an additional 0.3 FAR authorized for electronic equipment facilities), maximum 70% lot coverage, and a 75-foot height limit. Some of the *Precise Plan*’s permitted uses and development standards are inconsistent with this existing designation. A Planned Community (P) District will replace the IR District zoning for the Precise Plan Area, and the *Precise Plan* will be adopted simultaneously with the P District zoning.

Precise Plan Issues & Goals

- 1. Neighborhood Compatibility** – Development of the campus as envisioned is likely to add value to nearby neighborhoods, support local businesses, and promote continued investment in Redwood City as a whole. On the other hand, it would significantly increase the square footage of the campus, accommodating significantly more employees and producing significantly more traffic. The adjacent Friendly Acres, Redwood Village, and North Fair Oaks neighborhoods could expect to be affected as the campus takes shape over time.

The *Precise Plan* balances the impacts and benefits of campus development with a program of traffic management, pedestrian safety, open space improvements, and development controls. Precise Plan Area development will ensure that publicly accessible shuttle service is provided between the Precise Plan Area and the Downtown Transit Center. In addition, the *Redwood City General Plan* identifies Broadway as a potential streetcar route. Renovation of Broadway and Bay Road as more pedestrian-, bicycle-, and transit-oriented streets is an important planning goal and is required by the *Precise Plan*. Average building heights will be similar to or lower than permitted under current zoning, and lowest adjacent to the Friendly Acres Neighborhood and Spinus Park.

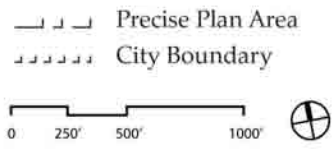
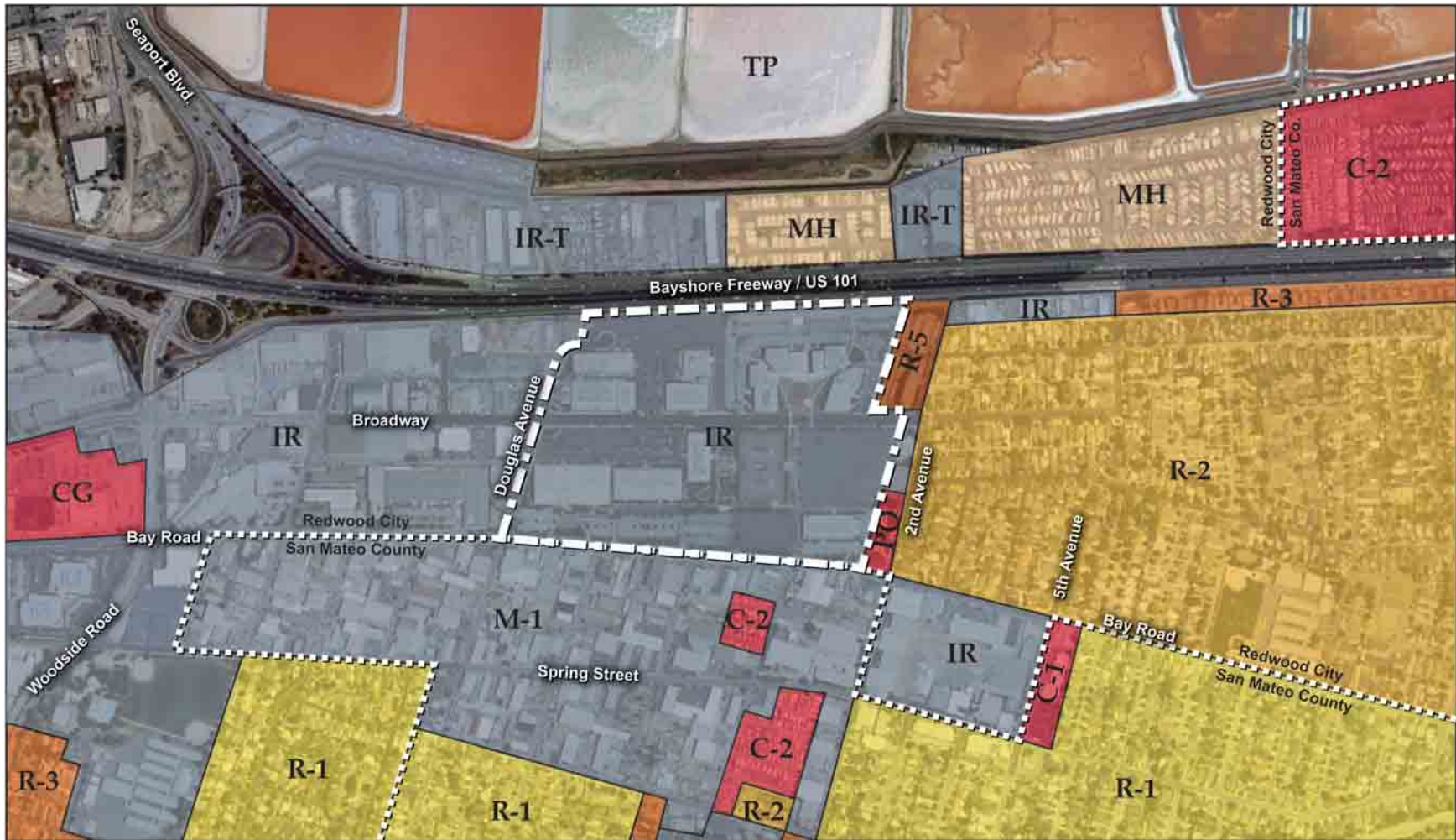
- 2. The Broadway Corridor** – Broadway connects the Precise Plan Area directly to Downtown, and the *Redwood City General Plan* focuses on the Broadway and Veterans Boulevard corridors

as key locations for future investment in mixed-use development and supporting transit service. The westernmost edge of the campus is approximately 1 mile from the intersection of Broadway and Main Street – a 20-minute walk – and the City-proposed potential streetcar service would create a strong and convenient link to Downtown’s mix of shops, civic and entertainment destinations, and the Downtown Redwood City multimodal transit station with Caltrain service.

The *Precise Plan* focuses the public face of the campus on Broadway, so that pedestrians, bicyclists, and transit users regard the street as the gateway to the rest of Redwood City. Ideally, new employees in the area will find it convenient to patronize Downtown, and even live there as envisioned by the *Downtown Precise Plan*. Attractive buildings, sidewalks, lighting, and street trees will line the street, creating an appealing campus image and entrance to the Friendly Acres neighborhood.

- 3. Campus Access, Circulation, and Parking** – Broadway is planned to function as the public face and front door to the campus, with employee parking facilities located primarily along Bay Road and the US 101 frontages. Ideally, this will maintain capacity on Broadway to serve the adjacent Friendly Acres neighborhood, and accommodate potential future transit service, including a potential streetcar as envisioned by the *Redwood City General Plan* for the Broadway / Veterans Boulevard corridor. Because Bay Road links to both Woodside and Marsh Roads, it is planned to accommodate most campus-bound traffic. Shuttle service and a potential future streetcar service should result in reductions in campus-related traffic and parking.

The *Precise Plan* calls for the extension of Hurlingame, Warrington, and Barron Avenues through the campus between Bay Road and Broadway, continuing the street grid that exists south of the Precise Plan Area. North of Broadway, Warrington Avenue would be a private street with a public access easement, linking SMOC and adjacent properties to the campus center south of Broadway. These extensions will create four blocks where only one exists today, providing more flexible vehicle, bicycle and pedestrian access to campus buildings and parking



R-1: Residential - Single Family
 R-2: Residential - Two Family
 R-3: Multifamily (Low Density)
 R-5: Multifamily (High Density)
 MH: Mobile Home

CG: General Commercial
 C-1: Neighborhood Business District
 C-2: General Commercial District
 PO: Professional Office

IR: Industrial Restricted
 IR-E Industrial Restricted/Transient Residential
 M-1: Light Industrial
 TP: Tidal Plain

Zoning Map

facilities, and minimizing the need for curb cuts and driveways on Broadway and Bay Road. It will also allow for more flexibility in development phasing, and support a campus that feels like it is a part of, rather than separated from, the surrounding community. Hurlingame Avenue may be a pedestrian paseo if deemed appropriate by the City in future phases.

The *Precise Plan* includes a strong TDM program that is intended to reduce daily and peak period vehicle trips from the levels otherwise typical for the *Precise Plan*'s permitted land uses. Promoting this reduction in vehicle trips is an important goal of the *Precise Plan*.

- 4. Building Orientation, Pedestrian Ways, and Open Space** – As the campus develops over time, new buildings will be located and designed to frame streets and open spaces, rather than occupy the center of parking lots. Building façades and building entrances will address Broadway, with additional entrances and pedestrian-oriented site features on side streets, the Greenway, and Bay Road. Sidewalks will be designed to be generous in dimension, with continuous street trees and pedestrian oriented street lighting along all frontages.

A new publicly accessible open space will be provided adjacent to Spinas Park. A central “Greenway” will extend through the four blocks created south of Broadway. This Greenway will unify the campus visually, and accommodate a variety of internal pedestrian routes and landscaped areas that link buildings to one another, to adjacent city sidewalks, and to supporting parking facilities. It will provide a dramatic visual and environmental amenity for campus employees and a direct link to the open space adjacent to Spinas Park. Courtyards and other small spaces are encouraged along the Greenway to accommodate informal meetings and other employee-related activities.

- 5. Architectural Character** – New development is anticipated to occur incrementally, and it is important that a basic architectural character be established so that the campus has a coherent form and appearance. However, technical building requirements and architectural fashions are likely to change over the build-out period, and a rigidly defined approach to

architectural design is not considered appropriate. Instead, the *Precise Plan* establishes guidelines so that buildings are complementary and pedestrian-friendly in scale, and the campus as a whole has a distinctive and attractive image.

A generally contemporary architectural design approach is assumed, and the *Precise Plan* encourages buildings that incorporate natural light and views but are also warm and inviting. Building entrances will be oriented to public streets and ways, and lower floors will be a focus of design attention. Building step backs and other massing approaches should be employed as needed to maintain sunlight on sidewalks where desirable and to create a gracious campus environment.

- 6. Environmental Sustainability** – Stanford University is committed to promoting sustainable development principles in all of its campus planning and building efforts. The *Precise Plan* ensures that this commitment extends to other tenants and applicants that may participate in development of the campus in the future. *Precise Plan* Area development will provide shuttle service to the Downtown Transit Center to reduce auto-based trips, and street improvements will not preclude a potential Broadway streetcar route as provided for and envisioned in the *Redwood City General Plan*. Energy efficiency and other “green” principles will be fundamental to review and approval of all new development. The proposed Greenway open space, combined with the shift from surface to structured parking, will increase the amount of permeable area, reducing runoff and promoting natural infiltration of rain water.
- 7. Relationship to Downtown and Surrounding Areas** – The campus has an important role to play within the pattern of the City as a whole. As noted above, the site is linked to Downtown by Broadway, and lies at the east end of the Broadway Corridor, which the *Redwood City General Plan* designates for infill development and focused transit service, including a potential streetcar line. The campus would anchor one end of one of Downtown’s most important transit corridor “spokes,” the others being Seaport Boulevard and Middlefield Road. Over time, Broadway and the Stanford in Redwood City campus are envisioned to evolve to become an extension of Down-

town's pedestrian-oriented building and street environment, and the local transit hub for residents and employees in adjacent neighborhood and light industrial areas. To promote this vision, the *Precise Plan* establishes a development and circulation approach that facilitates through movement and extends the benefits of intra-city mobility to surrounding areas.

The campus abuts US 101, which is the public face of Redwood City for tens of thousands of passersby. The *Precise Plan* recommends that adjacent buildings and site improvements be designed and oriented to address the freeway, to project a positive image of the City, Stanford University and other tenant spaces within the Precise Plan Area. The *Precise Plan* allows for greater building height in this location to promote an attractive and memorable development adjacent to US 101.

8. Ongoing Role in the Community – Ideally the Stanford in Redwood City campus will become one of Redwood City's signature workplace facilities, comparable to Oracle and Pacific Shores. However, the campus location is not an isolated "green field" site. It is embedded in the fabric of the surrounding community. While not an academic campus per se, City/university-related issues and opportunities are likely to arise. Some of these may be physical in nature; for example, the *Precise Plan* requires that on street parking be available for neighborhood park users.

Other opportunities to address local issues are more programmatic. For example, there are likely to be opportunities to coordinate educational and vocational efforts with campus tenants. Participation in local economic development initiatives, particularly those that focus on local residents and business owners, could provide a valuable focus for outreach. Such initiatives are anticipated to be included in a development agreement, as described in Chapter IV – Implementation. Whatever the future issues and opportunities may be, it is important that the campus play an ongoing role in the physical and social environment of the surrounding community and the City as a whole.

9. Development Agreement – Stanford has proposed to provide certain community benefits and public improvements consistent with City expectations of other projects of this magnitude. It is anticipated that these benefits and improvements will be provided in exchange for a development agreement to be considered for approval concurrently with the *Precise Plan*. The anticipated community benefits and public improvements are listed below:

- Neighborhood Streets Enhancement Program (NSEP)
- Community Sustainability Fund
- Bicycle System Improvements
- Bus Shelter Improvements
- Water Tank Improvements for emergency water supply
- Stormwater Improvements to address existing flooding conditions in the Precise Plan Area
- Economic Development in the form of executive education and entrepreneur training programs for Redwood City residents, businesses and City staff through the Stanford University Graduate School of Business
- Multi-use recreation and wellness center at Red Morton Park (partial funding)
- Summer Concert Series payment
- City of Redwood City Educational Foundation payment
- Design and improvement of a publicly accessible open space (2.4 acres adjacent to Spinas Park)

A number of these benefits are more particularly described in Chapter III – Capital Improvements and in Chapter IV – Implementation. Details regarding the specifics of each benefit, as well as the timing of contributions, are addressed in the development agreement.

Chapter II – Development Standards & Urban Design Guidelines

This chapter establishes policy standards and guidelines for land use, site development, and urban design based on the goals contained in Chapter I. Unless otherwise stated, the *Precise Plan's* standards and guidelines apply to new development on all sites in the Precise Plan Area. Development Standards are requirements for those aspects of development that are essential to achieve the goals of the *Precise Plan*. They include specifications for such aspects as permitted uses, building setbacks and parking. Urban Design Guidelines are strongly recommended yet discretionary policies which address more subjective considerations such as building forms and architectural detailing, and will be reviewed in more detail and considered on a case-by-case basis. They serve as criteria for design review by City staff, Architectural Advisory Committee, Planning Commission and City Council. Without limiting the generality of the foregoing, except as otherwise provided in Zoning Ordinance Article 33 (Nonconforming Lots, Uses, Structures and Parking), existing uses/structures within the Precise Plan Area are not subject to the *Precise Plan's* on-site development or streetscape improvement standards, as such standards apply only to new development.

Development Standards

Development Standards are organized in four categories:

- I. Land Use & Development
- II. Building Height & Setbacks
- III. Development Phasing
- IV. Site Development & Parking

I. Land Use & Development

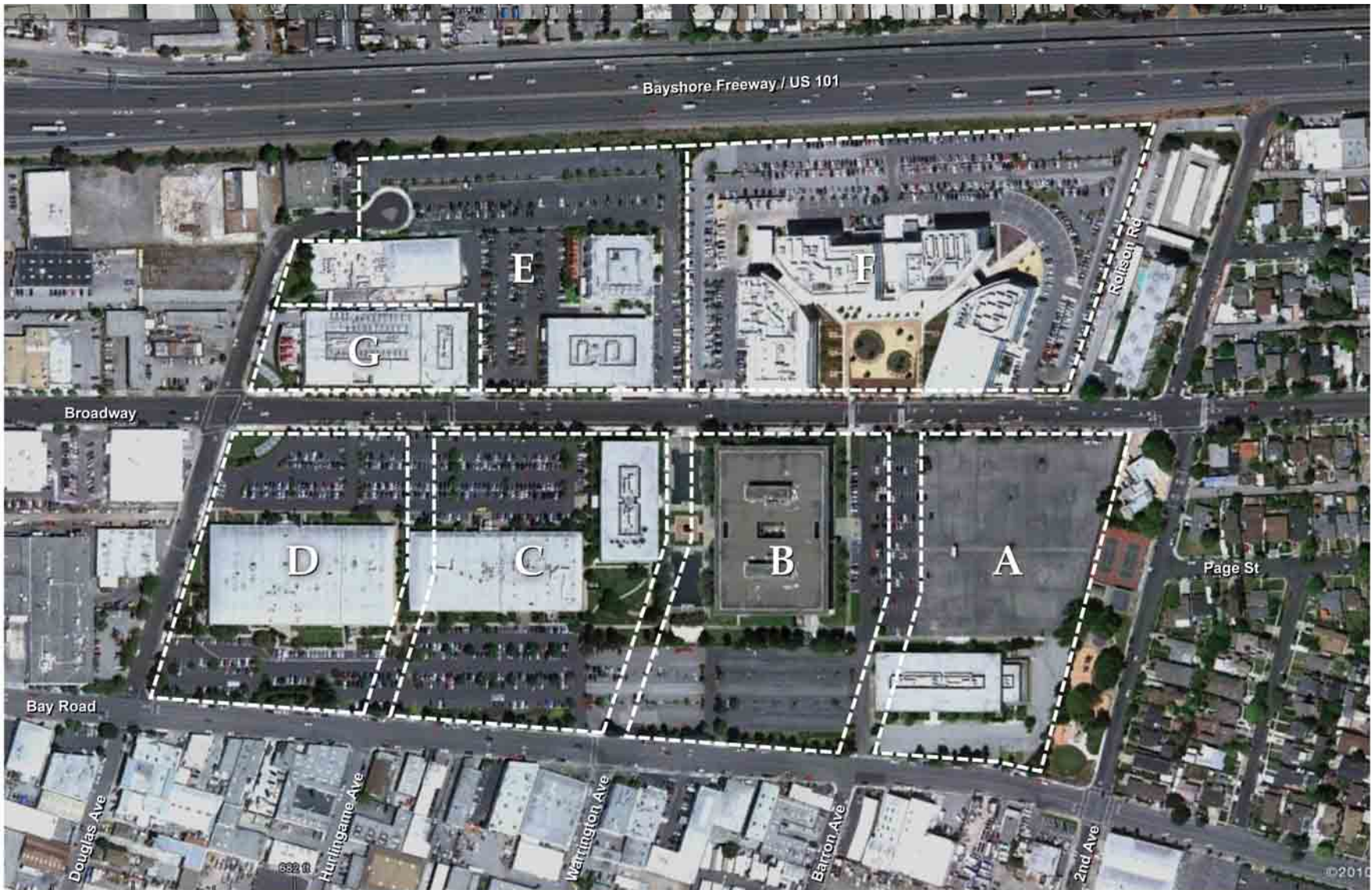
The type, distribution, and extent of land uses established within the Precise Plan Area are based on the goals contained in Chapter I. The Precise Plan Area is subdivided into seven blocks – A

through G– that are defined by existing and proposed streets and ways. Blocks A through D extend from Broadway south to Bay Road . Blocks E through G are located north of Broadway; Block E is part of the 35 acres proposed for development, Block F contains the Stanford Medical Outpatient Clinics, and Block G contains the building and parcel at 550 Broadway. Land use, development, and urban design policies are organized to reflect this block configuration, as appropriate.

The Precise Plan Area Blocks map on the following page reflects the fact that Stanford's medium- and long-term development program has not been established. Near term New Development (defined in section B.4. below) is most likely on Blocks A and B, located across Broadway from the SMOC facility.

- A. PERMITTED AND ACCESSORY USES – Permitted uses are consistent with the *Redwood City General Plan* policies for the Precise Plan Area. Permitted accessory uses are subordinate to and supportive of permitted campus uses and primarily oriented to campus employees. See section B for allowable amounts of development.
 1. **Block A** – Block A is bounded by Broadway on the north, Bay Road on the south, Spinus Park and Fire Station No. 11 on the east, and extension of Barron Avenue on the west.
 - a. Permitted Uses
 1. Administrative, Business, and Professional Offices
 2. Medical Professional Offices and Clinics
 3. Research and Development Facilities
 4. Laboratory Facilities¹

1. For the purposes of this Precise Plan a “laboratory” land use is defined as a medical or analytical facility for testing, analysis, and/or research. Examples include materials testing, forensics labs, and medical labs. This land use is intended to be light industrial in character, and does not include heavy manufacturing, assembly, packaging, or distribution of products.



Plan Area Blocks

b. Accessory Uses

1. Child Care Facilities
2. Cafeterias
3. Small scale commercial, retail, service, grocery, sundries, and other similar uses
4. Small scale education facilities
5. Health/fitness center

- 2. Blocks B, C, and D** – Block B is bounded by Broadway on the north, Bay Road on the south, extension of Barron Avenue on the east, and extension of Warrington Avenue on the west. Block C is bounded by Broadway on the north, Bay Road on the south, extension of Warrington Avenue on the east, and extension of Hurlingame Avenue on the west. Block D is bounded by Broadway on the north, Bay Road on the south, extension of Hurlingame Avenue on the east, and Douglas Avenue on the west.

a. Permitted Uses

1. Administrative, Business and Professional Offices
2. Medical Professional Offices and Clinics
3. Research and Development Facilities
4. Freestanding Parking Structures
5. Laboratory Facilities

b. Accessory Uses

1. Child Care Facilities
2. Cafeterias
3. Small scale commercial, grocery, sundries, and other similar uses
4. Small scale education facilities
5. Health/fitness center

- 3. Block E** – is bounded by US 101 on the north, Broadway on the south, extension of Warrington Avenue on the east, and Douglas Avenue on the west. It excludes the 550 Broadway property, which comprises Block G.

a. Permitted Uses

1. Administrative, Business and Professional Offices
2. Medical Professional Offices and Clinics
3. Research and Development Facilities
4. Freestanding Parking Structures
5. Laboratory Facilities

b. Accessory Uses

1. Cafeterias
2. Small scale commercial, grocery, sundries, and other similar uses
3. Small scale education facilities
4. Health/fitness center

c. Conditional Uses

1. Hotel
2. Commercial Retail

- 4. Block F** – is bounded by US 101 on the north, Broadway on the south, Rolison Road on the east, and extension of Warrington Avenue and Block E on the west.

a. Permitted Uses

1. Administrative, Business and Professional Offices
2. Medical Professional Offices and Clinics
3. Hospital

b. Accessory Uses

1. Child care facilities
2. Cafeterias
3. Small scale commercial, grocery, sundries, and other similar uses
4. Small scale education facilities
5. Health/fitness center

c. Conditional Uses

1. Research and Development Facilities
2. Laboratory Facilities
3. Warehouses
4. Public Open Space, such as mini-parks
5. Hotel
6. Commercial Retail

5. **Block G** – is comprised of the 550 Broadway site, located adjacent to Douglas Avenue.

a. Permitted Uses

1. Research and Development Facilities
2. Laboratory Facilities
3. Electrical Equipment Facilities
4. Warehouses
5. Public Open Space, such as mini-parks

b. Accessory Uses

1. Child care facilities
2. Cafeterias
3. Small scale commercial, grocery, sundries, and other similar uses
4. Small scale education facilities
5. Health/fitness center
6. Offices accessory to a primary, non-industrial use or an electronic equipment facility, provided the combined space for offices, technicians and conference rooms is less than twenty-five (25) percent of the gross floor area of the primary use; in calculating the office area, common areas such as hallways, bathrooms, kitchens, and meeting rooms shall only be included if they primarily serve the office use²
7. Offices accessory to a primary, industrial use, but not including electronic equipment facilities, provided the office area is less than fifty (50) percent of the gross floor area of the primary use; in calculating

ing the office area, common areas such as hallways, bathrooms, kitchens, and meeting rooms shall only be included if they primarily serve the office use.²

c. Conditional Uses

1. Administrative, Business and Professional Offices (other than those that qualify as Accessory Uses).
2. Medical Professional Offices and Clinics
3. Hotel
4. Commercial Retail

B. DEVELOPMENT AMOUNT AND INTENSITY – Standards listed below are for occupied space only; e.g. parking structure floor area is additional to the allowed maximums. Development amount is measured in terms of gross floor area per City of Redwood City Ordinance section 2.2. Development intensity is measured in terms of floor-area-ratio (FAR), which is the ratio of gross floor area to land area.

1. **New/Replacement Space** – Building space on Blocks A through E shall not exceed a total of 1,518,000 square feet. This total includes Replacement Space as well as Net New Development (each is defined in section B.4. below). The *Precise Plan* does not establish maximum development limits for the various permitted and conditional land uses other than this overall maximum square footage. However, the *Stanford in Redwood City Precise Plan EIR* evaluated land uses and building intensities assuming the percentage-breakdown of uses as listed below, and development of particular uses at greater intensities than those listed below may require additional CEQA review.

- a. Administrative, Business, and Professional Offices, and non-Laboratory R&D Facilities – 75-100% of total allowable buildout.
- b. Medical Professional Offices and Clinics – 0-15% of total allowable buildout.
- c. Research and Development Laboratory Facilities – 0-10% of total allowable buildout.

2. Definition per previous “I-R – Industrial Restricted” zoning designation.

- 2. Overall Development Intensity** – The development intensity for Blocks A through E of the Precise Plan Area shall not exceed a gross floor-area ratio (FAR) of 1.0, consistent with the policies of the *Redwood City General Plan*. The FAR calculation for Precise Plan Blocks A through E shall be based on the 34.85 acres of developable land area that existed at the time the *Precise Plan* was adopted; i.e., the developable land area prior to establishment of new streets, land dedications, etc., per the policies of the *Precise Plan*.
- 3. Block FARs** – Street and potential open space dedications, public access easements, or allocation requirements reduce the amount of developable land in the Precise Plan Area, resulting in net FARs higher than 1.0 on individual blocks. The *Precise Plan* focuses these higher FARs on the west side of the Precise Plan Area, away from the Friendly Acres neighborhood, and on the north side of Broadway adjacent to US 101. This provides for variety and flexibility in development.

<u>Block</u>	<u>FAR</u>	<u>Block</u>	<u>FAR</u>
A	1.0	E	1.75
B	1.25	F	2.0
C	1.50	G	1.0
D	1.50		

The maximum net FAR allowed for each block is listed above. Given the Precise Plan Area’s maximum 1.0 FAR and maximum build-out requirements for Blocks A through E, it is not possible for all of these blocks to be built to their maximum net FAR; i.e., developing some blocks to the maximum net FAR requires that other blocks be developed at less than the maximum net FAR. Block FAR calculations shall be based on the land areas remaining after establishment of new street rights-of-way per the *Precise Plan*.

The *Redwood City General Plan EIR* evaluated, at a conceptual level, the floor area ratio and building heights authorized by the *Redwood City General Plan*. The *Stanford in Red-*

wood City Precise Plan EIR constitutes a CEQA evaluation of full build out of the 35-acre portion of the Mid-Point Technology Park that Stanford proposes to develop, consistent with this *Precise Plan*. No new development is proposed for 550 Broadway or SMOC; future development of those two sites would necessitate additional project-specific CEQA review.

- 4. Definitions** – As used in this *Precise Plan*, the terms below shall have the following meanings:
- a. “Initial Development” or “Initial Phase” means the first phase of new building construction that results in Net New Development within Blocks A-E.
 - b. “Net New Development” means any new building construction on Blocks A-E which increases the combined rentable square footage on such Blocks above the amount of gross building area in place as of the date of adoption of this *Precise Plan* (i.e. approximately 536,000 sq. ft. of gross building area).
 - c. “Replacement Space” means space within newly constructed buildings which replaces gross building area space existing on Blocks A-E as of the date of adoption of this *Precise Plan*, but does not result in any Net New Development.
 - d. “New Development” means and includes any building construction on Blocks A-E, which includes Replacement Space and/or Net New Development.

II. Building Height & Setbacks

- A. **BUILDING HEIGHT POLICY APPROACH** – It is the intention of the *Precise Plan* that buildings average from 60 to 75 feet in height, or from 4 to 5 stories. However, the *Precise Plan*’s building height standards provide for variety and flexibility, with different maximum building heights established for different blocks. Maximum building heights are lowest adjacent to the Friendly Acres neighborhood, and highest adjacent to US 101.



The gross maximum FAR for the Precise Plan Area is 1.0. However, street and open space dedication requirements reduce the amount of developable land, creating higher net FARs on individual blocks. The Precise Plan focuses higher FARs on the blocks to the west, away from the Friendly Acres neighborhood, and on the north, adjacent to US 101. This provides for variety and flexibility in development. However, given the Precise Plan's gross maximum FAR and maximum build-out requirements, it is not possible for all blocks to be built to their respective maximum net FAR; i.e., developing some blocks to the maximum net FAR requires that other blocks be developed at less than the maximum net FAR.

Variations in height maximums reflect Precise Plan policies for lower levels of development on the east side of the Precise Plan Area, adjacent to the Friendly Acres neighborhood, and higher levels of development on the west and north adjacent to US 101. The height limits establish a maximum envelope for individual buildings. However, given the Precise Plan's average building height, FAR, and maximum build-out policies, it is not possible for all buildings to be built to the maximum height; i.e., developing some buildings to the maximum height requires that other buildings be developed at less than the maximum height.

* See Section II: Building Height and Setback.

Maximum Development Intensity & Building Height

- B. **BUILDING HEIGHT MEASUREMENT** – Building height is defined as the average vertical distance measured from proposed grade to the top of building wall, base of parapet, and/or eave line. Pitched, domed, and/or other special architectural roof forms are recommended and may qualify for a height exception; see D., “Maximum Height Exceptions.”
- C. **BLOCK BUILDING HEIGHTS** – Maximum building height for each block is listed below:

<u>Block</u>	<u>Maximum Building Height</u>
A	60 feet (typically 4 stories)
B	75 feet (typically 5 stories)
C	75 feet (typically 5 stories)
D	75 feet (typically 5 stories)
E	75 feet (typically 5 stories) within 100 feet of Broadway; 120 feet (typically 8 stories) greater than 100 feet from Broadway and greater than 200 feet from US 101; 20 feet (two parking levels) within 200 feet of US 101.
F	60 feet (typically 4 stories) greater than 200 feet from US 101; 20 feet (two parking levels) within 200 feet of US 101.
G	75 feet (typically 5 stories)

Variations in heights reflect policies for lower levels of development on the east side of the Precise Plan Area, adjacent to the Friendly Acres neighborhood, and higher levels of development on the west and north sides adjacent to US 101. The height limits establish a maximum envelope for individual buildings. Given the *Precise Plan's* average building height, FAR, and maximum build-out requirements, however, it is not possible for all buildings to be built to height maximums; i.e., developing some buildings to the maximum height requires that other buildings be developed at less than the maximum height.

- D. **MAXIMUM HEIGHT EXCEPTIONS** – May be approved for the following:

- Above Subsurface Parking** – The maximum building height may be exceeded by up to 5 feet where subsurface parking is provided; subsurface structures shall extend no higher than 5 feet above finished grade.
- Special Architectural Forms** – Special architectural forms such as towers, atria and other features are encouraged and may be permitted to exceed height limits subject to City review.
- Rooftop Mechanical Equipment** – May extend up to 15 feet above the maximum building height standard provided equipment is screened per G., below, and is set back at least 10 feet from the building edge.
- Blocks B, C, and E** – One building on each of these centrally located blocks may be allowed to exceed height limits by up to 30 feet (typically 2 stories), subject to City review and approval.
- Flood Clearance** – The maximum building height may be exceeded by up to 5 feet if needed to elevate the first floor above the 100-year flood elevation.

- E. **SPECIAL REQUIREMENTS FOR BUILDINGS TALLER THAN 75 FEET** – To reduce visual impact and create an interesting and attractive skyline, portions of building(s) that exceed a height of 75 feet shall be subject to the following requirements:

- Floor Area** – Maximum floor area above 75 feet shall not exceed 25,000 square feet per floor.
- Stepback** – Shall be a minimum of 15 feet along the long sides of a rectangular floor plate. Square floor plates shall be stepped back 15 feet on all sides.
- Massing** – Shall be recessed, projected, notched, or otherwise broken at intervals of 100 feet or less, consistent with the building below.



Maximum setbacks are intended to allow segments of façades to be recessed from the frontage for entrance courts, variations in building mass, and other design approaches that add visual interest.

- 4. **Orientation** – Rectangular buildings shall be oriented parallel to Broadway and US 101.
- E. **MINIMUM BUILDING HEIGHT** – A minimum height of 25 feet is required along street frontages in all Plan Areas. Accessory buildings may be less than 25' in height; examples include concession stands, rest rooms, child care, and storage buildings.
- G. **ROOFTOP MECHANICAL EQUIPMENT** – Rooftop mechanical equipment shall be screened from view from surrounding streets and properties by a parapet, segment of pitched roof, or enclosure consistent with and complementary to the architectural style and materials of the principal building.
- H. **FRONT/STREET SETBACKS** – A gracious campus character is desired for the Precise Plan Area, and buildings should be located near streets to encourage pedestrian activity and to frame streets as public spaces. Minimum/build-to setbacks indicated below are intended to reinforce this character. Maximum setbacks are intended to allow segments of façades to be recessed from the frontage for entrance courts, variations

in building mass, and other design approaches that add visual interest. Setbacks are illustrated on pages 51-59.

- 1. **Broadway** – is planned as the public face of the campus and a transit corridor. Setbacks are established from the existing ROW to accommodate possible future improvements, including a potential streetcar, as well as existing buildings anticipated to remain; see illustrations on pages 51-53. North frontage shall have 10-foot minimum setback/build-to line, 20-foot maximum setback. South frontage shall have 20-foot minimum setback/build-to line, 30-foot maximum setback. Parking structures are not permitted along Broadway.
- 2. **Bay Road, Douglas Avenue** – Setback of occupied buildings from proposed ROW shall be 4-foot minimum, 12-foot maximum planter area. Setback of parking structures shall be 14-foot minimum planting/screen area. Back of curb area within the ROW shall consist of an 8-foot street tree/landscape area and an 8-foot sidewalk.
- 3. **Warrington Avenue** – is planned as a pedestrian-oriented campus gateway street south of Broadway, and as a private drive north of Broadway; roadway widths, walks, and building setbacks are depicted by graphics on pages 55 and 56. Setback of occupied buildings from new ROW shall be 6-foot minimum, 16-foot maximum. Setback of parking structures shall be 14-foot minimum planting/screen area. Parking structures are permitted to front only one side of Warrington; back of curb area within the ROW shall consist of 12-foot sidewalk.
- 4. **Hurlingame Avenue, Barron Avenue** – Setback of occupied buildings from new ROW shall be 0-foot minimum, 10-foot maximum. Setback of parking structures shall be 8-foot minimum planting/screen area. Back of curb area within the ROW shall consist of 12-foot sidewalk.
- I. **INTERIOR SIDE AND REAR SETBACKS** – Minimum building setback from adjacent/internal property line(s) shall be 20 feet.

- J. SPACE BETWEEN BUILDINGS – Minimum space between unattached campus buildings, including parking structures, shall be 40 feet. Buildings should be set back from each other a minimum of 40 feet wall-to-wall (60 feet preferred) to allow adequate space for light, air and emergency vehicle and pedestrian circulation at grade.
- K. SETBACK ADJACENT TO SPINAS PARK/FIRE STATION NO. 11 – A minimum building setback of 50 feet shall be required along the eastern boundary of Block A.
- L. SETBACK ADJACENT TO US 101 – A minimum building setback of 200 feet shall be required for occupied buildings and parking structures over two floors. This area includes an existing 60-foot wide utility easement. A minimum parking setback of 10 feet from the highway right-of-way shall be provided to accommodate a campus edge/buffer landscaping. This 10-foot parking setback applies to parking structures no taller than one level above existing grade; i.e., two parking floors total.

III. Development Phasing

The standards in this subsection III (Development Phasing) apply only to Blocks A-E.

Build-out of Blocks A-E could occur in a variety of ways, from block-by-block to all-at-one-time. The *Precise Plan* assumes that development would be likely to occur in one- to two-block increments. Each phase of development shall provide at least a related and proportional share of associated capital improvements, such as street and intersection improvements, utilities, open space, etc.; these are depicted by the Potential Development Phasing Diagram on page 22, and described in Chapter IV, Implementation. A phasing plan shall accompany each development application(s), and shall be subject to City review and approval to ensure consistency with the requirements of this paragraph.

- A. DEVELOPMENT PHASING PLAN – Individual development phases shall be able to stand alone aesthetically and functionally, including the provision of adequate parking by phase, if subsequent phases are not developed. The applicant shall sub-

mit a Development Phasing Plan for City review and approval with each “PC” Permit submittal. The City shall require that such Development Phasing Plan be consistent with *Precise Plan* goals and policies. Phasing plans may be changed with successive development applications provided that development phases meet requirements to stand alone aesthetically and functionally.

The Development Phasing Plan shall indicate the total number of remaining development phases proposed, and where, when, and how much development and Greenway improvement is anticipated to be proposed in each phase consistent with *Precise Plan* policies. A Development Phasing Plan shall accompany the first PC Permit application for New Development, and will be revised or modified in subsequent applications.

- B. INITIAL PHASE – The Initial Phase shall be accompanied by various public improvements and amenities, including traffic, utility, Neighborhood Street Enhancement Program, and TDM-related improvements as described in Chapters III and IV.
- C. BLOCK AND STREET PHASING – New Development in the project area will require frontage improvements and roadway extensions that proportionally correspond to the New Development being proposed. Roadway extensions are defined as the curb to curb roadway improvement for roadway sections as specified in the *Stanford in Redwood City Precise Plan*. These extensions shall be public streets between Bay and Broadway. Warrington north of Broadway is planned as a private drive with public access. Frontage improvements are defined as the sidewalk and related improvements and infrastructure behind the roadway curb and within the right-of-way, including underground utilities.

Any New Development in each of Blocks A-E requires roadway extensions as follows:



*Initial Phase Development: Improvement of adjacent street extension required for new development. New development totaling 150,000 square feet or more of planned new/replacement space shall provide open space land in block A.**



New Development in blocks A, B, C, D, or E: Dedication and improvement of adjacent street extension required, per City direction. Interim uses such as landscaped areas or surface lots on sites banked for later phases of development. New buildings located on Broadway.



Build-out >50% of any block: Greenway required.



Full build-out: All dedications and improvements made.

- This is one of a number of potential scenarios for the sequence of development.
- New development in the project area will require frontage improvements and roadway extensions that proportionally correspond to the new development being proposed. Any new development in each of Blocks A-E requires roadway extensions as follows: Block A - Barron; Block B - Barron; Block C - Warrington; Block D - Hurlingame; Block E - North Warrington. Frontage improvements will be required along roadways where adjacent to new development.

* The open space is depicted in this diagram at the south end of Block A, adjacent to Bay Road. However, it could be located at the north end, adjacent to Broadway. See Section IV.Q.

- Pedestrian-Oriented Buildings
- Buildings and Parking Structures
- Surface Parking
- Open Space
- Street Extension

Potential Development Phasing

<u>Block</u>	<u>Roadway</u>
A	Barron
B	Barron
C	Warrington
D	Hurlingame
E	North Warrington

Improvements will be required along the entire block frontage of roadways adjacent to New Development.

- D. PUBLICLY ACCESSIBLE PRIVATE OPEN SPACE ADJACENT TO SPINAS PARK – In conjunction with the first phase of development that includes Net New Development, or such earlier time as may be agreed in the development agreement contemplated for the Project, the applicant shall designate, design and improve 2.4 acres of publicly accessible open space land adjacent to Spinax Park.
- E. GREENWAY PHASING – The Greenway is a major element of the *Precise Plan* development concept, and Greenway segments shall be completed as development phases proceed. Completed segments shall be provided on a block when New Development on that block equals or exceeds ½ the permitted FAR. This allows for the use of existing buildings and surface parking areas until new building construction is undertaken.

IV. Site Development & Parking

- A. MAXIMUM BUILDING COVERAGE – Maximum building coverage for individual Blocks A through F shall be 55%. Maximum coverage for Block G shall be 75% for electrical equipment facilities and 55% for all other structures. (Note: A portion of Block A is designated for publicly accessible private open space, and given *Precise Plan* standards related to Maximum Building Footprint, below, Block A will have a building coverage significantly less than 55%.)
- B. MAXIMUM BUILDING FOOTPRINT – The maximum footprint for a single building (occupied or parking structure) shall

be 55,000 square feet. This will help ensure that a gracious, pedestrian-scale campus with generous open space area(s) and well-scaled space between buildings is created.

- 1. **Maximum Building Dimension** – shall be no greater than 250 feet along the Broadway and Bay Road frontages, and no greater than 300 feet along side streets. Portions of the building plane that exceed 200 feet shall be set back a minimum of 20 additional feet.
- 2. **Building Mass Breaks** – Building mass shall be recessed, projected, notched, or otherwise broken at intervals of 100 feet or less along street and Greenway frontages. Recessed, projected or otherwise broken areas should be a minimum of 6 feet measured between building planes.
- C. BUILDING ORIENTATION AND ENTRANCES – Attractive main building entrances shall be provided and located on a street-fronting building façade or street-fronting building corner. Ground level building entrances/exits shall be located at regular intervals along streets and ways to encourage pedestrian activity and to promote campus supervision and security. Secondary building entrances to lobbies, retail and/or other supporting spaces, etc., shall be located at intervals of 150 feet or less along streets and publicly-accessible ways.
- D. ACCESSIBLE STREETS AND PEDESTRIAN WAYS – All public streets, sidewalks and private streets with public access easements within the *Precise Plan* Area shall be and remain publicly accessible. The intent of the Greenway is to create landscaped pathways available to the general public during normal business hours. The Greenway areas will remain in private ownership, and the property owner(s) reserve the right to secure and/or limit access to portions of their property if they deem it necessary; however, the Greenway shall remain visible from adjacent streets. Through-access along the Greenway area shall be provided to employees and authorized visitors during working hours.
- E. NEW STREET RIGHTS-OF-WAY (ROW) – Hurlingame, Warrington, and Barron Avenues shall be extended as noted in part



- ✱ Campus Gateway
 - Potential Mid-Block Pedestrian Crossing
 - X Landmark Focal Design Feature
 - ✱ Neighborhood Gateway
 - Intersection and Pedestrian Improvements
- 0' 100' 200' 400'

*The open space is depicted at the south end of Block A, adjacent to Bay Road. However, it could be located at the north end, adjacent to Broadway. See Section IV.Q.

Urban Design Concept

A of this section, and in Chapter IV, Section III. ROW shall be dedicated to the City for this purpose as follows:

1. **Hurlingame and Warrington Avenues** – Right-of-way shall be 64 feet, as needed to accommodate 12-foot minimum sidewalks, two travel lanes, parallel parking, and clear turn area at intersections.
2. **Barron Avenue** – Right-of-way shall be 84 feet, as needed to accommodate 12-foot minimum sidewalks, two travel lanes, angle parking, and clear turn area at intersections. On-street angle parking is intended to serve the publicly accessible private open space area and Block A development.

F. **STREET FRONTAGE IMPROVEMENTS** – Frontage improvements shall be provided to create attractive, pedestrian-oriented streets.

1. **Broadway** – Broadway is planned as the public face of the campus and a transit corridor; bike ways are designated along Broadway by the *Redwood City General Plan*. Back of curb area shall include street trees, minimum twelve-foot sidewalk, and back of walk planting area. Freestanding parking structures are not permitted along Broadway. Three potential new roadway configurations for Broadway are shown at pages 51-53. The depicted configurations would include bike lanes, two vehicle lanes, left-turn pockets, and potentially a median and/or a streetcar line. It is also possible that the configuration of Broadway through the Precise Plan Area would remain as it is today.
 - a. **Curbside Parking** – If curbside parking is established along the frontage, improvements would include a 19.5-foot sidewalk.
 - b. **No Curbside Parking** – If no curbside parking is established along the frontage, improvements would include the existing curbside landscape area and 12-foot sidewalk.



Attractive, pedestrian-scale lights shall be provided.

2. **Bay Road, Douglas Avenue** – Back of curb area shall consist of an 8-foot street tree and landscape area; an 8-foot sidewalk; and minimum 4-foot planter area for occupied buildings or minimum 14-foot planting/screen area at parking structures.
3. **Warrington Avenue** – Warrington is planned as a pedestrian-oriented campus gateway street. Back of curb area shall consist of a 12-foot sidewalk with street trees, and minimum 6-foot planter area or minimum 14' planting/screen area at parking structures.



Parking structures shall be designed to visually defer to and complement adjacent buildings.

4. **Hurlingame Avenue, Barron Avenue** – Back of curb area shall consist of a 12-foot sidewalk with street trees, and minimum 8-foot planting/screen area at parking structures.
5. **Street Lighting** – Attractive, pedestrian-scale streetlights shall be provided along all street frontages at approximately 80 feet on center. Specific fixture types, locations, and illumination requirements shall be as directed by the City.
6. **Street Trees** – Deciduous shade trees shall be planted along all street frontages at a maximum of 40 feet on center; a closer spacing is recommended. Trees shall be minimum 36-inch box, 3-inch caliper size. Tree wells shall be mini-

imum 24 square feet in area, with 36 square feet recommended.

G. **PARKING REQUIREMENTS** – Parking shall be provided according to the standards listed below, unless otherwise reviewed and approved by the City. Supporting transit use, employing transportation demand management (TDM) strategies, and other efforts to reduce vehicle travel and associated parking are part of the *Precise Plan* and may also reduce parking demand.

1. **Administrative, Business and Professional Offices, and Research and Development** – 3 stalls per 1,000 square feet of gross floor area.
2. **Medical Professional Offices and Clinics** – 5 stalls per 1,000 square feet of gross floor area unless otherwise reviewed and approved by the City.
3. **Other Uses** – per City of Redwood City Zoning Ordinance.

H. **PARKING FACILITIES** – Parking facilities may consist of subsurface garages, freestanding structures, or surface parking lots. Surface lots shall be considered interim facilities for Blocks A through D, with the ultimate build-out configuration consisting of structures and/or subsurface garages. Freestanding parking structures shall not be developed along Broadway.

1. **Subsurface Parking Garages** – Partially and/or completely below-grade parking garages are recommended but not required. Garage entrances shall be designed in an architecturally attractive fashion, with lighting and landscaping as needed to mitigate blank walls, dark openings, long ramps, etc. Garages may extend up to 5 feet above grade to provide for daylight and natural ventilation.
2. **Freestanding Parking Structures** – Parking structures shall be designed to visually defer to and complement adjacent buildings. The following standards apply:
 - a. **Height** – Maximum height shall be 65 feet or 6 levels for blocks B, C, D, E, and G; maximum shall be 55 feet or 5

levels for Block F. Parking levels should be submerged if more than 6 parking levels are required.

- b. Length – Maximum shall be 250 feet along Bay Road and 275 feet along side streets.
- c. First Level Façades – Shall incorporate a high level of architectural design and detailing to support pedestrian activity.
- d. Along Barron Avenue – A portion of the first floor along the west frontage of Barron Avenue shall be programmed to complement the publicly accessible private open space area adjacent to Spinas Park. This use may be incorporated within a parking structure or in a “veneer” structure constructed adjacent to the parking structure.
- e. Architectural Design – shall complement adjacent buildings in form, materials, and detailing; see Urban Design Guidelines for additional recommendations.

3. New Surface Parking Lots – may be allowed as part of buildout plans for Blocks E, F, and G. A small shared surface parking area may be considered adjacent to Spinas Park. Interim-phase surface lots would be permitted.

- a. Size and Character – New individual lots should not exceed 400 stalls. Lots shall be designed as parking courts or parking streets, with frontage sidewalks, frontage light standards, internal landscape and/or plaza islands, and other features that define them as public spaces as well as utilitarian facilities.
- b. Location – Lots shall be located to the side and/or rear of buildings and set back from streets and pedestrian ways.
- c. Frontage Screening – The perimeter of new surface lots along streets and pedestrian ways shall be screened with an ornamental wall or decorative metal fence between 30 inches and 42 inches in height. Height and



Building courtyard open spaces shall be provided for outdoor sitting, sunning, and lunch areas.

design of walls and fences are subject to City review; safe sight distances between streets and driveways shall be maintained.

- d. Trees – Lots shall be planted with shading trees at a minimum ratio of 1 tree for every 3 parking stalls. “Orchard” and/or other non-typical tree layouts shall be employed as feasible to maximize screening from adjacent buildings and properties. Tree plantings shall be designed in such a way that trees may be removed and relocated when parking areas are redeveloped.
- I. **BICYCLE PARKING** – Bicycle parking facilities shall be provided for employees and visitors at a ratio of 1 bicycle per 10 required vehicle stalls. Approximately 80% of these bicycle parking places shall be for long term parking in the form of bike lockers, covered locked cages, or special locked room(s), and 20% shall be for short term parking in the form of bike racks.



Utilities and equipment shall be screened from view by landscaping, screen walls, and/or equipment enclosures painted to blend with the landscape.

Such facilities shall be provided in unobtrusive areas and/or incorporated into the design of buildings and site improvements.

- J. **COMMON CAMPUS OUTDOOR SPACE** – Two types of usable outdoor space shall be provided within Blocks A-E: a central campus green or plaza, and smaller outdoor seating areas associated with individual office, medical, and R&D buildings.
 - 1. **Central Campus Greenway** – A central open space spanning Blocks A through D shall be established, with a minimum net area of 5 acres. The Greenway shall have an average width of 100 feet, but be no narrower than 75 feet. See Urban Design Guidelines for detailed design recommendations.
 - 2. **Building Courtyard Open Spaces** – A minimum area equal to 5% of gross floor area for buildings of 40,000 square feet or more shall be provided for outdoor sitting, sunning, and

lunch areas directly associated with the adjacent buildings; see Urban Design Guidelines for design recommendations.

- K. **COMMON OUTDOOR WALKWAYS** – On-site outdoor pedestrian walkways shall be a minimum of 6 feet and a maximum of 14 feet in width. Walkways shall appear as an extension of adjacent street sidewalks through use of similar design, materials, lighting, and other elements.
- L. **SERVICE AREAS** – Service areas and related materials, equipment, supplies, etc., shall be screened from view from the ground level of adjacent properties, streets, and pedestrian ways. Whenever feasible, loading docks, service bays, and mechanical facilities should be internal to buildings with bay doors that can be closed when facilities are not in use. If such areas and/or facilities must be located outside of the building, they shall be contained within attractively designed exterior enclosures. Service access ways and service bays shall be centralized between adjacent buildings wherever feasible to minimize impacts on adjacent streets and the Greenway. Service access shall be depicted on the Development Phasing Plan(s).
 - 1. **Exterior Enclosures** – shall reflect the architectural form and materials of principal buildings and should be enhanced with vines and/or other landscape materials appropriate for the location, and screened from views from above by roofs or canopies. Height shall be 10 feet or appropriate to the context of what is needed to be screened.
- M. **SITE UTILITIES AND MECHANICAL EQUIPMENT** – Above grade utilities and mechanical equipment, such as backflow preventers, electrical cabinets, etc., shall be located away from sidewalks and other pedestrian areas. Utilities and equipment shall be screened from view by landscaping, screen walls, and/or equipment enclosures painted to blend with the landscape. Where feasible, equipment shall be located in below-grade utility boxes (with the exception of backflow devices).
- N. **OVERHEAD UTILITY LINES** – Existing above-ground utility lines shall be placed underground per City requirements along Broadway, Bay Road and Douglas Avenue as development

occurs. Minimum length of undergrounding segment shall be one block.

- O. PRIVATE STREET/PASEO – If approved by the City, the Hurlingame Avenue extension may be designated a private street to create a paseo that features innovative, pedestrian-oriented design. If developed, this space shall be attractive, publicly accessible, and programmed by the applicant(s) as a focus for pedestrian activity. The City shall require a public access easement that encompasses the entire street space in order to ensure that public access is retained.
- P. SITE GRADING & FIRST FLOOR BUILDING ELEVATIONS – Grading within the Precise Plan Area shall be generally level, consistent with the local topography and the pedestrian-oriented campus environment envisioned for the site. First floor building elevations shall be a generally consistent height above grade, so that the campus has a unified appearance as seen from surrounding streets and the Greenway and consistent with other *Precise Plan* development standards and design guidelines. Grading and first floor building elevations shall be coordinated as part of the Development Phasing Plan(s).
- Q. PUBLICLY ACCESSIBLE PRIVATE OPEN SPACE ADJACENT TO SPINAS PARK – Approximately 2.4 acres in Block A, adjacent to Spinas Park, are designated for publicly accessible open space and stormwater management purposes. Applicant shall designate, design and improve a minimum 2.4-acre land area within Block A adjacent to Spinas Park for publicly accessible private open space use. Applicant shall prepare plans for improvement of the publicly accessible private open space in consultation with City planning staff.

Improvements will include safety lighting, irrigation systems, storm water detention facilities, hardscape improvements and landscaping. Signage designating the area as publicly accessible private open space shall be provided. All such plans shall be subject to approval of the City; however, the City will not require improvements typical of an active use public park, such as formal playing fields, playground equipment, or active recreational facilities.

The *Precise Plan's* various conceptual illustrations depict this open space at the south end of Block A, adjacent to Bay Road. However, it could be located at the north end, adjacent to Broadway. If located along Broadway, through access from Bay Road shall be provided.

- R. CAMPUS CENTER – If two or more of Blocks A through D are occupied by a single tenant or related tenants, applicant shall establish a Campus Center area to act as the heart of the campus for visitors and employees. This area shall be the preferred location for a shared cafeteria, small-scale commercial facilities, and similar activity-generating facilities.
- S. TRANSIT HUB – Applicant shall provide a central Transit Hub, located on Broadway and/or Warrington, to accommodate shuttle(s), bus stops, and related transfer activity. The transit hub shall be a specially-designed area. If a Campus Center is established, the Transit Hub should be part of or adjacent to the Campus Center and its associated commercial- and/or food-related uses.
- T. ON-SITE CHILD CARE FACILITY – Onsite child care is a component of development of Blocks A-E, and shall be established and in operation prior to the date on which certificates of occupancy have been issued for at least 500,000 square feet of Net New Development in Blocks A-E, unless the City, in its sole discretion, decides to defer the requirement of establishment and operation of the on-site child care facility to a later phase of development. Child care is required regardless of tenancy. The facility shall accommodate at least 100 children. If the project construction sequencing results in major outdoor construction activities occurring adjacent to the child care center after it is in operation, then the project sponsor, at its option, shall either temporarily close or relocate the child care center.
- U. COMMEMORATION DESIGN ELEMENTS – At least one publicly accessible area of the site shall incorporate design elements that highlight the various important periods of land use on the site (e.g., farming, flower fields, airfield, center for technology innovation).

Urban Design Guidelines

Guidelines are organized in five categories:

- I. Interim Development Phases
- II. Building Orientation and Design
- III. Pedestrian Ways & Open Spaces
- IV. Streets and Streetscapes
- V. Site and Landscape Improvements

Plan diagrams in the document illustrate guidelines for the Precise Plan Area. The “Urban Design Concept” plan on page 24 summarizes streetscape and building orientation guidelines. The “Potential Development Phasing” diagram on page 22 illustrates phasing guidelines. The “Concept Plan” on page 31 illustrates how the *Precise Plan* standards and guidelines could be applied to formulate a site plan. The *Precise Plan*’s policies, standards, and guidelines are intended to be flexible enough to allow for changing conditions, but definitive enough to ensure that the City’s vision for the *Precise Plan* is achieved. There may be a variety of ways to physically interpret the development standards and design guidelines of the *Precise Plan*.

I. Interim Development Phases

Development of the campus on Blocks A-E will likely occur in a series of phases over many years. Medium- and long-term development is difficult to anticipate, and the phasing of campus buildings and parking structures will depend largely upon the program needs at each stage. The City of Redwood City will work to accommodate a sequence of development that ensures the efficient functioning of campus buildings and facilities consistent with the policies of the *Precise Plan*. The “Phasing / Implementation Summary Table” on page 78 outlines required improvements and facilities.

A. PHASE COMPLETION – Individual phases should be functionally and aesthetically self-sufficient when completed, and

allow for the efficient occupancy and functioning of remaining Precise Plan Area buildings, parking lots, and infrastructure.

- B. LOCATION OF DEVELOPMENT – The campus’s most pedestrian-oriented administrative/office buildings should be located along Broadway. Buildings and facilities that have lower levels of pedestrian activity should be located along Bay Road, with adjacent land reserved for future structured parking per the *Precise Plan*’s standards and guidelines.
- C. GREENWAY SEGMENTS – The *Precise Plan*’s development standards require completion of Greenway segments on Blocks A-D if New Development on the block equals or exceeds ½ the permitted FAR. However, completion of Greenway segments is encouraged as part of any New Development in which the land area remaining after parking requirements are met could accommodate the segment; i.e., interim surface parking area(s) should be configured to accommodate completion of a portion or all of the Greenway.

II. Building Orientation & Design

A. BUILDING ORIENTATION

- 1. **Street Orientation** – Buildings along streets and open spaces will create a public face for the campus, and they should provide highly visible and attractive entrances and building façades. Buildings and main building entrances should parallel street rights-of-way to frame streets as public spaces.
- 2. **Corner Buildings** – Corner buildings should have corner entrances and/or attractive architectural features to highlight intersections as public spaces. Architectural forms should highlight/emphasize the importance of corners. Corner sites offer an opportunity to maximize views and day lighting, and fenestration and building massing should be designed with this in mind.



Note: This Concept Plan illustrates *Precise Plan* standards and guidelines applied to formulate a site plan. It is one interpretation of a number of possible interpretations of the *Precise Plan*'s policies and requirements.

Concept Plan



Buildings should be arranged to shape distinct and memorable open spaces.



Buildings should be arranged to form a network of inviting open spaces and courtyards of different scales, uses, and character.



Building entrances and windows should be located on campus open spaces for ease of access, supervision, natural light, and to encourage outdoor activity.

3. Multiple Building Arrangements to Shape Open Space –

Buildings should be arranged to shape distinct and memorable open spaces, and, where appropriate, to maximize southern exposure and natural light. Squares, malls, crescents and other clearly defined spaces are recommended for larger open space areas. Courtyards, paseos and gardens are recommended for smaller open space areas.

Building massing, special building forms, unique architectural elements, materials, colors, and all site features such as landmarks, site art and water features should be used to accent spaces by reinforcing campus edges, framing building entrances, terminating views and highlighting focal points. Clearly delineated building volumes contribute to the formation of campus circulation routes and cohesive open spaces.

4. Relationship to Campus Open Spaces – Buildings and open spaces should be linked physically and visually to provide an integrated campus environment. Buildings

should be arranged to form a network of inviting open spaces and courtyards of different scales, uses, and character. Building entrances and windows should be located on campus open spaces for ease of access, supervision, natural light, and to encourage outdoor activity.

5. Natural Light and Ventilation – Buildings should be configured to incorporate the use of natural light and natural ventilation where appropriate. Floors should generally be 120 feet or less in width.

6. Buildings along the Greenway – Heights, massing and materials should vary to create a more informal edge along the Greenway than that established along the Campus's perimeter streets. A high degree of visual transparency is desirable, with visual connection between building activities and adjacent open space(s).

7. Buildings along Bay Road – The massing and/or façade design of buildings and parking structures along the north



Heights, massing, and materials should vary to create a more informal edge along the Greenway than that established along the Campus's perimeter streets.

frontage of Bay Road should vary in increments of 50 feet to 60 feet to complement the small-scale pattern of parcelization and development that exists along the south.

B. BUILDING FORM AND MATERIALS – The Design Guidelines promote campus buildings that are complementary, while allowing for a variety of specific architectural solutions. While no particular architectural style is prescribed, the building character should respect neighborhood context, with design forms and materials that relate to adjacent residential and industrial districts and that are contemporary in style.

1. Complementary Building Forms – New campus buildings should be complementary to one another in terms of massing, form, composition, color, materials, fenestration, rooflines, and other architectural features.

2. First Phase Buildings – The first new campus buildings on Blocks A-E should establish a quality baseline for subsequent campus buildings in terms of urban design/building

orientation, and streetscape and frontage improvements. The first new buildings should have an architectural character that will complement future campus buildings.

3. Façade Composition – Building façades should be composed of more than a single architectural approach; i.e., continuous undifferentiated glass and/or other similar wall designs are not recommended. Different surface materials, massing, and/or other approaches should be used to accent the composition. A variety of architectural expressions are possible within this approach.

4. Façade Surface Relief – Building façades should exhibit a strong three-dimensional quality through the use of recessed wall surfaces, punched openings, terraces and arcades and/or projecting window bays, sunshades, canopies, eaves and other architectural forms, particularly along highly visible frontages and important pedestrian routes.



Campus buildings should exhibit massing approaches that respond to program and site context.



Heights of individual campus buildings should vary to create a visually interesting overall campus composition

5. **Massing** – Campus buildings should exhibit massing approaches that respond to program and site context; for example, massing should vary to accent main building entrances, building corners adjacent to street intersections, and/or open space axes. Massing step backs and massing changes should be used to create visual and architectural variety along streets and the Greenway.
6. **Variation in Building Heights** – Heights of individual campus buildings should vary to create a visually interesting overall campus composition, and an interesting and attractive skyline. Building heights should respond to on- and off-site views, and minimize shadow effects on adjacent residential buildings and Spinus Park. Building heights and massing should be composed to create attractive and varied building forms, and to provide for a variety of interior and exterior sun/shade conditions.
7. **Building Base** – Buildings should encourage pedestrian activity by providing a human scale and creating visual

interest at the pedestrian level. Transparency, active program uses, and high quality cladding materials should be employed. Cladding should be durable, aesthetically appealing, and give character and human scale with texture and detail, especially along highly visible frontages and/or important pedestrian ways. Smooth, graffiti-resistant surfaces are preferred. Covered walkways and arcades can further enhance the way buildings meet the ground and provide cover from the elements.

8. **Building Entrances** – Building entrances should be prominently located, clearly articulated, and scaled to the street and open space area they face. Multiple entries to buildings are recommended. Building entrances should be located along Broadway, Bay Street, and Douglas Street and along open spaces and side streets. All Broadway frontage buildings should have a prominent main entrance on the front façade, a frontage building corner, or a Broadway-facing plaza.



Use of transparent building materials is encouraged in areas with high pedestrian activity.

Main building entrances should give direct access to building lobbies and vertical circulation elements. Entrances should generally be glazed, offering transparency to and from the outdoors and have access ramps that are integrated into the overall design when required. To provide cover from the elements, entrances can be recessed, covered by a canopy, project, or be part of a system of arcades and covered walkways. Primary entrances should be prominent and easy to identify. Examples of design approaches include:

- a. A taller building mass above, such as a tower, and or/a volume that projects or is recessed;
- b. Entrance in the center of the façade as part of symmetrical composition;
- c. Entrance accented by architectural features, such as columns, canopy, and/or lighting fixtures;
- d. A change in the roofline or roof type above.



Entrances should generally be glazed, offering transparency to and from the outdoors.

9. Side and Rear Building Façades – should have a level of trim and finish compatible with the front façade, particularly if they are visible from adjacent streets, parking areas or residential buildings.

10. Blank Walls – Blank, windowless walls should not be created along street frontages. If wall segments without windows are essential to internal building functions, walls should be designed with recesses, different surface material(s), and/or other approaches that complement the landscaping at blank walls – i.e., vines and/or other plant

materials that do not create security concerns – should be considered.

11. Glass Walls – All-glass buildings are not recommended. However, limited expanses of glass may be appropriate for solar access at special publicly accessible areas, such as lobbies, atria, and/or indoor gardens.

12. Wall Surface Materials – Building wall materials and colors will make a strong visual contribution to the image and identity of the campus. Colors and materials should reinforce a cohesive image for the buildings while allowing for variety within overall building design and composition. A base palette of materials should be used for the campus that includes all cladding systems: solid surfaces, glazing, storefronts, louvers, decorative and accent materials. Warm, earth tones in various degrees of saturation should be used for building materials and colors. Accent materials and colors can be a combination of compatible warm and cool tones.

a. Recommended Building Materials

- natural stone
- terra cotta tile rainscreen
- cast-in-place concrete
- pre-cast concrete panels
- GFRC (glass fiber reinforced concrete) panels
- brick
- glass curtain wall (in limited applications)
- metal panels
- ceramic tile
- channel glass
- wood panels
- cement plaster

b. Materials Not Recommended

- reflective glass
- EIFS (exterior insulation finishing system)
- wood shingles, clapboard, or T-150 siding



Stone



Terra cotta tile



Cast in place concrete



Pre-cast concrete / GFRC pannels



Brick



Metal mesh



Channel glass



Wood

13. Windows – are an important element of building composition and an indicator of building quality. A variety of window and opening types are encouraged. Horizontal and vertical bands, punched openings with vertical or horizontal expression, and the juxtaposition of punched openings and glass curtain wall are all acceptable.

- a. Composition – All windows within a building, large or small, should be complementary in operating type, proportions, and/or trim. Unifying architectural elements such as common sill or header lines should be employed.
- b. Window Openings – Window openings should be appropriate to the internal program use and should generally be vertical (higher than wide) in orientation. Horizontal windows should have mullions that form a vertical pattern.
- c. Framing and Window Inset – Sills and trim should be used to frame openings. Glass should be inset a minimum of 2 inches from exterior wall and/or frame surface to add relief.
- d. Mullions and Muntins – Mullions and muntins are recommended to create multi-pane windows that provide a human scale and interest. The scale of the multi-pane pattern should be appropriate to the scale of the window opening and relate to the overall building elevation design. Multi-pane windows are recommended for highly visible locations such as main building entrances, first floor windows, and projecting building masses that incorporate window bays, atria, stair enclosures, etc.
- e. Glazing – Reflective glazing should not be used. If tinted glazing is used, the tint should be kept light; green and grey are recommended.

14. Roofs – should be integrated with the overall façade composition approach to create a coherent building character. Buildings can have flat or shaped roofs, broad solid or per-



A variety of window and opening types are encouraged.

forated eaves, or a simply detailed parapet. Roof forms should be used to mark a primary entrance and other important features.

- a. Materials – Roofs should use non-reflective, low intensity colors and avoid dark materials to minimize heat island effect. Green roofs are also encouraged to minimize heat island effect and to improve stormwater management.
- b. Screening of Rooftop Equipment – Enclosures and penthouses should be used to screen mechanical units and generally should be set back from the parapet. Mechanical equipment enclosures, mechanical and elevator penthouses, exit stair enclosures and other roofscape elements should be considered as sculptural forms that can add to the overall composition and



Roofs should be integrated with the overall façade composition approach to create a coherent building character.



Rooftop terraces should be considered to provide accessible open space for employees.



Sustainable design principles should be integrated with other design criteria to guide environmental responses.

visual interest of the building when viewed from a distance. Materials for mechanical equipment enclosures, including lightweight metal panels, should be consistent with other building cladding.

- c. Rooftop Terraces – should be considered to provide accessible open space for employees.
- d. Solar Panels – and/or other green energy features are encouraged. These should be integrated with and/or complement the form of the building.

15. Sustainable Design Principles – Sustainable design principles should be integrated with other design criteria to guide environmental responses such as inset windows, recesses, overhangs, high-performance glazing, integrated, projecting sunshades, white roofs, solar panels, and operable windows.

C. **PARKING STRUCTURES** – Parking structures should utilize the following elements so that they do not predominate in any portion of the campus.

- 1. Building Connections** – Pedestrian-oriented spaces should connect campus buildings and parking structures, enhancing pedestrian access/circulation to buildings and through the campus. Space between garages and buildings should be a minimum of 40 feet in width and should be designed as an attractive pedestrian corridor.
- 2. Complementary Form and Materials** – Parking structures should be designed to reflect and complement principal campus buildings with related architectural forms, materials, surfaces/finishes and massing. Vehicular and pedestrian entrance locations should relate to adjacent building entrances and pedestrian ways.
- 3. Visual Impact** – Parking structures should be less prominent than principal buildings. Wherever possible, parking



Parking structures should be designed to reflect and complement principal campus buildings with related architectural forms, materials, surfaces/finishes and massing.

structures should be made to recede visually, by selectively using materials, screening, and/or massing (lower heights or larger setbacks).

- 4. Auto Entrances** – should be designed as architectural features, with attractive framed openings, lighting, gates, surfacing, and/or other elements that are consistent with an urban village streetscape environment. Auto entrances should not be located directly across a street or way from a main building entrance or lobby.
- 5. Pedestrian Entrances** – Attractive, easily accessible pedestrian entrances are particularly important for encouraging pedestrian activity. Pedestrian entrances should be located adjacent to vertical circulation (stairs and elevators) and should provide easy access to significant points on campus. Elevations fronting on the Greenway should be considered for primary egress from the parking structures to the ground. Where parking structures form the corner of a street or way, corner entrance lobbies are strongly recom-

mended. Handicap accessible stalls and electric car charging stations in the parking structure should be located near pedestrian entrances.

- 6. Rooftop Treatment** – Parking structure roofs should have attractively finished paving, a solid parapet wall and guardrail, clearly marked egress points to vertical circulation, and screening in the form of trellises, plant materials and other elements that provide shade and improve appearance as viewed from nearby buildings.
- 7. Façade Design** – Above grade parking structures should be consistent with all applicable General Building Design guidelines, above. In general, structures should be designed with an attractive building base. Elevations fronting on open space areas may include exterior stairways and an integrated green wall system.
- 8. Openings** – Openings in above grade structures should be designed similar to building windows, with square or



Facades facing open space areas may include exterior stairways and an integrated green wall system.



A variety of attractive pedestrian-oriented spaces should be provided within the campus area.



Pedestrian ways and open spaces should incorporate common and/or complementary design elements.

rectangular shapes, trim, sills, and/or other details. Slanted openings associated with sloped “scissor” parking floors should not be created.

9. Interior Lighting – Should be designed and shielded as needed to prevent glare from affecting adjacent buildings, streets, and ways.

10. Glare Reduction – Visual impacts on surrounding building and site areas from vehicle headlights circulating in parking structures should be minimized.

11. Special Design Approaches – Are encouraged to improve the appearance and pedestrian orientation of above grade parking structures. Special design approaches include:

a. **Display Panels** – Illuminated panel cases for community event posters, shuttle/transit schedules, trail and open space maps, etc.

b. **Planter Boxes, Greenwalls, and Vertical Gardens** – Planters should be designed to complement the architectural features of the structures; vertical gardens could be aligned with columns or pilasters.

12. Along Bay Road – Massing and/or façades should be designed to complement the small-scale, 50- to 60-foot width of industrial structures to the south.

III. Pedestrian Ways & Campus Open Spaces

A. GENERAL

1. Pedestrian Network – A network of attractive pedestrian circulation routes that allows site access should be provided on Blocks A-E, employing city streets as well as on-site walks and through-building ways. Large, uninterrupted building footprints and/or other impediments that block through-campus pedestrian circulation should not be created.

2. **Framing** – Clearly defined, attractive, and gracious pedestrian ways and open spaces should be provided. These spaces should be framed or bordered by buildings and/or plant materials.
3. **Focus/Purpose** – Campus open spaces should be defined by buildings. Open space areas should have a focus, such as a building entrance, landmark, or garden/sitting area.
4. **Variety of Open Spaces** – A variety of attractive pedestrian-oriented spaces should be provided within the campus area. Intimate outdoor spaces for groups of 4-10 should be provided, with sitting areas for informal meetings, eating lunch or sunning. These small gathering spaces should be relatively private and easily accessible from indoor spaces. They should be separated from primary building entry points, pedestrian circulation routes and places of public gathering and could be unique in personality and character.

B. OPEN SPACE DESIGN

1. **Common Design Elements** – Pedestrian ways and open spaces should incorporate common and/or complementary design elements; i.e., paving materials and motifs, plant species and arrangements, lighting fixtures and arrangements, and furnishings should recur to strengthen campus image and pedestrian orientation.
2. **Destination/Focus** – Pedestrian ways should originate/terminate at a defined destination, such as a building entrance, transit stop, landmark/amenity, and/or street crossing.
3. **Composition** – Open spaces should generally have a simple composition and layout of paths and landscaping.

C. SPECIAL CONDITIONS

1. **Neighborhood Access to New Publicly Accessible Private Open Space** – As part of improvement of the publicly accessible private open space on Block A, a pedestrian crossing to existing Spinax Park should be created at Page Street,

and a pedestrian/bicycle connection should be extended through Spinax Park to link the crossing to the new open space.

2. **Bayshore Freeway / US 101 Campus Image and Identification** – A green edge is recommended along US 101 to create an attractive border for the campus, screen parked cars, and reduce traffic noise. However, the campus is an important component of the City’s economic development efforts, and some visibility of campus buildings should be maintained. A dense planting of deciduous trees that allow filtered and seasonal views is recommended. A focal design feature is recommended at the north end of Warrington Avenue.

D. **CENTRAL CAMPUS GREENWAY** – The Greenway is envisioned as a wide linear open space that extends through the four blocks located between Broadway and Bay Road. Highly visible crosswalks should be located at Hurlingame, Warrington, and Barron Avenues to connect the four sections of the Greenway. The following potential elements are included as part of the Greenway: a central Promenade; Tree Bosques; a Loop Walkway; a Campus Center; and Specimen Accent Trees.

1. **Central Promenade** – A central Promenade should extend the length of the Greenway, from Douglas Avenue to Spinax Park. The Promenade should have specific smaller open spaces embedded within it, including areas for lunchtime gatherings, small group meetings, and outdoor exercise.
2. **Tree Bosques** – Linear Bosques of tightly-spaced trees can be used to define the Promenade, link the various phases of the campus from east to west, and screen adjacent parking structures.
 - a. **Lighting** – Lighting within the Bosques should be consistent and of a pedestrian scale, able to produce enough light for evening events. Seating should be provided, and could include a mix of casual moveable tables and chairs and fixed benches. Fixed benches should share a similar character.



The Promenade should have specific smaller open spaces embedded within it.



Linear Bosques of tightly-spaced trees can be used to define the Promenade.



Seating should be provided, and could include a mix of casual moveable tables and chairs and fixed benches.



Consistent lighting fixtures should illuminate the path without becoming a strong element in the landscape. At-grade lighting is recommended where lighting levels can be minimal.



A Loop Walkway should circle around the Greenway.

b. Paving – A variety of surfacing types should be considered beneath the trees. Decomposed granite is strongly encouraged because of its ability to reflect heat and because of its malleability and permeability. Other materials could include crushed gravel and/or permeable concrete paving.

3. Loop Walkway – A Loop Walkway should circle around the Greenway along the perimeter of surrounding buildings and through the Greenway center.

a. Paving – The Loop Walkway should have a consistent paving material throughout. Its width should vary as necessary to accommodate different levels of pedestrian traffic.

b. Lighting – Consistent lighting fixtures should illuminate the path without becoming a strong element in the landscape. At-grade lighting is recommended where lighting levels can be minimal.

c. Seating – Seating should be placed along the Loop Walkway and should be of a consistent character and style.

4. Campus Center – The Campus Center should be the most lively place within the Precise Plan Area. The City may require some or all of the following urban design elements, as appropriate:

a. Location – The Campus Center should be in a key location adjacent to the Warrington Avenue extension and the Transit Hub on Broadway and/or Warrington Avenue.

b. Spatial Form – The Campus Center should have and/or incorporate a strong identity that is clear, recognizable, and attractive as viewed from surrounding campus buildings; e.g. squares, ovals, crescents, etc.

c. Seating – Seating should be incorporated into the Campus Center as much as possible and should be in

the form of walls and landscape areas. Fixed seating should be placed towards the periphery of the space where it will not conflict with other potential uses.

d. Trees – Trees should be used on the periphery of the Campus Center, so they will define the space without inhibiting its flexibility.

e. Surfacing and Amenities – The Campus Center should contain contiguous and generous pedestrian-friendly surfaces such as attractive paving, as well as pedestrian amenities such as benches, lighting, and trash receptacles.

f. Functional Elements – Functional elements within and adjacent to the Campus Center – drop-off driveways, major pedestrian ways, street crosswalks, etc. – should be designed to be subordinate to and enhance the overall composition of the space.

g. Central Landmark – The Campus Center should contain a central landmark such as a fountain, pavilion, clock, floral/garden arrangement, and/or other form of outdoor art that provides a focus and memorable image and encourages use.

h. Shade – Shade should be provided in a variety of ways; e.g., by shade structures such as pergolas, trellises or canopies as well as deciduous trees.

5. Specimen Accent Trees – Large specimen trees should be specially selected and installed at key highly-visible locations in the Greenway.

IV. Streets & Streetscape

A. URBAN STREETSCAPE CHARACTER – Street trees and streetlights should be arranged in a formal manner with a regular spacing. Tree wells, sidewalk paving surfaces and design treatments, and bordering planter areas should have a crisp architectural appearance.

1. **Street Trees** – Deciduous shade trees should be planted along all street frontages at a minimum 36” box size at time of planting, as noted in the Standards. Plane trees and/or trees with similar characteristics are recommended for their canopy/shade characteristics. However, varying shade tree species from street to street should be considered. Special trees – e.g., flowering and/or interesting tree forms – are recommended at campus gateways and other special locations.
 2. **Street Lights** – Attractive pedestrian-oriented street lights should be installed along all campus street frontages.
 3. **Curbside Parking** – Curbside parking is recommended along all street frontages as both a pedestrian buffer and source of additional employee and visitor parking. Pedestrian crossings at the Greenway need to be accommodated; see Urban Design Concept diagram on page 24.
 4. **Relationship of Trees, Lights and Parking** – Trees, lights and curbside parking spaces should be designed together to create an orderly appearance and minimize conflicts. Streetlights should be centered between trees to minimize light blocking. Tall-growing canopy trees that branch higher than lights should be used. Trees and lights should be located away from parked car door swing areas.
- B. **BROADWAY** – Broadway is planned as the primary pedestrian and visitor access street into the campus, a potential streetcar transit corridor, and an important gateway to the Friendly Acres neighborhood. Large street trees, generous sidewalks, pedestrian-oriented lighting, street furniture, and multiple pedestrian crossings should be established to create a gracious campus character. Existing London Plane street trees should remain, and additional infill trees should be planted to create a continuous canopy. Significant parking edge trees should be retained and incorporated into the required frontage setback area. Because Broadway is the primary pedestrian route, tree grates should be provided as needed to protect trees and root systems.
- C. **BAY ROAD** – Bay Road will provide primary vehicular and parking access, and frontage parking structures should be set back and screened by dense tree and/or “greenwall” plantings to create an attractive landscaped frontage. Large street trees and widened sidewalks with a planting strip should be established to improve the aesthetics of this side of the campus.
- D. **HURLINGAME AVENUE** – Depending upon traffic patterns at the time Blocks C and D are developed, consideration could be given to closing a portion of Hurlingame Avenue to create a pedestrian paseo. Pavers and/or other surfaces that are more pedestrian-oriented could be installed rather than typical roadway surfacing. Supplemental pedestrian-oriented lighting and landscaping could be incorporated as well, provided through access for an emergency vehicle is maintained.
- E. **GATEWAY AND LANDMARK LOCATIONS** – Special gateway landscaping and/or structures are recommended at the following high visibility locations. (Refer to Urban Design Concept for illustration.) In addition to the Precise Plan Area gateway features recommended below, the City may approve gateway features outside the Precise Plan Area at entrances to residential neighborhoods, for traffic calming or other neighborhood street enhancement purposes, under the Neighborhood Streets Enhancement Program (NSEP); see Chapter III.
1. **Douglas Avenue / Broadway** – A campus gateway sign and supporting landscape materials are recommended for this intersection, similar to the existing Mid-Point Technology Park campus gateway.
 2. **Bay Road / Warrington Avenue** – A campus gateway design that is related to that provided at Douglas/Broadway is recommended.
 3. **Broadway / Rolison Road** – Neighborhood gateway/traffic calming feature is recommended.
 4. **North End Warrington Avenue** – A freeway-oriented campus landmark should be located at the northern end of Warrington Avenue. This landmark should be architectural



Along Broadway, large street trees, generous sidewalks, pedestrian-oriented lighting, street furniture, and multiple pedestrian crossings should be established to create a gracious campus character.

in character, with form and materials that complement campus buildings.

- F. TRANSIT STOPS – for campus shuttles and/or SamTrans bus service should be attractive pedestrian landmarks. They should include benches, shelters (with lighting), paving surfaces, and other amenities. Architectural elements should have a common design theme in terms of style, materials, color, etc.

V. Hardscape & Landscape Improvements

- A. PAVING MATERIALS – recommended for pedestrian surfaces are listed below. All paving materials must meet Federal Americans with Disabilities Act (ADA) and State of California Title 24 requirements. In general, a maximum of two materials should be combined in a single application:
 1. **Stone** – such as slate or granite.
 2. **Brick pavers**
 3. **Concrete unit pavers**



Transit stops should include benches, shelters (with lighting), paving surfaces, and other amenities.

- 4. **Poured-in-Place Concrete** – All concrete walks should be tinted to reduce glare. Recommended enhancements include integral pigment, special aggregates, special scoring patterns, and ornamental insets, such as tile.
- 5. **Other surfaces** – As deemed appropriate by the City for a given application.
- B. SIGNAGE – Signage should be provided that clearly identifies the primary building entrance by name, number and/or address. The signage program for Blocks A-E should be part of a comprehensive campus-wide signage and way-finding system.
 1. **Program and Theme** – A coordinated signage program should be created that directs pedestrians and motorists to campus destinations. A common or complementary design theme should be employed.
 2. **Hierarchy of Signs** – There should be a hierarchy of signs within the design theme; e.g., larger, motorist-oriented architectural landmark signs at campus street entrances

and major facilities, and smaller, pedestrian-oriented signs at walkways and open spaces.

C. PLANT MATERIALS AND LANDSCAPE TREATMENTS

1. Plant Materials – should be drought tolerant and/or native species that require a low amount of water, and should use recycled water for irrigation when available. Plants should be selected and placed to reflect both ornamental and functional characteristics.

- a. Deciduous Trees – should be the predominant large plant material used. They should be used as street trees and located adjacent to buildings and within parking areas to provide shade in summer and allow sun in winter. Species should be selected that have deep roots, provide fall color, and minimize litter and other maintenance problems.
- b. Evergreen Shrubs and Trees – should be used as a screening device along rear property lines, around mechanical appurtenances, and to obscure grillwork and fencing associated with subsurface and freestanding parking garages.
- c. Flowering Shrubs and Trees – should be used where they can be most appreciated, adjacent to walks and open space areas, or as a frame for building entrances, stairs, and walks.
- d. Specimen Trees – Tree species that have special characteristics, yet require high levels of maintenance, may be considered for limited locations at key highly visible locations along the Greenway.
- e. Flowers with Annual or Seasonal Color – are recommended to highlight special locations, such as courtyards, building entrances, or access drives.
- f. Irrigation Systems – Mechanical irrigation should be provided for all planted areas; see standards and imple-

mentation requirements for use of recycled water. Subterranean drip systems should also be considered.

- g. Drought-Tolerant Non-Invasive Plant Species – should be used in all site landscaping for their low water need qualities.
- h. Turf – should be used for programmed recreation and/or leisure areas and should use recycled water when available.

2. Trees along Streets – Street trees are an indicator of publicly accessible space, as well as a source of shade and green. They should be planted along all publicly accessible streets. Deciduous trees are recommended, as noted above. In general, a consistent species should be used along the length of a street. Tree grates should be provided in locations where street trees are adjacent to on-street parking; where trees are not adjacent to on-street parking, planting strips should be considered.

- a. Street Tree Wells – Trees should be planted in curbside tree wells with a minimum horizontal dimension of 4 feet (6 feet preferred). Where possible, larger subsurface areas should be created to encourage root growth; approaches include trenches, structural soil, etc.
- b. Size – Street trees should be a minimum 36 inch box size at time of planting.
- c. Spacing – Trees should be located 30 feet on center, unless otherwise noted for specific Precise Plan Area conditions.

3. Landscaping in Surface Parking Lots – should be designed as an integral feature of the overall campus development plan.

- a. Grid Tree Arrangement – In general, trees should be distributed evenly throughout parking lots to provide shade and enhance appearance, particularly as seen from adjacent streets and buildings. A regularly spaced

grid of trees is encouraged, with trees planted toward the rear of parking stalls rather than at the front of bays. This arrangement provides more even distribution of vegetation and shade throughout the parking area.

b. Other Landscape Approaches – should be considered. These could utilize trellises, columns, walls, and/or arbors with vines, hedges, wind rows, or other elements.

4. **Fountains** – are recommended in hardscape open spaces to provide cooling in hot weather, with additional consideration given to windy locations. The design and materials should be related to the principal building(s) and/or palette of on-site furnishings. Fountains should utilize recycled water.

5. **Mounding Earth** – or berming is not recommended. Terracing should be used as an alternative to or in combination with sloped earth areas.

D. **RECOMMENDED PLANT LIST** – The lists below illustrate types of plants that are consistent with the *Precise Plan's* guidelines. Other plants are permitted. Final palettes may vary according to availability and site design. Planting areas within the Greenway, setbacks and courtyards shall be selected for drought tolerance, hardiness, beauty and ability to support regional habitat, including pollinators and bird species. Plant species should be verified for salt tolerance and suitability for irrigation with recycled water.

1. **Street, Greenway Promenade, and Parking Lot Trees** – These trees have been approved for use by the Redwood City Council, and are recommended for their habitat value and attractive foliage. Final tree selection(s) should be made for upright growth characteristics, growth speed to maturity, drought tolerance, shade provided, and availability. Note: Oaks produce acorns and should not be used in pedestrian-intensive locations.

- Red Maple, *Acer rubrum* (red fall foliage cultivars)

- Ash, *Fraxinus Americana* 'Autumn Purple'
- Ginkgo, *Ginkgo biloba* (male only)
- Brisbane Box, *Lophostemon confertus*
- Columbia Sycamore, *Platanus acerifolia* 'Columbia'
- Coast Live Oak, *Quercus agrifolia*
- Shumard Red Oak, *Quercus shumardii*
- American Elm, *Ulmus Americana* (DED resistant varieties)
- Frontier Elm, *Ulmus* 'Frontier'
- Cork Oak, *Quercus suber*
- London Plane Tree, *Platanus acerifolia*
- English Oak, *Quercus robur*
- Kentucky Coffee Tree, *Gymnocladus dioica*
- Tupelo, *Nyssa sylvatica*

2. **Medium-Size and Flowering Trees** – These trees are recommended for special locations where canopy shade is not necessary.

- Chinese Pistache, *Pistacia chinensis*
- Flowering Pear, *Pyrus calleryana*
- Crape Myrtle, *Lagerstroemia indica* (Powdery Mildew resistant varieties)
- Western Redbud, *Cercis occidentalis*
- Toyon, *Heteromeles arbutifolia*

3. **Courtyard Shrubs** – Plants recommended for their attractive qualities such as colorful blossoms, unique foliage, and seasonal qualities. Most also have habitat value. These plants are recommended for use in courtyards as well as visual areas.

- Butterfly Bush, *Buddleja* spp.
- Australian Fuschia, *Correa* spp.
- Coral Bells, *Huechra maicanthra*
- Lantana, *Lantana davivii*
- Lavender, *Lavandula* spp.
- Lion's Tail, *Leonurus* spp.
- Matilija poppy, *Romneya coulteri*
- Sage, *Salvia* spp.



Best management practices such as bio-filters, rain gardens, permeable paving and swales, should be integrated into the streetscape and open space design.

4. Habitat Plants – Plants recommended for habitat value. Also have attractive flowers and foliage. These plants are not recommended for use in courtyards.

- Manzanita, *Arctostaphylos* spp.
- California black-flowering sedge, *Carex nudata*
- Oregon grape, *Mahonia aquifolium*
- Monkeyflower, *Mimulus* spp.
- Red-flowering currant, *Ribes sanguineum*
- California wild rose, *Rosa* spp.
- Thimbleberry, *Vaccinium ovatum*

5. Evergreen/Screen Trees – These trees and other similar conifers should be used where a dense screen is required and security is not a significant issue.

- Canary Island Pine, *Pinus canariensis*
- Coast Redwood, *Sequoia sempervirens*

6. Rain Garden Plants – On-site percolation of storm water is a *Precise Plan* sustainability objective; however, the campus

has high groundwater levels and special design techniques will be required, subject to City review. Bio-filtration and swale plant species should be selected for inundation tolerance, attractiveness, size hardiness, and habitat value. Because these plants are necessarily selected for inundation tolerance, they require moderate watering in dry months. The following list was adapted from the Bay Area Storm Water Management Agencies Association's list of plant species for infiltration areas and the Brooklyn Botanic Garden's list of California Rain Garden Plants. The list below illustrated types of plants that can achieve these goals. Other plants are permitted.

- Elk clover, *Aralia californica*
- Pipevine, *Aristolochia californica*
- Western spicebush, *Calycanthus occidentalis*
- California black-flowering sedge, *Carex nudata*
- Hazelnut, *Corylus cornuta* 'Californica'
- Umbrella plant, *Darmera peltata*
- California gray rush, *Juncus patens*



Potential locations for public art should be identified in campus open spaces.



The system for building-mounted lighting should be part of a comprehensive site lighting system for the campus that supports the overall architectural design concept and identity.



Light fixtures and locations should help reinforce personal safety and security and facilitate way-finding.

- Monkeyflower, *Mimulus* spp.
- Ninebark, *Physocarpus capitatus*
- California polypody, *Polypodium californicum*
- Red-flowering currant, *Ribes sanguineum*
- Salmonberry, *Rubus spectabilis*
- Coneflower, *Rudbeckia californica*

E. **OUTDOOR ART** – Locations for outdoor art should be identified along selected campus walkways, in campus open spaces, and in publicly-visible building lobbies.

F. **MATURE TREES** – Existing heritage trees and mature trees (i.e. those with a trunk circumference of 38” or greater, per City Code) should be evaluated for incorporation in site and streetscape landscape plans. A formal, urban street tree planting approach is recommended by the Precise Plan, however, and preservation of existing trees is generally most appropriate within internal site areas.

G. **EXTERIOR LIGHTING** – The system for building-mounted lighting should be part of a comprehensive site lighting system

for the campus that supports the overall architectural design concept and identity.

1. **Fixtures** – Light fixtures and lamp types should be consistent with other campus facilities and should be selected based on light color, luminescence, quality and energy efficiency.
2. **Building Entrances** – All primary building entrances should have a higher level of lighting than surrounding uses.
3. **Safety** – Light fixtures and locations should help reinforce personal safety and security and facilitate way-finding.
4. **Light Pollution** – There should not be unnecessary light spillage and glare to the surrounding neighborhood.

H. **STORMWATER MANAGEMENT** – Best management practices such as bio-filters, rain gardens, permeable paving and swales, should be integrated into the streetscape and open space



Rain Gardens should be planted with vegetation that can withstand periodic inundation of water

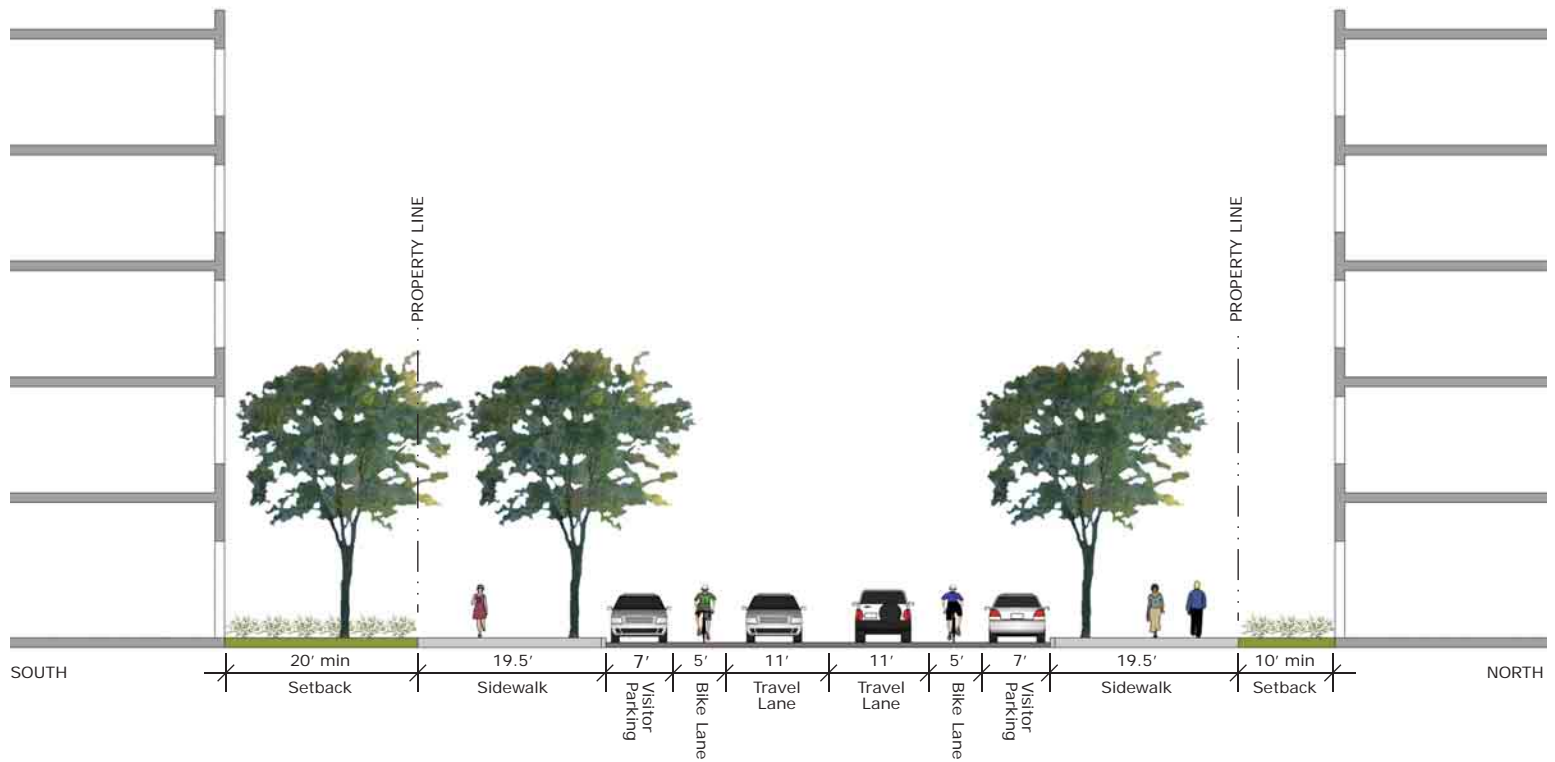
design. Where biological measures cannot be used, mechanical devices should be used in their place. The site may be subject to periodic flooding, and the design of landscape elements should take this into consideration.

1. **Rain Gardens** – These are functional elements within the Campus Greenway, responsible for handling all stormwater runoff and storm-water detention. The primary objective of the Rain Gardens is to slow water velocity coming from building roofs and hardscape areas, and to treat the water using a bio-filtration system. Rain Gardens should be shallow, depressed areas in the landscape, planted with vegetation that can withstand periodic inundation of water. Rain Garden design strategies shall include:

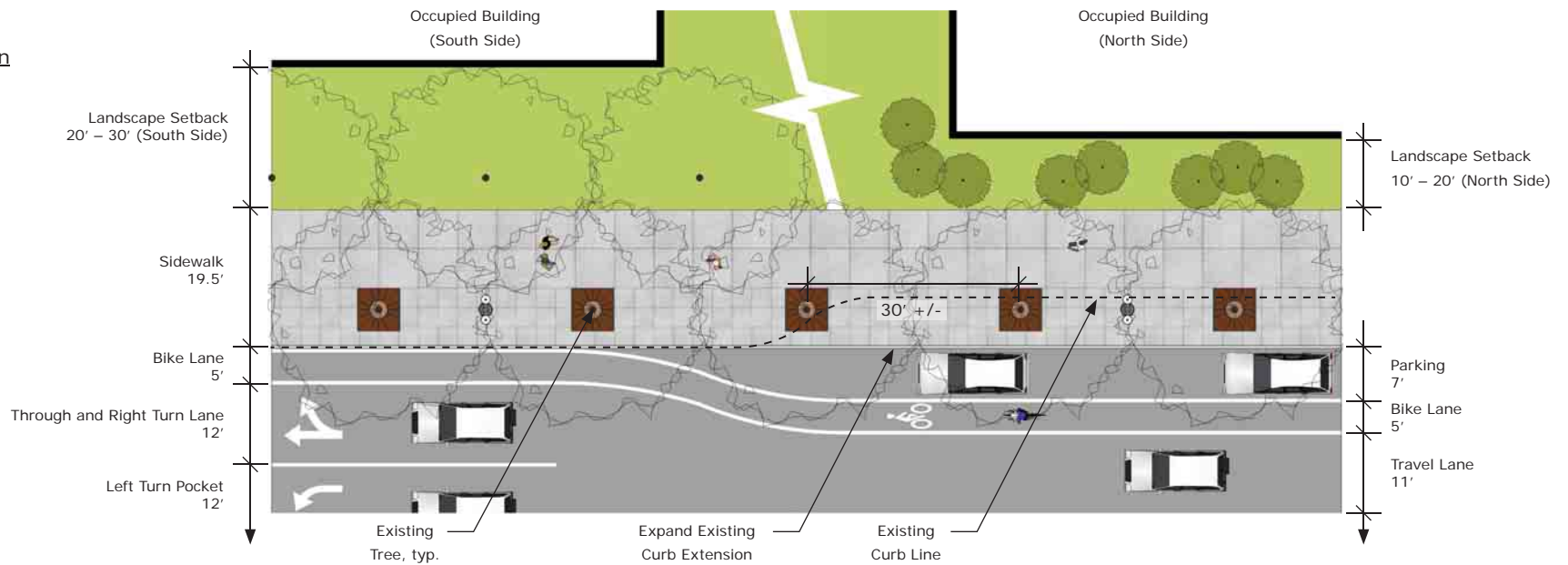
a. **Location** – Locate rain gardens away from buildings such that water is not directed toward foundation structures.

- b. **Soil** – Use amended soil and avoid compaction of soil to increase infiltration.
- c. **Draining** – Provide a sub-drain to promote infiltration.
- d. **Slope** – Surrounding land should be sloped towards the rain garden
- e. **Overflow Management** – Direct overflow to a discharge point, or provide an overflow drain within the rain garden.

Street Cross Section

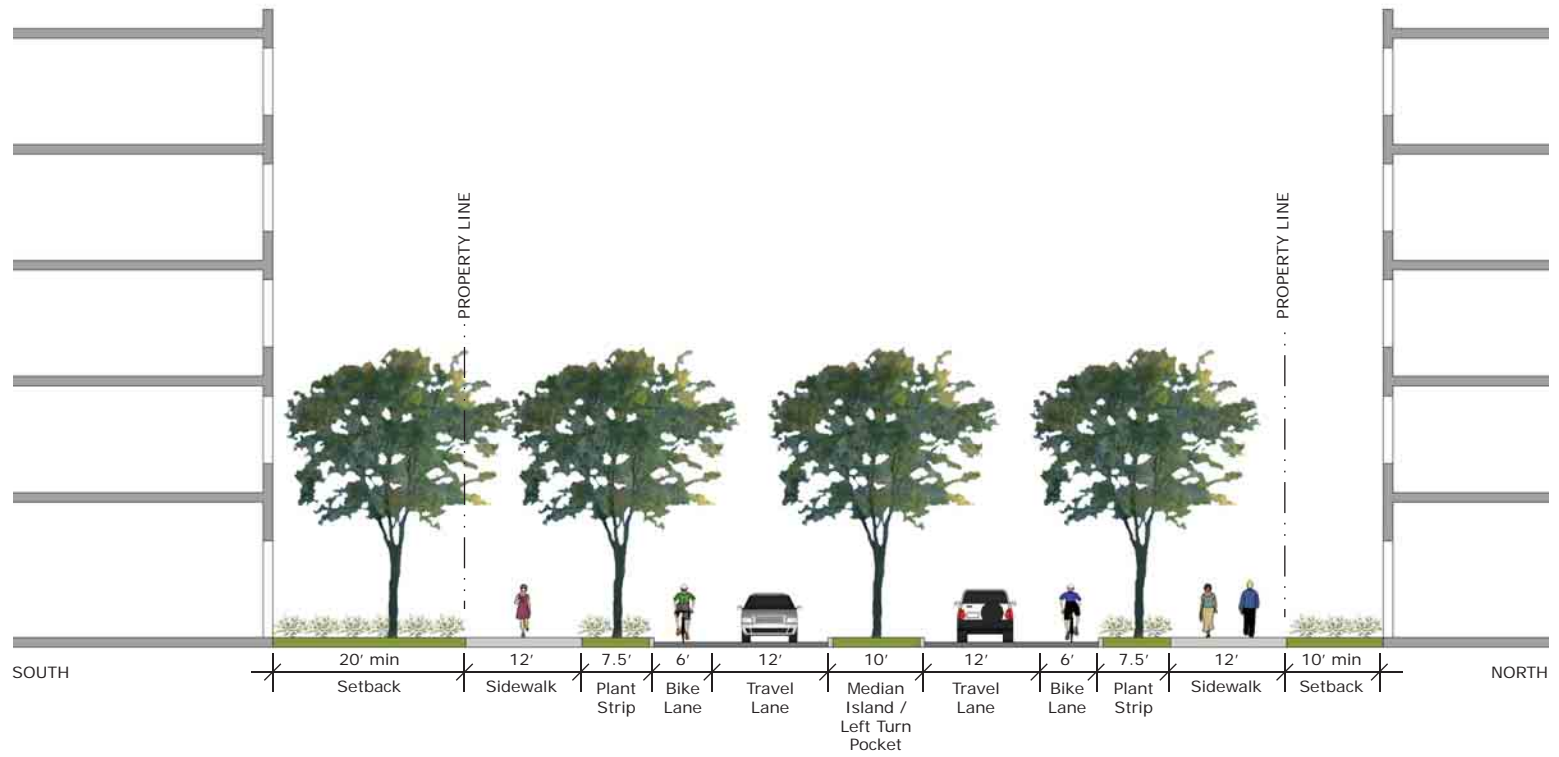


Frontage Plan

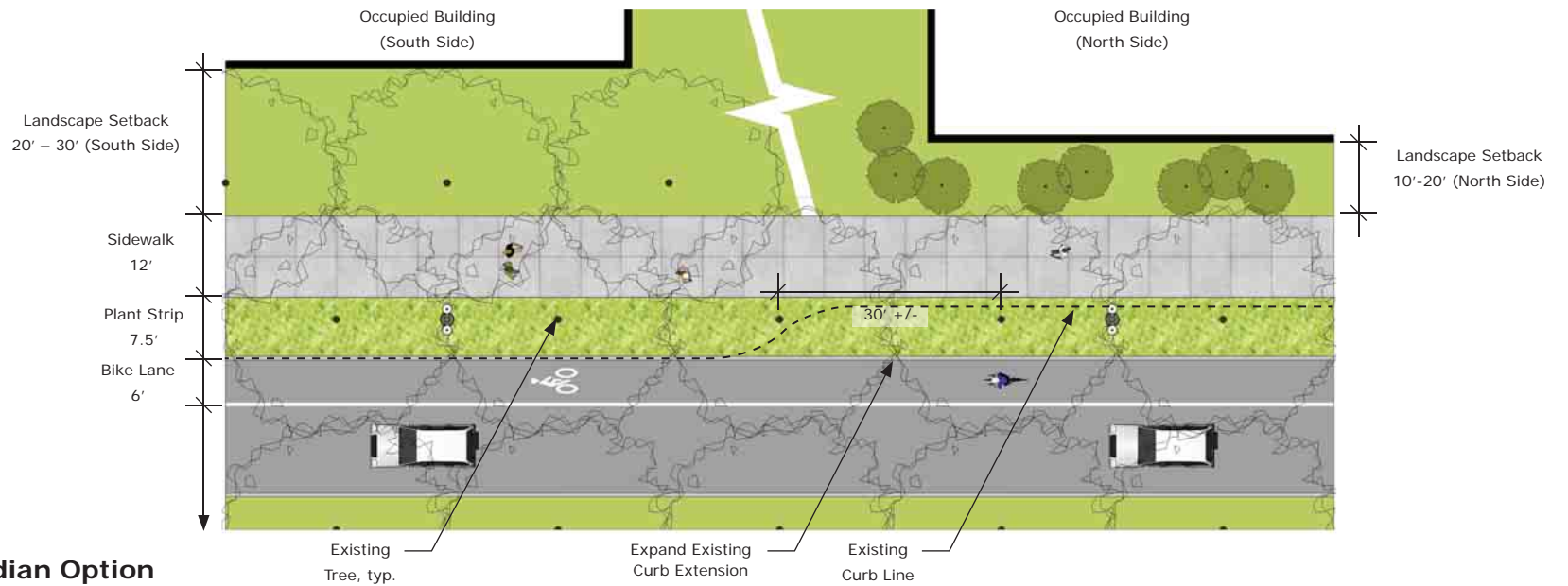


Broadway – Parallel Parking Option

Street Cross Section

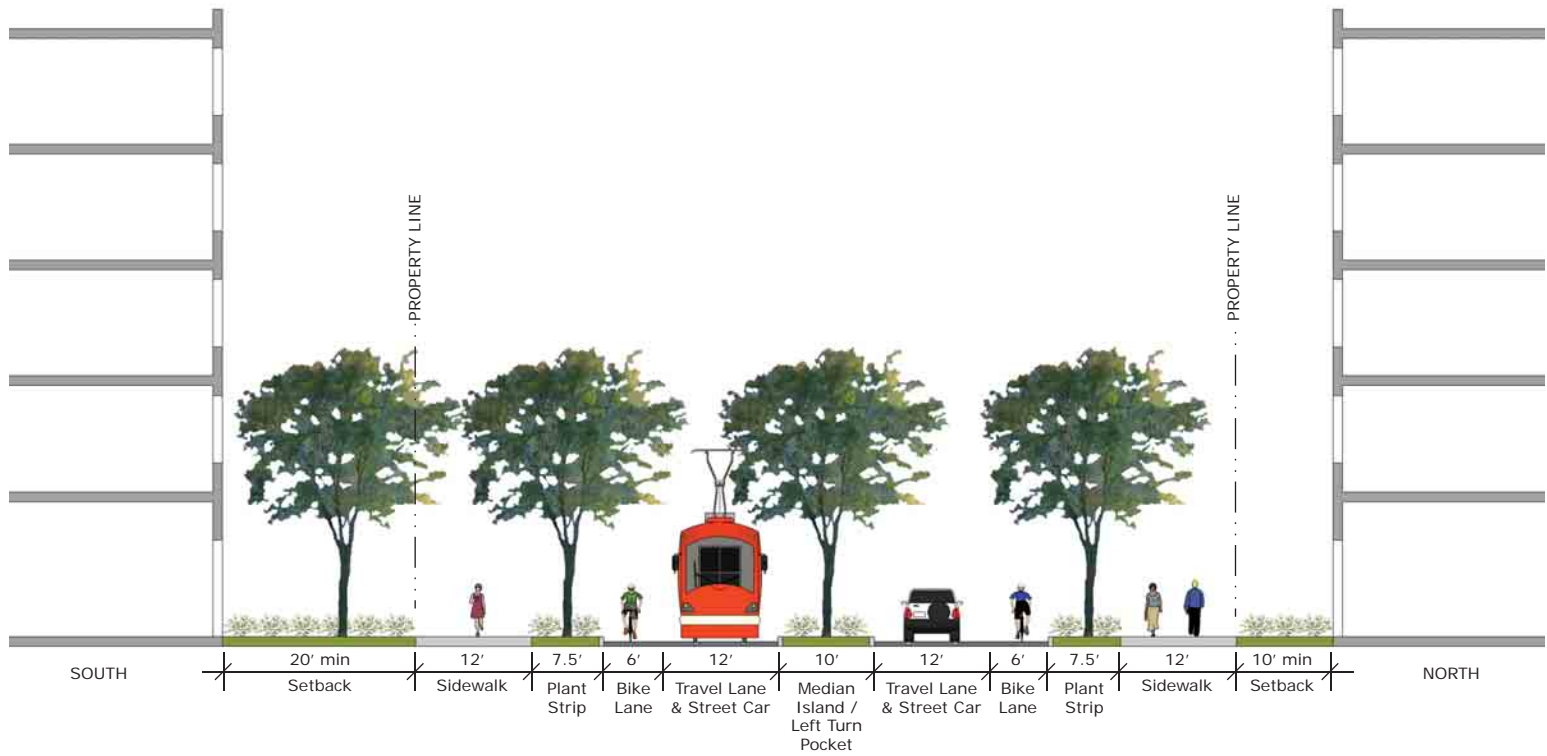


Frontage Plan

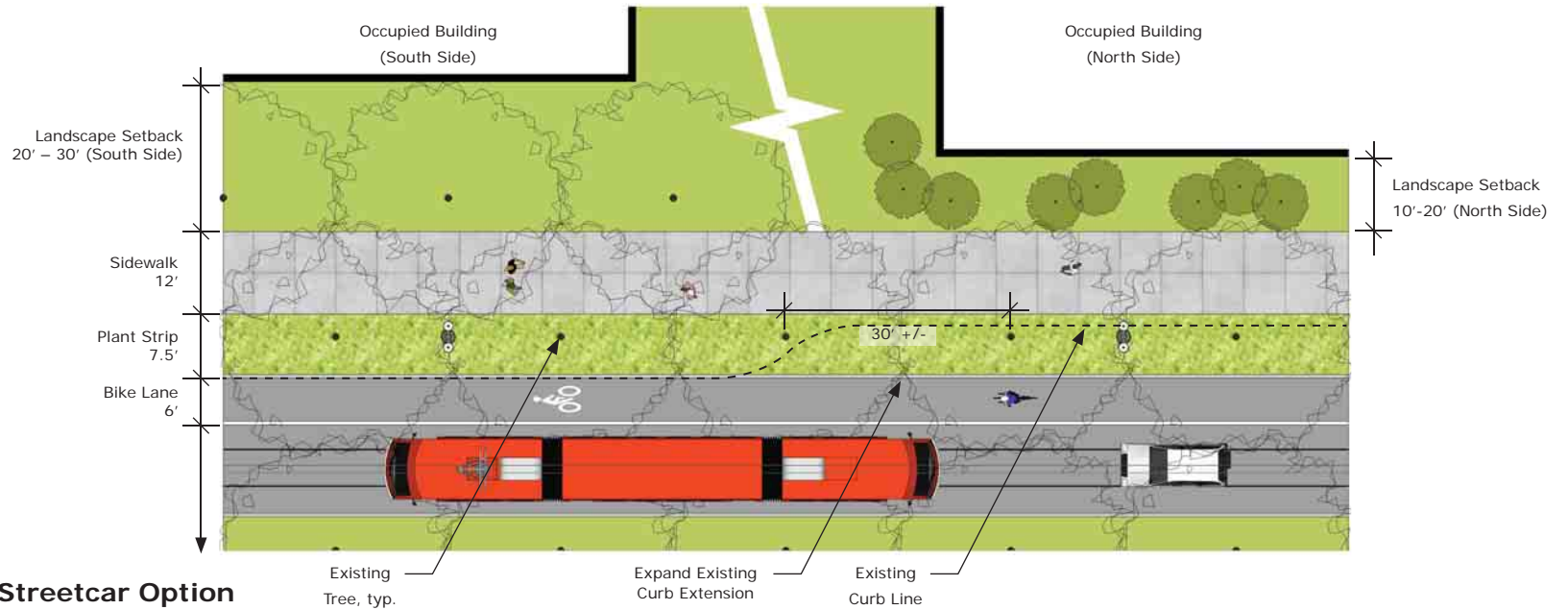


Broadway – Median Option

Street Cross Section

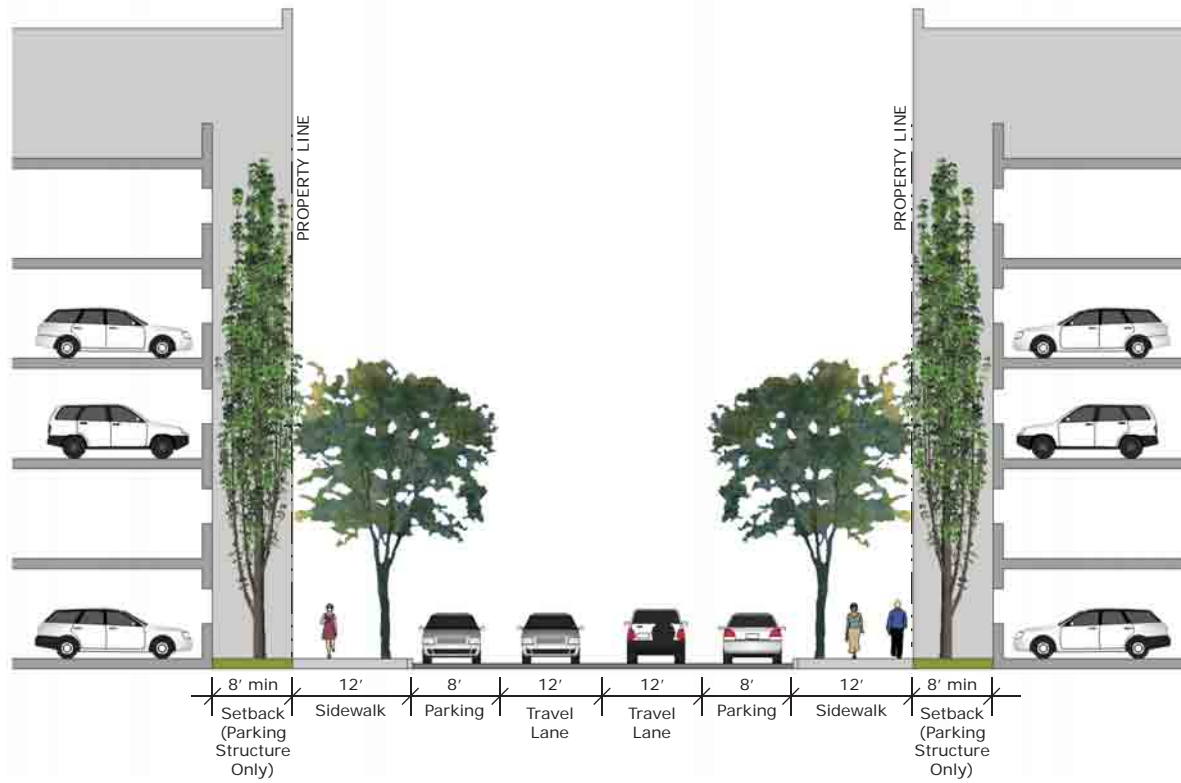


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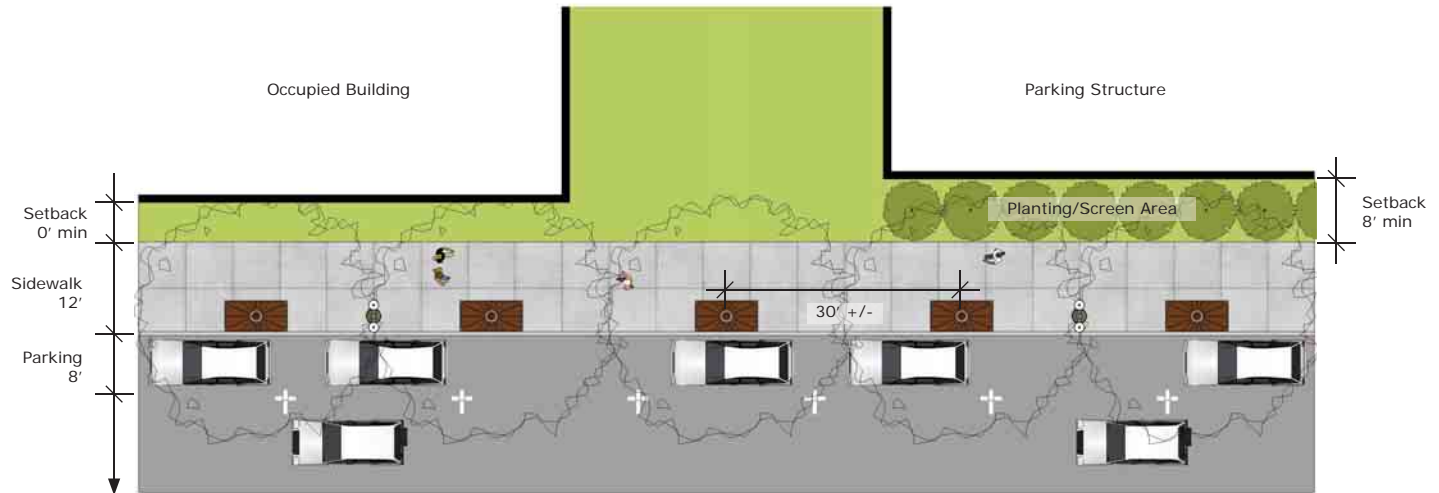


Broadway – Streetcar Option

Street Cross Section

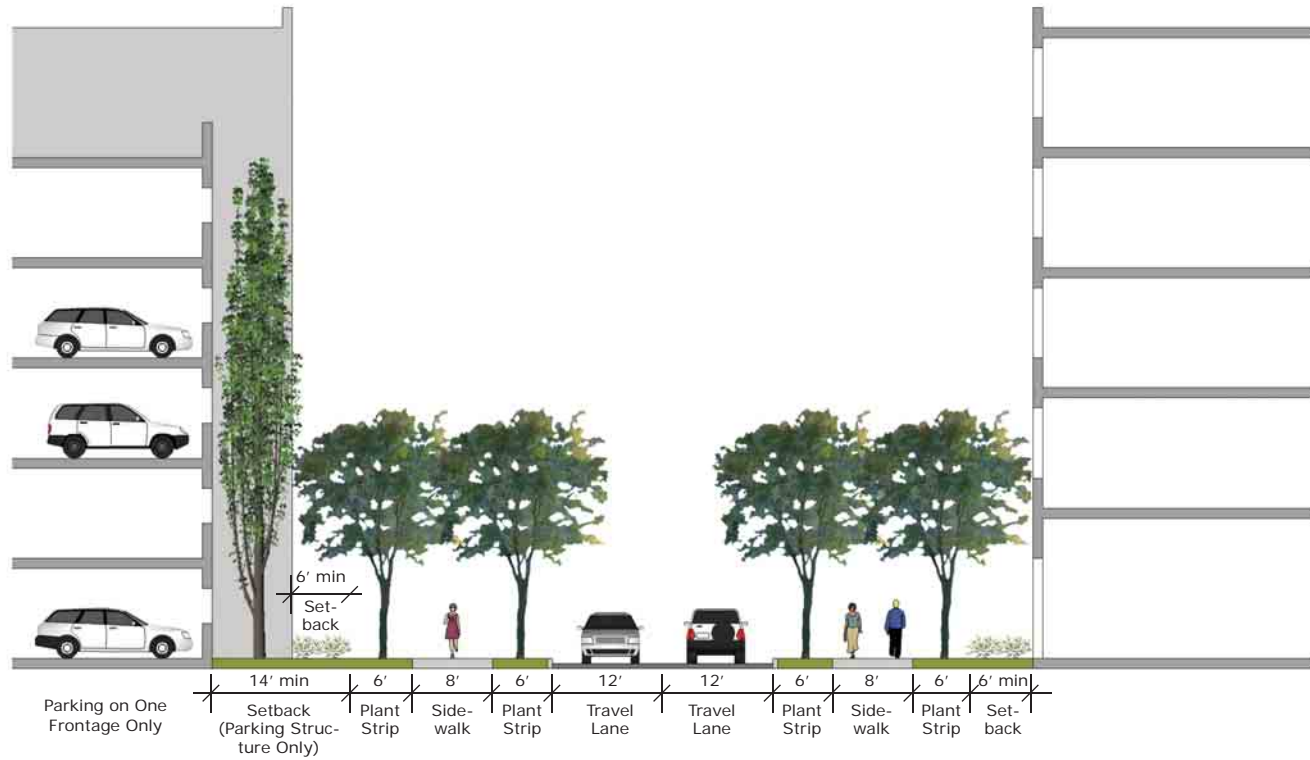


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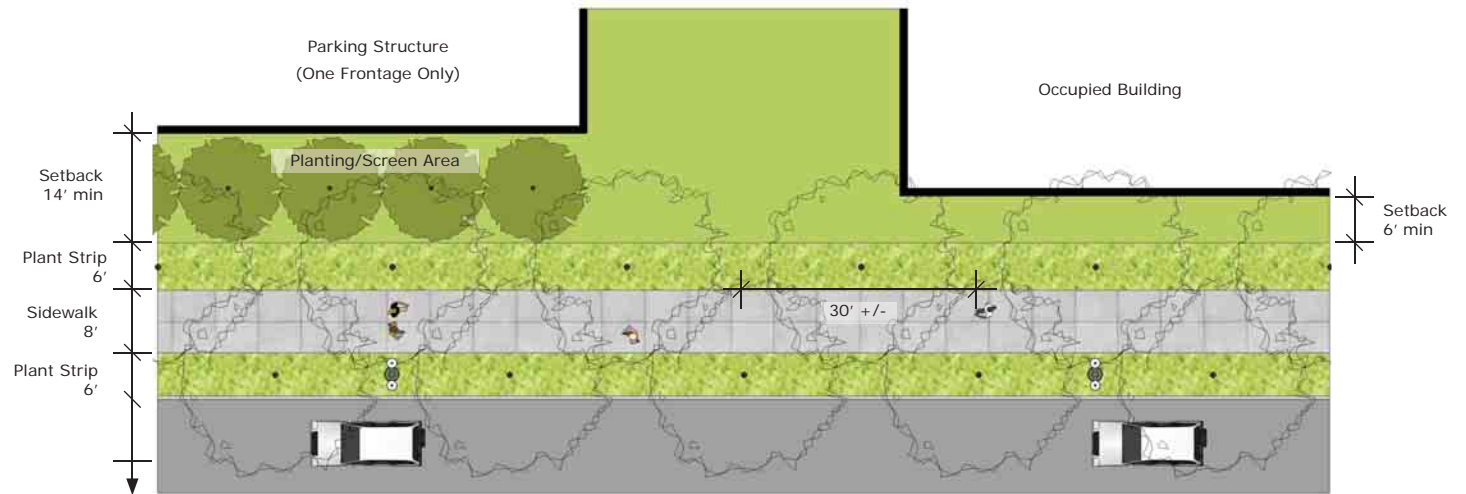


Hurlingame Avenue

Street Cross Section

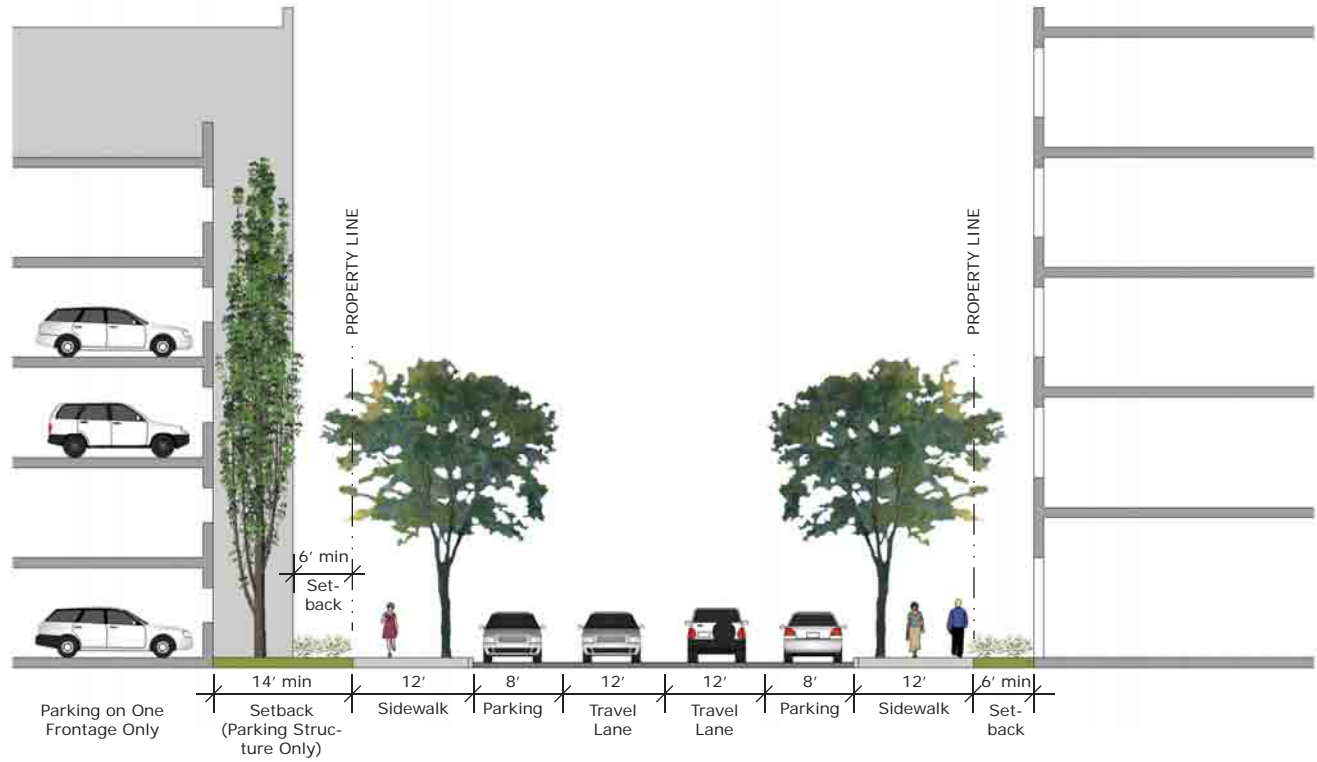


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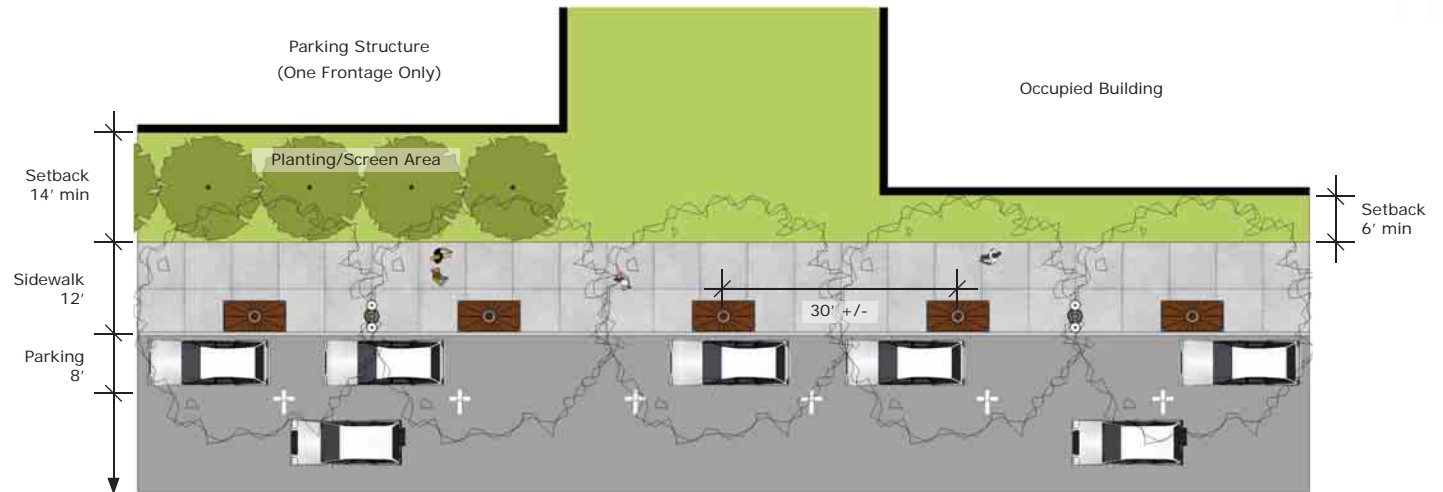


Warrington Private Drive (North of Broadway)

Street Cross Section

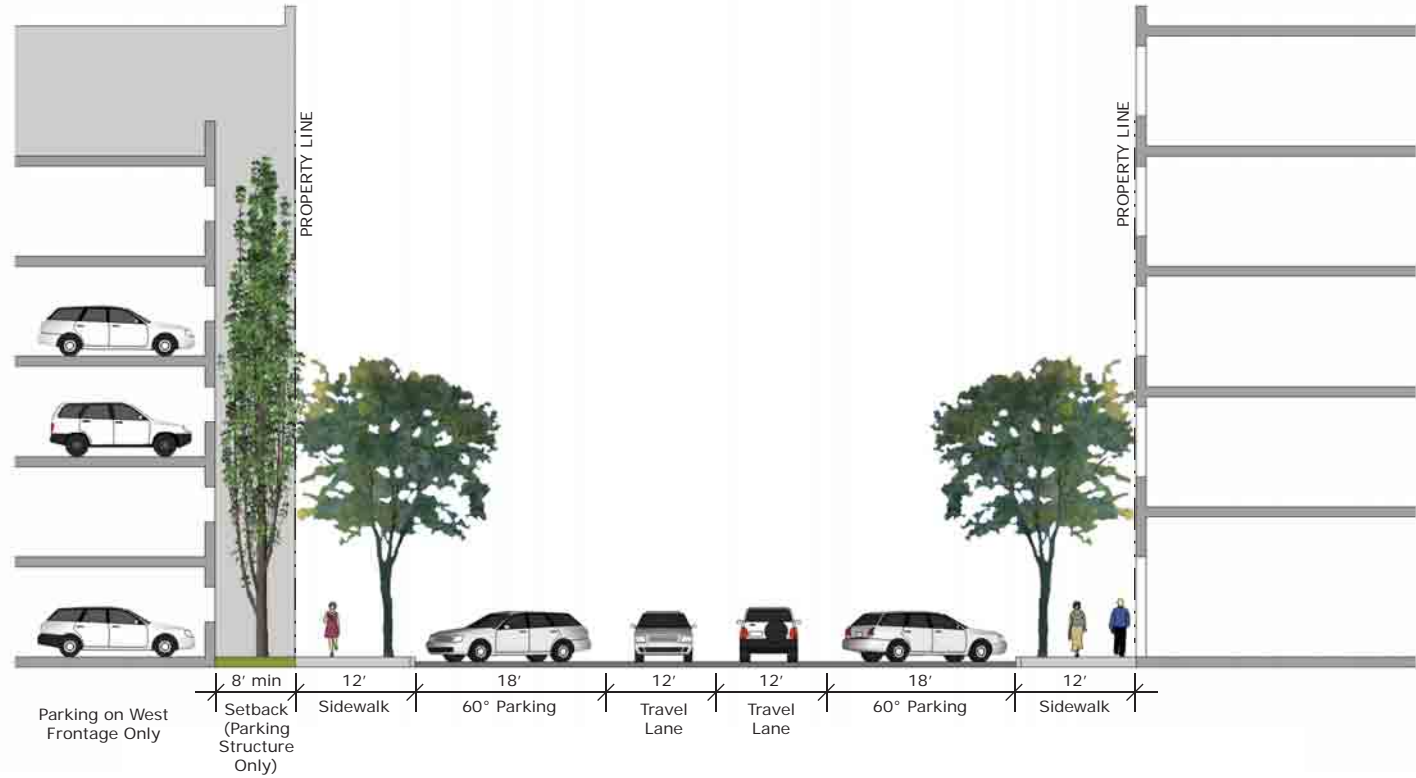


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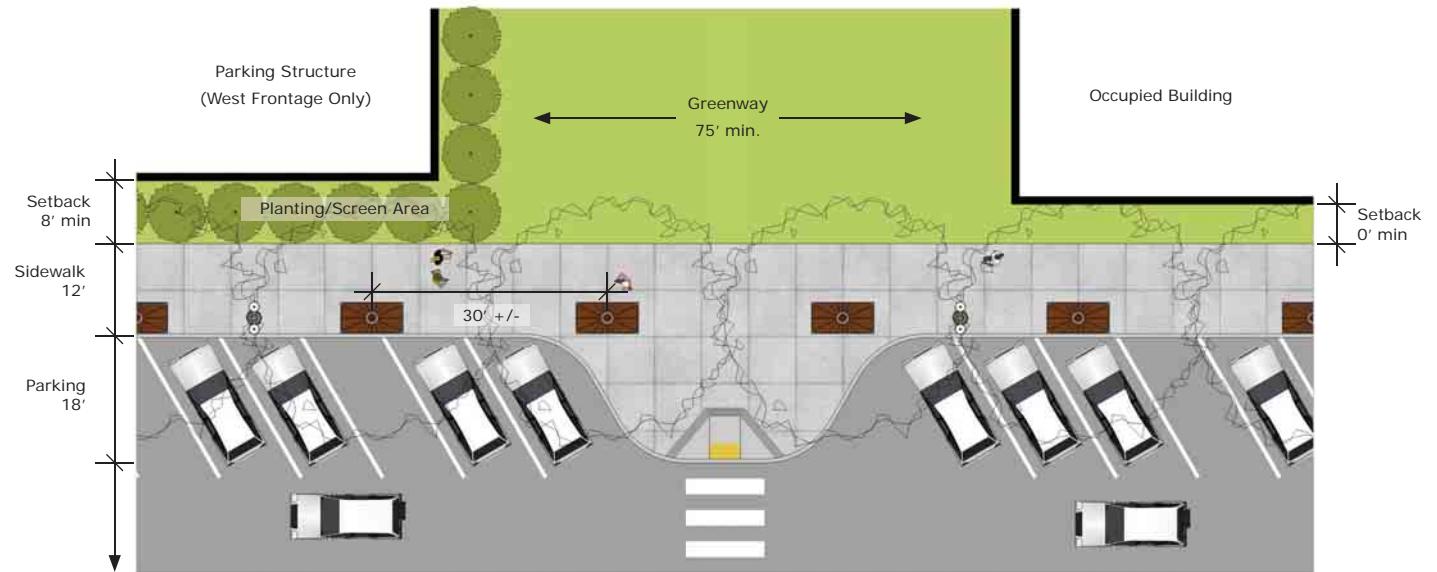


Warrington Avenue (South of Broadway)

Street Cross Section

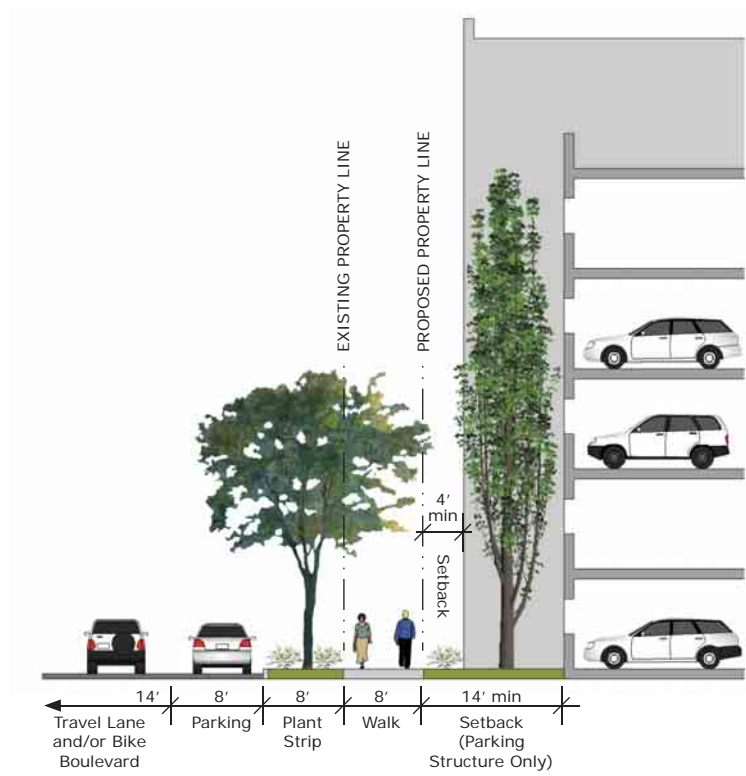


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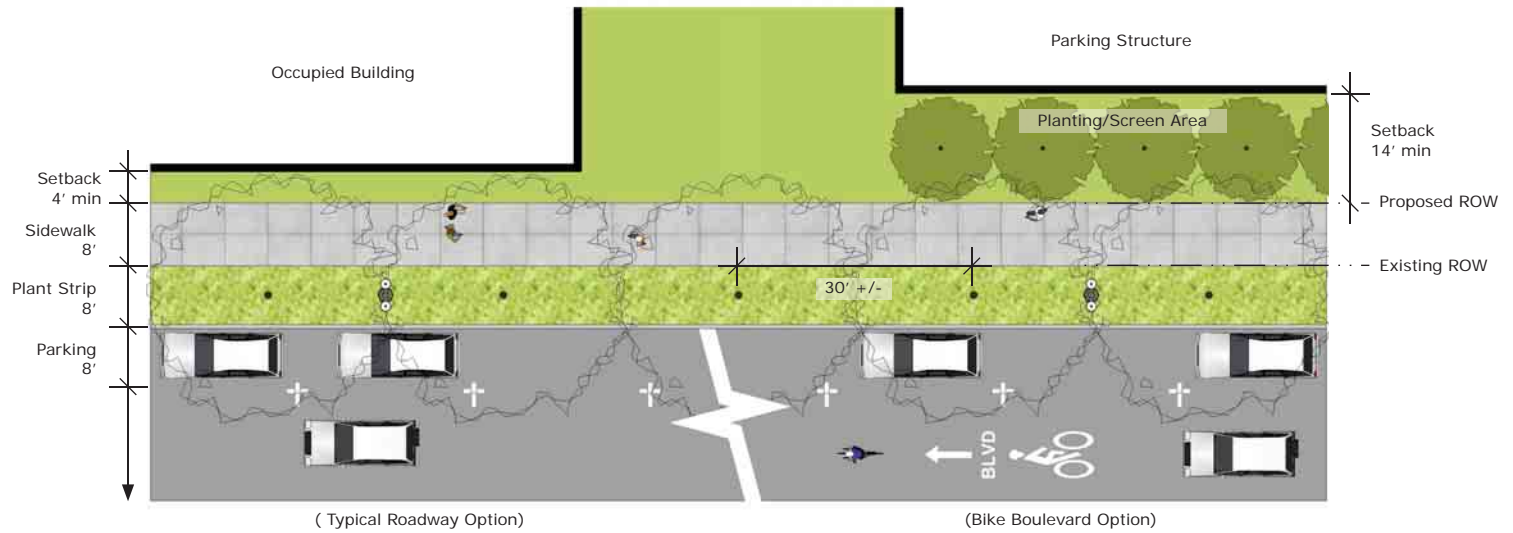


Barron Avenue

Street Cross Section

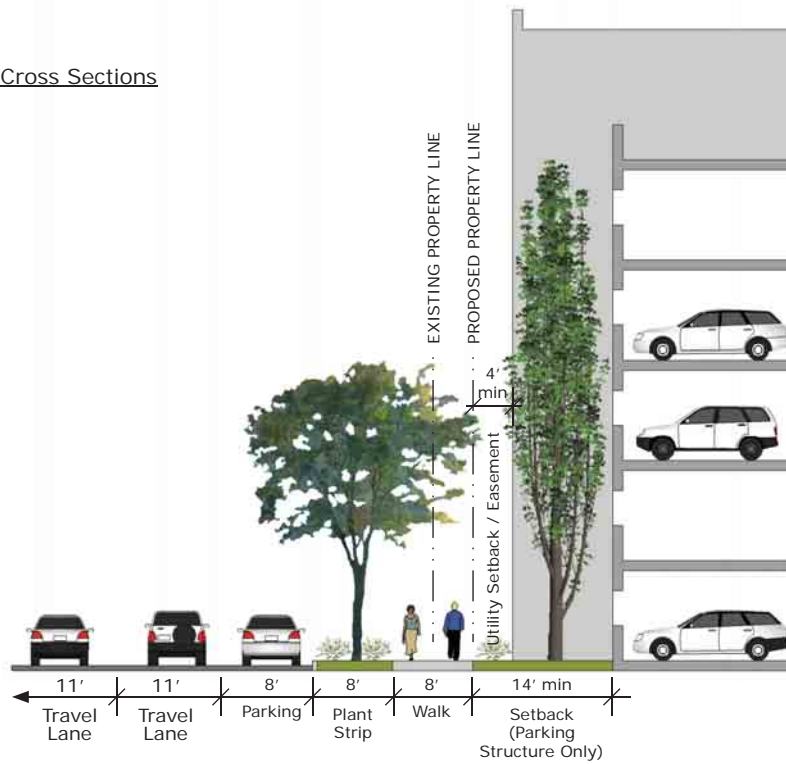


Frontage Plan

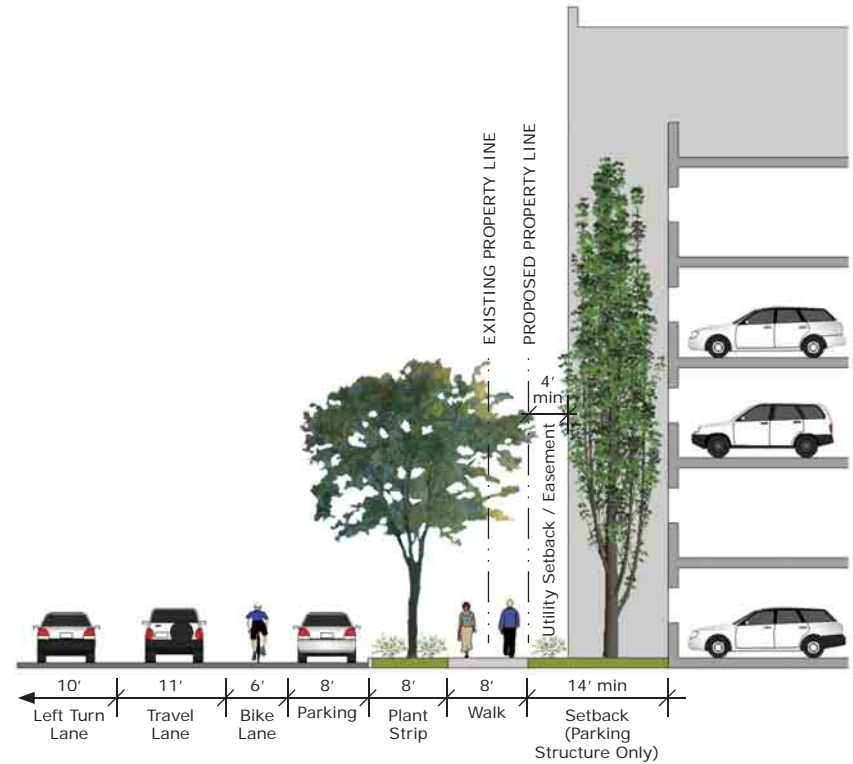


Douglas Avenue (South of Broadway)

Street Cross Sections

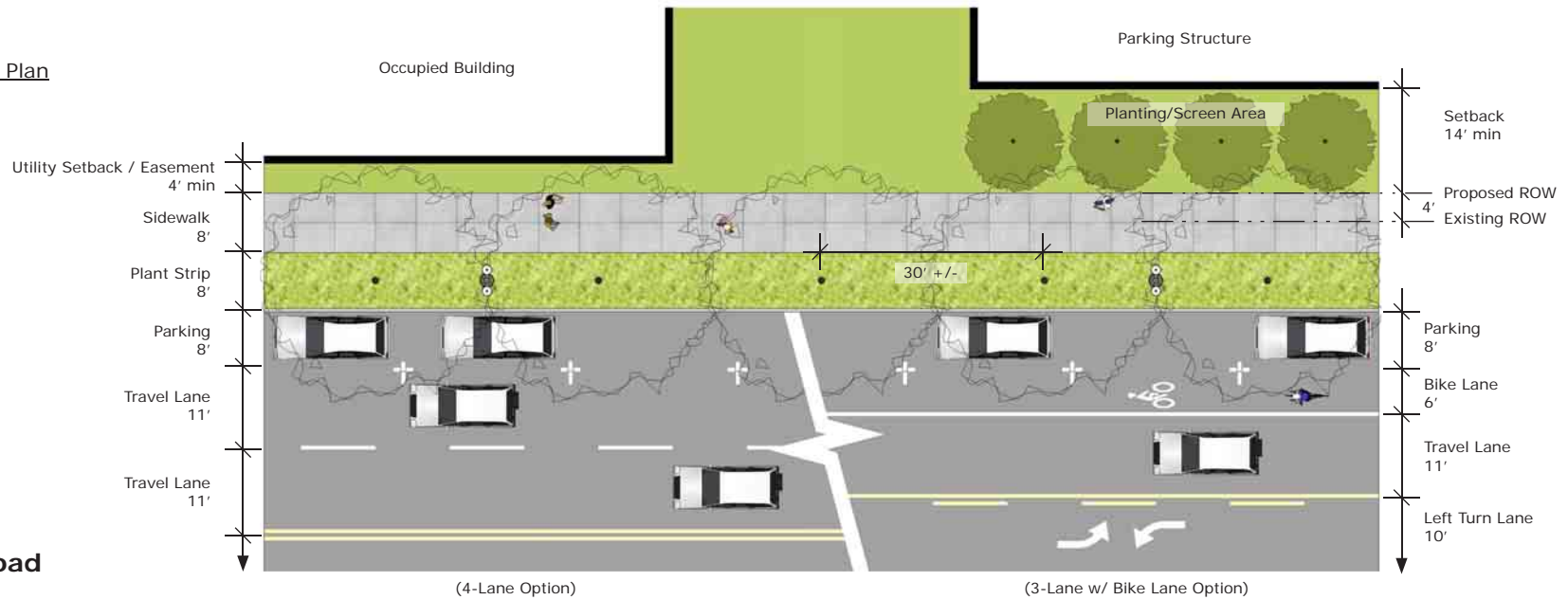


4-Lane Option



3-Lane w/ Bike Lane Option

Frontage Plan



Bay Road

(4-Lane Option)

(3-Lane w/ Bike Lane Option)

Chapter III – Circulation Policies & Capital Improvements

Circulation policies and Plan Area capital improvements reflect the *Precise Plan* issues and goals described in Chapter I, as well as the policies of the *Redwood City General Plan*, and the analysis and findings of the *Stanford in Redwood City Precise Plan EIR*. The policies in this chapter apply to development of Blocks A-E, and do not apply to Blocks F and G. The *EIR*'s recommended impact mitigation measures are incorporated as appropriate, though the *Precise Plan*'s circulation-related policies and capital improvements are not limited to *EIR*-recommended mitigations.

I. Circulation Policies

A. VEHICULAR CIRCULATION – The *Redwood City General Plan* contains policies to remake Broadway into a “complete street,” balancing enhanced mobility for transit users, cyclists, and pedestrians with automobile traffic. An expanded setback area along the south side of the street is established to accommodate right-of-way widening if needed. The *Precise Plan*'s site development and parking policies promote the use of Bay Road for campus access, conserving Broadway for access to the Friendly Acres neighborhood and the potential streetcar line connection to Downtown.

The City plans to study the feasibility of reconfiguring most of Broadway in the Precise Plan Area to include three vehicle lanes (two travel lanes and a left-turn pocket) rather than the existing four vehicle lanes, consistent with *General Plan Program BE-57*. The *Precise Plan* would not preclude this option and applicant would be required to develop frontage improvements that correspond with such option to the extent it is selected by City prior to or concurrently with City's approval of a PC Permit for development of the applicable block fronting Broadway. See pages 51-53 for roadway options and corresponding frontage improvements.

Bay Road links to Woodside Road, Marsh Road, and associated US 101 interchanges. Bay Road will accommodate most

campus-generated traffic, and employee parking facilities will be concentrated along Bay Road and the US 101 frontage. Primary access to parking facilities should be provided from north-south streets. Two potential roadway configurations for Bay Road are shown on page 59. One of the depicted configurations would include three vehicle lanes (two travel lanes and a left-turn pocket) and a bike lane adjacent to the Precise Plan Area. It is also possible that the configuration of Bay Road adjacent to the Precise Plan Area will continue to include four vehicle lanes.

Hurlingame, Warrington, and Barron Avenues will be extended through the campus to Broadway. Warrington Avenue will be extended north across Broadway as a private drive to provide access to Block E and potentially to the SMOC facility. These street extensions will provide for flexible vehicle, bicycle and pedestrian access to campus buildings and parking facilities, and minimize the need for curb cuts and driveways on Broadway and Bay Road. Required right-of-way and intersection improvements are described in detail in section III of this chapter. Major *Precise Plan* circulation policies and improvements are illustrated by the Circulation Policies & Improvements Diagram on page 61.

B. PEDESTRIAN CIRCULATION – Pedestrian circulation is a key ingredient of a campus environment. Promoting it supports transit use and, over time, the City's revitalization and infill development efforts along the Broadway Corridor and in Downtown. A network of pedestrian circulation routes to and through the Precise Plan Area should be provided that maximizes pedestrian access, employing City streets as well as on-site walks and through-building ways. Chapter II contains design guidelines for pedestrian ways and open spaces.

Broadway should be the primary pedestrian route linking the Precise Plan Area to points east and west, with the internal Campus Greenway providing off-street circulation through the portion of the campus south of Broadway. The *Precise Plan*



Circulation Policies & Improvements

requires generous sidewalks along all campus streets, including the extensions of Hurlingame, Warrington, and Barron Avenues, with enhanced pedestrian crossings required at street and Greenway intersections. Section III of this chapter contains specific pedestrian-oriented capital improvement requirements.

- C. **BICYCLE CIRCULATION** – The *Precise Plan* assumes that bicycle trips to and from the campus will be significant. Class II bicycle lanes are currently striped along Broadway east of the campus between 2nd and 5th Avenues, and a formalized bike route will be extended within the Broadway right-of-way through the campus to Douglas Avenue consistent with the policies of the *Redwood City General Plan*. (See D. 5. below for additional bike circulation policy details.)

In addition, a minimum bicycle parking requirement of 1 bicycle parking place per 10 auto stalls is established; approximately 80% of these bicycle parking places shall be for long term parking in the form of bike lockers, covered locked cages, or special locked room(s), and 20% shall be for short term parking in the form of bike racks.

- D. **TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM** – TDM measures are intended to enhance the quality of life in Redwood City while accommodating growth and investment. They emphasize non-automobile alternatives for circulation within the greater *Precise Plan* Area.

The *Stanford in Redwood City Precise Plan* includes a strong TDM program that is intended to reduce automobile trips overall, including a reduction in peak period commute trips associated with Blocks A-E by 18%. Promoting this level of traffic reduction is an important element of the *Precise Plan* and is consistent with *Redwood City General Plan* goals and policies. Complete TDM measures are listed in Chapter IV, Implementation. Establishment of the TDM program is required to begin development that results in Net New Development on Blocks A – E.

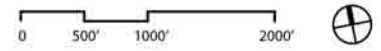
1. **Shuttle Service** – Increasing the use of Caltrain and bus transit relative to automobile-based commuting is an

important *Precise Plan* goal. Shuttle service is currently provided at the campus. *Precise Plan* Area development shall implement or participate in the existing publicly accessible shuttle service to the Downtown Redwood City Caltrain station. As part of its TDM program, the TDM coordinator will evaluate the effectiveness of the shuttle program over time and consider implementation of other shuttle runs, including potentially mid-day shuttle runs to and from Downtown Redwood City and/or to and from the Stanford Palo Alto main campus, if and to the extent demand for such additional shuttle runs exists. Shuttle schedules shall be coordinated to complement Caltrain schedules and to maximize the efficiency of the system; e.g., short headways during peak commute periods.

2. **Car Share Program** – As part of its TDM program, the *Precise Plan* development may implement a satellite car-sharing program. Based on programs in other locations, such a program might consist of a small fleet of on-site vehicles for use by employees through a cooperative agreement with an established car sharing company.
3. **Campus Transportation Coordinator** – The campus shall designate a Campus Transportation Coordinator. The Coordinator shall prepare and implement campus TDM and mode share monitoring programs, assist employers to refine TDM programs as needed to increase effectiveness, and coordinate with the City of Redwood City and regional transportation management agencies as necessary.
4. **Bus Shelter Improvements** – Applicant will pay \$100,000 to fund improvements to existing bus stops, including benches and shelters, within ½ mile of the *Precise Plan* Area. The specific bus shelter improvements will be selected by the City in consultation with SamTrans and the applicant(s). The full amount of the bus shelter improvement payment shall be paid to City prior to issuance of the first certificate of occupancy that results in the total campus gross building area on Blocks A-E exceeding 1 million sq ft. The \$100,000 amount shall be increased based on increases



- | | |
|---|---|
|  Broadway (0.81 miles) |  Douglas Avenue (0.65 miles) |
|  Bay Road / Florence Street (2.16 miles) |  2nd Avenue (0.85 miles) |
|  Middlefield Road (0.8 miles) |  5th Avenue (1.51 miles) |



Priority Streets for Bicycle Improvements

in the Construction Cost Index as published from time to time by the Engineering News Record.

5. Bike Lanes – Applicant will pay the City a financial contribution in an amount to be identified in the contemplated development agreement, to fund planning and installation of bicycle linkages from the Precise Plan Area to the downtown and the Caltrain Station and, consistent with the San Mateo County and Redwood City bicycle plans, to bicycle facilities located north and south of Redwood City. The specific bicycle linkages will be selected by the City in consultation with the applicant and may include one or more of the following routes, which are depicted on the Priority Streets for Bicycle Improvements diagram.

- Broadway through the campus to Charter Street to connect to the City’s existing and planned bike lanes
- Bay Road from Marshall Street/Beech Street to Marsh Road
- Middlefield Road from Hurlingame Road to Encina Avenue (City of Atherton border)
- Douglas Avenue and 2nd Avenue from Broadway to Middlefield Road
- 5th Avenue from Rolison Road to El Camino Real

Applicant shall pay the full amount of the bicycle linkage payment to the City at the time of building permit issuance for any Net New Development or at such earlier time as may be agreed to in the contemplated development agreement. The applicant(s) will also participate in the City’s Bike Share Program or a similar program. As noted in Chapter IV – Implementation, it is anticipated that Stanford and the City will enter into a development agreement that sets forth the specific amount of the contribution to bike lane and linkage improvements.

E. PARKING REQUIREMENTS AND MONITORING – The *Precise Plan* reduces Zoning Ordinance parking standards for administrative office and health care-related land uses consistent with *EIR*-related analysis and findings for comparable

facilities. However, the City will assess traffic and parking conditions between build-out phases as necessary. The City may require additional parking analyses prior to approval of subsequent phases to determine if facilities and *Precise Plan* standards are adequate, and/or if additional parking-related measures are required.

F. SUPPORTIVE STREET DESIGN – The Precise Plan Area is approximately 1,900 feet in length, or a 5- to 10-minute walk from east to west. This relatively compact area supports pedestrian and bicycle circulation and transit use. Streets should be designed to encourage bicycle and pedestrian circulation, with street trees, lighting, paved areas/routes, wayfinding signage, and other features that make streets attractive public spaces. Streets should be designed to accommodate the turning movements associated with shuttles, buses, and the potential street-car network, where necessary.

G. NEIGHBORHOOD STREETS ENHANCEMENT PROGRAM – The Stanford in Redwood City campus will be a new neighbor within an existing community. As a new neighbor, Stanford University and/or Stanford University successors will work with the City to provide positive enhancements that support the surrounding residential neighborhoods of Friendly Acres, Redwood Village and North Fair Oaks. To that end, the applicant proposes to fund a Neighborhood Streets Enhancement Program (NSEP). The purpose of the NSEP is to address residents’ concerns that increased vehicle traffic could diminish residents’ enjoyment of their streets, sidewalks, and neighborhoods.

The NSEP should further the *Redwood City General Plan’s* policy to provide complete streets to enable safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists and transit users of all ages, abilities and preferences (General Plan Policy BE 25.3). Features of a complete street system that could be funded through the NSEP include the following:

- Enhanced pedestrian and bicycle facilities, including safe routes to schools and safe routes to transit
- Traffic-calming measures

- Improved street lighting
- Augmented street trees and landscaping
- Signage and way-finding information

In addition, NSEP funds could be used to provide neighborhood signage, trees or other improvements designed to indicate to travelers that they have arrived at a neighborhood gateway, providing visual cues that driving speed should be reduced. Gateways could consist of signage, bulb-outs, landscape elements, roundabouts, and/or other features that create an attractive neighborhood boundary that discourages through traffic. As noted in Chapter IV – Implementation, the specific amounts of the NSEP contributions are anticipated to be set forth in a development agreement between Stanford and the City.

- H. BROADWAY STREETCAR – The *Redwood City General Plan* designates Broadway as a “Transit Street” intended for a potential streetcar network. Signal preemption, streetcar stops, and prioritization of transit over other travel modes are key elements of this designation. Cross section and plan sketches on page 53 depict the Broadway “Streetcar Option;” dimensions are approximate and the City reserves the right to modify dimensions as needed to accommodate the potential streetcar and related facilities.
- I. LANE REDUCTION REVIEW – A council-designated subcommittee or review group shall be formed to work with the local community to assess the potential future lane configurations identified for Broadway and Bay Road within the Precise Plan Area.

II. Public Improvement and Infrastructure Policies

A variety of types of public improvements are needed to serve the Precise Plan Area. Some will improve current conditions and some are needed to accommodate future growth. Public improvements, as described below, shall be shown on an Improvement Plan(s) depicting all improvements needed within public rights-of-way,

based on engineering-related standards and codes in place at the time of development application.

- A. PUBLIC FACILITIES AND INFRASTRUCTURE – Infrastructure includes elements such as street lighting, curbs, gutters, sidewalks, and landscaping, as well as water supply, water distribution and emergency water storage, sewage collection, transmission, and treatment, storm drainage systems, recycled water mains, etc. Reevaluation of utility systems may be performed in conjunction with PC Permit review to address demand and regulation changes. Modifications to preliminary system designs shall be made to reflect these changes if necessary. Precise Plan Area service demand (especially as related to water and sewer service) may be monitored over time by the City in cooperation with Precise Plan Area tenants to verify use relative to Precise Plan Area development assumptions.

Easements shall be reserved for public facilities and infrastructure as needed to support New Development. The design and construction of these facilities and related infrastructure shall be in accordance with City standards.

- B. CAPITAL IMPROVEMENTS PHASING – The City shall require that each phase of development provide an appropriate level of infrastructure improvements and otherwise meet the requirements further described in Chapter III, Section III. Public facilities and infrastructure improvements shall be provided in parallel with New Development per City Standards. Phasing of capital improvements (on-site, off-site, private and public) shall at a minimum be in proportion to phasing of development. The Phasing/Implementation Summary Table in Chapter IV outlines the basic capital improvements, facilities, and programs required by the *Precise Plan* and when they shall be provided.
- C. STREET PLAN LINES – The *Precise Plan* requires that streets be improved to accommodate curbside parking, high levels of pedestrian and bicycle use, and design improvements such as street lighting and street trees that are consistent with the City Standards and *Precise Plan* Design Standards. Recommended street dimensions are listed under section III, below. Dimen-

sions are flexible and may be changed subject to City review and approval. Plan lines shall be established as part of New Development.

- D. INTERSECTION IMPROVEMENTS – Intersection improvements as identified in the *EIR* will be required within and surrounding the Precise Plan Area to accommodate increased levels of auto, pedestrian, and bicycle traffic; nearby intersection improvements are described in Section III of this Chapter and are illustrated by the Circulation Policies & Improvements diagram in Section I of this Chapter.

The *Redwood City General Plan* encourages alternative approaches to typical intersection configuration and signalization including, but not limited to, the use of roundabouts. Where these alternatives are appropriate they are listed in Chapter IV, Section III.C of this *Precise Plan*. The *EIR* addresses these approaches where relevant.

- E. PEDESTRIAN CROSSING IMPROVEMENTS – Enhanced pedestrian crossings (e.g. striping, paving, high-visibility signs/markers, curb bulbouts) are required by the City at a number of locations; see section III, below. Specific design for intersection curb conditions – e.g., radius of corner bulbouts – will be determined by the City based on an assessment of turning movements.

Crossing improvements to promote pedestrian access and motorist accommodations along the Broadway and Bay Road corridors shall be identified by location with the first Planned Community permit submittal. Improvements such as count-down signals, special crosswalk paving, striping, or bulb-outs may be appropriate for early installation. The location and timing of said improvements will be evaluated and implemented as early in the project phasing as deemed feasible and said locations and timing will be reevaluated with each subsequent phase of the development.

- F. TRAFFIC IMPACT MITIGATION MEASURES OUTSIDE THE PRECISE PLAN AREA – Required circulation-related capital improvements have been identified in the *Stanford in Redwood*

City Precise Plan EIR and/or the City’s Traffic Impact Mitigation Fee Study. These are listed in Section III of this chapter.

- G. TRANSIT- AND BICYCLE-RELATED IMPROVEMENTS – Consistent with TDM measures included in the *Stanford in Redwood City Project*, the applicant will make or provide funding to the City to make improvements to the existing bus and bicycling infrastructure. Bus infrastructure includes elements such as bus stops, shelters, and benches within ½ mile of the Precise Plan Area. The specific location and type of improvements will be determined by the City, SamTrans, and San Mateo County in consultation with the Precise Plan Area applicant(s).

Bicycle-related improvements to be funded by the applicant as provided in Sections I.C and D.5 above will provide bicycle linkages from the Precise Plan Area to the downtown and the Caltrain Station and, consistent with the San Mateo County and Redwood City bicycle plans, to bicycle facilities located north and south of Redwood City. The specific location and type of improvements will be determined by the City in consultation with the Precise Plan Area applicant(s).

- H. UTILITIES AND SERVICES – Major facilities and services policies are summarized below. A number of the requirements are based on the *Stanford in Redwood City Precise Plan EIR*. Additional information and detail is provided in supplemental reports, particularly the *EIR*. Requirements may be added as part of conditions of approval, prior to approval of a development permit or final map, and/or per other City procedures. Each phase of development shall provide an appropriate proportional level of infrastructure improvements.

1. Potable Water

- a. Water Supply – As required by State law SB 610, a Water Supply Assessment (WSA) must be prepared for commercial office projects employing 1,000 or more persons or containing 250,000 or more square feet. SB 610 requires preparation of a WSA in conjunction with CEQA evaluation requirements. The City prepared a WSA, dated February, 2007, that was revised

and approved by the City Council on July 13, 2009. The approved WSA is incorporated in the *Stanford in Redwood City Precise Plan EIR*.

The City has entered the full amount of the estimated project water demand into the City of Redwood City's water supply planning process; however, the *Precise Plan* does not reserve a right of water allocation to the project (see Chapter IV, Section XI for discussion of water use).

- b. Emergency Storage and Fire Protection – The City is collecting developer contributions and CIP funds for the construction of a 3-million-gallon water storage tank to address emergency water supply in the Main City Service Area in the event of a prolonged interruption in SFPUC water supply. At the time of this *Precise Plan*, the City's method for determining an applicant's contribution is an equivalent dwelling unit formula that assigns 490 EDU to the net growth associated with proposed development under the *Precise Plan*, which represents 15% of potential net growth in the City's Main City Service Area. Based on this formula, the applicant's proportionate share of the emergency water storage tank costs is \$1.5 million for the full 1,518,000 square feet allowed on Blocks A - E, as of the date of this *Precise Plan*. This amount shall be increased based on increases in the Construction Cost Index as established from time to time by the Engineering News Record.

Unless otherwise agreed by the City and Stanford in the contemplated development agreement described in Chapter IV – Implementation, applicant(s) shall pay a portion of the required funds to the City at the time of issuance of each building permit for construction of additional building area within Blocks A - E. The amount of the payment due shall be based on the ratio of the square footage that is the subject of the building permit, as compared to the total net new building area

square footage for Blocks A – E authorized by this *Precise Plan* (i.e. 982,000 sq ft).

- c. Water Distribution – Provision of water service to the Precise Plan Area shall include modifications to the water delivery and storage system in the vicinity. New Development shall:
1. Pay all applicable, mandatory City development and connection fees,
 2. Construct all necessary water system facilities as identified in the City-approved version of the Stanford in Redwood City Engineering Report (June 26, 2009) to serve demand that exceeds current consumption, and
 3. Submit all final project water system design specifications and construction modifications for approval by the City's Building, Infrastructure, and Transportation Department.
- All water delivery and storage infrastructure shall be designed and constructed to meet the City's Hydraulic Design Criteria and Engineering Standards. The Standards edition shall be the current latest version at the time of building permit issuance of each phase of development.
- d. On-Site Water and Fire Protection System – shall be constructed or paid for by the applicant. The applicant and its successors shall own and maintain on-site water and fire protection systems from the meter to the buildings or other structures.
- e. Water Capacity Charge, Facilities Fees, and Other Fees – Development shall pay connection/impact fees that may be applicable at the time prior to issuance of building permits for each phase of development.
- f. Off-Site Water Distribution Facilities – Precise Plan Area development shall provide all facilities needed to serve *Precise Plan* build-out as appropriate for each phase as

it develops. The infrastructure needed to serve campus buildout of Blocks A-E will be determined prior to the Initial Phase, and plans for these facilities shall be approved by the City prior to approval of the Initial Phase. As noted in the Stanford in Redwood City Engineering Report, some facilities needed to serve buildout will need to be constructed as part of the Initial Phase or in other phases preceding buildout.

2. Recycled Water

- a. Plumbing – All new occupied structures shall be dual-plumbed for indoor use of recycled water for toilet flushing and applicable, self-contained cooling systems. Such plumbing shall be separate from potable plumbing and shall be served by separate recycled water meters, in full compliance with Title 22 requirements and plumbing codes. All new exterior landscaping shall be designed for the use of recycled water in full compliance with California Title 22 requirements, and shall be served by recycled water meters that are separate from indoor recycled water meters and all potable water meters.
- b. Service Area – The Precise Plan Area is not within the City of Redwood City’s Recycled Water Service Area. The Service Area will be amended to include the Precise Plan Area, and a distribution system shall be constructed and paid for by the applicant as part of Precise Plan development of Blocks A – E for the use of recycled water in the Precise Plan Area.
- c. System Connections – The applicant shall extend or pay for extension of the existing recycled water system to the Precise Plan Area as part of the Initial Phase. The amount that the applicant is required to fund for the recycled water line is based upon the cost of extending the line to the closest point of potential connection, which is across US 101 near Blomquist Avenue. The cost of the line also shall be based on the size of the line necessary to serve build out of Blocks A - E.

- d. Landscaping – shall be irrigated with recycled water and shall conform to City Water Conservation guidelines.

3. Waste Water

- a. Treatment and Transmission Capacity – If the Fair Oaks Sewer Maintenance District (FOSMD) determines that it has not obtained sufficient SBSA dry weather flow treatment capacity to serve Blocks A-E, the City will purchase SBSA dry weather flow treatment capacity and shall be reimbursed by applicant(s) commensurate with development that results in net new wastewater treatment demand.
- b. Local Collection System Capacity – At the time that construction of Net New Development on Blocks A-E is proposed, the applicant’s engineer shall work with FOSMD and the San Mateo County Engineering Department to verify that the local Fair Oaks Sewer Management District sewer collection system has adequate capacity for the proposed increment of development’s peak wastewater flow rate. If an inadequacy is found and the proposed increment of development represents the entire cause of the capacity shortfall, the applicant shall bear full responsibility for funding the required improvements to FOSMD’s system; if the proposed increment of development does not represent the entire cause of such an incapacity, the applicant shall pay its fair share of the cost of such improvements.
- c. On-Site Facilities – To better facilitate waste water service connections, conform to new building(s) layout, and reduce infiltration and inflow, the applicant shall replace all existing sewer laterals and sewer lines within Blocks A-E , including 2,530 feet of 6-inch vitreous clay pipe and 740 feet of 18-inch vitreous clay pipe. Each New Development shall replace all segments of vitreous clay pipe within Blocks A-E that serve that New Development.

4. Storm Drainage and Flood Protection – The Precise Plan Area currently has a developed system of in-ground storm drains. The system drains northwest to the City-operated Douglas Avenue pumping station. Collected storm water runoff is pumped under US 101 via a force main to the Bayfront Canal. However, the station has capacity for a one- or two-year storm only. When this capacity is exceeded, water backs out of the storm drain system and ponds within low-lying areas along the freeway frontage, including the Precise Plan Area.

Given the local drainage issues, continued flooding in the area is to be expected, and storm water management is an essential element of Precise Plan Area development. The following requirements apply:

- a. Off-Site Inundation – Any off-site inundation from Blocks A-E shall not be increased compared to existing conditions. Finished grades within the portions of the Precise Plan Area outside proposed building envelopes shall be set at an average elevation that maintains, at a minimum, the existing volume of on-site storm water detention storage, until such time as the City’s downstream discharge constraints (e.g., the Bayfront Canal) are resolved and the storage is no longer needed to protect project improvements and improved properties in the adjoining neighborhoods.
- b. Site Grading – Project grading requirements shall be based on a detailed, design-level study prepared by the applicant’s engineer and approved by the City. The study shall document the volume of storage currently available on the project site and establish proposed grades to replicate the existing storage condition following construction of proposed new buildings. The required campus Greenway and publicly accessible open space area adjacent to Spinas Park are of key importance as areas that should be considered for storm water storage. The storm water detention potential of the publicly accessible open space and the

Greenway shall be incorporated into the design-level study.

- c. Flood-Proofing and Protection – Improvements that are not elevated above the 100-year flood elevation shall be flood-proofed or otherwise protected from the effects of high water. Project applicant(s) shall develop a program to notify employees, customers, and other users that vehicles parked within potential flood areas should be moved if it is determined that flooding conditions are imminent.
- d. Pollution Control – Precise Plan Area development shall comply with local, state, and federal pollution control requirements and design and engineering standards in place at the time of development applications(s). Precise Plan Area development is currently subject to Regional Water Quality Control Board paragraph “C.3” of the Municipal Regional Permit requirements. It is also subject to the EPA NPDES “General Construction Permit.” A Storm Water Pollution Prevention Plan (SWPPP) must be prepared before construction begins, and should be prepared during the planning and design phases of development. The SWPPP must include Best Management Practices (BMPs) to be incorporated in project landscaping, and engineering specifications to be implemented during construction to control contamination of surface flows and the potential discharge of pollutants from the site.

Additionally, the SWPPP must describe measures to prevent or control pollutants in runoff after construction is complete, and include an Operations and Maintenance Plan providing for ongoing inspection and maintenance of these measures.

- 5. **Easements** – Public service easements (PSEs) shall be provided to provide access to all publicly owned and maintained utilities. Emergency access easements (EAEs) shall be provided as necessary over private streets and portions

of walkways, paseos and other areas as determined by the City.

- 6. Publicly Accessible Private Open Space Adjacent to Spinus Park** – Applicant shall designate and improve a minimum 2.4-acre land area within Block A adjacent to Spinus Park for publicly accessible private open space use. Applicant shall prepare plans for improvement of the publicly accessible private open space in consultation with City planning staff. Improvements will include such items as safety lighting, irrigation systems, storm water detention facilities, hardscape improvements and landscaping. Signage designating the area as publicly accessible private open space shall be provided. It is anticipated that a development agreement between Stanford and the City will address the applicant’s obligation to maintain, repair and replace the open space area improvements and landscaping over time, as well as the rights of the public to access the open space area.

III. Capital Improvements

- A. CAPITAL IMPROVEMENTS PHASING – New curbs, gutters, sidewalks, utility undergrounding, street trees, lighting, and other street-related capital improvements required by the *Precise Plan* shall be installed in block-frontage increments. Any New Development within a *Precise Plan*-designated block shall require improvement of the entire block frontage.

Intersection improvements, particularly signalization, may be phased to accompany development-generated traffic. A schedule to guide intersection signalization-related improvements based on the amount of Precise Plan Area development is provided in Chapter IV, Implementation. The Phasing/Implementation Summary Table in Chapter IV outlines the basic capital improvements, facilities, and programs required by the *Precise Plan* and when they shall be provided.

- B. NEW STREET WIDTHS / PLAN LINES – The *Precise Plan* requires extension of Hurlingame, Warrington, and Barron Ave-

nues to promote vehicle, pedestrian, and bicycle access. It also requires establishment of a setback along Broadway to accommodate potential future widening for enhanced transit and/or potential streetcar service. Along Bay Road, a four-foot expansion/dedication of right-of-way and a four-foot utility setback/easement are required. Dimensions are flexible and may be changed, subject to City review, if necessary to accommodate subsurface utility conditions. Angle parking is required along Barron Avenue to support public use of the new open space area required adjacent to Spinus Park. Street widths, setbacks, and specific landscape and other frontage improvements are illustrated by the sketch diagrams on pages 51 through 59.

	<u>Hurlingame Ave & Warrington Ave</u>	<u>Barron Ave</u>
Right-of-Way	64 feet	84 feet
Curb-to-Curb	40 feet	60 feet
Travel Lanes	12 feet	12 feet
Parking	8-foot curbside	18-foot angle
Sidewalks	12 feet	12 feet

- C. INTERSECTION IMPROVEMENTS IN THE PRECISE PLAN AND SURROUNDING AREAS – Traffic-related improvements are needed to accommodate various build-out phases of the Precise Plan Area. The most important of these are intersection improvements, listed below. They reflect the *Redwood City General Plan’s* policies to promote a balance of traffic accommodation and pedestrian and bicycle access, and specific mitigation measures described in the *Stanford in Redwood City Precise Plan EIR*.

Enhanced pedestrian crossings and related improvements should be installed in conjunction with *Precise Plan*-defined street extensions and other improvements as determined by the City. Crossing improvements along the Broadway and Bay Road corridors shall be identified by location with the first Planned Community permit submittal. Improvements such as

countdown signals, special crosswalk paving, striping, or bulb-outs may be appropriate for early installation. The location and timing of said improvements will be evaluated and implemented as early in the project phasing as deemed feasible and said locations and timing will be reevaluated with each subsequent phase of the development.

The location and configuration of corner bulb-outs are to be determined by the City based on assessment of right turn requirements. All improvements shall be matched by complementary improvements on the other side of the crosswalk(s) even if they are outside the Precise Plan Area. Improvements to State Route 84/Woodside Road would require Caltrans review and approval. Improvements in unincorporated areas along Bay Road would require coordination with the County of San Mateo.

The *Redwood City General Plan* policies encourages alternative approaches to typical intersection configuration and signalization, including, but not limited to, the use of roundabouts. Where these alternatives are appropriate they are listed below. The *EIR* addresses these approaches where relevant. Improvements the City should consider implementing in addition to those recommended as mitigations by the *EIR* or identified in the City's TIF program are also noted below. These could include striping of additional crosswalks, corner curb bulb-outs, and other features that promote pedestrian circulation and/or traffic calming. Applicant is not required to fund or provide intersection improvements described below that are outside the Precise Plan Area and not part of required CEQA mitigation measures.

BROADWAY

- 1. Broadway / Woodside Road** – If approved by Caltrans, the applicant shall fund or construct the following improvements:

The westbound approach on Broadway shall be re-striped to include one left-turn lane, one through lane, one shared through/right-turn lane, and one right-turn lane. Signage

shall be provided indicating that the “right-most” right-turn lane is to southbound 101 only. In addition, the eastbound travel lines shall be re-striped to include two left-turn lanes and one shared through/right-turn lane. Eastbound and westbound signal phasing should be changed from split phasing to protected phasing. Crosswalks should be considered at all intersection legs.

These improvements would require Caltrans review and approval. Pursuant to Caltrans Deputy Directives 64 and 64-R1, requiring facilitation of multi-modal travel, it is possible that the above intersections improvements would also be required to include such features as pedestrian countdown signals, an emergency vehicle preemption system, reconstruction of corner radii to reduce pedestrian crossing distances, pedestrian median refuges, bike lanes, and bike detectors.

- 2. Broadway / Charter Street** – The applicant shall fund or construct the following improvements:

The intersection shall be signalized with protected phasing on all approaches. The northbound and southbound approaches on Charter shall be re-striped to include one left-turn lane and one shared through/ right-turn lane. The eastbound and westbound approaches on Broadway shall be re-striped to include one left-turn lane, one through lane, and one shared through/right turn lane. Parking (50 curbside parking spaces) would need to be removed from all intersection legs to accommodate travel lanes. Crosswalks and pedestrian countdown signals should be provided at all intersection legs.

- 3. Broadway / Douglas Avenue** – The applicant shall fund or construct the following improvements:

The intersection shall be signalized with protected phasing on all approaches. (Douglas Avenue is considered north-south and Broadway is considered east-west.) In addition to signalization, parking spaces (15 spaces) shall be removed from the north and south legs to accommodate

additional travel lanes. The southbound approach shall be re-stripped to include one left-turn lane, one through lane, and one right-turn lane. The northbound approach shall be re-stripped to include two northbound left-turn lanes and one shared through/right-turn lane. The eastbound and westbound approaches shall each be re-stripped to include one left-turn lane and one shared through/right-turn lane.

Crosswalks and pedestrian countdown signals should be provided at all intersection legs. Corner curb bulb-outs at the east side of the intersection are recommended. Bulb-outs should extend approximately 6 feet.

4. **Broadway / Hurlingame Avenue** – Corner curb bulb-outs at south side of intersection, mid-block bulb-out on north side of Broadway. Bulb-outs should extend about 6 feet.
5. **Broadway Mid-Block** – If a Transit Hub is established mid-block between Hurlingame and Warrington Avenues, a mid-block crosswalk should be established with signalized and/or flashing crosswalk lights. As part of crosswalk construction, mid-block bulb outs on north and south sides of Broadway should be installed if feasible given the ultimate cross-section determined for Broadway.
6. **Broadway / Warrington Avenue** – Corner curb bulb-outs at all four corners recommended. Bulb-outs should extend approximately 6 feet. If vehicle and/or pedestrian activity at this location is heavy, a crosswalk warning device/signal may be required, as determined by the City.
7. **Broadway / Barron Avenue** – Corner curb bulb-outs are recommended. Bulb-outs should extend approximately 12 feet at angle parking along Barron, 6 feet at parallel parking along Broadway. A signalized and/or flashing crosswalk may be required, as determined by the City.
8. **Broadway / Second Avenue** – The applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure

by paying the TIF in effect at the time of payment and issuance of a building permit:

The intersection shall be signalized. Given its location as a neighborhood gateway and the access needs of adjacent Fire Station No. 11, special attention should be given to intersection configuration and related improvements. In addition to improvements required of Precise Plan Area development, the City should consider installation of corner curb bulb-outs to enhance pedestrian circulation, and Neighborhood Gateway-related signage and other features that deter cut-through traffic. These improvements could be part of the NSEP or provided separately by the City.

BAY ROAD

9. **Bay Road / Woodside Road** – If approved by Caltrans, the applicant shall fund or construct the following improvements:

The westbound approach on Bay Road shall be re-stripped to include two left-turn lanes and one shared through/right-turn lane. (Woodside Road is considered north-south and Bay Road is considered east-west.) The eastbound approach shall be re-stripped to include one left-turn lane, one through lane, and one shared through/right-turn lane. In addition, the signal phasing on the eastbound and westbound approaches shall be modified from permitted phasing to protected phasing. Crosswalks should be considered at all intersection legs.

These improvements would require Caltrans review and approval. Pursuant to Caltrans Deputy Directives 64 and 64-R1, requiring facilitation of multi-modal travel, it is possible that the above intersection improvements would also be required to include such features as new crosswalk and pedestrian signals across Bay Road on the west side of Woodside Road, re-stripping of two crosswalks on Woodside Road to provide straight and shorter walking distances, pedestrian median refuges on Woodside Road,

curb ramps, pedestrian count-down signals, an emergency vehicle preemption system, reconstruction of corner radii to reduce pedestrian crossing distances, bike lanes, and bike detectors.

In addition, the applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure by paying the TIF in effect at the time of payment and issuance of a building permit: An additional west-bound through lane shall be added and the shared through/ right-turn lane converted to a right-turn lane. (Woodside Road is considered north-south and Bay Road is considered east-west.)

- 10. Bay Road / Charter Street** –The applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure by paying the TIF in effect at the time of payment and issuance of a building permit:

The intersection shall be signalized with protected phasing on the eastbound and westbound approaches on Bay Road, and permitted phasing on the northbound and southbound approaches on Charter Street. In addition to signalization, the eastbound and westbound approaches shall be re-striped to each include one left-turn lane and one shared through/right-turn lane. Crosswalks and pedestrian countdown signals should be provided at all intersection legs.

An alternative approach would be to convert the all-way stop controlled unsignalized intersection to a single lane roundabout. Standard roundabouts are at least 110 feet in diameter. Smaller roundabouts may operate efficiently down to 80 feet in diameter. The existing intersection at Charter Street and Bay Road would allow up to an 80-foot diameter roundabout. If the design work shows that the

80-foot diameter roundabout would not require the acquisition of additional right-of-way and would not create additional safety hazards for motorists, pedestrians, or bicyclists compared to signalization of this intersection, and if substantial evidence at the time this roundabout is proposed shows the roundabout would not divert traffic to other intersections, the roundabout shall be considered feasible and may be substituted for signalization.

Notwithstanding the two prior paragraphs above, if, at the time this improvement is required (see Chapter IV, Intersection Improvement Table), the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement. In that event, the City shall enter into a reimbursement agreement with applicant pursuant to which applicant may be reimbursed for improvement costs that exceed the applicant's fair share. The source(s) of the reimbursement will be developer fair share funds, if any, collected within three years from the effective date of the reimbursement agreement.

- 11. Bay Road / Douglas Avenue** – The applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure by paying the TIF in effect at the time of payment and issuance of a building permit:

The intersection shall be signalized with protected phasing on the eastbound and westbound approaches on Bay Road. In addition to signalization, both the eastbound and westbound approaches shall be re-striped to include one left-turn lane and one shared through/right turn lane on both the eastbound and westbound approaches. Crosswalks and pedestrian count-down signals should be provided at all intersection legs. Corner curb bulb-outs are recommended. Bulb-outs should extend approximately 6'.

12. Bay Road / Fifth Avenue – The applicant shall pay the TIF in effect at the time of payment and issuance of a building permit. The signalization of this intersection is a project that is included in the City’s Traffic Impact Fee Program (2000). Crosswalks should be considered at all intersection legs and funded through the TIF program or funded by the City by other available means. Alternatively, the City could change its TIF project list to substitute the following improvements:

Convert the all-way stop controlled intersection to a single lane roundabout. The existing road widths at Fifth Avenue and Bay Road would allow up to an 85-foot diameter roundabout. If the design work shows that the 85-foot diameter roundabout would not require the acquisition of additional right-of-way and would not create additional safety hazards for motorists, pedestrians, or bicyclists compared to signalization of this intersection, and if substantial evidence at the time this roundabout is proposed shows the roundabout would not divert traffic to other intersections, the roundabout shall be considered feasible and may be substituted for signalization.

Notwithstanding the two prior paragraphs above, if, at the time this improvement is required (see Chapter IV, Intersection Improvement Table), the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement. In that event, the City shall enter into a reimbursement agreement with applicant pursuant to which applicant may be reimbursed for improvement costs that exceed the applicant’s fair share. The source(s) of the reimbursement will be developer fair share funds, if any, collected within three years from the effective date of the reimbursement agreement.

13. Hurlingame / Bay Road – The applicant shall fund or construct high visibility crosswalks along Bay Road to be aligned with Hurlingame. These crosswalks could include

bulbouts, high visibility paint, paving textures/treatments, or pedestrian flashing warning light systems.

14. Barron / Bay Road – The applicant shall fund or construct high visibility crosswalks along Bay Road to be aligned with Hurlingame. These crosswalks could include bulbouts, high visibility paint, paving textures/treatments, or pedestrian flashing warning light systems.

INTERSECTION IMPROVEMENTS AT OTHER LOCATIONS

The improvements listed below were identified by the *EIR* to address the cumulative effects of Precise Plan Area development combined with other planned development on intersections that are outside of the greater Precise Plan Area.

15. Woodside Road / Veterans Boulevard – The applicant shall pay the TIF in effect at the time of payment of issuance of a building permit. The addition of an eastbound through lane to Veterans Boulevard is a project that is included in the City’s Traffic Impact Fee Program (2000). (Woodside Road is considered north-south and Veterans Boulevard is considered east-west.) This improvement would require Caltrans review and approval.

16. Woodside Road / Middlefield Road – The applicant shall pay the TIF in effect at the time of payment of issuance of a building permit. An additional southbound through lane on Woodside Road is a project that is included in the City’s Traffic Impact Fee Program (2000). (Middlefield Road is considered east-west.) This improvement would require Caltrans review and approval.

17. Middlefield Road / Douglas Avenue – The applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure by paying the TIF in effect at the time of payment and issuance of a building permit:

The eastbound and westbound approaches shall be modified from permitted phasing to protected phasing. (Douglas Avenue is considered north-south.) Crosswalks and pedestrian countdown signals should be considered at all intersection legs and funded through the TIF program or funded by the City through other means.

- 18. Marsh Road / Scott Drive** – The applicant shall contribute its fair share to a mitigation fund established to pay for the cost of the following improvements, or if the City adds the improvements to its traffic impact fee program (TIF) project list, the applicant would implement this measure by paying the TIF in effect at the time of payment and issuance of a building permit:

The eastbound approach on Scott Drive shall be re-striped to include one shared through/left-turn lane and one right-turn lane. (Marsh Road is considered north-south and Scott Drive is considered east-west.) This improvement would require City of Menlo Park review and approval.

- D. **UTILITY UNDERGROUNDING** – Utility undergrounding shall be incorporated as part of all new street and/or site construction consistent with City policies. Location of underground utilities shall be established to accommodate frontage street trees and minimize root zone conflicts. High-voltage power lines along the north side of Bay Street shall be located in a designated setback and easement area; see page 59.
- E. **WATER SUPPLY** – A summary of water supply-related requirements and improvements is provided in section II, above. See the *Stanford in Redwood City Precise Plan EIR* and the *Stanford in Redwood City Engineering Report* (June 26, 2009).

Chapter IV – Implementation

The *Stanford in Redwood City Campus Precise Plan* contains both policy and capital improvements-related elements. This Chapter describes the actions and/or legal mechanisms required to put these elements into effect. Except as otherwise indicated, the policies in this chapter apply to development of Blocks A-E, and do not apply to development of Blocks F and G. Policy-related actions include amendments to the City of Redwood City Zoning Map and Zoning Ordinance, establishment of street plan lines, and approval of a Parcel and/or Subdivision Map(s).

Capital improvement-related actions include installation of street trees, street lighting, and intersection and street width modifications, and utilities. These improvements shall be shown on Improvement Plan(s) that are required with each development application. These actions are separate from adoption of the *Precise Plan*. The Phasing/Implementation Summary Table on the following pages outlines the basic capital improvements, facilities, and programs required by the *Precise Plan* and when they shall be provided.

Each phase of development shall adhere to the latest City and other applicable jurisdiction regulations, standards, policies, building codes, and fees in place at the time of that phase of development, unless otherwise agreed to in a development agreement.

I. Anticipated Development Agreement

At the same time this *Precise Plan* is approved, Stanford University and the City anticipate approval of a development agreement for Blocks A-E. Among other terms, it is contemplated that this agreement will provide additional benefits to the community, including, but not limited to:

- Meaningful, substantial financial contributions to the Neighborhood Streets Enhancement Program described in Chapter III.

- Meaningful, substantial financial contributions to enhanced bike lanes and linkage improvements as described in Chapter III.
- Meaningful, substantial financial contributions to a solution to local area flooding problems in the vicinity of the Precise Plan Area.
- Stanford-sponsored business development and education programs in Redwood City.

In exchange for such commitments, and in recognition of the fact that development of the campus is anticipated to occur in multiple phases, it is anticipated that the agreement would preserve the zoning created by the *Precise Plan* for a number of years commensurate with the anticipated build out period, and otherwise provide certainty to the applicant that full development of Blocks A-E will be allowed by the City.

II. General Plan Consistency

The *Precise Plan* is consistent with the *Redwood City General Plan's* “Commercial-Office Professional/Technology” and “Hospital” land use designations, as well as its goals and policies for land use, circulation, and other policy areas. A General Plan Amendment is not needed to ensure *Precise Plan* consistency with the *Redwood City General Plan*.

III. Zoning Consistency

The *Precise Plan's* policies and guidelines are implemented by rezoning the area to the Planned Community (P) district. For any issue not addressed in the *Precise Plan*, relevant sections of the Zoning Ordinance would apply. If there is a conflict with the regulations of the Zoning Ordinance or with other City Standards the *Precise Plan* shall apply.

The Industrial-Restricted (IR) zone currently applies to all properties located within the Precise Plan Area. The P district and *Precise*

Plan are intended to supersede the IR zoning designation, and the Zoning Ordinance Map will be amended to replace the Industrial-Restricted (IR) designation for the Precise Plan Area with a Planned Community (P) designation.

IV. New and Modified Streets

The *Precise Plan* proposes to extend Hurlingame, Warrington, and Barron Avenues within the Precise Plan Area to accommodate vehicle, pedestrian, and bicycle circulation, and curbside parking. It also proposes new pedestrian crossings and bulb-outs to make pedestrian movement safe and inviting. In order to provide for coordinated development of this area, plan lines for these modified streets and intersections are to be established and adopted as part of engineering plans for the Initial Phase. Street dedications or easements shall occur as individual development phases proceed.

Potential new roadway configurations are proposed by the *Precise Plan* for Broadway and for Bay Road. By approving the *Precise Plan*, the City is not approving a roadway configuration for Broadway or for Bay Road. Any changes in the roadway configuration for Broadway would be considered as a separate action, independent from approval of the *Precise Plan*.

The City plans to study the feasibility of reconfiguring most of Broadway in the Precise Plan Area to include three vehicle lanes (two travel lanes and a left-turn pocket) rather than the existing four vehicle lanes, consistent with *General Plan* Program BE-57. The *Precise Plan* would not preclude this option and applicant would be required to develop consistent with such option to the extent it is selected by City. The *Precise Plan* depicts three potential configurations on pages 51-53, one with curbside parking and two without curbside parking. It is also possible that the configuration of Broadway through the Precise Plan Area would remain as it is today.

During the City's processing of the first Stanford in Redwood City PC Permit that requires installation of Broadway frontage improvements, the roadway configuration shall be reviewed and discussed with the applicant. If the City determines, at its discretion, that a new roadway configuration for Broadway is feasible, and selects

and approves such a configuration prior to or concurrently with approval of the first PC Permit noted above, then the applicant's frontage improvements shall accommodate the City-selected new roadway configuration rather than the current Broadway configuration.

Two potential roadway configurations for Bay Road are shown on page 59. One of the depicted configurations would include three vehicle lanes (two travel lanes and a left-turn pocket) and a bike lane adjacent to the Precise Plan Area. It is also possible that the configuration of Bay Road adjacent to the Precise Plan Area will continue to include four vehicle lanes and no bike lane. Any changes in the roadway configuration for Bay Road would be considered as a separate action, independent from approval of the *Precise Plan*. Refer to page 59 for Bay Road frontage improvement details for the three lane and four lane roadway scenarios.

V. Sustainability and Resource Efficiency

New Development shall employ sustainability strategies related to building construction, water conservation, energy efficiency, waste minimization, and product purchasing as noted in the *Stanford in Redwood City Precise Plan EIR*. The strategy elements include a commitment to a 30% reduction in energy use below California's May 2008 energy code requirements, and a 25% reduction in water use below May 2008 Title 24 standards, including recycled water for landscaping, toilets, and equipment.

Stanford has committed to using its University Guidelines for Sustainable Buildings for all future new buildings on Blocks A-E that Stanford constructs for its use. Stanford has promoted high sustainability standards as a key ingredient of its vision for the Precise Plan Area, and new development should incorporate more than minimum Redwood City Green Building Ordinance requirements in place at the time of *Precise Plan* approval. A complete list of sustainability measures is as follows:

Phasing / Implementation Summary Table

Improvement / Facility	Initiated By (Phase)	Coordination Required	Funding Responsibility	PP Page
1 New Streets Plan Lines	New Development	with City	applicant solely	65, 70, 77, 87
2 New Street Improvements	Proportional with New Development	with City	applicant solely	21, 23, 54-57, 60, 61, 77
3 Street Frontage Improvements	New Development; 1 side of street (full block) required minimum	with City	applicant solely	21, 25, 43, 51-59, 70
4 Broadway Improvements – Continuous Curbline, Trees, Lighting, etc.	New Development, 1 side of street (full block) required minimum	with City	applicant solely	21, 44, 51-53, 70
5 Intersection Improvements – PP Area and Cumulative	Proportional with Net New Development	with City, County, Caltrans	applicant, City TIF	61, 70-74, 90
6 Publicly Accessible Private Open Space Adjacent to Spinax Park	≥ 150,000 sf Net New Development, or sooner if provided for in Development Agreement	with City	applicant solely	23, 29, 69
7 Pedestrian Improvements – Crossings and Intersections, including Broadway and Bay Road crossings	Proportional with New Development and/or City initiated	with City, County	applicant, City, TIF	61, 66, 70-74
8 Transit Improvements – Bus stops, shelters, etc, within 1/2 mile	Funding when total development exceeds 1M sf GBA	with City, County, SamTrans	applicant solely	45, 62, 66
9 Potential Broadway Streetcar	City	with City	City	53, 64
10 Potential Neighborhood Gateways	Per NSEP	with City, neighborhood	applicant solely	44, 65
11 Greenway Segments	New Development ≥ 50% block FAR	with City	applicant solely	23, 28, 30, 41-43
12 Bicycle Ways	Funding at Initial Development, or sooner if provided for in Development Agreement	with City, County, Caltrans	applicant solely	62-64, 66, 81
13 TDM Shuttle Service	New Development	with City, existing shuttle service provider, JPB	applicant solely	62, 82
14 TDM Program Elements (multiple, including enhanced shuttle service)	Initial Development, or sooner if provided for in Development Agreement	with City, SamTrans, other PP Area development, yearly evaluation	applicant solely	62-64, 81-82
15 Neighborhood Street Enhancement Program (NSEP)	Initial Phase or sooner if provided for in Development Agreement	with City, neighborhood(s), County	applicant solely	64, 82
16 Recycled Water System Connection	Initial Development	with City	applicant solely	68

Improvement / Facility	Initiated By (Phase)	Coordination Required	Funding Responsibility	PP Page
17 Emergency Fire/Water Storage	Funding proportional with Net New Development (at building permit(s) application), or sooner if provided for in Development Agreement	with City	applicant, City fee program	67
18 Sewage Transmission and Collection Upgrade	Evaluate at each application for net new square footage and fund if necessary	with City, County, FOSMD	applicant, FOSMD fee program	65, 68, 82
19 On-Site Sewer Lines Upgrade	New Development, per Improvement Plan(s)	with City	applicant solely	65, 68, 82
20 Douglas Drainage Basin Flood Control Improvements	As provided by Development Agreement	City to coordinate with County FCD, adjacent cities	applicant, City	68
21 Water Supply Lines	Initial development, per WSA, Improvement Plan(s)	with City	applicant solely	65-67, 75, 91
22 Phasing Plans/Procedures	Per Precise Plan, Improvement Plan(s), Phasing Plan(s)	with City, County, FOSMD, FCD	applicant, other entities as appropriate	21-23, 30, 65, 70, 88
23 Transit Hub	Per approved Phasing Plan(s)	with City, SamTrans	applicant solely	29
24 Campus Center	Per approved Phasing Plan(s)	with City	applicant solely	29, 43
25 On-Site Child Care Facility	New Development ≥ 500,000 sf, or later if deferred by City to later phase of development	with City	applicant solely	29

FCD: San Mateo County Flood Control District
FOSMD: Fair Oaks Sewer Maintenance District
JPB: Peninsula Corridor Joint Powers Board
NSEP: Neighborhood Streets Enhancement Program

Note: "New Development," "Net New Development," and "Initial Development" are defined on page 17.

SUSTAINABLE BUILDING CONSTRUCTION

- Implement a comprehensive salvage and reuse plan for future demolitions.
- Develop and implement sustainability goals of up to 30% reduction of energy use below.
- California's energy code and up to 25% reduction of water use below Title 24 building standards (as of May 2008).
- Continue to use the University's Guidelines for Sustainable Buildings for all future new Stanford buildings.

WATER CONSERVATION

- Incorporate the necessary infrastructure for potential future water-saving measures into construction of new facilities (e.g., recycled water pipeline extension and dual plumbing for landscape and toilets to use non-potable water).
- Develop specific design guidelines for conserving and reusing water in new buildings and landscaping.
- Develop and implement sustainability goal of 25% reduction of water use below Title 24 building standards (as of May 2008).

ENERGY EFFICIENCY

- Require all new building projects to achieve energy performance at least 30% better than required by California's energy code (as of May 2008).
- Consider joining local utility renewable energy or offset purchasing programs.
- Explore opportunities for cost-effective renewable energy installations on the development site.

WASTE MINIMIZATION

- Develop an educational campaign for the development site promoting the 5 "R"s (reduce, reuse, recycle, buy recycled, rot).
- Educate the campus about waste reduction techniques.

- Develop a recycling program to include:
 - a. Solid waste
 - b. Paper and cardboard
 - c. Food waste collection program to collect organic waste
 - d. Bottles and cans
 - e. Collection of electronic waste.
- Support market development for recycling products by continuing to identify new waste materials within the development site and finding dependable recycling markets.
- Develop management processes to increase the reuse of capital assets (fixtures and furnishings), office supplies (staplers, file folders), and unwanted employee items.

ENVIRONMENTALLY PREFERABLE PURCHASING

- Implement a comprehensive educational program to teach employees about:
 - a. The benefits of full product use, reuse, and environmentally preferable purchasing, wherever possible;
 - b. The availability of 30% post-consumer content paper for preferable/default purchases, and the availability of other office products made with recycled content;
 - c. The advantages of Energy Star-qualified equipment when it is available; and
 - d. The array of products now made with biodegradable materials.
- Continue to negotiate favorable pricing from vendors of environmentally preferable products.
- Purchase products made locally when this is the most sustainable option.
- Encourage purchases from contracted suppliers in order to reduce and increase the efficiencies of deliveries on campus.

Verification of compliance with sustainability measures shall be performed at applicant's expense at the time of each PC development application submittal.

VI. Transportation Demand Management Program

Reduction of automobile-based trips relative to typical land use trip generation rates is part of the Stanford in Redwood City Project description and is included as a key goal of the *Precise Plan*. It is also a fundamental assumption of the traffic impact analyses prepared for the *Stanford in Redwood City Precise Plan EIR*. Projected peak period drive-alone trips associated with Blocks A-E were reduced by a factor of approximately 18% based on establishment of a strong Transportation Demand Management (TDM) program. It consists of the following elements:

BICYCLE-RELATED ELEMENTS

Applicant will pay the City a financial contribution in an amount that is anticipated to be identified in the contemplated development agreement, to fund planning and installation of bicycle linkages from the Precise Plan Area to the downtown and the Caltrain Station and, consistent with the San Mateo County and Redwood City bicycle plans, to bicycle facilities located north and south of Redwood City. The specific bicycle linkages will be selected by the City in consultation with the applicant and may include one or more of the following routes which are depicted on the Priority Streets for Bicycle Improvements Diagram in Chapter III.

- Broadway through the campus to Charter Street to connect to the City's existing and planned bike lanes
- Bay Road from Marshall Street/Beech Street to Marsh Road
- Middlefield Road from Hurlingame Road to Encina Avenue (City of Atherton border)
- Douglas Avenue and 2nd Avenue from Broadway to Middlefield Road
- 5th Avenue from Rolison Road to El Camino Real

Applicant shall pay the full amount of the bicycle linkage payment to the City at the time of building permit issuance for any Net New Development. The applicant shall also participate in the City's Bike Share Program or a similar program.

PROMOTING ALTERNATIVE FORMS OF TRANSPORTATION

- Participate in or operate a shuttle service during commute peak periods to and from the Redwood City Caltrain Station.
- Offer subsidized transit passes to employees.
- Implement a vanpool program.
- Implement a carpool program.
- Create preferred parking for vanpools and carpools.
- Provide a commute assistance center offering one central location for transit and commute alternatives information.
- Conduct periodic surveys of employees to examine the use of alternative transportation and best practices.
- Consult with SamTrans to improve existing bus service to the project.
- Make selected improvements to the existing bus infrastructure (e.g., stops, shelters, benches) within 1/2 mile of the project site. These improvements will be within the existing public right-of-way. The specific location of the improvements will be determined by Redwood City in consultation with SamTrans and the applicant.
- Work with the Peninsula Traffic Congestion Relief Alliance (commonly referred to as the "Alliance") to develop a Transportation Action Plan.

SERVICES FOR COMMUTERS

- Provide an "emergency ride home" program for commuters using alternative transportation modes (transit, carpool, vanpool).
- Provide a program that offers installation of high bandwidth connections to the Internet in qualified employees' homes to facilitate telecommuting.
- Install video-conference centers within conference rooms.
- Provide a program that offers a compressed work week schedule to applicable staff.

- Provide a program that offers alternative work hours to applicable staff.
- Provide on-site amenities, accommodations, and programs such as child care credits and facilities, automated teller machines, fitness center, sundries shop, etc, that encourage employees and visitors to leave their cars at home.
- Provide a car sharing program, providing vehicle access to employees who use alternative commute methods and need a vehicle to attend to personal or business related activities.
- Offer participation in the project's Transportation Demand Management programs to existing development and employers in the Precise Plan Area (i.e., Stanford Hospital and Clinics and 550 Broadway).

VII. Neighborhood Streets Enhancement Program

The applicant has volunteered to fund the Neighborhood Streets Enhancement Program (NSEP) with a meaningful and significant financial contribution, the specific amount of which is expected to be included in the anticipated development agreement between Stanford and the City. The City would keep the NSEP funds in a separate account, and would use the funds to study, implement and provide street improvements within the surrounding residential neighborhoods of Friendly Acres, Redwood Village, and North Fair Oaks. The timing of payments by the applicant would be as follows, unless otherwise specified in the contemplated development agreement:

- First payment to be provided within 30 days of the effective date of the development agreement. These funds could be used by the City to facilitate community outreach to select improvements to be funded through the NSEP, as well as to evaluate and implement an initial set of improvements that could address existing neighborhood concerns prior to development of the Stanford in Redwood City campus.
- Second payment to be provided prior to issuance of the first building permit for development of Blocks A-E. These funds could be used by the City to evaluate and implement addition-

al improvements identified during the City's outreach process, including improvements designed to address neighborhood effects from increased traffic.

- Third payment to be provided prior to issuance of a certificate of occupancy for any building that would cause the total gross building area of Blocks A-E to exceed 1 million square feet. These funds could be used by the City to evaluate and implement further improvements identified during the City's outreach process and/or improvements designed to address neighborhood concerns not yet anticipated at the time of the Initial Phase.

The City would be responsible for determining the appropriate use of the NSEP funds, in consultation with the residential neighborhoods of Friendly Acres and Redwood Village, and in consultation with San Mateo County with respect to the North Fair Oaks neighborhood. The City also will be responsible for studying and implementing any selected improvements. The combined cost of City studies shall not exceed 15% of the total NSEP fund.

VIII. Shuttle Service

Applicant shall provide or participate in a daily week-day shuttle service during peak commute hours, except during periods, if any, when less than 50% of the then-existing gross building area within Blocks A-E is occupied. Notwithstanding the foregoing, if at least 400,000 square feet within Blocks A-E is occupied, the shuttle service shall be in operation. The shuttle service requirement may be satisfied through participation in a larger area wide shuttle service, if available.

IX. Financing & Maintenance of Capital Improvements

Utility and roadway improvements within Blocks A-E will be installed by the applicant(s) commensurate with development phasing. Utility main lines and utility laterals from the main lines to the meters, including recycled water, fire water, sanitary sewer and potable water lines, will be installed by the applicant(s) and owned

and maintained by the City, Fair Oaks Sewer Maintenance District or other agency(ies), as applicable. Laterals from the meters to onsite buildings will be owned and maintained by the applicant(s).

Ancillary roadway improvements, including street lights, sidewalks, and planter strips within the public rights-of-way on Blocks A-E will be installed by the applicant(s) and owned and maintained by the City, except that the applicant(s) shall install and maintain the street trees and grates within the public right-of-way along the frontages of each of Blocks A-E.

As depicted in the Potential Development Phasing Diagram in Chapter II, the extensions of Hurlingame, Warrington and Barron Avenues shall be public streets between Bay and Broadway. However, Hurlingame Avenue may be a pedestrian paseo if deemed appropriate by the City in future phases, in which event it would be privately owned and maintained. Warrington Avenue north of Broadway is planned as a private drive with public access. The City will own and maintain all public streets. The applicant(s) will own and maintain all private streets, paseos and driveways.

Storm drainage improvements within public streets will be installed by the applicant(s) and owned and maintained by the City. Storm drainage improvements on privately-owned property shall be installed, owned and maintained by the applicant(s).

One or more public improvement agreements will be entered into between the City and the applicant(s) setting forth the terms by which applicant(s) will construct and dedicate to City the publicly-owned utility and roadway improvements, including requirements for performance, labor and materials and warranty security.

X. Administration

Upon application, all proposed development within this Precise Plan Area shall be evaluated for consistency with this *Precise Plan* as it exists now or as it may later be amended. Minor development that is generally consistent with the *Precise Plan* may be evaluated by the Planning Director. Upon granting of a PC Permit, the following minor amendments to a PC Permit may be administratively approved by the Planning Director or his/her designee: minor sign

programs, specific signs, and minor site changes and minor adjustments to building materials and building uses that the Planning Director or his/her designee deems in conformance with the *Precise Plan*. Major development (e.g., development involving areas of one acre or more) must be evaluated by the Planning Commission.

This *Precise Plan* is an amendment to the City's Zoning Ordinance and covers an area of approximately 48.3 acres, with approximately 35 acres owned by Stanford University. The *Precise Plan* is consciously designed to create a 'policy envelope' rather than one unique site plan. Subsequent Planned Community (PC) Permit submittals will be evaluated against the *Precise Plan's* goals, development standards and urban design guidelines.

Development within the Precise Plan Area shall be approved by a Planned Community (PC) Permit issued in accordance with this *Precise Plan*. This PC Permit may cover the entire Precise Plan Area, or only a part. All PC Permit applications shall demonstrate consistency with the *Precise Plan's* goals and development standards and with the intent of its urban design guidelines.

PC Permits for all development shall be reviewed by staff and recommended to the Planning Commission for final approval. The Planning Director may also refer the submittal to the Architectural Advisory Committee (AAC) for its recommendation. Submittals for PC Permits made after adoption of this *Precise Plan* shall consist of sufficient detail to enable staff to determine conformity with the policies of this *Precise Plan*. Applications for PC Permits shall contain the information and follow the process described below. To the extent that the regulations regarding review of PC Permits set forth in this *Precise Plan* differs from the provisions of Article 52 of the Zoning Ordinance, this *Precise Plan* shall control.

PC PERMIT CONCEPT PLANS

1. For each PC Permit for Blocks A - G, the applicant shall submit Concept Plans to City staff for review. These Concept Plans may consist of diagrammatic sketches and tracings sufficient to communicate the applicant's basic intentions. Concept Plans shall be to scale and must at a minimum indicate building heights, entrances, basic site layout, parking supply and con-

figuration and off-site building and access relationships. Concept Plans will not constitute formal application. City staff shall have no less than 30 working days to review and comment on the Concept Plans prior to the applicant submitting a formal application, during which time the applicant shall meet and confer with City staff about refinements to the Concept Plans. Up to 30 days may be required for relatively large development phases; less review time would be required for relatively small development phases.

2. Depending upon results of the Concept Plan Review, applicants may elect to continue refining plans with City staff or proceed to prepare and submit a PC Permit application and start the formal application process. Plan refinement with City staff is strongly recommended as a means to work out *Precise Plan* inconsistencies prior to submitting a PC Permit application.
3. To the extent allowed by this *Precise Plan*, PC Permits shall delegate authority to the Community Development Director or his or her designee to approve minor site and building changes in response to unanticipated site/field conditions, provided such changes are consistent with the intent of this *Precise Plan* and in furtherance of public health and safety.

PC PERMIT APPLICATION

The Application for any PC Permit on Blocks A – G shall include a cover letter detailing the request and a narrative description of the proposed application. The application shall also include the following:

1. A Site Plan shall show the proposed phase of development within the context of the buildings/structures then completed and those still to be built. The site plan shall show the layout of buildings, parking and open space areas and shall also include pedestrian walkways, freestanding signs, driveways, and all existing and proposed streets. The site plan shall also show all existing and proposed utilities, including power poles and lines, fire hydrants, irrigation controls and any other above ground utility of any kind. The site plan(s) shall be to-scale and

fully dimensioned and shall specify the location of property lines, setbacks and easements. Site plans involving building, open space and parking area relationships shall be designed by either a licensed Architect or licensed Landscape Architect. Additional site plan information, including grade elevations, slope, and drainage and infrastructure details necessary to establish or identify the proposed improvements shall be prepared by a registered Civil Engineer.

2. Building Plans shall specify the overall area of each building and/or unit as well as the proposed uses of each building. Building plans must contain elevations of all faces of the proposed project. The elevations of the proposed development must also include existing adjacent buildings and structures. If the proposed development is adjacent to a public street, the elevation must include buildings and structures at least two hundred feet on either side of the proposed development.
3. Landscape Plans shall provide detailed information on the location, size, type and number of all proposed trees, shrubs and ground cover areas. Existing plant materials to be retained and/or removed shall also be indicated on the plans. Additional information on proposed “hardscaping” materials such as special paving surfaces, lighting, street furniture and recreational equipment shall also be shown on the landscape plans.

The applicant shall also submit a Construction and Demolition Plan for each PC Permit application that includes plans for interim improvements to vacant sites and parking lots for review/recommendation by the Architectural Advisory Committee or another entity designated by the Planning Director.

4. An Improvement Plan shall be submitted that depicts all improvements needed within public rights-of-way, based on engineering-related standards and codes in place at the time of development application. These improvements include but are not limited to those identified in the *Stanford in Redwood City Precise Plan EIR* and the *Stanford in Redwood City Engineering Report*. An Improvement Plan depicting all improvements required for Precise Plan Area build-out shall be submitted as part of the first development application for New Develop-

ment, and shall be coordinated with an initial New Development Phasing Plan. Updated Improvement Plan(s) shall be provided as part of the application for each subsequent phase of development.

5. A Phasing Plan shall be submitted with each application indicating the total number of development phases anticipated, and where, when, and how much development, Greenway, and capital improvements are anticipated in each future phase consistent with *Precise Plan* policies. An initial New Development Phasing Plan shall accompany the first PC Permit application for New Development, and it shall be revised or modified in subsequent PC Permit applications as needed. Updates to the Improvement Plan(s) and the TDM Program shall be submitted as part of subsequent applications as well.
6. Signage Plans shall consist of a signage program for the proposed development, which shall illustrate the location, size, type, design and number of all proposed signs. Signage review shall be governed by the City Sign Ordinance, the Zoning Ordinance and the regulations governing the duties of the AAC, in effect at the time of signage plan approval.
7. Prior to project construction activity, the applicant shall submit a Construction Staging, Traffic Routing and Parking Plan to the City's Engineering and Transportation Services Division for review and approval.
8. Applicant shall pay any generally applicable fees, service charges and/or deposits that are required by the City for development at the time of application, unless otherwise specified in the anticipated development agreement. Nothing in this *Precise Plan* shall be construed as a limitation on or expansion of the City's ability to change existing fees and charges or to impose new fees and charges during the term of this *Precise Plan*.

PC PERMIT REVIEW AND FINDINGS

In its review of a PC Permit application for Blocks A-E, the Planning Commission, or other reviewing authority, must make only the following findings in order to approve the PC permit:

1. During the initial Term of the development agreement and, if applicable, the First Term Extension, as defined therein, a finding of consistency with this *Precise Plan*. A finding of consistency with the *Precise Plan* shall be based upon the City's application of the *Precise Plan*, including the urban design guidelines, to the proposed site plans and building and improvement designs.

In some instances, the *Precise Plan* identifies future decisions to be made by the City over which the City has retained discretion. Where such discretion is to be exercised in connection with approval of development under the *Precise Plan*, the City shall retain the discretion to select the alternative that best achieves the goals and objectives of the *Precise Plan*, as determined by City, and the exercise of such discretion shall be deemed consistent with the *Precise Plan* and the terms of the Development Agreement.

To the extent that the selection of the alternative is subject to additional environmental review pursuant to the *EIR* or *Precise Plan*, the applicant shall be obligated to fund the costs of such environmental review; provided, however, the applicant's funding obligation shall be limited to that portion of the alternative addressed by this *Precise Plan*.

The future discretionary decisions identified by the *Precise Plan* include, but are not limited to, the following:

- a. **Broadway** – Broadway is a public street, and the configuration of travel lanes, turn lanes, bike lanes, on-street parking and medians within the public right-of-way ("roadway configuration") is within the City's discretion and control. By approving the *Precise Plan*, the City is not approving a roadway configuration for Broadway. Any changes in the roadway configuration for Broadway would be considered as a separate action, independent from approval of the *Precise Plan*.

On pages 51 to 53, the *Precise Plan* depicts three potential roadway configurations that the City might consider in the future (one with two travel lanes, a turn lane, bike lanes and parallel parking; one with two travel lanes, a turn lane,

bike lanes and a median; and one with two travel lanes, a turn lane, bike lanes, a median, and a streetcar sharing a travel lane). The three figures demonstrate that it would be possible to accommodate parallel parking, a median, and/or a street car within the existing Broadway right-of-way and construction of *Precise Plan* buildings and landscaping on private property would not preclude these options. In addition, it is possible that the Broadway roadway configuration through the Precise Plan Area would remain as it is today.

As noted in Chapter III, Section III (Capital Improvements), new curbs, gutters, sidewalks, utility undergrounding, street trees, lighting and other street-related capital improvements required by the *Precise Plan* (“frontage improvements”) shall be installed in block-frontage increments as each block is developed. The frontage improvements along Broadway shall correspond to the roadway configuration that the City has selected prior to or concurrently with the City’s approval of the PC Permit requiring installation of such frontage improvements, as described in Chapter II, Section IV.F.1. The City will not delay issuance of a PC Permit in order to evaluate roadway configuration changes on Broadway.

- b. Bay Road** – Bay Road is a public street, and the roadway configuration is within the City’s discretion and control. By approving the *Precise Plan*, the City is not approving a roadway configuration for Bay Road. Any changes in the roadway configuration for Bay Road would be considered as a separate action, independent from approval of the *Precise Plan*.

On page 59, the *Precise Plan* depicts two potential roadway configurations for Bay Road (one as Bay Road exists today with four travel lanes and parallel parking; and one new configuration with two travel lanes, a turn lane, bike lanes and parallel parking). Under both scenarios, four feet of additional right-of-way would be needed to accommodate an eight-foot plant strip and an eight-foot sidewalk along Bay Road, and the *Precise Plan* requires the applicant

to dedicate the requisite four feet of right-of-way, and to provide an additional four-foot utility easement within the setback area along Bay Road. Regardless of whether the City selects and approves a new roadway configuration for Bay Road in the future, the planter strip, sidewalk and utility setback easement improvements required by the *Precise Plan* would be the same. The City will not delay issuance of a PC Permit in order to evaluate roadway configuration changes on Bay Road.

- c. Pedestrian Crossing Improvements** – The *Precise Plan* enables the City to determine at a later date the design and configuration of pedestrian crossing improvements required to be constructed by the applicant in and adjacent to the Precise Plan Area, including the location and configuration of bulb-outs, striping, paving, and high visibility signs/markers. The *Precise Plan* also requires the applicant to construct complementary bulb-out improvements on the other side of the crosswalk, even if outside of the Precise Plan Area. The design of pedestrian crossing improvements required to be constructed in and adjacent to the Precise Plan Area is within the City’s discretion. The City will not delay issuance of a PC Permit in order to evaluate pedestrian crossing improvements.
- d. Offsite Intersection Improvements** – The *Precise Plan* requires the applicant(s) to fund or construct those off-site intersection improvements listed in Chapter III, Section III.C that are required as CEQA mitigation. For some of the intersections, the City may consider alternative approaches to typical intersection configurations such as roundabouts. Appropriate alternatives are listed in Chapter III, Section III.C of this *Precise Plan*. The *EIR* addresses these approaches where relevant. The design of offsite intersection improvements is within the discretion of the City, and will be considered and approved by the City separate from approval of PC Permit applications. The City will not delay issuance of a PC Permit in order to evaluate offsite intersection improvements.

- e. **Hurlingame Avenue Public Street/Paseo** – As depicted in the Potential Development Phasing Diagram in Chapter II, the *Precise Plan* requires that the extension of Hurlingame Avenue between Bay and Broadway shall be a public street. Alternatively, the *Precise Plan* allows the Hurlingame Avenue extension to be a pedestrian paseo if deemed appropriate by the City, in which event it would be privately owned and maintained.

If the applicant dedicates right-of-way for and develops the Hurlingame Avenue extension as a public street, no new discretionary City approval will be required in connection with the PC Permit. If the applicant applies to construct the Hurlingame Avenue extension as a pedestrian paseo, it will be within the City’s discretion to decide whether to grant such an approval. The City does not anticipate that additional CEQA review will be required in connection with such a decision because the *Precise Plan Environmental Impact Report* calculated traffic increases on Hurlingame Avenue assuming either a roadway extension or a pedestrian paseo; both options have been addressed as part of the project analysis (*Stanford in Redwood City Precise Plan EIR*, pp. 7-68 - 7-69).

In addition to the discretionary actions described above, the *Precise Plan* also contemplates future City decisions with regard to the following additional topics that would be addressed at the PC Permit stage. Those topics include the following:

- a. **Street Plan Lines** – Required street dimensions are listed in Chapter III, Section II.C; however, the *Precise Plan* also states: “Dimensions are flexible and may be changed subject to City review and approval.” Changes in street dimensions, if any, are anticipated to be minor in nature.
- b. **Parking Requirements** – Required ratios of parking stalls to building square footage are listed in Chapter II, Section IV.G; however, the *Precise Plan* also states “Parking shall be provided according to the standards listed below, unless otherwise reviewed and approved by the City.” In Chapter IV, Section XI, the *Precise Plan* requires parking use to

be monitored to ensure that any shortfall is addressed in future phases of development.

- c. **Street Lighting** – Chapter II, Section IV.F(5) states that attractive, pedestrian-scale streetlights shall be provided along all street frontages; the *Precise Plan* also states: “Specific fixture types, locations and illumination requirements shall be as directed by the City.” Fixtures will have to meet City lighting standards.
- d. **On-site Child Care Facility** – Chapter II, Section IV.T requires establishment and operation of an onsite child care facility; the *Precise Plan* also states: “However, the City may elect, in its sole discretion, to defer compliance with this requirement to a later phase of development.”
- e. **Urban Design Guidelines** – Chapter II contains recommended Urban Design Guidelines. The *Precise Plan* states in the introduction to Chapter II that the Urban Design Guidelines “are strongly recommended yet discretionary policies which address more subjective considerations such as building forms and architectural detailing, and will be reviewed in more detail and considered on a case-by-case basis.” Design review is a mechanism that the City uses to ensure development projects do not adversely affect the visual quality of a site and its surroundings.

- 2. During a Second Term Extension of the development agreement, as defined therein, the following findings:
 - a. That the PC Permit is consistent with this *Precise Plan*, as provided in Item 1 above;
 - b. A determination whether substantial evidence shows that the PC Permit has triggered conditions identified in CEQA Guidelines section 15162, or its successor statute, such that the project will have one or more significant effects not discussed in the *EIR* or that significant effects previously examined in the *EIR*, such as those caused by changes in neighborhood traffic patterns, will be substantially more severe than shown in the *EIR*;

- c. If new or substantially more severe impacts are found, a determination, based upon any required supplemental or additional CEQA review, whether one or more feasible mitigation measures would substantially lessen the new or substantially more severe impact of impacts; and
- d. Appropriate findings to incorporate any feasible mitigation measure of measures.

If the City finds that the new or substantially more severe impact or impacts cannot feasibly be reduced to a less than significant level, the City may elect to deny the PC permit or the City may elect to approve the PC permit based on a statement of overriding considerations, as allowed by CEQA.

- 3. After expiration or earlier termination of the development agreement as to the property that is the subject of a PC Permit application, the findings shall be set forth in Article 52 of the Redwood City Zoning Ordinance, as may be amended from time to time.

The findings for approval of PC Permits for Blocks F and G shall be as set forth in Article 52 of the Zoning Ordinance, as may be amended from time to time.

XI. Development Impacts, Monitoring & Phasing

The *Precise Plan* contemplates the development of approximately 1,518,000 gross square feet (GSF) of building area on Blocks A-E, with related parking. It is likely that development of Blocks A-E will consist of a mixture of permitted land uses (administrative office, medical clinics, and research and development). Different land use mixtures could potentially create different traffic and/or water supply impacts. For example, a higher percentage of administrative office uses might generate more traffic (due to a relatively high number of employees per square foot), but use less potable water. Conversely, a higher percentage of research and development uses would have lower traffic impacts (due to fewer employees per square foot) but have a potentially greater need for potable water.

This *Precise Plan* allows the following mix of uses on Blocks A through E for a total of 1,518,000 square feet:

- Up to 1,518,000 square feet of office floor area (75 to 100% of total New Development at full buildout)
- Up to 228,000 square feet of medical clinic floor area (zero to 15% of total New Development at full buildout)
- Up to 152,000 square feet of R&D floor area (zero to 10% of total New Development at full buildout)

Any mix of these permitted uses within these percentages is addressed by the *Stanford in Redwood City Precise Plan EIR*. Mixtures of permitted land uses other than those listed above may be pursued, but may create traffic and/or water supply impacts in excess of those studied in the *EIR*. Proposed development of a significantly different land use mix or a development proposing conditional uses as listed within this *Precise Plan* may require supplemental CEQA evaluation.

TRAFFIC AND PARKING

The project outlined in the *Precise Plan* includes TDM efforts, shuttle service, parking and other elements that are intended to reduce traffic impacts. The *Stanford in Redwood City EIR* estimates that the proposed TDM efforts will reduce peak period trips at build-out to 82% of Institute of Traffic Engineers (ITE) trip generation rates. The TDM program and the *Precise Plan* traffic and circulation improvements shall be monitored by the City to ensure that trip-reducing efforts are undertaken and are effective.

The TDM program is as proposed by Stanford University and applies to all new buildings within Blocks A-E. Future applicants, or individual tenants and property owners, shall submit an annual TDM report to the City. The contents of the annual reports are suggested to be:

1. A description of the current TDM program underway at the time of the preparation of the annual report;
2. A description of the rate of use of alternative peak-period transportation modes. (Alternative transportation modes con-

stitute any mode of transportation that brings employees to and from work that does not involve a single occupant car at a peak period, including working from home.)

Development of a successful TDM program takes both time and critical mass to develop. With this in mind, target goals are established for the TDM program. Target goals for Blocks A through E are:

- Achieving a 9% reduction of peak period vehicle trips from ITE rates once 700,000 sq ft of gross building area in Blocks A-E is occupied.
- Achieving an 18% reduction of peak period vehicle trips from ITE rates once 1,000,000 sq ft of gross building area in Blocks A-E is occupied.

Prior to starting construction on the Initial Phase, the owner(s) of Blocks A-E shall pay for the creation of a Pre-Development Traffic Study that shall include data on the number of employee and visitor vehicles parking on-street within the Precise Plan Area and going into and out of parking lots and garages on Blocks A-E during the morning and afternoon peak periods. Vehicles that are not associated with Blocks A-E employees and visitors shall be deducted from the resulting trip counts.

Once per year, a traffic/transportation consultant will be hired by the City in consultation with and paid for by the owner(s) of Blocks A-E. The traffic consultant will collect the following data :

1. Peak period trip counts of all employee and visitor trips to and from Blocks A-E, with trips associated with uses outside of Blocks A-E deducted from the trip counts.³
2. A Parking Use Study of all parking lots and structures on Blocks A-E and streets within the Precise Plan Area with on-street parking specified by the City Traffic Engineer. The traffic consultant will count how many parking spaces are occupied and vacant at selected intervals during the study period in order to

assess whether sufficient parking is provided onsite in order to avoid spillover parking into nearby residential neighborhoods.

The traffic consultant will use this data to evaluate the effectiveness of the TDM program as described in the annual TDM report, and will prepare an analysis report for the City that assesses the effectiveness of the overall TDM effort. The City will coordinate review of the report with C/CAG. If this analysis indicates that the trip counts exceed the trip-reduction target goals noted above, the owner(s) of Blocks A-E and the City shall meet and confer to identify TDM program redesigns or changes capable of bringing the peak hour trip counts back into alignment with the original traffic projections.

If the trip reduction goals listed above are not met for two consecutive years, then acceleration of the timing of the intersection mitigation identified in the *Stanford in Redwood City EIR* shall be required as necessary to ensure that intersection mitigation is provided at the time that traffic increases trigger the mitigation requirements.

In addition, if, at any time before or after buildout, the trip reduction goals listed above are not met for two consecutive years and the total number of employee and visitor peak period vehicle trips from use of Blocks A-E exceeds the total number of trips assumed for that portion of the build-out of Blocks A-E by more than 5 percent, then each owner of an occupied structure on Blocks A-E shall be responsible for a fair share contribution toward the following additional intersection improvement or improvements that would have been required had the Stanford in Redwood City project not included the TDM program:

- Signalization of the Hurlingame Avenue/Middlefield Road intersection
- Signalization of the 2nd Avenue/Bay Road intersection [As noted above City may not want these intersection improvements]

If the City chooses not to construct one or both of the two intersection improvements identified above, the City may allocate the applicable fair share contribution to other traffic improvements or vehicle trip reduction measures in the Precise Plan Area vicinity.

3. TDM requirements for development on blocks F and G are contained in the *Stanford Outpatient Center EIR* and *Midpoint Technology Park EIR*, respectively.

Intersection Improvements Table

Intersection	Improvement	Total SF	Net Increase SF	Mitigation Responsibility
1 Broadway / Douglas Avenue	signalization and re-stripe	560,712	23,712	Precise Plan Development
2 Broadway / Charter Street	signalization and re-stripe	576,808	39,808	Precise Plan Development
3 Broadway / Woodside Road	re-stripe and protected phasing	608,999	71,999	Precise Plan Development
4 Woodside Road / Veterans Blvd	additional EB through-lane	715,189	178,189	Fair Share / TIF ¹
5 Woodside Road / Middlefield Road	additional SB through-lane	715,189	178,189	Fair Share / TIF
6 Bay Road / Douglas Avenue	signalization and re-stripe	759,845	222,845	Fair Share / TIF
7 Woodside Road / Bay Road	restripe and protected phasing (EB & WB)	849,155	312,155	Precise Plan Development
8 Woodside Road / Bay Road	additional WB through lane and restripe	849,155	312,155	Fair Share / TIF
9 Marsh Road / Scott Drive	re-stripe	893,810	356,810	Fair Share / TIF
10 Bay Road / Charter Street	signalization and re-stripe, or single-lane roundabout	1,370,785	833,785	Fair Share / TIF
11 Bay Road / Fifth Avenue	signalization, or single-lane roundabout	1,370,785	833,785	Fair Share / TIF
12 Broadway / Second Avenue	signalization	1,419,857	882,857	Fair Share / TIF
13 Middlefield Road / Douglas Avenue	protected phasing	1,478,743	941,743	Fair Share / TIF

¹ New development shall provide a Traffic Impact Fee (TIF) payment / fair share contribution for improvements to these intersections.

If the trip reduction goals listed above are met for five consecutive years and no additional development has occurred, the owner(s) of Blocks A-E shall no longer be required to submit descriptions of the rate of use of alternative peak-period transportation modes, trip counts or parking use studies, provided, however, that the Community Development Director or his/her designee may require such reports and studies in his sole discretion if there are changes in building tenancy after full build-out of the campus. If no reports or studies are required by City, the owner(s) of Blocks A-E shall nonetheless be required to make annual reports to the City describing their current TDM program(s) to demonstrate implementation of the *Precise Plan's* TDM measures.

At each subsequent PC Permit submittal, the City shall review local traffic conditions and onsite parking supply and usage. Where such PC Permit submittals are amendments of previously approved PC Permits that do not add further square footage or intensify the uses on Blocks A-E, the Planning Director may waive this requirement.

To guide the phasing of traffic-related improvements, a sensitivity analysis was conducted for the *Precise Plan* development as part of the *EIR's* Traffic Impact Analysis. Intersection improvements identified to mitigate the traffic impacts associated with buildout levels are summarized in the Intersection Improvements Table; existing development on Blocks A-E totals approximately 537,000 square feet. Not all intersection improvements identified in the table are solely a result of Precise Plan Area development. Many are required to accommodate surrounding growth as well as Precise Plan Area development; these would be funded by the City's existing Traffic Impact Fee program, or a "Fair Share" contribution by Precise Plan Area development.

WATER USE

The City of Redwood City needs to manage its water resources carefully. As part of the City's efforts to track water use, all new structures will be required to have separate meters. Landscaping will likewise be separately metered.

A Water Supply Assessment (WSA) was prepared for the project and incorporated in the *Stanford in Redwood City Precise Plan EIR*. The WSA contains water supply and project demand projections that serve as a basis for City decision-making related to water provision.

The City has found development of the Precise Plan Area to be consistent with the *Redwood City General Plan*, which anticipates that there will be sufficient potable water and sanitary sewer capacity to serve future development contemplated by the *Redwood City General Plan*, including development of the Precise Plan Area, through the year 2030. However, nothing herein is intended to provide any reservation of potable water or sanitary sewer capacity or shall be deemed to provide an exemption from water use rationing requirements that may be imposed from time-to-time.

In order to monitor water usage, PC Permit applications shall only be deemed complete if they include a water monitoring report, describing the following;

- Two latest years of water consumption from all water service accounts serving the applicant's existing buildings and landscaped areas (copies of actual bills)
- Such other information as the City may require to associate water consumption to the uses and/or buildings to be able to compare usage to initial projections and baselines
- Total square footage of each building and major building function
- Number of meters serving the facility and landscaped areas and the description of the meter's location/building/area served
- Data on any changes to existing buildings during the review period that would affect water use
- Tables and graphs to illustrate existing demand, water system thresholds, and demand trends to illustrate whether the applicant is using more or less water than the original projection
- An analysis of data with summaries and conclusions.

This monitoring report, prepared by the applicant at the applicant's expense and submitted to the City, shall also include the

cumulative total water use of all existing structures on Blocks A-E to the extent usage information regarding structures not owned or occupied by applicant is available to the applicant. The water usage data shall be part of the information reviewed by staff and the Planning Commission in their review of PC Permits.

Appendix A - Mitigation Monitoring and Reporting Program

Section 201 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the MMRP is to ensure compliance with the mitigation measures during project implementation. The Final Environmental Impact Report (EIR) was approved for the Stanford in Redwood City Precise Plan in 2013. The Final EIR concluded that the implementation of the project could result in significant effects on the environment and mitigation measures were incorporated into the proposed project or are required as a condition of project approval. This MMRP outlines these measures and indicates how, when, and by whom they will be implemented.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
TRANSPORTATION, CIRCULATION, AND PARKING				
<p>Impact 7-1: Existing Plus Project Impact on Woodside Road/Broadway Intersection. Under Existing Plus Project conditions during the PM peak hour, project traffic would cause the intersection to degrade from LOS E (59.3 seconds delay) to LOS F (128.8 seconds delay). According to City guidelines, this change would constitute a significant project impact.</p>	<p>Mitigation 7-1. To mitigate the project's impact (i.e., the project applicant would be responsible for fully funding/completing the mitigation) at the intersection of Woodside Road and Broadway, the westbound approach on Broadway would need to be restriped to include a total of one left-turn lane, one through lane, one shared through/right-turn lane, and one right-turn lane. Signage would also need to be provided indicating that the "right-most" right-turn lane is to southbound US 101 only. In addition, the eastbound travel lanes would need to be restriped to include a total of two left-turn lanes and one shared through/right-turn lane. The eastbound and westbound signal phasing would need to be modified from split phasing to protected phasing. Because this intersection is subject to Caltrans jurisdiction, any changes to the operation of the signal or physical improvements to the intersection would require Caltrans approval. Pursuant to Caltrans Deputy Directives 64 and 64-R1, requiring facilitation of multimodal travel, it is possible that the above improvements to the intersection of Woodside Road and Broadway would also be required to include such features as pedestrian count-down signals, an emergency vehicle pre-emption system, reconstruction of corner radii to reduce pedestrian crossing distances, pedestrian median refuges, bike lanes, and bike detectors.</p> <p>With the improvements described above, the level of service (LOS) at this intersection would be restored to E or better. Therefore, with this mitigation, the project impact would be considered <i>less-than-significant</i>. However, because this improvement would require Caltrans approval, the City cannot ensure the construction of this improvement. Without implementation of the proposed mitigation, the impact would be significant and unavoidable.</p>	Applicant to fully fund. Applicant or City to construct.	City to monitor in consultation with C/CAG & Caltrans	Prior to building permit issuance that would result in 608,999 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-2: Existing Plus Project Impact on Woodside Road/Bay Road Intersection. Under Existing Plus Project conditions during the PM peak hour, project traffic would</p>	<p>Mitigation 7-2. To mitigate the project's impact (i.e., the project applicant would be responsible for fully funding/completing the mitigation) at the intersection of Woodside Road and Bay Road, the westbound approach on Bay Road would need to be restriped to include a total of two left-turn lanes and one shared through/right-turn lane. (Woodside Road is consid-</p>	Applicant to fully fund. Applicant or City to construct.	City to monitor in consultation with C/CAG & Caltrans	Prior to building permit issuance that would result in 849,155 total square feet in

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
<p>cause the intersection to degrade from LOS D (35.5 seconds delay) to LOS F (81.7 seconds delay). According to City guidelines, this change would constitute a significant project impact.</p>	<p>ered north-south and Bay Road is considered east-west.) The eastbound approach would need to be restriped to include a total of one left-turn lane, one through lane, and one shared through/right-turn lane. In addition, the signal phasing on the eastbound and westbound approaches would need to be modified from permitted phasing to protected phasing. Because this intersection is subject to Caltrans jurisdiction, any changes to the operation of the signal would require Caltrans approval. Pursuant to Caltrans Deputy Directives 64 and 64-R1, requiring facilitation of multimodal travel, it is possible that the above intersection improvements would also be required to include such features as new crosswalk and pedestrian signals across Bay Road on the west side of Woodside Road, restriping of two crosswalks on Woodside Road to provide straight and shorter walking distances, pedestrian median refuges on Woodside Road, curb ramps, pedestrian count-down signals, an emergency vehicle pre-emption system, reconstruction of corner radii to reduce pedestrian crossing distances, bike lanes, and bike detectors.</p> <p>With the improvements described above, the level of service (LOS) at this intersection would improve to an acceptable LOS D in the PM peak hour, resulting in a <i>less-than-significant</i> impact. However, because this improvement would require Caltrans approval, the City cannot ensure the construction of this improvement. Without implementation of the proposed mitigation, the impact would be significant and unavoidable.</p>			Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-3: Existing Plus Project Impact on Charter Street/Broadway Intersection. Under Existing Plus Project conditions during the AM peak hour, project traffic would cause the intersection to degrade from LOS B (14.1 seconds delay) to LOS F (117.1 seconds delay). In the PM peak hour, project traffic would cause the intersection to degrade from LOS C (17.9 seconds delay) to LOS F (122.5 seconds delay). In addition, this intersection would have peak hour volumes large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes would constitute a significant project impact.</p>	<p>Mitigation 7-3. To mitigate the project's impact (i.e., the project applicant would be responsible for fully funding/completing the mitigation) at the intersection of Charter Street and Broadway, the intersection would need to be signalized with protected phasing on all approaches. The northbound and southbound approaches on Charter Street would need to be restriped to include a total of one left-turn lane and one shared through/right-turn lane. The eastbound and westbound approaches on Broadway would need to be restriped to include a total of one left-turn, one through lane, and one shared through/right-turn lane. Parking (50 spaces) would need to be removed from all intersection legs to accommodate travel lanes. With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS B in the AM peak hour and an acceptable LOS C in the PM peak hour, and the impact would be less-than-significant.</p>	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 576,808 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
<p>Impact 7-4: Existing Plus Project Impact on Douglas Avenue/ Broadway Intersection. Under Existing Plus Project conditions during the AM peak hour, project traffic would cause the intersection to degrade from LOS B (10.4 seconds delay) to LOS F (167.6 seconds). During the PM peak hour, project traffic would cause the intersection to degrade from LOS B (11.1 seconds) to LOS F (180.0 seconds). In addition, this intersection would have peak hour volumes large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes would constitute a significant project impact.</p>	<p>Mitigation 7-4. To mitigate the project's impact (i.e., the project applicant would be responsible for fully funding/completing the mitigation) at the intersection of Douglas Avenue and Broadway, the intersection would need to be signalized with protected phasing on all approaches. (Douglas Avenue is considered north-south and Broadway is considered east-west.) In addition to signalization, parking (15 spaces) would need to be removed from the north and south legs to accommodate additional travel lanes. The southbound approach would need to be restriped to include a total of one left-turn lane, one through lane, and one right-turn lane. The northbound approach would need to be restriped to include a total of two northbound left-turn lanes and one shared through/right-turn lane. The eastbound and westbound approaches would need to be restriped to include a total of one left-turn lane and one shared through/right-turn lane. With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS C during both peak hours, and the impact would be less-than-significant.</p>	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 560,712 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-5: Near Term Plus Project Impact on Woodside Road/ Broadway Intersection. Under Near Term Plus Project conditions during the PM peak hour, this intersection would continue to operate at LOS F, and project traffic would cause the critical delay to increase by 69.5 seconds. According to City of Redwood City guidelines, this change would constitute a significant project impact.</p>	<p>Mitigation 7-5. Implement Mitigation 7-1 (the project applicant would be responsible for fully funding/completing the mitigation). With these improvements, the level of service (LOS) at this intersection would remain at LOS F. Although the LOS F condition would exceed the City LOS standard, the LOS under Near Term Plus Project condition with this mitigation would be better than that under the Near Term Without Project condition. These improvements would enhance the overall performance of the intersection. Therefore, with this mitigation, this project impact would be considered less-than-significant. However, because implementation of this mitigation would require Caltrans approval, the City cannot ensure its construction. Without implementation of the proposed mitigation, the impact would be significant and unavoidable.</p>	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 608,999 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-6: Near Term Plus Project Impact on Woodside Road/ Bay Road Intersection. Under Near Term Plus Project conditions during the PM peak hour, project traffic would cause this intersection to degrade from LOS D (44.9 seconds delay) to LOS F (91.1 seconds delay). According to City</p>	<p>Mitigation 7-6. Implement Mitigation 7-2 (the project applicant would be responsible for fully funding/completing the mitigation). With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS D in the PM peak hour, resulting in a less-than-significant impact. However, because implementation of this mitigation would require Caltrans approval, the City cannot ensure its construction. Without implementation of the proposed mitigation, the impact would be significant and unavoidable.</p>	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 849,155 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
guidelines, this change would constitute a significant project impact .				Plan, Chapter IV, Intersection Improvements Table.
Impact 7-7: Near Term Plus Project Impact on Charter Street/Broadway Intersection. Under Near Term Plus Project conditions during the AM peak hour, project traffic would cause this intersection to degrade from LOS C (24.7 seconds delay) to LOS F (127.7 seconds delay). In the PM peak hour, the intersection would continue to operate at LOS F, and project traffic would cause the critical delay at the intersection to increase by 104.6 seconds. In addition, the increase in peak hour volumes at this intersection would be large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes would constitute a significant project impact .	Mitigation 7-7. Implement Mitigation 7-3 (the project applicant would be responsible for fully funding/completing the mitigation). With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS B in the AM peak hour and an acceptable LOS C in the PM peak hour, and the impact would be less-than-significant .	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 576,808 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
Impact 7-8: Near Term Plus Project Impact on Charter Street/Bay Road Intersection. Under Near Term Plus Project conditions during the PM peak hour, project traffic would cause the intersection to degrade from LOS D (27.7 seconds delay) to LOS E (37.7 seconds delay). In addition, this intersection would have peak hour volume increases large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes would constitute a significant project impact .	Mitigation 7-8(a). To mitigate the project's impact at the intersection of Charter Street and Bay Road, the intersection would need to be signalized with protected phasing on the eastbound and westbound approaches on Bay Road, and permitted phasing on the northbound and southbound approaches on Charter Street. In addition to signalization, the eastbound and westbound approaches would need to be restriped to include a total of one left-turn lane and one shared through/right-turn lane. With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS C in the AM peak hour and LOS D in the PM peak hour. Traffic from the proposed project would add 10.0 seconds to the PM peak hour delay at this intersection over Near Term No Project conditions (see EIR Table 7.11); other Near Term growth would add 14.5 seconds to the delay over Existing conditions. Therefore, it is assumed that the proposed project would contribute approximately 41 percent toward this impact. The proposed project would mitigate its contribution to this impact by contributing its fair share to a	Applicant fair share or payment of Traffic Impact Fee.	City	Prior to building permit issuance that would result in 1,370,785 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table. If, at the time this improvement is required,

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
	<p>mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 41 percent) at the time of issuance of a building permit or, if the City adds the improvement to its Traffic Impact Fee Program (TIF) project list, the proposed project would mitigate its contribution to this impact by paying its Traffic Impact Fee in effect at time of payment and issuance of a building permit. Applicant's full funding or construction of the improvement, subject to potential reimbursement as provided in the Precise Plan, would also mitigate the project's contribution to this impact.</p> <p style="text-align: center;">or</p>			the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement, subject to potential reimbursement for improvement costs that exceed the applicant's fair share. Refer to Precise Plan, Chapter III, Capital Improvements.
	<p>Mitigation 7-8(b). Mitigation of the project's impact at the intersection of Charter Street and Bay Road would require the conversion of the all-way stop controlled unsignalized intersection to a single-lane roundabout. Standard roundabouts are at least 110 feet in diameter. Smaller roundabouts may operate efficiently down to 80 feet in diameter. The existing intersection at Charter Street and Bay Road would allow up to an 80-foot-diameter roundabout. If the design work shows that the 80-foot-diameter roundabout would not require the acquisition of additional right-of-way and would not create additional safety hazards for motorists, pedestrians, or bicyclists compared to Mitigation 7-8(a), and if substantial evidence at the time the roundabout is proposed shows that the roundabout would not divert traffic to other intersections, the roundabout shall be considered feasible and may be substituted for Mitigation 7-8(a). With this improvement, the level of service (LOS) at this intersection would improve to an acceptable LOS B during the AM peak hour and LOS C during the PM peak hour.</p>	Applicant fair share or payment of Traffic Impact Fee.	City	<p>Prior to building permit issuance that would result in 1,370,785 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.</p> <p>If, at the time this improvement is required,</p>

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
	<p>Traffic from the proposed project would add 10.0 seconds to the PM peak hour delay at this intersection over Near Term No Project conditions (see EIR Table 7.11); other Near Term growth would add 14.5 seconds to the delay over Existing conditions. Therefore, it is assumed that the proposed project would contribute approximately 41 percent toward this impact. The proposed project would mitigate its contribution to this impact by contributing its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 41 percent) at the time of issuance of a building permit or, if the City adds the roundabout to its Traffic Impact Fee Program (TIF) project list, the proposed project would mitigate its contribution to this impact by paying its Traffic Impact Fee in effect at time of payment and issuance of a building permit. Applicant's full funding or construction of the improvement, subject to potential reimbursement as provided in the Precise Plan, would also mitigate the project's contribution to this impact.</p> <p>Implementation of any one of these two mitigation options would reduce this project impact to a <i>less-than-significant level</i>.</p>			the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement, subject to potential reimbursement for improvement costs that exceed the applicant's fair share. Refer to Precise Plan, Chapter III, Capital Improvements.
<p>Impact 7-9: Near Term Plus Project Impact on Douglas Avenue/ Broadway Intersection. Under Near Term Plus Project conditions during the AM peak hour, project traffic would cause the intersection to degrade from LOS C (21.9 seconds) to LOS F (179.1 seconds). During the PM peak hour, the intersection would continue to operate at LOS F, but project traffic would cause the critical delay at the intersection to increase from 54.5 seconds to 223.4 seconds (i.e., by 168.9 seconds). In addition, this intersection would have peak hour</p>	<p>Mitigation 7-9. Implement Mitigation 7-4 (the project applicant would be responsible for fully funding/completing the mitigation). With these improvements, the level of service (LOS) at this intersection would improve to an acceptable LOS C during both peak hours, and the impact would be <i>less-than-significant</i>.</p>	Applicant to fully fund. Applicant or City to construct.	City	Prior to building permit issuance that would result in 560,712 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
<p>volume increases large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes constitute a significant project impact.</p>				
<p>Impact 7-10: Near Term Plus Project Impact on 5th Avenue/Bay Road Intersection. Under Near Term Plus Project conditions during the PM peak hour, project traffic would cause the intersection to degrade from LOS C (21.8 seconds delay) to LOS E (38.4 seconds delay). In addition, this intersection would have peak hour volume increases large enough under both peak hours to satisfy the peak hour signal warrant. According to City guidelines, these changes would constitute a significant project impact.</p>	<p>Mitigation 7-10(a). The signalization of the 5th Avenue/Bay Road intersection is a transportation project included in the City's 2000 Traffic Impact Fee Program (TIF). Payment by the project applicant of its City Traffic Impact Fee in effect at time of payment and issuance of a building permit (or alternatively applicant's full funding or construction of the improvement subject to potential reimbursement as provided in the Precise Plan) would mitigate this impact. To mitigate the project's impact at the intersection of 5th Avenue and Bay Road, the intersection would need to be signalized. (5th Avenue is considered north-south and Bay Road is considered east-west.) No further improvements would be required. With this improvement, the level of service (LOS) at this intersection would improve to an acceptable LOS B during both peak hours.</p> <p style="text-align: center;">or</p>	<p>Applicant fair share or payment of Traffic Impact Fee</p>	<p>City</p>	<p>Prior to building permit issuance that would result in 1,370,785 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.</p> <p>If, at the time this improvement is required, the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement, subject to potential reimbursement for improvement costs that ex-</p>

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
				ceed the applicant's fair share. Refer to Precise Plan, Chapter III, Capital Improvements.
	<p>Mitigation 7-10(b). Mitigation of the project's impact at the intersection of 5th Avenue and Bay Road would require the conversion of the all-way stop controlled intersection to a single lane roundabout. The existing road widths at 5th Avenue and Bay Road would allow up to an 85-foot-diameter roundabout. If the design work shows that the 85-foot-diameter roundabout would not require the acquisition of additional right-of-way and would not create additional safety hazards for motorists, pedestrians, or bicyclists compared to Mitigation 7-10(a), and if substantial evidence at the time the roundabout is proposed shows that the roundabout would not divert traffic to other intersections, the roundabout shall be considered feasible and may be substituted for Mitigation 7-10(a). With this improvement, the level of service (LOS) at this intersection would improve to an acceptable LOS A during both peak hours.</p> <p>Implementation of either one of these two mitigation options would reduce this project impact to a <i>less-than-significant level</i>.</p>	Applicant fair share or payment of Traffic Impact Fee	City	Prior to building permit issuance that would result in 1,370,785 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table. If, at the time this improvement is required, the improvement has not yet been constructed and the City determines that other development has not yet significantly contributed to the need for the improvement, then the applicant shall fully fund or construct the improvement, subject to potential reimbursement for improvement costs that ex-

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
				ceed the applicant's fair share. Refer to Precise Plan, Chapter III, Capital Improvements.
<p>Impact 7-12: Cumulative With Project Impact on Veterans Boulevard/ Woodside Road Intersection. Under Cumulative With Project conditions during the PM peak hour, the intersection would remain at LOS F and the proposed project could contribute up to 22.8 seconds of critical delay to the intersection. According to City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>Mitigation 7-12. To mitigate the project's contribution to the cumulative impact at the intersection of Veterans Boulevard and Woodside Road, an additional eastbound through lane would need to be added. (Woodside Road is considered north-south and Veterans Boulevard is considered east-west.) With these improvements, the level of service (LOS) at this intersection would improve to LOS E during the PM peak hour. Although LOS E still exceeds the City of Redwood City LOS standard, the LOS under Cumulative With Project conditions would be better than that under Cumulative No Project conditions. Therefore, with this mitigation, the project's contribution to this cumulative impact would be considered less-than-significant. Widening of Veterans Boulevard between Chestnut and Woodside Road is included in the City's Traffic Impact Fee Program (TIF) project list. Accordingly, the applicant's payment of its Traffic Impact Fee in effect at time of payment and issuance of a building permit would mitigate the proposed project's contribution to the significant cumulative impact. However, because this improvement would require Caltrans approval, the City of Redwood City cannot ensure the construction of this improvement. Without implementation of the proposed mitigation, the impact would be significant and unavoidable.</p>	Applicant fair share or payment of Traffic Impact Fee	City to monitor in consultation with C/CAG & Caltrans	Prior to building permit issuance that would result in 715,189 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-13: Cumulative With Project Impact on Woodside Road/Bay Road Intersection. Under Cumulative With Project conditions during the PM peak hour, the intersection would degrade from LOS D to LOS F, and the proposed project could contribute up to 46.2 seconds of critical delay to the intersection. According to the City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>Mitigation 7-13. To mitigate the project's contribution to the cumulative impact at the intersection of Woodside Road and Bay Road, an additional westbound through lane would need to be added and the shared through/right-turn lane converted to a right-turn lane. (Woodside Road is considered north-south and Bay Road is considered east-west.) Traffic from the proposed project could add up to 46.2 seconds to the PM peak hour delay at this intersection over Cumulative No Project conditions (see EIR Table 7.16); other Cumulative growth could add up to 3.4 seconds to the delay over Near Term No Project conditions. The proposed project would contribute its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 93 percent) at the time of issuance of a building permit or, if the City adds the improvement to its Traffic Impact Fee Program (TIF) project list, the proposed project would pay its Traffic Impact Fee in effect at time of payment and issuance of a building permit.</p>	Applicant fair share or payment of Traffic Impact Fee	City to monitor in consultation with C/CAG & Caltrans	Prior to building permit issuance that would result in 849,155 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
	<p>The above improvements would be added to mitigation measures identified under Existing Plus Project conditions for the intersection of Woodside Road and Bay Road (Mitigation 7-2). The proposed project's payment of its fair share towards these improvements, and the City's implementation of the improvements, would mitigate the impact to a less-than-significant level. However, because these improvements would require Caltrans approval, the City of Redwood City cannot ensure the construction of these improvements. Also, the additional westbound through lane would require additional right-of-way. Without implementation of the proposed improvements, the impact would be significant and unavoidable.</p>			
<p>Impact 7-14: Cumulative With Project Impact on Woodside Road/Middlefield Road Intersection. Under Cumulative With Project conditions during the PM peak hour, the intersection would remain at LOS F, and the proposed project could contribute up to 29.2 seconds of critical delay to the intersection. According to City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>Mitigation 7-14. This mitigation is in addition to the Caltrans intersection improvement that will be implemented in 2013; a description of the 2013 improvement is included on page 7-21 of the Final EIR.</p> <p>To mitigate the significant cumulative impact at the intersection of Woodside Road and Middlefield Road, an additional southbound through lane would need to be added to Woodside Road. (Woodside Road is considered north-south and Middlefield Road is considered east-west.) Because this intersection is subject to Caltrans jurisdiction, this roadway widening and any changes to the operation of the signal would require Caltrans approval. With these improvements, the level of service (LOS) at this intersection would remain at LOS F. Although LOS F still exceeds the City of Redwood City LOS standard, conditions with this mitigation would be better than under Cumulative No Project conditions.</p> <p>The widening of Woodside Road, inclusive of this intersection, is included in the City's Traffic Impact Fee Program (TIF) project list. However, there is no current design option that is acceptable to both Caltrans and the City of Redwood City; therefore, this improvement may be infeasible. If a design for widening Woodside Road can be developed which is acceptable to both Caltrans and the City of Redwood City, payment of the Traffic Impact Fee by the applicant would mitigate the proposed project's contribution to the significant cumulative impact to a less-than-significant level. If it is determined that the Woodside Road improvements remain infeasible because the improvements are not consistent with the New Redwood City General Plan and/or Caltrans policy, the cumulative impact would remain significant and unavoidable, as would the proposed project's contribution to that cumulative impact.</p>	<p>Applicant fair share or payment of Traffic Impact Fee</p>	<p>City to monitor in consultation with C/CAG & Caltrans</p>	<p>Prior to building permit issuance that would result in 715,189 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.</p>

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
<p>Impact 7-15: Cumulative With Project Impact on Douglas Avenue/Bay Road Intersection. Under Cumulative With Project conditions during the PM peak hour, the intersection would degrade from LOS C to LOS F, and the proposed project could contribute up to 78.2 seconds of critical delay to the intersection. According to City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>Mitigation 7-15. To mitigate the significant cumulative impact at the intersection of Douglas Avenue and Bay Road, the intersection would need to be signalized with protected phasing on the eastbound and westbound approaches on Bay Road. In addition to signalization, both the eastbound and westbound approaches would need to be restriped to include a total of one left-turn lane and one shared through/right-turn lane on both the eastbound and westbound approaches. With these improvements the level of service (LOS) at this intersection would improve to an acceptable LOS C during the PM peak hour.</p> <p>Traffic from the proposed project could add up to 78.2 seconds to the PM peak hour delay at this intersection over Cumulative No Project conditions (see EIR Table 7.16); other Cumulative growth could add up to 11.9 seconds to the delay over Near Term No Project conditions. The proposed project would contribute its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 87 percent) at the time of issuance of a building permit or, if the City adds the improvement to its Traffic Impact Fee Program (TIF) project list, the proposed project would pay its Traffic Impact Fee in effect at time of payment and issuance of a building permit.</p> <p>The proposed project's payment of its fair share toward these improvements would mitigate the project's contribution to the cumulative impact to a less-than-significant level.</p>	Applicant fair share or payment of Traffic Impact Fee	City	Prior to building permit issuance that would result in 759,845 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-16: Cumulative With Project Impact on Douglas Avenue/Middlefield Road Intersection. Under Cumulative With Project conditions during the AM peak hour, the intersection would degrade from LOS D to LOS E, and the proposed project could contribute up to 10.6 seconds of critical delay to the intersection. According to City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>Mitigation 7-16. To mitigate the cumulative impact at the intersection of Douglas Avenue and Middlefield Road, the eastbound and westbound approaches would need to be modified from permitted phasing to protected phasing. (Douglas Avenue is considered north-south and Middlefield Road is considered east-west.) With these improvements, the level of service (LOS) at this intersection would improve to acceptable LOS D during the AM peak hour.</p> <p>Traffic from the proposed project could add up to 10.6 seconds to the AM peak hour delay at this intersection over Cumulative No Project conditions (see EIR Table 7.16); other Cumulative growth could add up to 35.8 seconds to the delay over Near Term No Project conditions. The proposed project would contribute its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 23 percent) at the time of issuance of a building permit or, if the City adds the improvement to its Traffic Impact Fee Program (TIF) project list, the proposed project would pay its Traffic Impact Fee in effect at time of payment and issuance of a building permit. The proposed project's payment of its fair share toward these improvements would mitigate the project's contribution to the cumulative impact to a less-than-significant level.</p>	Applicant fair share or payment of Traffic Impact Fee	City	Prior to building permit issuance that would result in 1,478,743 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
<p>Impact 7-17: Cumulative With Project Impact on 2nd Avenue/ Broadway Intersection. Under Cumulative With Project conditions during the AM peak hour, the intersection would remain at LOS F, and the proposed project could contribute up to 6.7 seconds of critical delay to the intersection. According to City of Redwood City guidelines, this constitutes a cumulatively considerable contribution to a <i>significant cumulative impact</i>.</p>	<p>Mitigation 7-17. To mitigate the significant cumulative impact at the intersection of 2nd Avenue and Broadway, the intersection would need to be signalized. With this improvement, the level of service (LOS) at this intersection would improve to an acceptable LOS C during the AM peak hour.</p> <p>Traffic from the proposed project could add up to 6.7 seconds to the AM peak hour delay at this intersection over Cumulative No Project conditions (see EIR Table 7.16); other Cumulative growth could add up to 89.8 seconds to the delay over Near Term No Project conditions. The proposed project would contribute its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 7 percent) at the time of issuance of a building permit or, if the City adds the improvement to its Traffic Impact Fee Program (TIF) project list, the proposed project would pay its Traffic Impact Fee in effect at time of payment and issuance of a building permit.</p> <p>The proposed project's payment of its fair share toward these improvements would mitigate the project's contribution to the cumulative impact to a <i>less-than-significant level</i>.</p>	Applicant fair share or payment of Traffic Impact Fee	City	Prior to building permit issuance that would result in 1,419,857 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.
<p>Impact 7-18: Cumulative With Project Impact on Marsh Road/ Scott Drive Intersection. Under Cumulative With Project conditions during the PM peak hour, the intersection, would remain at LOS F and the proposed project could contribute up to 14.4 seconds of delay. The intersection of Marsh Road/Scott Drive is located in the City of Menlo Park. According to City of Menlo Park guidelines, this constitutes a cumulatively considerable contribution to a <i>significant cumulative impact</i>.</p>	<p>Mitigation 7-18. To mitigate the cumulative impact at the intersection of Marsh Road and Scott Drive, the eastbound approach of Scott Drive would need to be restriped to include a total of one shared through/left-turn lane and one right-turn lane. (Marsh Road is considered north-south and Scott Drive is considered east-west.) With these improvements, the level of service (LOS) at this intersection would remain an unacceptable LOS F during the PM peak hour. Although the LOS F still exceeds the City of Menlo Park LOS standard, the LOS under Cumulative With Project conditions would be better than that under Cumulative No Project conditions.</p> <p>Traffic from the proposed project could contribute up to 14.4 seconds to the PM delay at this intersection over Cumulative No Project conditions (see EIR Table 7.16); other Cumulative growth could add up to 74.4 seconds to the delay over Near Term No Project conditions. The proposed project would contribute its fair share to a mitigation fund established to pay for the cost of this improvement (estimated, based on this EIR, to be 16 percent) at the time of issuance of a building permit or, if the City adds the improvements to its Traffic Impact Fee Program (TIF) project list, the proposed project would pay its Traffic Impact Fee in effect at time of payment and issuance of a building permit.</p> <p>With this mitigation, the project's contribution to this cumulative impact would be considered less-than-significant. However, because this improvement would require City of Menlo Park approval, the City of Redwood City cannot ensure the construction of this improvement. Without</p>	Applicant fair share or payment of Traffic Impact Fee	City	Prior to building permit issuance that would result in 893,810 total square feet in Precise Plan Blocks A-E. Refer to Stanford Precise Plan, Chapter IV, Intersection Improvements Table.

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
	implementation of the proposed mitigation, the impact would be significant and unavoidable .			
Impact 7-20: Existing Plus Project Impact on Pedestrian Facilities (Hurlingame/Bay and Barron Bay). Currently, two mid-block crosswalks along Broadway and one crosswalk at Bay Road provide pedestrian access in the Precise Plan area. Due to the limited existing pedestrian facilities on Bay Road along the project frontage, the existing pedestrian facilities could encourage pedestrians to cross roads in undesignated areas. The addition of project-related pedestrian trips is therefore considered a potentially significant impact .	Mitigation 7-20. To mitigate this impact (i.e., the project applicant would be responsible for fully funding/completing the mitigation), additional high visibility crosswalks shall be created along Bay Road that are aligned with the intersecting streets. These crosswalks could include bulbouts, high visibility paint, paving textures/treatments, or pedestrian flashing warning light systems. These crosswalks would be installed at Hurlingame Avenue/Bay Road and Barron Avenue/Bay Road. These improvements would reduce this impact to a less-than-significant level .	Applicant to fully fund. Applicant to construct.	City	Prior to building permit issuance for development on adjacent parcels. Refer to Stanford Precise Plan, Chapter III, Phasing/ Implementation Summary Table--item 7--for pedestrian improvements timing and implementation.
AIR QUALITY				
Impact 8-1: Construction-Related Air Quality Impacts. Project-related demolition and construction activities would generate exhaust emissions and fugitive dust. These emissions would not subject sensitive receptors to substantial pollutant concentrations, but emissions of ROG and NOx could exceed BAAQMD daily significance thresholds. This would represent a potentially significant impact .	Mitigation 8-1. For all project-related grading, demolition, or construction activity, construction contractors shall implement the following mitigation measures, where applicable: <u>(a) BAAQMD-Recommended Measures for All General Construction Activities:</u> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
	<p>6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</p> <p>7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.</p> <p>8. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to help ensure compliance with applicable regulations.</p> <p><u>(b) Additional Construction Measures for Construction Activities With Emissions Above BAAQMD Thresholds:</u></p> <p>9. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. 10. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.</p> <p>11. Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.</p> <p>12. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.</p> <p>13. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.</p> <p>14. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.</p> <p>15. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.</p> <p>16. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.</p>			

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
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	<p>17. The idling time of diesel-powered construction equipment shall be limited to two minutes.</p> <p>18. The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet-average 20 percent Nox reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.</p> <p>19. Use low-VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).</p> <p>20. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.</p> <p>21. All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy-duty diesel engines.</p> <p><u>(c) Project-Specific Measures:</u></p> <p>22. For construction, off-road equipment shall be Tier 4 or shall achieve Tier 4 particulate matter emission levels through use of one or more of the following: Tier 2/Tier 3 equipment with diesel particulate filters; alternative fuels (e.g. biodiesel or liquefied natural gas); and/or electrification.</p> <p>23. For each phase of project construction, the applicant shall maintain ROG emission below 54 pounds per day. The applicant may demonstrate compliance with this limit through one or more of the following: strategic project phasing, use of pre-coated building materials, and/or use of low-VOC coatings beyond the requirements of BAAQMD Regulation 8, Rule 3.</p> <p>Implementation of these measures would reduce project construction-related air quality impacts. The measures to reduce localized PM10 impacts due to fugitive dust would be consistent with BAAQMD CEQA Guidelines recommendations and would reduce PM10 emissions to a less-than-significant level. Because the ROG performance standard would maintain ROG emissions below 54 pounds per day, this impact would be less-than-significant. The NOx emissions from construction of the project would be reduced by up to 20 percent; however, there is a potential that construc-</p>			

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
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	tion period NOx emissions could still exceed the BAAQMD threshold even with the mitigation measure. As a result, the potential impact from NOx is considered significant and unavoidable .			
Impact 8-2: Operational Emissions Increases. Project development would generate stationary, area, and traffic air pollutant emissions increases. These emissions would not subject sensitive receptors to substantial pollutant concentrations, but emissions of ROG and PM10 would exceed BAAQMD significance thresholds. This project-related effect is considered a significant project and cumulative impact .	<p>Mitigation 8-2. In addition to the project-proposed sustainability measures described in chapter 3 (Project Description) of this EIR, which include a Transportation Demand Management (TDM) program, implement the following measure:</p> <p>Minimize testing of the new generators to reduce ROG emissions. New generator emissions, as computed on an annual basis, shall be reduced by 30 percent or greater. This could be achieved in a number of ways:</p> <ol style="list-style-type: none"> 1. Install fewer than the assumed 13 new generators; 2. Install generators with lower emissions (in this case, smaller generators); 3. Test new generators at lower running loads (the analysis assumed 100-percent load, so 50-percent load would reduce emissions); and/or 4. Reduce the number of annual testing hours. <p>The applicant shall submit an analysis of the new generator emissions prior to installing more than five new generators at the project development site.</p> <p>Implementation of this measure to reduce generator emissions would reduce ROG emissions by 2.7 pounds per day, which would result in total ROG emissions of 53.1 pounds per day, which is below the BAAQMD significance threshold of 54 pounds per day. However, this mitigation measure would reduce PM10 emissions by a minimal amount, leaving PM10 emissions above the BAAQMD significance threshold. Therefore, as currently proposed, the project would result in a significant unavoidable project and cumulative operational air quality impact.</p>	Applicant	City	Prior to building permit issuance; prior to occupancy permit issuance
Impact 8-3: Community Risk and Hazard Impacts. Project development could expose attendees of the on-site child care center to significant levels of PM _{2.5} . Significant impacts from the Tyco Thermal Controls Facility to attendees of the proposed child care facility are anticipated to be significant regardless of where the child care facility	<p>Mitigation 8-3. Buffer the child care center from existing and planned emission sources, and include project features to reduce TAC and PM_{2.5} exposure from air pollutant sources--which include US 101 traffic, the Tyco Thermal Controls facility, and existing and proposed generators--through the following measures:</p> <ol style="list-style-type: none"> 1. When construction of a child care center is proposed, conduct site-specific detailed analysis to determine the child care center's TAC and PM2.5 exposures. The analysis should be utilized to guide final design and siting of the child care facility and determine the level of ventilation/ filtration necessary to ensure that indoor concentrations 	Applicant	City	Prior to PC permit issuance; prior to building permit issuance; prior to occupancy permit issuance

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
		Implementation Entity	Monitoring & Verification Entity	Timing Requirements
is located within the Precise Plan area. This project-related effect is considered to represent a significant project and cumulative impact .	<p>will be less-than-significant.</p> <ol style="list-style-type: none"> 2. Evaluate and appropriately buffer the child care center from existing diesel generators at the Stanford Medicine Outpatient Center and 550 Broadway, and any other sources near the Precise Plan area identified by BAAQMD at the time such analysis is undertaken. 3. Ensure that the ventilation/filtration systems in the child care center result in an indoor cancer risk of less than 10 in one million and annual PM2.5 concentrations of less than 0.3 µg/m3 from any single source or less than 100 in one million cancer risk and annual PM2.5 concentrations of less than 0.8 µg/m3 from cumulative resources. 4. Consider tiered plantings of trees between the child care center and air pollutant sources such as the freeway, existing and planned generators, and the Tyco Thermal Controls facility. 5. Avoid location of any truck loading zones near the child care facility. 6. With respect to outdoor use areas for the child care center, impacts from US 101 shall be mitigated by placing the child care center more than 700 feet from the freeway. Based on currently available information, the impact from Tyco Thermal Controls cannot be mitigated to a less-than-significant level because the elevated PM2.5 levels from the facility extend across the entire project development site. If the Tyco Thermal Controls facility remains in operation at the time of construction of the child care center, and if the detailed analysis described above shows PM2.5 levels exceeding the 0.3 µg/m3 standard throughout the development site, construction and operation of a child care center on the development site shall be prohibited. If the detailed analysis shows that some or all of the development site would be exposed to PM2.5 levels lower than 0.3 µg/m3, the outdoor use area for the child care center shall be sited in one of those locations. <p>Implementation of these measures would reduce this impact to a less-than-significant level.</p>			
CLIMATE CHANGE				
Impact 9-1: Sea Level Rise Impacts on Project Development. Based on the BCDC sea level rise maps, the project may be affected by anticipated sea level rise and associated changes in broader flood	Mitigation 9-1. For all new development on the project development site, the City shall ensure that the development complies with the most current Redwood City General Plan and Redwood City Municipal Code requirements for protection from flood hazards, consistent with Mitigation 10-3 in chapter 10 (Utilities), of this EIR. These provisions would require compliance with associated storm drainage storage, building elevation, and	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation

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plain boundaries. Potential impacts associated with future development that may be subject to sea level rise include risk to public safety and property damage, representing a potentially significant impact .	flood-proofing requirements. Implementation of these measures would be expected to reduce this impact to a less-than-significant level .			
UTILITIES				
Impact 10-1: Need for Emergency Potable Water Storage. Project development would require emergency potable water storage per City requirements. Because the infrastructure (e.g., water tank and distribution system) necessary to meet this requirement has not been incorporated as a component of the proposed project, the need for emergency potable water storage represents a potentially significant project impact .	Mitigation 10-1. Based on the projected emergency potable water storage requirement for the proposed project, the project applicant shall contribute the funds equivalent to the cost of providing 490 equivalent dwelling units (EDU) (\$1.5 million in 2011 dollars) of emergency potable water storage towards the design and construction of the planned off-site areawide storage facility. Implementation of this measure would reduce the identified project impact to a less-than-significant level .	Applicant fair share	City	Prior to building permit issuance for net new development, to be implemented proportionately as net new development occurs. Refer to Stanford Precise Plan, Chapter III, Phasing/ Implementation Summary Table--item 17--for emergency fire/water storage timing and implementation.
Impact 10-2: Increased Peak Wastewater Flows in the Local FOSMD Collection System. It is estimated that the proposed project development site's peak wastewater flows to the FOSMD sewer system would be approximately 4.5 times the flow under existing (full occupancy) conditions, from 112 gallons per minute (gpm) to 627 gpm. Based on information provided by the County Department of Public Works, it has not yet been confirmed whether the two existing sewer lines that would carry this	Mitigation 10-2. At the time that construction of net new square footage on the project development site is proposed, the applicant's engineer shall work with FOSMD and the San Mateo County Engineering Department to verify that the local FOSMD sewer network, particularly lines 100 and 200, has adequate capacity for the proposed increment of development's peak wastewater flow rate. If an inadequacy is found and the proposed increment of development represents the entire cause of the capacity shortfall, the applicant shall bear full responsibility for funding the required improvements to FOSMD's system; if the proposed increment of development does not represent the entire cause of such an incapacity, the applicant shall pay its fair share of the cost of such improvements. Implementation of this measure in accordance with the policies and standards of the FOSMD Master Plan would reduce the identified wastewater collection system capacity impact to a less-than-significant level .	Applicant fully fund or fair share	City; FOSMD; County Engineering Department	Prior to building permit issuance for new square footage beyond the existing 537,000 square feet, evaluate whether need for upgrade exists and if so, calculate applicant's funding responsibility. Refer to Stanford Precise Plan, Chapter III,

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increased wastewater flow across the freeway have sufficient capacity to accommodate such an increase. It has therefore been conservatively determined for this EIR that additional project-related flows could represent a potentially significant project wastewater collection system capacity impact.				Phasing/ Implementation Summary Table--item 18--for sewage transmission and collection upgrade timing and implementation.
<p>Impact 10-3: Increased Risk of Flooding Resulting from Loss of Existing Detention Storage.</p> <p>The project development site would be substantially reconfigured, with replacement of all existing buildings and elimination of a large part of the existing at-grade parking. If the associated regrading and construction of new buildings reduces the existing volume of on-site detention storage, flood levels on the project development site and elsewhere within the basin could rise compared to current conditions. This possible project-related worsening of existing flooding conditions represents a potentially significant impact.</p>	<p>Mitigation 10-3. The project shall not increase off-site flooding compared to existing conditions. Finished grades within the portions of the project development site located outside the proposed building envelopes shall be set at an average elevation that maintains, at a minimum, the existing volume of on-site stormwater detention storage, until such time as the City's downstream discharge constraints (e.g., Bayfront Canal) are resolved and the storage is no longer needed to protect the project improvements and improved properties in the adjoining neighborhoods.</p> <p>Project grading requirements would be based on a detailed, design-level study prepared by the project engineer and approved by the City Building, Infrastructure, and Transportation Department. The study would document the volume of storage currently available on the project development site and establish proposed grades to replicate this existing storage condition following construction of the proposed new buildings. The stormwater detention potential of the project-proposed approximately 2.4-acre publicly accessible open space and of the project-proposed greenway shall be incorporated into the design-level study. In addition, all proposed improvements that are not elevated above the 100-year flood elevation would have to be flood-proofed or otherwise protected from the effects of high water. The applicant shall develop a program by which future building tenants can be notified that vehicles parked within potential flood areas should be moved if it is determined that flooding conditions are imminent.</p> <p>Implementation of this measure would reduce the identified flooding impact to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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HAZARDS AND HAZARDOUS MATERIALS				
<p>Impact 12-1: Potential Project-Related Exposure to Existing Soil or Groundwater Contamination. Project-related excavation and construction activities, as well as project operations, could expose on-site construction and maintenance personnel and members of the public to existing soil and groundwater contamination. Recommendations included in the August 2008 draft Site Management Plan (SMP) commissioned by Stanford University for the Stanford development portion of the Precise Plan area identify the environmental issues associated with project development site construction activities (e.g., excavation, dewatering, etc.) and specify the contents of the site-specific, construction period Health and Safety Plan (HASP) that the construction contractor must prepare (a standard CalOSHA requirement for work at hazardous waste sites). With implementation of the SMP and HASP, the proposed project's construction impacts to construction workers and the public would be less-than-significant.</p> <p>The SMP also explains that site conditions do not preclude any of the uses proposed, but that further risk assessment is required when the precise on-site locations and details of sensitive uses such as child care, medical clinics, and recreation areas are identified, so that any mitigation measures specific to the operations of such uses</p>	<p>Mitigation 12-1. The applicant shall implement the Site Management Plan (SMP) attached as an appendix to the EIR. At such times as the exact locations and details of sensitive uses such as child care, medical clinics, and publicly accessible open space are identified, the applicant shall supplement the SMP to assess any risks to those uses from existing hazardous materials on the development site and shall identify any treatment measures required to ensure that risks to users remain below regulatory limits.</p> <p>Implementation of these mitigations would reduce this impact to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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will be identified and implemented. Pending completion of the required supplemental risk assessments and identification of measures to ensure compliance with residential-level ESLs for these sensitive uses, the proposed project's impacts during operations from potential exposure to existing groundwater and soil vapor contamination are assumed to represent a potentially significant impact .				
NOISE				
<p>Impact 13-1: Potential Exposure of Proposed Child Care Facility to Noise Levels Exceeding Standards. The Precise Plan includes a provision for a proposed child care center. The center's children, employees, and visitors could be exposed to various existing and projected noise sources, including U.S. 101 traffic. The compatibility of the child care land use with the existing and projected noise environment has been evaluated based on the Redwood City Noise Guidelines for Land Use Planning (see EIR Table 13.4). New educational (e.g., child care) development is considered "satisfactory" in noise environments of less than 55 dBA CNEL.</p> <p>Both existing and projected noise levels throughout much of the Precise Plan area, especially in the vicinity of U.S. 101, exceed 55 dBA CNEL, thereby potentially exposing the proposed child care center to noise levels exceeding the "normally acceptable" threshold. This possible adverse noise effect would</p>	<p>Mitigation 13-1. Location-specific noise studies consistent with the requirements of the State Building Code (SBC) shall be conducted for the proposed child care use to identify appropriate noise reduction measures to be included in project final design. The noise study must be submitted to and approved by the Redwood City Community Development Department prior to City issuance of the child care center building permit. Identified noise insulation measures may include:</p> <ul style="list-style-type: none"> • Site planning to minimize noise by locating the child care center away from U.S. 101, with buffering from roadway noise provided by other project buildings; • Air conditioning throughout the child care center so that windows can remain closed to maintain interior noise levels below 45 dBA CNEL; and • Sound-rated windows and construction methods if necessary to maintain interior noise levels below 45 dBA CNEL. <p>For child care center outdoor use areas, noise levels at the property line should be maintained at a CNEL not in excess of 55 dBA during operating hours. Although existing and future noise levels measured along roadways in the project vicinity exceed 55 dBA CNEL, noise levels in outdoor activity areas could be reduced from roadside levels by at least 20 dBA through site selection and site design, including buffer areas, siting the building as an effective noise barrier for adjacent traffic noise sources, and, or in combination with, other noise barriers. The approval of future commercial uses near the child care center may, at City discretion, require a noise study demonstrating how the proposed new commercial uses--including associated loading docks, refuse areas, ventilation systems, and emergency generators--would meet these standards.</p>	Applicant	City	Site planning measures prior to PC permit issuance; remaining measures prior to building permit issuance and prior to occupancy permit issuance

IDENTIFIED IMPACT	RELATED MITIGATION MEASURE (Performance Criteria)	MONITORING		
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represent a potentially significant impact .	Implementation of these measures would reduce the potential impact on the proposed child care use to a less-than-significant level .			
<p>Impact 13-2: Project-Facilitated Construction Noise. Construction activities facilitated by the project would include building demolition, site grading and preparation, construction of new buildings, and installation of utilities. Noise levels at 50 feet from the demolition or construction equipment source could reach approximately 105 dBA, resulting in intermittent interference with typical existing residential and business activities, as well as any on-site sensitive uses developed during earlier phases of Precise Plan buildout. Because construction noise could elevate noise levels at the nearest residences by more than 5 dBA, at some locations the proposed project could cause a potentially significant intermittent and short-term impact.</p>	<p>Mitigation 13-2. Reduce project demolition- and construction-period noise impacts on nearby residences (including the Broadway Towers apartments and the mobile home park near the proposed recycled water pipeline route) and sensitive uses developed on the development site during earlier phases (e.g., child care center) by incorporating conditions in project demolition and construction contract agreements that stipulate the following conventional construction-period noise abatement measures:</p> <ul style="list-style-type: none"> • <i>Construction Plan.</i> Prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with nearby existing and on-site newly constructed noise-sensitive facilities so that construction activities can be scheduled to minimize noise disturbance. • <i>Construction Scheduling.</i> Ensure that noise-generating construction activity is limited to between the hours of 7:00 AM to 8:00 PM, Monday through Friday, and prohibit any construction during other hours which would cause any increase in ambient noise levels within a residential district. (<i>Redwood City Municipal Code Section 24.32</i>) • <i>Construction Equipment Mufflers and Maintenance.</i> Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. • <i>Equipment Locations.</i> Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near the construction site. • <i>Construction Traffic.</i> Route all construction traffic to and from the construction sites via designated truck routes where possible. Prohibit construction-related heavy truck traffic in residential areas where feasible. • <i>Quiet Equipment Selection.</i> Use quiet construction equipment, particularly air compressors, wherever possible. • <i>Temporary Barriers.</i> Construct solid plywood fences around construction areas to shield residences, operational businesses, or noise-sensitive land uses. • <i>Temporary Noise Blankets.</i> Temporary noise control blanket barriers should be erected, if necessary, along building facades or around construction areas. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. (Noise control blanket barriers can be rented and quickly erected.) 	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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	<ul style="list-style-type: none"> • <i>Noise Disturbance Coordinator.</i> The City shall require project designation of a “Noise Disturbance Coordinator” who would be responsible for responding to any local complaints about construction noise. The Disturbance Coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. (The project sponsor could be responsible for designating a Noise Disturbance Coordinator, posting the phone number, and providing construction schedule notices; the Noise Disturbance Coordinator would work directly with an assigned City staff member. Alternatively, the Noise Disturbance Coordinator could be employed by the City and funded by the applicant.) • <i>Temporary Closure or Relocation of Child Care Center.</i> If the project construction sequencing results in major outdoor construction activities occurring adjacent to the child care center after it is in operation, then the project sponsor, at its option, shall either temporarily close or relocate the child care center. <p>Although implementation of these measures would reduce construction noise impacts, it is likely that this large project would be constructed in phases over a long period of time, subjecting nearby sensitive receptors to repeated construction noise.</p> <p>Therefore, the construction noise impact of the proposed project is considered significant and unavoidable.</p>			
<p>Impact 13-3: Project-Facilitated Groundborne Vibration Levels. Project-facilitated demolition and construction activities could generate substantial vibration (e.g., from potential pile driving) in the project vicinity. These possible intermittent and short-term effects represent a potentially significant impact.</p>	<p>Mitigation 13-3. Reduce ground borne vibration levels during individual, location-specific future project demolition and construction periods by incorporating conditions in individual project demolition and construction contractor agreements that stipulate the following groundborne vibration abatement measures:</p> <ul style="list-style-type: none"> • Restrict vibration-generating activity to between the hours of 7:00 AM and 7:00 PM, Monday through Friday. Prohibit such activity on weekends and holidays. • If pile driving is proposed, prepare a vibration study. If the vibration study shows that pile driving, including mitigation such as pre-drilling of pile holes, would cause vibration exceeding 0.5 inches/sec ppv for structurally sound buildings designed to modern engineering standards or 0.2 inches/sec for structurally sound buildings for which structural damage is a major concern, then pile driving shall not be conducted. 	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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	Implementation of these measures would reduce this potential intermittent and short-term project vibration impact to a <i>less-than-significant level</i> .			
Impact 13-4: Potential Noise from Parking Structure Ventilation System. Noise generated solely by the ventilation system and other mechanical equipment for the potential parking structure at the corner of Bay Road and Barron Avenue could substantially exceed existing ambient levels at residences in the area or the Redwood City Noise Guidelines for Land Use Planning (see Table 13.4) because the parking structure would be located proximate to residences on 2nd Avenue. This possibility represents a <i>potentially significant impact</i> .	Mitigation 13-4. During the project detailed design phase for the potential parking structure at the corner of Bay Road and Barron Avenue, the project applicant shall submit an acoustical study to demonstrate how the parking structure design would meet the following noise standards at the most affected receiver: 60 dBA CNEL and 60 dBA Leq-hr daytime (7:00 AM to 7:00 PM), 55 dBA Leq-hr evening (7:00 PM to 10:00 PM), and 50 dBA Leq-hr nighttime (10:00 PM to 7:00 AM). The design measures may include, for example, the installation of silencers and baffles as necessary to reduce the noise level at the nearest residential property line to the existing ambient noise level. Implementation of this measure to the satisfaction of the Redwood City Community Development Department would reduce this impact to a <i>less-than-significant level</i> .	Applicant	City	Prior to building permit issuance; prior to occupancy permit issuance
CULTURAL AND HISTORIC RESOURCES				
Impact 14-2: Potential Disturbance of Archaeological or Paleontological Resources. Project construction (e.g., excavation for underground parking and utilities) could disturb existing unrecorded sensitive archaeological or paleontological resources at the development site. Although unlikely, this possibility represents a <i>potentially significant impact</i> .	Mitigation 14-2. The project applicant shall carry out the following measures, which shall be at least as protective as those listed in the City's Cultural Resources Management Plan: (1) <i>Construction Personnel Education Program.</i> The project applicant shall implement an education program, prepared by a qualified archaeologist and a qualified paleontologist, for construction personnel that includes the following elements: <ul style="list-style-type: none"> • Resource identification training procedures for construction personnel; • Procedures for coordinating work with the archaeological monitor (see below); and • Procedures for reporting discoveries. (2) <i>Procedures for Resources Encountered During Construction.</i> The project applicant shall provide an Archaeological Monitoring and Data Recovery Program (AMDRP) prepared by a qualified archaeologist and outlining procedures for resources encountered during construction. The AMDRP shall include specific measures to insure compliance with State Public Resources Code section 5097.98 and CEQA Guidelines section 15064.5(d) and (e) in the event that human remains are encountered.	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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	<p>(3) A qualified archaeological monitor will visit the site for spot-checks during excavations exceeding five feet in depth below current grade.</p> <p>If subsurface archaeological resources are encountered, excavation shall halt in the vicinity of the resources, and the archaeological monitoring shall evaluate the resource and its stratigraphic context. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to archaeological resources.</p> <p>If disturbance of an archaeological resource cannot be avoided, the mitigation program described in the AMDRP, including measures set forth in the City's CRMP and in compliance with sections 15064.5 and 15126.4 of the CEQA Guidelines, shall be implemented.</p> <p>If subsurface paleontological resources are encountered, excavation shall halt in the vicinity of the resources and the project paleontologist shall evaluate the resource and its stratigraphic context. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. During monitoring, if potentially significant paleontological resources are found, "standard" samples shall be collected and processed by a qualified paleontologist to recover micro vertebrate fossils. If significant fossils are found and collected, they shall be prepared to a reasonable point of identification. Excess sediment or matrix shall be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of material collected and identified shall be provided to a museum repository with the specimens. Significant fossils collected during this work, along with the itemized inventory of these specimens, shall be deposited in a museum repository for permanent curation and storage. A report documenting the results of the monitoring and salvage activities, and the significance of the fossils, if any, shall be prepared. The report and inventory, when submitted to the lead agency, shall signify the completion of the program to mitigate impacts on paleontological resources.</p> <p>Implementation of these measures would reduce this impact to a less-than-significant level.</p>			
GEOLOGY AND SOILS				
<p>Impact 15-1: Geotechnical Hazards Associated with Project Excavation and Grading. The project's proposed excavation and grading activities have the potential to destabilize existing buried utilities</p>	<p>Mitigation 15-1. As recommended by the project's preliminary geotechnical investigations, prior to City issuance of grading permits for individual project construction phases, the applicant shall be required to retain a registered engineering geologist or geotechnical engineer to prepare detailed, design-level geotechnical investigations to guide the design of all project grading and excavation activities. The detailed, design-level geotechnical</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during

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<p>and building foundations, or to create conditions that would potentially compromise the safety or stability of proposed project improvements. The project applicant's preliminary geotechnical investigations (Lowney Reports I and II; and Cornerstone Earth Group, March 2008) made initial assessments of these conditions, but a design-level geotechnical investigation will be needed to adequately address all grading and excavation activities on the development site. Without such a study--and without the associated supervision of an engineering geologist or geotechnical engineer during project grading and construction--the safety and long-term stability of existing and proposed project improvements cannot be assured. These possible excavation and grading hazards represent a potentially significant impact.</p>	<p>investigations shall be performed for each of the structures proposed for the development site. Subsurface conditions shall be explored and laboratory tests conducted on selected soil samples to establish strength parameters for the design of excavations, retained slopes and fill placement, and to determine the corrosive potential of both Bay mud and imported fill on foundation elements and buried utilities. Recommendations from the investigations shall be incorporated into all plans for project grading, excavation, soil support (both temporary and long-term) and utility construction, to the satisfaction of the City Engineer.</p> <p>The detailed, design-level investigations, relevant recommendations, and all associated project grading, excavation and foundation plans, shall be subject to review and approval by an independent engineering geologist or geotechnical engineer retained by the City Engineer at applicant expense. In addition, the project civil engineer shall certify to the City Engineer (e.g., through plan submittal for City review) that all relevant provisions of the investigations have been incorporated into the grading, excavation and construction plans, and all earthwork and site preparation shall be performed under the direct supervision of a registered engineering geologist or geotechnical engineer. Implementation of these measures would reduce the potential excavation and grading impacts to a less-than-significant level.</p>			grading and construction
<p>Impact 15-2: Excavation Instabilities Caused by High Groundwater. Groundwater encountered during construction of the proposed project's below-grade installations could destabilize excavation walls, reduce the bearing capacity of in-place soils that might otherwise be suitable for foundation support, and exert additional stresses on basement walls and floor slabs. These possible groundwater-related construction problems represent a potentially significant impact.</p>	<p>Mitigation 15-2. The detailed, design-level geotechnical investigations recommended under Mitigation 15-1 for each project construction phase shall fully characterize groundwater conditions on the development site and make appropriate recommendations regarding dewatering techniques, slope and shoring requirements for excavations, stabilization or replacement of saturated foundation materials, and hydrostatic pressure implications for the design of below-grade structures.</p> <p>Implementation of these measures would reduce these potential groundwater impacts to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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<p>Impact 15-3: Soil Erosion. Project development would disturb the site's existing cover of buildings, pavements and landscaping, potentially leaving soils exposed to wind and water erosion during the construction period. Eroded soils would be washed into on-site drainage facilities that discharge to the Bayfront Canal and San Francisco Bay. Deposition of these soils through natural sedimentation could adversely affect the carrying capacity of drain lines, pumping equipment and open channels, increasing flooding potential and maintenance requirements. In addition, suspended sediment would degrade water quality in the canal and in the bay by increasing turbidity levels. These possible effects of project-related soil erosion represent a potentially significant impact.</p>	<p>Mitigation 15-3. The applicant shall develop an erosion control plan in accordance with the provisions of the project's City-approved Stormwater Pollution Prevention Plan (SWPPP). The erosion control plan would be implemented throughout project construction, and would include measures for the post-construction stabilization of all disturbed ground.</p> <p>Implementation of this measure would reduce these potential soil erosion impacts to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction
<p>Impact 15-4: Settlement and Foundation Movement. The project's preliminary geotechnical studies determined that structural loads imposed by buildings more than approximately three stories in height would likely exceed the bearing capacity of either fill or weakly consolidated Bay mud underlying conventional shallow foundations. Such buildings would potentially experience gradual but excessive long-term total and differential settlements. These possible settlement effects represent a potentially significant impact.</p>	<p>Mitigation 15-4. The detailed, design-level geotechnical investigations required under Mitigation 15-1 for each project construction phase shall include a thickness and consolidation analysis of all clay soils underlying proposed building locations. This analysis shall be sufficient to accurately estimate the rate and total amount of consolidation expected to occur in response to building construction, as well as the likely magnitude of differential settlement. Building foundations, surface improvements, and utility connections shall be designed to structurally withstand the associated movement, without disrupting either pedestrian or vehicular connections to the building. Implementation of these measures would reduce the potential compressible soil and settlement impacts to a less-than-significant level.</p> <p>The requirement described in Mitigation 15-1 for peer review of the recommended design-level geotechnical investigations, as well as for certification by the project civil engineer that all provisions of the investigation have been incorporated into the project's design and construction, would also apply to this mitigation and to all subsequent geotechnical and soils mitigation measures set forth in this EIR chapter.</p> <p>The requirement described in Mitigation 15-1 for peer review of the recom-</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

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	mended design-level geotechnical investigations, as well as for certification by the project civil engineer that all provisions of the investigation have been incorporated into the project's design and construction, would also apply to this mitigation and to all subsequent geotechnical and soils mitigation measures set forth in this EIR chapter.			
<p>Impact 15-5: Expansive Soils. Near-surface clay soils subjected to seasonal cycles of wetting and drying can undergo significant volume changes, expanding when wet and shrinking when dry. Structures based in these materials would be subjected to significant stresses that could destabilize foundations and cause cracking or heaving of floor slabs and exterior pavements. These possible expansive soil effects represent a potentially significant impact.</p>	<p>Mitigation 15-5. The detailed, design-level geotechnical investigations required for each project construction phase under Mitigation 15-1 shall include an evaluation of the likely effects of building on expansive soils and shall recommend specific measures designed to minimize soil movement and/or counter its potentially destructive effects. Implementation of these measures would reduce the potential expansive soil impacts to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction
<p>Impact 15-6: Seismically Induced Settlement. Development of the proposed project would place new commercial buildings in an area that could experience rapid, excessive settlement in response to earthquake-induced ground shaking during the useful life of the project improvements. These possible responses to anticipated seismic activity represent a potentially significant impact.</p>	<p>Mitigation 15-6. The detailed, design-level geotechnical investigations required under Mitigation 15-1 for each project construction phase shall include a site-specific evaluation of the liquefaction and settlement potential at each proposed building location. The investigations shall also propose measures as needed to offset the effects of liquefaction-induced settlement, either through stabilization of the most vulnerable sand layers or through utilization of building foundation, utility connection, and pavement designs that can withstand the anticipated degree of total and differential settlement. Implementation of these measures would reduce these potential seismically induced settlement impacts to a less-than-significant level.</p>	Applicant	City	Prior to grading permit issuance; prior to building permit issuance; field verify implementation during grading and construction

Acknowledgments

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