COMMUNITY DEVELOPMENT DEPARTMENT

Council Meeting Date: April 2, 2013
Staff Report #: 13-050

Agenda Item #: SS-1

STUDY SESSION: Council Review and Possible Direction Regarding the Proposed SRI, International Campus Modernization Project and the Associated Draft Public Outreach and Development Agreement Negotiation Process

---

RECOMMENDATION

Staff recommends that the City Council support review and processing of the SRI, International (SRI) Campus Modernization Project consistent with the draft public outreach and development agreement negotiation process discussed below. Contingent upon City Council support of project review and processing, this framework would be refined for City Council review at a subsequent meeting.

BACKGROUND

SRI's Menlo Park Campus consists of approximately 38 buildings that have been constructed incrementally, with the earliest structure dating back to the 1940s. The Campus is subject to the requirements of a Conditional Development Permit (CDP), which was originally approved in 1975 and has subsequently been amended. The 1975 CDP did not establish a maximum development potential, and the only reference to limitations related to development potential can be found in the 1975 Environmental Impact Report (EIR), which stated an assumed maximum employee count of 3,500 people.

In 1978, an amendment to the CDP was approved in order to remove approximately 10.3 acres from SRI's Campus for the development of the McCandless office complex located at 525 to 545 Middlefield Road. The amended CDP establishes parameters for the development of the McCandless buildings and, other than a reduction in the physical size of the SRI campus, did not alter the 1975 CDP.

In 1997, as a direct result of a proposal by Classic Communities to development residential units on a portion of SRI's Campus, the CDP was again amended. The amendment included a further reduction in the physical size of the campus to reflect the property being sold to Classic Communities and to establish for the first time, a maximum development potential. The 1997 CDP limits the site to 1,494,774 square feet of gross floor area and a maximum of 3,308 employees. SRI leases a portion of their campus gross floor area for non-SRI uses, and for those uses, the allowable number of persons working on the site is calculated at a 2:1 ratio. Finally, the most recent CDP

amendment was completed in 2004, and is specific to changes associated with building T.

In summary, the current CDP reflects a project site inclusive of approximately 63.2 acres, with a maximum gross floor area of 1,494,774 square feet and a maximum employee count of 3,308 people.

SRI has previously contemplated development of a Master Plan for the Campus, the most recent application submittal dates back to September 1999. The City Council's review included development of a subcommittee to review the issues associated with the proposal. Prior to preparation of an EIR, SRI decided to withdraw the application.

On November 28, 2012, SRI submitted preliminary plans and associated materials to initiate review of the SRI Campus Modernization Project, which is a phased project over the next 25 years. In response to comments from staff related to the preliminary project proposal, SRI submitted revised project plans and materials on March 15, 2013. The project description, which includes select plan sheets, is included as Attachment A. Key Project elements include:

- **Building replacement with no net new square footage:** the existing gross floor area at the project site is approximately 1,380,332 square feet and SRI proposes to replace this existing square footage incrementally over the next 25-years. Buildings are proposed to range in heights, with a maximum height of 64-feet (exclusive of mechanical enclosures) on the east side of the campus proximate to other commercial uses, and more distant from residential uses and public roadways;
- **Increase in employee density:** Current employee count at the SRI Campus includes approximately 1,500 SRI employees and an additional approximately 280 people who are employed by unrelated tenants. Based upon the CDP requirement that non-SRI uses employee count be calculated at a 2:1 ratio, these 280 people would equate to 540 employees, for a total employee count of approximately 2,040 employees. SRI seeks to have a maximum of 3,000 employees and anticipates that the number of employees would gradually increase over the next 25 years;
- **Increased landscaping:** The project proposal includes an increase in site landscaping from approximately one-fourth of the lot area, to more than one-third of the lot area, over the 25-year development horizon;
- **Continued implementation of the Transportation Demand Management Program:** Based upon recent transportation studies completed by SRI, approximately 41 percent of employees commute to the campus by means other than a single occupancy vehicle, including the use of public transportation, bicycles and by foot. The existing comprehensive Transportation Demand Management (TDM) Program that helps achieve this high alternative transportation rate is proposed to continue as part of the Project proposal;
- **Reconfigured Site Access:** Access to the site is proposed to be reconfigured to more efficiently bring employees from the public street network onto the SRI

campus. The reconfiguration includes the removal of vehicular access from Laurel Street, reduction of the driveways on Ravenswood Avenue from five to four, and greater emphasis on use of the existing driveways on Middlefield Road; and

- **Reduced Parking:** The project site currently includes 3,224 parking spaces, which exceeds existing and proposed project demand. As part of the proposed project, the parking spaces would be reduced to approximately 2,444 spaces, with approximately one-fifth of those parking spaces located within a parking structure.

Land use entitlements and associated agreements related to the requested SRI Campus Modernization Project include:

- **General Plan Amendment** and **Zoning Ordinance Amendment** to create a new General Plan land use designation and a new Zoning District that would allow for a long range master plan to reconstruct the existing approximately 62-acre research campus with state-of-the-art facilities with a maximum gross floor area of approximately 1.38 million square feet. A new General Plan land use designation and Zoning District is necessary because the existing and proposed gross floor area exceeds the maximum permissible in the Professional and Administrative Offices land use designation and the C-1 (Administrative and Professional District, Restrictive) zoning district, which are both applicable to the site. The new zoning district would conditionally permit uses such as research and development facilities, including laboratories, offices, auditoriums, conference facilities, employee amenities including cafes and health/fitness centers, accessory facilities, and public utilities;
- **Rezoning** to change the zoning of the site from C-1 (X) (Administrative and Professional District, Restrictive, Conditional Development) and P (Parking) to the new zoning district;
- **Amended and Restated Conditional Development Permit** to revise the existing Conditional Development Permit to reflect the 25-year phased modernization plan and applicable development standards;
- **Lot Merger or Lot Line Adjustments** to reconfigure the existing parcels;
- **Plan Line Abandonment** for the Burgess Drive right-of-way;
- **Heritage Tree Removal Permits** to remove approximately 91 heritage trees; and
- **Development Agreement,** which results in the provision of overall benefits to the City and adequate development controls in exchange for vested rights in Project approvals.

In addition, the preparation of an EIR and a Fiscal Impact Analysis (FIA) would be required.

ANALYSIS

Staff has reviewed the most recent project submittal and proposes the following draft project milestones and public meetings framework, subject to refinement as project review proceeds. This process is generally based on the project review framework utilized for the Facebook Campus Project, and is designed to facilitate review of the project in an efficient manner that provides sufficient opportunity for public, Commission, and City Council input:

Meeting or Milestone	Purpose
City Council Meeting	Authorization for the City Manager to enter into consultant contracts for environmental review and fiscal impact analysis in excess of $50,000, and review of the draft public outreach and development agreement negotiation process
Milestone	Issue a Notice of Preparation (NOP) pursuant to the requirements of the California Environmental Quality Act (CEQA)
Planning Commission Meeting	EIR scoping session and study session
City Council Meeting	Appointment of a Development Agreement subcommittee comprise of two Council members
Milestone	Release of Draft EIR and Draft FIA for public review
Public Outreach Meetings and Commission Meetings	To inform the public and Commissions about the proposed project and documents available for review
Planning Commission Meeting	Review of Draft EIR, Draft FIA and Study Session to discuss the project proposal
City Council Meeting	Review of Draft EIR, Draft FIA, development program and provision of direction or parameters to guide Development Agreement negotiations
Milestone	Prepare Final EIR, Final FIA and negotiate Development Agreement Term Sheet
City Council Meeting	Review of Development Agreement Term Sheet
Planning Commission Meeting	Review and recommendation on project and all applicable land use entitlements and agreements
City Council Meeting	Review and action on project and all applicable land use entitlements and agreements
City Council Meeting	Second reading of the Rezoning and Development Agreement Ordinances

During the project review process, there will be numerous discussion points and potential for project refinements. Staff has already identified a number of key topic areas for further discussion, including:

- Project design with a focus on site layout, access, height, and massing;
- Interface with the neighboring properties and uses;
- Maximization of TDM Program;
- Construction phasing;
- Burgess Drive plan line abandonment; and
- Parking agreements with neighboring property owners.

These topics, as well as others, will be discussed in greater detail at future public meetings.

SUGGESTED STUDY SESSION PROCESS

Staff suggests that the City Council consider an agenda for the study session that would include the following:

1. Staff presentation;
2. Council questions of clarification regarding the presentation;
3. Applicant presentation;
4. Council questions of clarification regarding the presentation;
5. Public comments; and
6. Council discussion and direction on project processing.

The study session is intended to provide feedback on the project proposal and confirm City Council's support for subsequent project review and processing.

IMPACT ON CITY RESOURCES

The applicant has submitted application fees for all applicable land use entitlements and agreements. The applicant is required to pay planning permit fees, based on the City's Master Fee Schedule, to fully cover the cost of staff time spent on the review of the project. The applicant is also required to bear the cost of the associated environmental review and fiscal analysis. For the environmental review and fiscal analysis, the applicant deposits money with the City, and the City pays the consultants.

POLICY ISSUES

The applicant is requesting General Plan and Zoning Ordinance amendments, as well as a rezoning of the project site. At future public meetings the City Council would want to consider whether the requested General Plan and Zoning Ordinance amendments and associated rezoning are appropriate for this project site and for the City in totality. In addition, the City Council would need to consider the potential significant and unavoidable environmental impacts and the appropriate level of public benefit based

upon the applicant's request for a phased development proposal, and General Plan and Zoning Ordinance amendments.

ENVIRONMENTAL REVIEW

Study sessions do not result in an action, and as such are not subject to the requirements of CEQA. Project review would include preparation of an EIR.

PUBLIC NOTICE

Public notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting. In addition to the agenda posting, an email update was sent to subscribers of the project page for the proposal, which is available at the following address: http://www.menlopark.org/projects/comdev_sri.htm The Project page allows interested parties to subscribe to email updates, and provides up-to-date information about the Project, as well as links to previous staff reports and other related documents.

ATTACHMENTS

A. Project Description Letter, inclusive of select plan sheets

Report prepared by:

Rachel Grossman
Associate Planner

Justin Murphy
Development Services Manager

Kyle Perata
Assistant Planner

Introduction

I. INTRODUCTION

SRI International, a nationally recognized nonprofit research and development (R&D) institute and innovation center, is submitting an application to the City of Menlo Park to modernize its aging campus. The proposed Campus Modernization Project will permit SRI to continue its important work in a facility better designed to meet the needs of its clients, its staff, and the City of Menlo Park. SRI proposes no increase in existing campus gross floor area. The application focuses instead on modernizing the campus by replacing and improving SRI's facilities without expansion.

The objectives for the Campus Modernization Project are as follows:

- Revitalize and upgrade the existing SRI campus in a manner that promotes orderly campus renewal and enhances campus economic vitality and fiscal health;
- Create high-quality, state-of-the-art facilities to promote world-leading multi-disciplinary research;
- Improve the working environment for SRI employees so as to attract and retain top scientists, engineers, researchers, and other professionals;
- Update campus seismic, safety and security features to maintain a safe environment for SRI employees and neighbors;
- Enhance the energy efficiency of the campus through modernization of buildings and utility infrastructure, and through building placement based on solar orientation;
- Improve campus bicycle and pedestrian pathways, as well as internal vehicular circulation patterns, to minimize traffic congestion on surrounding streets; and
- Allow flexibility to respond to future changes in world-class research needs.

SRI's present Menlo Park facilities comprise approximately 38 buildings constructed incrementally from the earliest structures built as part of the Dibble Army Hospital in the 1940s, additional office and laboratory buildings constructed in the 1960s and 1970s, and more recent building expansions erected within the past decade. Modernizing these buildings is driven by four important considerations: continuing SRI's research contributions, retaining and attracting talent, improving energy efficiency, and enhancing safety and security.

Contributions to society: World-leading research is achieved by talented staff, working in modern facilities with the best equipment available. SRI's researchers have continued to perform outstanding work even with the challenges presented by aging facilities. However, the quality of SRI's buildings must be addressed so that physical conditions on the campus do not become barriers to technical excellence and innovation.

Talented staff: The job market for the most talented staff is fiercely competitive. Offering first-class equipment and facilities, a supportive physical environment, and a comprehensive compensation package all contribute to recruiting top talent. As a nonprofit scientific research institute, SRI cannot always compete with Fortune 500 companies in terms of salary and benefits. Consequently, the attractiveness and functionality of SRI's campus facilities and amenities are critical to its ability to attract and retain staff, and to maintain its world leadership in research and development.

Green buildings: Consistent with SRI's public-benefit mission, employees also want to work in facilities that provide a healthy, energy efficient environment, knowing that they are minimizing their imprint on the environment. SRI will seek U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) certification to validate that its new buildings are designed and built to achieve high performance in sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

Modern safety and security: Much has been learned over the years about constructing buildings to withstand seismic events and to promote safety. This knowledge has been incorporated into modern building design and construction building codes. While SRI has invested considerable financial resources into retrofit projects, a preferred and more prudent approach is to take full advantage of best practices and to invest SRI's resources in modern buildings that are fully compliant with current seismic and safety standards. In addition, changing needs for overall campus security can be accomplished through a more cohesive site plan and thoughtful attention to security fencing, gates and access points.

The City of Menlo Park will benefit from a more modern SRI facility. Upgrading and revitalizing SRI's campus will enable SRI to continue to serve as a stable and large employer, attracting talented and educated scientists and other professionals. In addition, as the long-standing home of one of the most famous and honored research institutes in the United States, Menlo Park's reputation as a Silicon Valley hub visited daily by researchers and clients from around the world will continue to be enhanced. Other benefits to the City include improved aesthetics, the potential to reduce SRI's carbon footprint and water use, an increase in permeable surfaces to reduce runoff, and improved bicycle, pedestrian and vehicular circulation.

The physical and regulatory components of the Campus Modernization Project reflect the objectives identified above, as well as two important projections: (1) SRI's unique research needs will continue to result in a relatively low ratio of employees per square foot of building space, and (2) SRI will not dramatically increase the number of employees at the site. It will gradually grow its employee population until it reaches a level similar to its historic employment count in Menlo Park.

- Low intensity use of space: SRI occupies its floor space with fewer employees than is the case in more traditional commercial or office buildings. SRI's research activities drive a need for laboratory, high bay, clean room and R&D equipment support spaces that result in a low density of employees. For example, SRI's largest current laboratory is more than 180,000 square feet in size, but houses only 320 employees due to the size and configuration of the laboratory's research equipment, as well as square footage needs for researcher offices and support space. As another example, SRI's existing high bay facility of 21,000 square feet has no resident occupants. All scientists working in the high bay facility have private offices in other buildings. SRI anticipates that it will continue its practices that result in much lower occupancy levels per square foot than companies utilizing "open office" and other higher occupancy strategies.
- Gradual employment growth: SRI's employment base has historically moved in gradual, long-term cycles. Just as SRI's Menlo Park employment count slowly decreased from its peak during the 1980s, its future return to levels similar to its historical peak will also take many years. Campus employment growth will be moderated both by SRI's business program and by the need to continue ongoing research studies while old buildings are removed and replaced by new ones.

The Campus Modernization Project can be summarized as follows:

- **Building replacement with no net new square feet.** Existing buildings will be replaced without increasing total campus gross floor area at full development. The existing campus buildings total 1,380,332 square feet of gross floor area. SRI proposes to limit total campus gross floor area upon completion of the Campus Modernization Project to the identical amount. ***This is 11 percent less than the 1,494,774 square feet of gross floor area allowed under SRI's current Conditional Development Permit.***

- **Minimized visual effects.** The tallest new buildings will be located away from the campus edges and neighboring residential areas. Existing building heights on the campus range from 12 to 48 feet above average finished grade. The new buildings will be taller to promote collaboration by providing flexible workspaces on smaller floor plates. Increasing building height will also result in increased landscaping and permeable surfaces, reducing runoff. The new buildings are proposed to be 48 feet or less on the west side of the campus, nearer to residential neighborhoods, and 64 feet or less on the east side of the campus, nearer to commercial uses and more distant from public roadways.
- **Gradual return to historic employment levels.** As the new campus takes shape, SRI expects to gradually return to employment levels that are similar to those that have been on the site in the past. Presently, SRI and its related entities employ approximately 1,500 people on the campus. Another 280 people are employed onsite by unrelated tenants. A maximum 25-year employment cap of 3,000 employees is proposed. ***This is a reduction of more than 10 percent from the 3,308 employees permitted under SRI's current Conditional Development Permit.***
- **A new campus orientation.** The new campus buildings will be clustered at the center of the campus, creating an integrated research campus surrounding a central green. Both the relationship of the new buildings to one another, and the design of each individual building, will promote collaboration, cross-disciplinary exchange of ideas, and innovation.
- **Flexible building design.** The new campus buildings will be designed in a flexible manner to accommodate offices, research laboratories or both. This type of flexible floor plate will ensure that building use can conform to evolving research needs over the next quarter of a century.
- **Enhanced amenity space.** Amenities will be added to promote a healthy and productive workplace, including expanded onsite dining facilities, employee fitness centers, a new auditorium, and an integrated system of outdoor gathering and walking spaces.
- **Reduced carbon footprint.** Energy-efficient building designs, utility systems and materials will be used to reduce energy demand and associated greenhouse gas emissions. The new buildings will be oriented to take advantage of natural daylight for lighting and heating, as well as shading for cooling.
- **Sensitive campus edges.** Enhanced landscaping is proposed at the campus edges to provide a shady, soft edge that will be visually appealing to neighbors and passersby. The proposed site plan includes 60-foot setbacks along Ravenswood Avenue, most of Laurel Street, and the southwest boundary between SRI and the Classics Communities neighborhood. Existing buildings will be retained on the southern "tab" portion of the site; therefore setbacks in this area will continue to be 20 feet. Setbacks along the edges of the site adjacent to the United States Geological Survey buildings and commercial uses on the southern and eastern side of the campus similarly are proposed to be 20 feet.
- **Increased landscape.** More of the campus land area will be dedicated to landscaping than exists under current conditions. Landscaping and other pervious materials currently cover 24 percent of the campus. At full development of the Campus Modernization Project, landscaped areas will increase to approximately 37 percent.

- **Tree preservation and planting.** Trees, including heritage trees, will be preserved where feasible and additional trees will be planted, increasing the total number of trees on the campus. The new landscape plan will include dense tree plantings at the campus perimeter, with ribbons of trees flowing through the campus.
- **Transportation demand management.** SRI has unique trip-generation characteristics compared to more typical office or R&D land uses. Its location within 1/4 mile walking distance of the Menlo Park Caltrain station, close proximity to downtown services, and flexible work environment have combined to encourage employees to travel to campus in modes other than commuting by car. Recent studies show that only 59 percent of SRI employees commute in drive-alone vehicles. By comparison, 78 percent of all employees who work in Menlo Park commute in drive-alone vehicles according to the most recently available census data. Under the Campus Modernization Project, SRI intends to continue to implement its progressive transportation demand management program, which is designed to provide and encourage alternatives to private automobile travel.
- **Improved bicycle and pedestrian facilities.** Pedestrian and bicycle paths and gateways will be designed to support and encourage non-vehicular transportation—both by those commuting to and from work and by those biking, walking and cycling during lunch hours and workday breaks. Bicycle storage will be added to further promote non-vehicular transportation choices.
- **Improved circulation.** Internal roadways and parking areas will be designed to enable employees to travel easily within a campus loop road system. These improvements include: a consolidated single driveway on Laurel Street instead of the current two driveways on Laurel, four driveways on Ravenswood Avenue instead of the current five driveways, and greater emphasis on utilizing the two existing driveways on Middlefield Road.
- **Sensitive location for truck access.** A new campus loading dock, receiving center, and warehouse will be located on the east side of the campus, away from residential neighborhoods. Delivery trucks and waste and recycling hauling trucks will access the campus from Middlefield Road via Ringwood Avenue.
- **Reduced parking.** Fewer parking spaces will be provided on the campus than exist today. All campus parking demand (including conference center demand) can be accommodated with 2,135 spaces as compared to the 3,224 existing spaces. The Campus Modernization Project has been designed to accommodate the anticipated parking demand by providing 2,444 spaces in surface lots and a new parking structure.
- **Efficient utility infrastructure.** SRI is served by an energy-efficient cogeneration plant. Under the Campus Modernization Project, the cogeneration plant boiler will be replaced, heat exchangers and pumping stations will be added to convert steam to hot water, and new high-efficiency chillers and a multi-cell cooling tower will be added to accommodate demand while reducing water use. Utility pipelines and ducts will be installed in an efficient loop, with water, sewer, gas and electrical distribution lines installed at the outer perimeter of the new campus buildings and mechanical steam, heating hot water, and chilled water installed at the perimeter of the new campus green, to the interior of the new campus buildings. The combined improvements will substantially decrease annual electricity and chilled water consumption, and only slightly increase natural gas consumption compared to existing conditions. Water demand will decrease by more than 11 percent, and sewer discharge will decrease by 8 percent.

- **Enclosed recycling and waste facilities.** Recycling and trash enclosures will be fully enclosed, with smaller collection points located along the outer perimeter of the new buildings, and a recycling and a centralized waste sorting and storage area located at the eastern edge of the campus. SRI employs sustainable resource recovery practices on its campus and will continue to do so with the Campus Modernization Project.
- **Enhanced security. I**mproved security fencing and gates will surround the portions of the campus that will be closed to public access. Along the most public campus edges, the security fence will be located behind a vegetated screen to reduce its visibility from the campus exterior.
- **Improved fire department access and facilities.** New fire hydrants, fire truck access routes, and fire department staging areas will be constructed throughout the campus, substantially improving fire department access.
- **Gradual construction phasing.** Buildings will be replaced gradually to minimize campus disruption. No more than two buildings will be under construction at any one time.
- **Planning for interim conditions.** In some campus locations, interim surface parking lots, fencing and utilities will be installed to enable campus operations to continue during the Campus Modernization Project. In addition, there will be interim periods when overall gross floor area on the campus will be higher than gross floor area at full development due to the need to complete new buildings before moving research functions from existing buildings.

SRI proposes general plan amendments, new zoning, and an amended and restated Conditional Development Permit to conform the City's land use regulations and permits for the SRI campus to the existing gross floor area on the site and the new building heights proposed by the Campus Modernization Project. In addition, once project impacts and mitigation measures have been identified, SRI intends to apply for a Development Agreement with the City that will allow the implementation of the Campus Modernization Project over a 25-year period. This timeframe is necessary to manage the removal of old buildings and the construction of new buildings so as to allow SRI to continue its research programs during the modernization process. A Development Agreement will assure SRI that once it begins its Campus Modernization Project, it will be allowed to complete the full project as designed. A Development Agreement also gives the City flexibility to recognize and obtain community benefits beyond those required to mitigate project impacts. SRI values its long-standing partnership with the City of Menlo Park and intends to continue to serve the Menlo Park community into the future.

SRI Background

II. BACKGROUND ON SRI

A. Overview of SRI

SRI International is an independent, nonprofit research institute conducting client-sponsored research and development. SRI brings its innovations to the marketplace through licenses and new ventures. Since its founding in 1946, SRI has been committed to discovery and to the application of science and technology for knowledge, commerce, prosperity, and peace.

SRI works on some of the world's most important—and difficult—challenges in a manner that combines the best of academic research with business pragmatism. SRI conducts basic and applied research and technology development to advance understanding of scientific and technological principles, and to address practical problems. From field exercises to system demonstrations, technologists and engineers translate research and development into integrated systems and working solutions. And to bring new solutions to market and end-users, SRI offers off-the-shelf and custom products, technologies for license, and spin-off venture opportunities.

Scientists, engineers, technologists, and policy researchers at SRI are organized around the broad areas of biomedical sciences and health, chemistry and materials, computing, earth and space sciences, economic development, education and learning, energy and green technologies, security and defense, and sensing and devices.

In the last decade alone, SRI has conducted more than $4 billion in client-sponsored research and development. Most of SRI's research funders are U.S. government agencies such the National Institutes of Health, Department of Defense, Defense Advanced Research Projects Agency, National Science Foundation, NASA, U.S. Agency for International Development, and the Departments of Education, Energy, Transportation, and Health and Human Services. SRI helps these agencies enter new fields by providing new approaches and breakthrough solutions.

For foundations such as the Bill and Melinda Gates Foundation and the Packard Foundation, SRI conducts research in global health and evaluates education and social programs. Businesses faced with growing economic and competitive pressures also sponsor research and development at SRI. SRI serves as an extension of their in-house technical groups, providing multidisciplinary teams that ramp up quickly, specialized facilities and equipment, and licenses to SRI intellectual property.

In addition to contributing to the success of its clients and society at large, SRI's contributions to the local economy and civic activities have added to the quality of life enjoyed in Menlo Park today. Almost 10 percent of SRI's Menlo Park employees live in the City, and 20 percent live in the City or immediately surrounding communities. In addition, SRI's active alumni association includes more than 400 retired and former staff, with many living nearby. Staff members and alumni are intertwined in the community not only through employment at SRI, but also through their families, home ownership, extracurricular activities, volunteerism, and civic involvement. SRI also provides in-kind and cash charitable contributions to local educational, environmental, and human service organizations and programs. These include the Menlo Park Library Foundation, student robotics teams, Menlo Park school field trips to The Tech Museum, Trees for Menlo, Children's Health Council, American Cancer Society Relay for Life, Menlo-Atherton High School Outreach Fund, and more. In addition, SRI shares its parking lots through long-standing arrangements with its neighbors, including Menlo-Atherton High School, First Church of Christ Scientist, Trinity Church, U.S. Geological Survey, Sunset Magazine, and the City of Menlo Park.

B. SRI's past accomplishments

SRI has served as a springboard for new industries and has created billions of dollars in market value and lasting benefits to society. SRI innovations have changed how people work, live, and benefit from technology. Many people touch an SRI innovation every day, such as automated bank checks, the computer mouse, interactive personal computing, and advancements in the Internet. These are just a few examples.

Countless lives have been saved because SRI pioneered diagnostic ultrasound, discovered malaria and cancer treatments, and developed the first robotic surgical system. SRI has stimulated economic development by, for example, identifying Anaheim, California as the site for Disneyland. Closer to home, an SRI study gave the Packard Foundation a green light to build the Monterey Bay Aquarium. SRI's achievements have been recognized with Emmy® Awards for broadcast innovations such as high-definition television (HDTV) and with an Academy Award for the Technicolor electronic movie print timer. In 2010, Apple acquired Siri from SRI and incorporated it in its iPhone. These are just a few of SRI's many accomplishments.

In addition, SRI has spun off more than 40 new companies with top-tier venture capitalists in Menlo Park and around the world. These companies incubate on SRI's campus and then move into other facilities as they mature and add staff. Notable SRI ventures include speech-recognition leader Nuance Communications, Intuitive Surgical, and Siri.

C. SRI's future direction

SRI is committed to high-value innovation. The proposed Campus Modernization Project will permit SRI to build on its extraordinary legacy and continue important research and development programs such as digital math curricula for students and teachers, clean fuel and carbon dioxide capture technologies, intelligence systems for the war against terrorism, new approaches to automation and robotics, and much more.

A more modern facility better designed to meet the demanding and sophisticated needs of its clients and research staff is critical. For example, SRI operates cleanrooms to design and fabricate innovative micro-scale structures, sensors, and systems. A wave tank is used to research the detection of submerged objects and to develop algae photo-bioreactors for biofuels. SRI operates one of seven National Cancer Institute-funded laboratories to identify biomarkers for cancer. This is only a sampling of the wide range of specialized facilities and equipment used by SRI researchers.

SRI also requires a facility with more adaptable, flexible workspaces and laboratories for tomorrow's research and development activities—activities that can only be imagined today. The Campus Modernization Project envisions adaptive, prototype buildings that will be designed to accommodate SRI's various research activities and associated work styles (labs, offices, workshops, meeting spaces, collaborative workspaces, etc.).

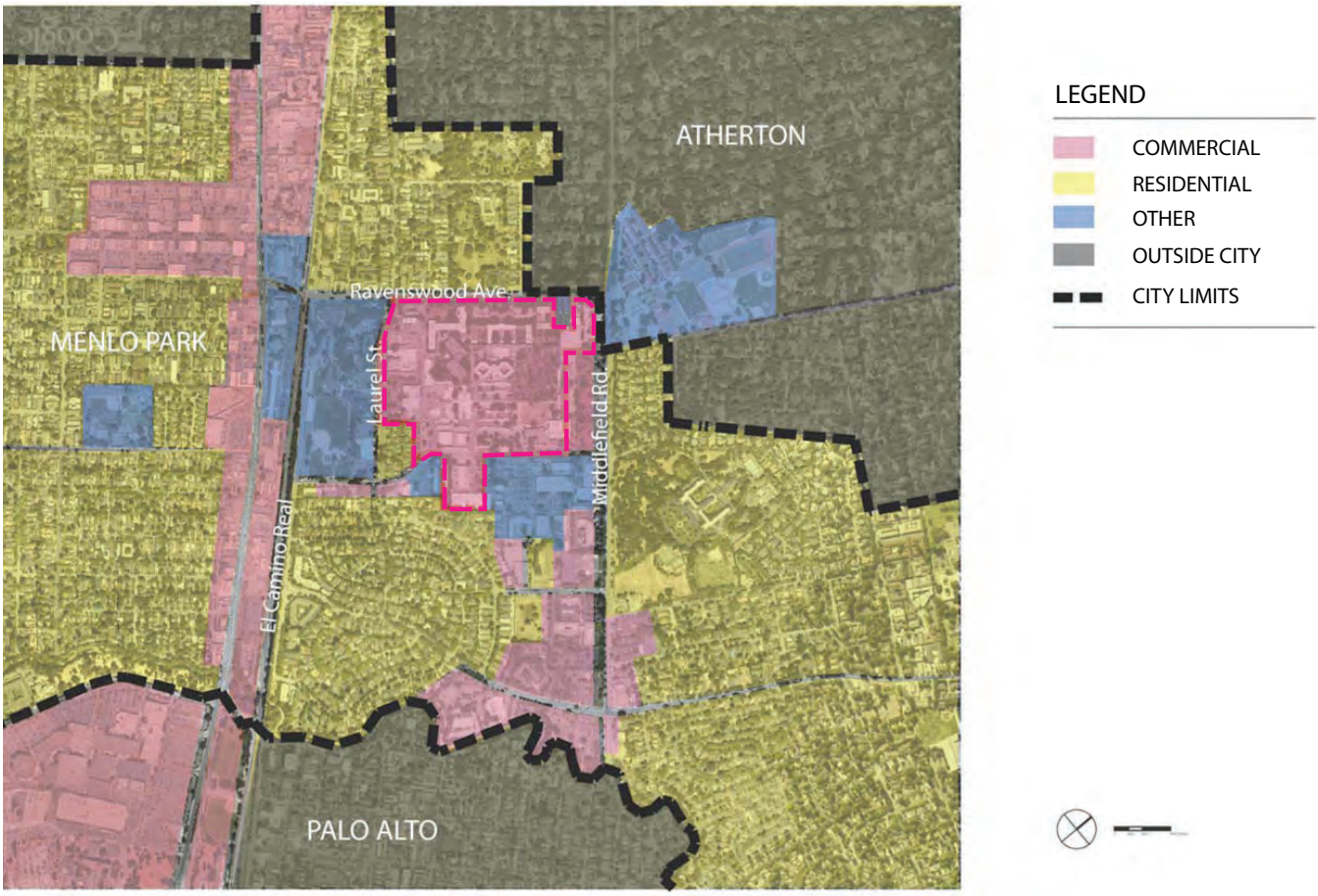
Project Location

III. Project Location

A. Surrounding land uses in the immediate vicinity

The 63.2-acre SRI campus is directly adjacent to a variety of land uses, including commercial, institutional, religious, and residential uses typical of a downtown suburban context. It is a diverse and lively neighborhood context, with City Hall across Laurel Street, single-family homes and churches along Ravenswood Avenue, the Menlo-Atherton High School and Performing Arts Center and office buildings along Middlefield Road, and a mix of offices including the United States Geological Survey federal offices and multi-family residential uses adjacent to the property's rear lot line.

Surrounding Land Use



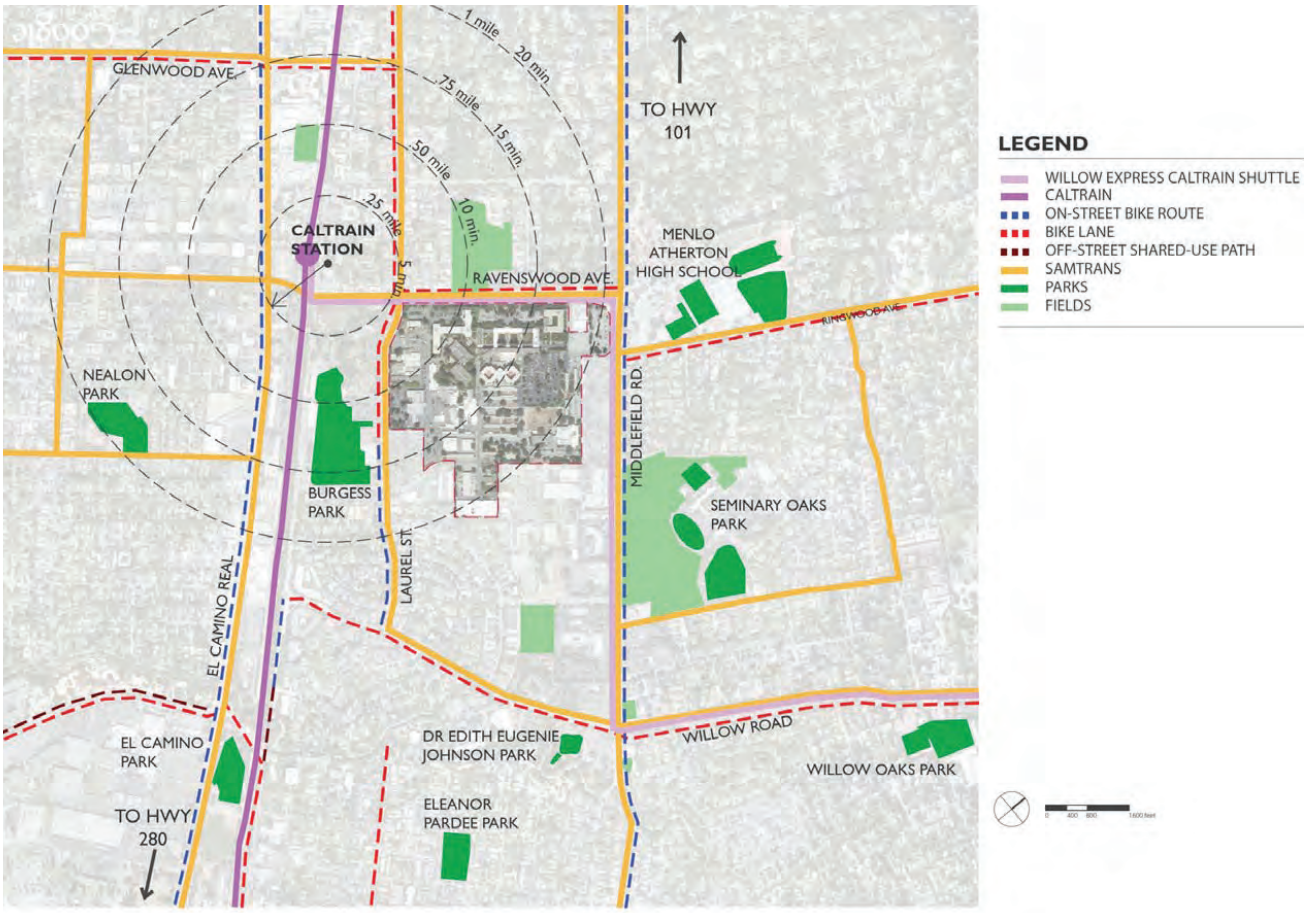
B. Relationship to broader geographic region

SRI is located on the San Francisco Peninsula, approximately midway between the cities of San Francisco and San Jose. As such, the campus is in the desirable Silicon Valley area, where the world's most innovative science and technology companies are clustered. Also of note for SRI is its ongoing relationship with Stanford University in nearby Palo Alto. SRI was founded by Stanford University, and—although independent of the university—SRI continues to maintain research collaborations with Stanford. This cluster of thriving research institutions and technology companies contributes to a healthy economy for the region.

SRI is conveniently located near regional transit service, including within ¼ mile (less than a 10-minute walk) of the Menlo Park Caltrain station and 1.5 miles from the Palo Alto (University Avenue) Caltrain station (a 10-minute bicycle ride). Several major bus routes also provide service near SRI, including Samtrans bus routes 390 and KX on El Camino Real; 83 on Laurel Street; 83, 85, 295, 296 on Ravenswood Avenue; and 83, 296, 297, 397 on Middlefield Road.

Geographic Regions

Transit Service



Project Purpose and Objectives

IV. PROJECT PURPOSE AND OBJECTIVES

A. Overall needs and objectives for the project

The current SRI campus has several physical deficiencies that impede the ability to create a high-quality environment for world-class science and research. From outmoded buildings to a campus layout that is difficult to navigate, the campus tends to isolate researchers rather than promote collaboration and innovation.

The primary impetus driving the Campus Modernization Project is the age and quality of the older campus buildings. Constructed as far back as the 1940s, the older buildings do not incorporate modern seismic safety features, ventilation systems, and utility infrastructure. The buildings tend to provide little natural daylight and feature long narrow corridors that isolate researchers rather than bringing them together to share ideas and form teams. Further, the long, spread out floor plates result in lengthy walking distances between research and workspaces. Most of the buildings contain no central, communal space or other common gathering areas for shared activities or interaction. The auditorium is not adequate for SRI's staff size. In addition, the floor to ceiling heights within the buildings and the building configurations do not enable adaptation to changing needs for office or research space.

The existing relationship between the campus buildings exacerbates these deficiencies. Internal campus circulation paths are circuitous. Surface parking areas are interspersed with buildings, making pedestrian travel lengthy and uninviting. Landscaped areas appear in isolated pockets, rather than in a central area designed to draw workers outside.

And finally, reflecting the age of their construction, the campus buildings lack energy-efficient features. Typical of the time they were built, the buildings are sited on a grid, without recognition of seasonal daylight patterns. They require substantial energy for heating and cooling because they lack state-of-the-art design features and materials. Building fixtures similarly are outdated and do not conserve water to the same degree as modern, water-conserving fixtures.

SRI proposes the Campus Modernization Project to accomplish the following project objectives:

- Revitalize and upgrade the existing SRI campus in a manner that promotes orderly campus renewal and enhances campus economic vitality and fiscal health;
- Create high-quality, state-of-the-art facilities to promote world-leading multi-disciplinary research;
- Improve the working environment for SRI employees so as to attract and retain top scientists, engineers, researchers, and other professionals;
- Update campus seismic, safety and security features to maintain a safe environment for SRI employees and neighbors;
- Enhance the energy efficiency of the campus through modernization of buildings and utility infrastructure and building placement based on solar orientation;
- Improve campus bicycle and pedestrian pathways, as well as internal vehicular circulation patterns, to minimize traffic congestion on surrounding streets; and
- Allow flexibility to respond to future changes in world-class research needs.

These objectives align with the City of Menlo Park's planning goals, as articulated in the City's General Plan:

- The overall philosophy of the Menlo Park General Plan includes "revitalization of existing development." (General Plan Policy Document, p. 2)
- To carry out this philosophy, the General Plan states that development should be carried out in a manner that:
  - Promotes the upgrading of existing commercial development;
  - Allows for the development of the City's employment and commercial base;
  - Maintains and enhances the City's economic vitality and fiscal health;
  - Minimizes the exposure of people and property to health and safety hazards;
  - Minimizes traffic congestion on city streets; and
  - Maintains and enhances the residential quality of life in the city by emphasizing development which has a human scale and is pedestrian friendly. (General Plan Policy Document, pp. 2-3).
- The City's General Plan also promotes energy efficiency for public and quasi-public facilities through street orientation, placement of buildings, and use of shading. (Policy I-H-12, page I-16) SRI has extended this policy to the private facilities on its campus.

Project Components

V. PROJECT COMPONENTS

A. Building Replacement

As explained above, the primary impetus driving the Campus Modernization Project is the age and quality of the older campus buildings. Existing buildings will be replaced without increasing total campus gross floor area at full development. Existing building gross floor area totals 1,380,332 square feet. SRI proposes to limit total campus gross floor area upon completion of the Campus Modernization Project to the identical amount. This is approximately 11 percent less than the 1,494,774 square feet of gross floor area allowed under SRI's current Conditional Development Permit.

Existing Buildings

There are 38 buildings on the SRI campus. Of those 38 buildings, one is used exclusively to provide campus amenities, three are used exclusively for support functions, and the remaining buildings house a mix of amenity, office, research and development and support uses.

The gross floor area calculations provided in this application are based upon the methodology adopted by the City of Menlo Park in May 2009. At SRI, the main difference between the previous methodology for calculating gross floor area and the City's May 2009 methodology is the inclusion of mezzanine and penthouse spaces in Buildings A, L, M, P, R and T. These areas previously were not included in gross floor area calculations reported for the SRI campus.

The City of Menlo Park Planning Commission Staff Report dated October 25, 2004 reported that SRI had an existing gross floor area of 1,319,060 square feet. The 61,867 square foot difference between the previously reported square footage and the gross floor area identified in this application is due to the following:

- Per the City's new definition of gross floor area mezzanine and penthouse space totaling 50,347 square feet has been added;
- Building M square footage totaling 25,644 square feet was not included in the total reported in the Planning Commission staff report and has been added;
- The constructed square footage of the Building T expansion was 2,916 square feet greater than the preliminary square footage calculation reported in 2004, and this difference has been added;
- The buildings demolished as part of the Building T expansion project totaled 17,642 square feet, and this square footage has been subtracted; and
- Per the City Planning Department requirements, 39 square feet for the Building 205 awning has been added.

Existing Buildings — Table 1

Bldg ID	Use	Height	Existing	Demo	Existing to Remain
100	Office/Research	29'	9,006	9,006	-
108	Office/Research	29'	10,093	10,093	-
110	Office/Research	29'	12,836	12,836	-
201	Office/Research	16.5'	9,128	9,128	-
202	Office/Research	16.5'	10,514	10,514	-
203	Office/Research	16.5'	10,070	10,070	-
204	Office/Research	16.5'	10,557	10,557	-
205	Office/Research	16.5'	10,039	10,039	-
301	Office/Research	11.5'	19,943	19,943	-
302	Amenity	11.5' - 28.5'	2,893	2,893	-
303	Office/Research	11.5'	4,267	4,267	-
304	Office/Research	14' - 18.5'	22,978	22,978	-
305	Office/Research	16.5'	9,982	9,982	-
306	Office/Research	14'	14,331	14,331	-
307	Office/Research	13.5'	9,600	9,600	-
309	Office/Research	16.5'	9,236	9,236	-
320	Office/Research	14'	19,440	19,440	-
404	Office/Research	12'	16,867	16,867	-
405	Office/Research	12'	2,055	2,055	-
406	Office/Research	12'	16,520	16,520	-
408	Office/Research	12'	15,395	15,395	-
409	Office/Research	20'	5,527	5,527	-
412	Office/Research	35'	5,858	5,858	-
A	Office/Research	30.5' - 56'	276,113	276,113	-
B	Office/Research	40.5' - 50.5'	135,110	135,110	-
E	Office/Research	42.5' - 46.8'	171,980	171,980	-
G	Office/Research	28.8' - 36.8'	59,536	59,536	-
I	Office/Research	30.5'	39,220		39,220
I	Amenity	30.5'	17,700		17,700
K	Office/Research	9'	4,101	4,101	-
L	Office/Research	24' - 36'	75,267	75,267	-
M	Office/Research	23'	25,772	25,772	-
P	Office/Research	50' - 60.5'	183,423	183,423	-
R	Support	32'	23,009	23,009	-
S	Office/Research	26'	21,241		21,241
T	Office/Research	14.75' - 30'	82,066		82,066
U	Support	28' - 33'	5,400		5,400
W	Support	11'	1,819		1,819
M1	Office/Research	23'	1,440	1,440	-
TOTAL Bldg Area (Gross Floor Area):			1,380,332	1,212,886	167,446

Buildings to be Retained

Under the Campus Modernization Project, up to 33 of the existing buildings collectively having a gross floor area totaling 1,212,886 square feet will be demolished. The following five buildings will be retained:

- Conference center Building I (56,920 sq. ft): The conference center, Building I, is located near the campus entranceo and houses conference facilities and office space, as well as the current onsite gymnasium and kitchen.
- Tab area, Buildings S, T, U and W (110,526 sq. ft.): No changes are proposed to the existing buildings located on the southern portion of the campus known as the "tab" area. SRI received City approval to expand the largest building in the tab area, Building T, in 2004 and completed the Building T expansion project in 2006. Building S also recently has been upgraded through remodeling completed in 2000. Building U houses the existing campus cogeneration facility and Building W houses the existing campus hazardous waste processing facility. These facilities will continue to serve the campus under the Campus Modernization Project.

Replacement Buildings

Approximately 13 new buildings totaling 1,212,886 square feet of gross floor area will replace the 33 buildings to be demolished. Like the buildings they replace, most of the new buildings will house a mix of amenity, office, research and development and support uses. Two of the new buildings are anticipated to be used exclusively for campus amenities, three will be used exclusively for support functions.

SRI CAMPUS MODERNIZATION PROJECT - PROPOSED BUILDING PROGRAM

EXISTING BUILDINGS TO REMAIN

Bldg ID	Use	Height	Existing to Remain	New
I	Amenity	30.5'	17,700	-
I	Office/Research	30.5'	39,220	
S	Office/Research	26'	21,241	-
T	Office/Research	14.75' - 30'	82,066	-
U	Support	28' - 33'	5,400	-
W	Support	11'	1,819	-
TOTAL Bldg Area (GSF):			167,446	-

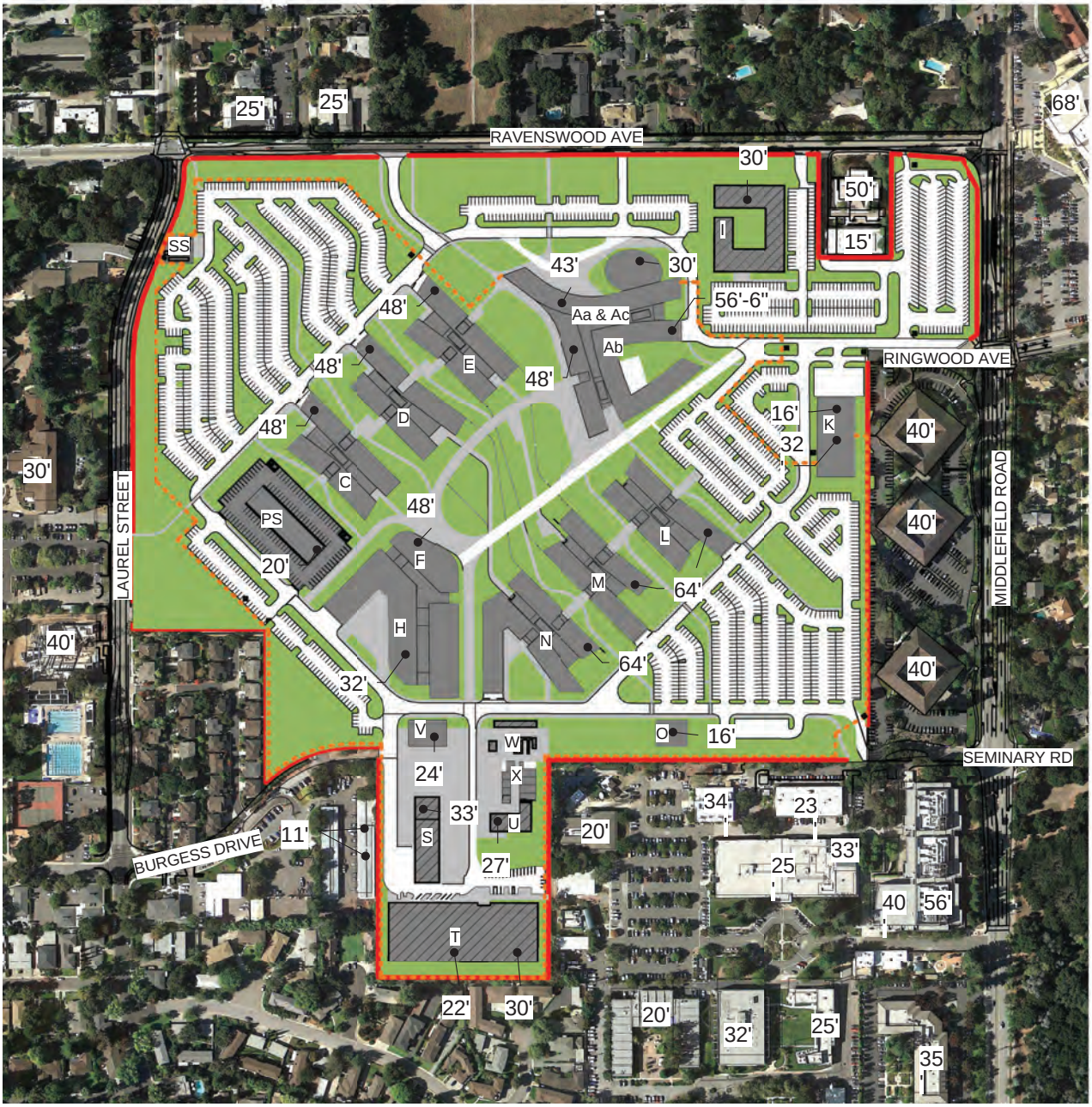
NEW BUILDINGS

Bldg ID	Use	Height	Existing to Remain	New
Aa	Amenity	48'	-	47,315
Ab	Office/Research	48'	-	75,200
Ac	Office/Research	56'6"	-	139,995
C	Office/Research	48'	-	95,940
D	Office/Research	48'	-	97,735
E	Office/Research	48'	-	95,831
F	Amenity	48'	-	26,290
H	Office/Research	32'	-	64,820
K	Support	16' & 32'	-	28,000
L	Office/Research	64'	-	163,015
M	Office/Research	64'	-	157,475
N	Office/Research	64'	-	204,770
O	Amenity	16'	-	5,000
V	Support	24'	-	6,000
X	Support	27'	-	5,500
TOTAL New + Existing Bldg Area (GSF):			**167,446**	**1,212,886**

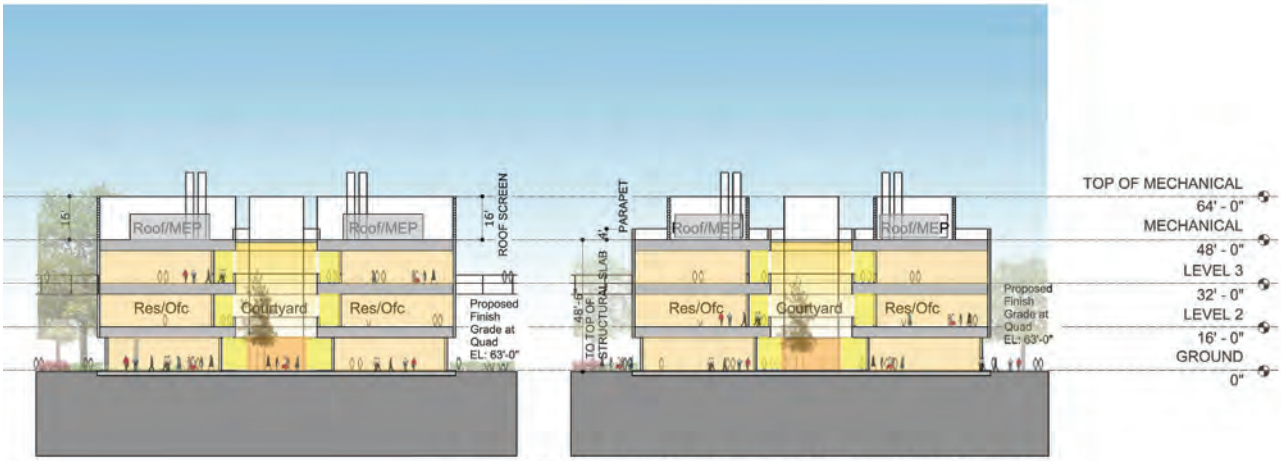
BUILDING USE SUMMARY (GSF)		Existing to Remain	New	Proposed
	Office/Research	103,307	1,094,781	1,198,088
	Amenity	56,920	78,605	135,525
	Support	7,219	39,500	46,719
	Total Bldg Area (Gross Floor Area):	167,446	1,212,886	**1,380,332**

The tallest new buildings will be located away from the campus edges and neighboring residential areas. Existing building heights on the campus range from 12 to 48 feet above average finished grade. The new buildings will be taller in order to promote collaboration by providing flexible workspaces on smaller floor plates. Increasing building height also directly will result in increased landscaping and other permeable surfaces. The new buildings are proposed to be 48 feet or less on the west side of the campus, nearer to residential neighborhoods, and 64 feet or less on the east side of the campus, nearer to commercial uses and more distant from public roadways. Basements will be provided in some of the buildings.

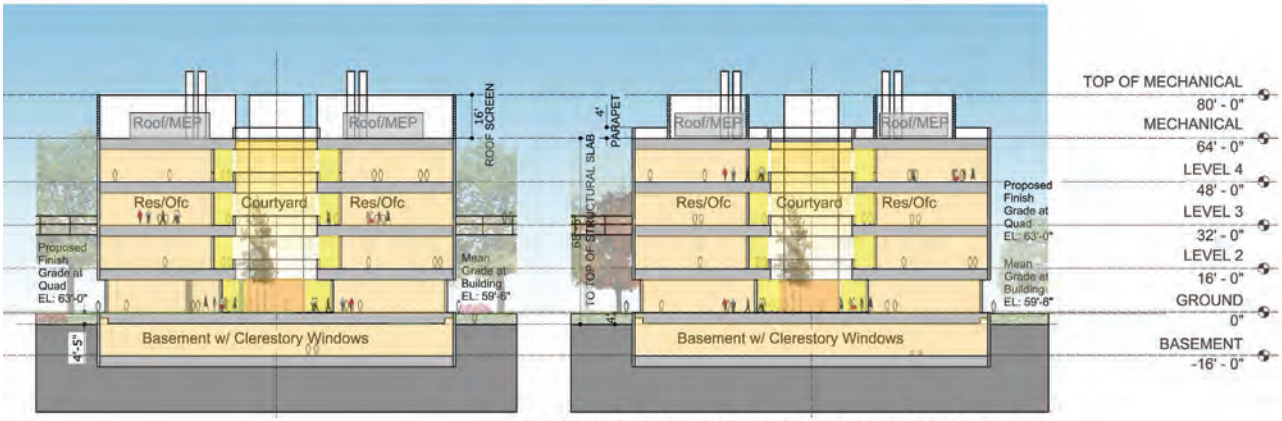
Building Heights



Conceptual Building Sections



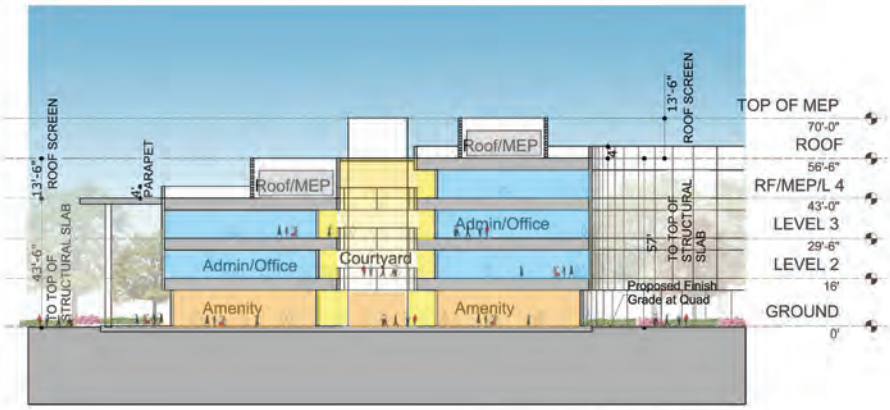
West Buildings- 3 Potential Parapet/Mechanical Configurations



East Buildings- 3 Potential Parapet/Mechanical Configurations

Conceptual Building Sections C, D, E, H, L, M, N - Proposed

Conceptual Building Sections



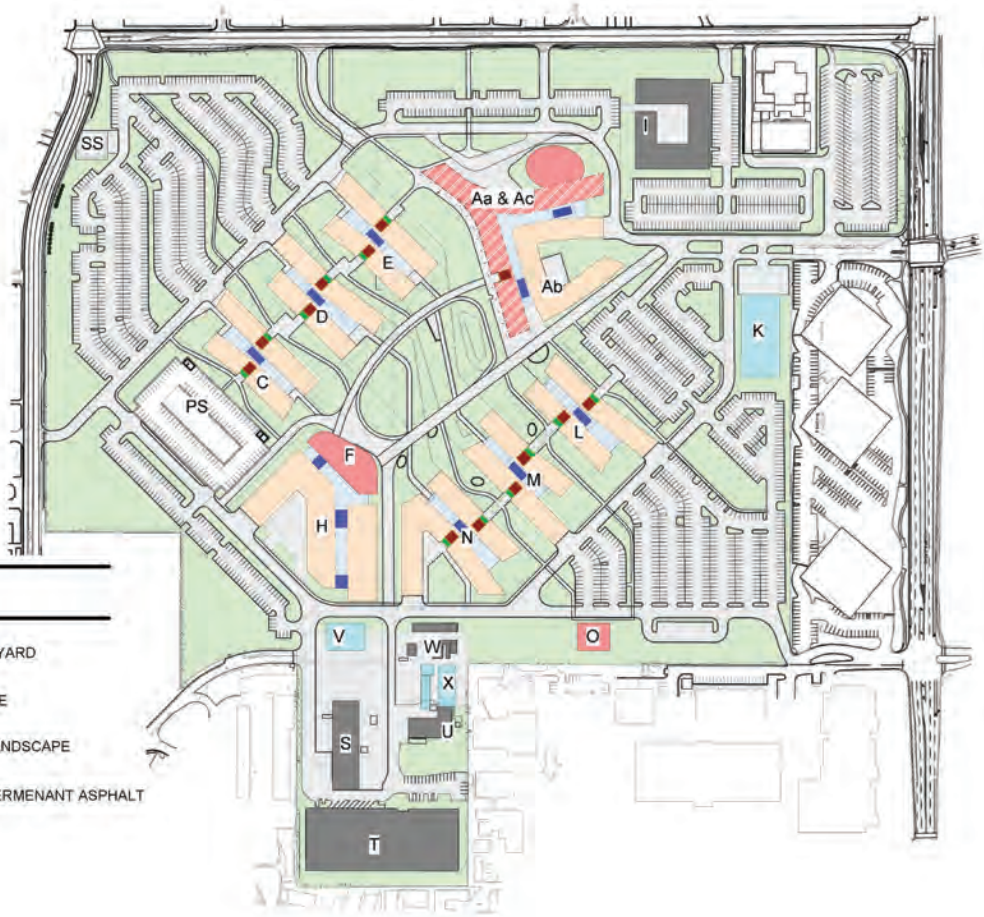
Conceptual Building Section A

Conceptual Building Section L

Conceptual Building Section

Conceptual Site Sections Proposed

Plan Square Footage Calculations



PROGRAM TYPE

- AMENITY
- COMMUNAL
- CORE
- EXISTING
- FLEXIBLE
- OUTDOOR TERRACE
- COURTYARD
- SERVICE
- NEW LANDSCAPE
- NEW PERMENANT ASPHALT

Square Footage Calculations Proposed Schedule	
Aa	
GROUND	47315 SF
	47315 SF
Ab	
GROUND	40910 SF
LEVEL 2	33065 SF
LEVEL 3	33220 SF
LEVEL 4	32800 SF
	139995 SF
Ac	
LEVEL 2	36795 SF
LEVEL 3	37600 SF
LEVEL 4	805 SF
	75200 SF
C	
GROUND	34360 SF
LEVEL 2	30080 SF
LEVEL 3	30695 SF
LEVEL 4	800 SF
	95940 SF
D	
GROUND	35205 SF
LEVEL 2	30545 SF
LEVEL 3	31185 SF
LEVEL 4	800 SF
	97735 SF
E	
GROUND	34320 SF
LEVEL 2	30050 SF
LEVEL 3	30660 SF
LEVEL 4	800 SF
	95830 SF
F	
GROUND	13145 SF
LEVEL 2	13145 SF
	26290 SF
H	
BASEMENT	2725 SF
GROUND	59370 SF
LEVEL 2	2725 SF
	64820 SF

Square Footage Calculations Proposed Schedule	
K	
GROUND	18000 SF
LEVEL 2	10000 SF
	28000 SF
L	
BASEMENT	32015 SF
GROUND	35695 SF
LEVEL 2	30650 SF
LEVEL 3	31285 SF
LEVEL 4	30650 SF
MECHANICAL	1660 SF
	161955 SF
M	
BASEMENT	29350 SF
GROUND	33865 SF
LEVEL 2	30395 SF
LEVEL 3	30975 SF
LEVEL 4	30395 SF
MECHANICAL	1620 SF
	156595 SF
N	
BASEMENT	30870 SF
GROUND	44680 SF
LEVEL 2	40090 SF
LEVEL 3	40720 SF
LEVEL 4	40090 SF
MECHANICAL	1570 SF
	198025 SF
O	
GROUND	5000 SF
	5000 SF
UTILITY TUNNEL	
BASEMENT	8560 SF
	8560 SF
V	
GROUND	6000 SF
	6000 SF
X	
GROUND	6200 SF
	6200 SF
Grand total	1213455 SF

The new campus buildings will share a natural material palette, with colors and hues derived from the local natural surroundings. Building faces will be imbued with warm ochres, soft creams and sienna colors inspired from native species, earth forms, rocks, trees and skies. Natural building materials consistent with the context will include terra cotta tiled facades; expressed concrete structure, through board-formed walls and round columns; low iron and tinted glazing; and natural finish metal, brushed aluminum, copper and steel. Architectural features will display richness of surface and depth with trellises, green screens, and surface treatments.

B. Employment Levels

As the new campus takes shape, SRI expects to gradually return to similar employment levels as the levels that have historically been experienced on the site. Presently, SRI and its related entities employ approximately 1,500 people on the campus. Another 280 people are employed onsite by unrelated tenants. A maximum 25-year employment cap of 3,000 employees is proposed. This is a reduction of more than 10 percent from the 3,308 employees permitted under SRI's current Conditional Development Permit.

C. Campus Design

The existing campus is largely constructed on a grid, with internal roadways running between buildings, surface parking scattered throughout, and long pedestrian travel distances. By contrast, the new campus buildings will be clustered at the center of the campus, creating an integrated research campus surrounding a central green.

Both the relationship of the new buildings to one another and the design of each individual building will promote collaboration, cross-disciplinary exchange of ideas, and innovation. The campus green will draw professionals together at the center of the campus. Bridges will enable researchers to move quickly and easily from one building to another. Smaller floor plates will reduce travel time within and between buildings. Conference rooms and other gathering spaces will draw employees out of their offices and into areas where ideas can be exchanged and groups can collaborate.

To determine how best to modernize its campus and create a world-class center for innovation, SRI sought advice from two world-renowned design firms. First, SRI retained the Gensler architecture firm to evaluate existing conditions and to develop a set of design principles targeted to address SRI's specific needs. SRI then retained HOK to confirm and fine-tune these principles, and design the campus. The resulting site plan will create a platform for SRI to continue to succeed and to attract the talent, creativity and innovation that underpin the organization.

The six design principles that guided the site plan, along with a brief explanation of how the new campus design carries them out, follows.

Design Principle 1. Connect researchers to foster Innovation
Bring researchers closer together on the campus

- Consolidate districts
- Weave connective tissue within and outside buildings
- Encourage a culture of walking
- Foster interaction and collaboration

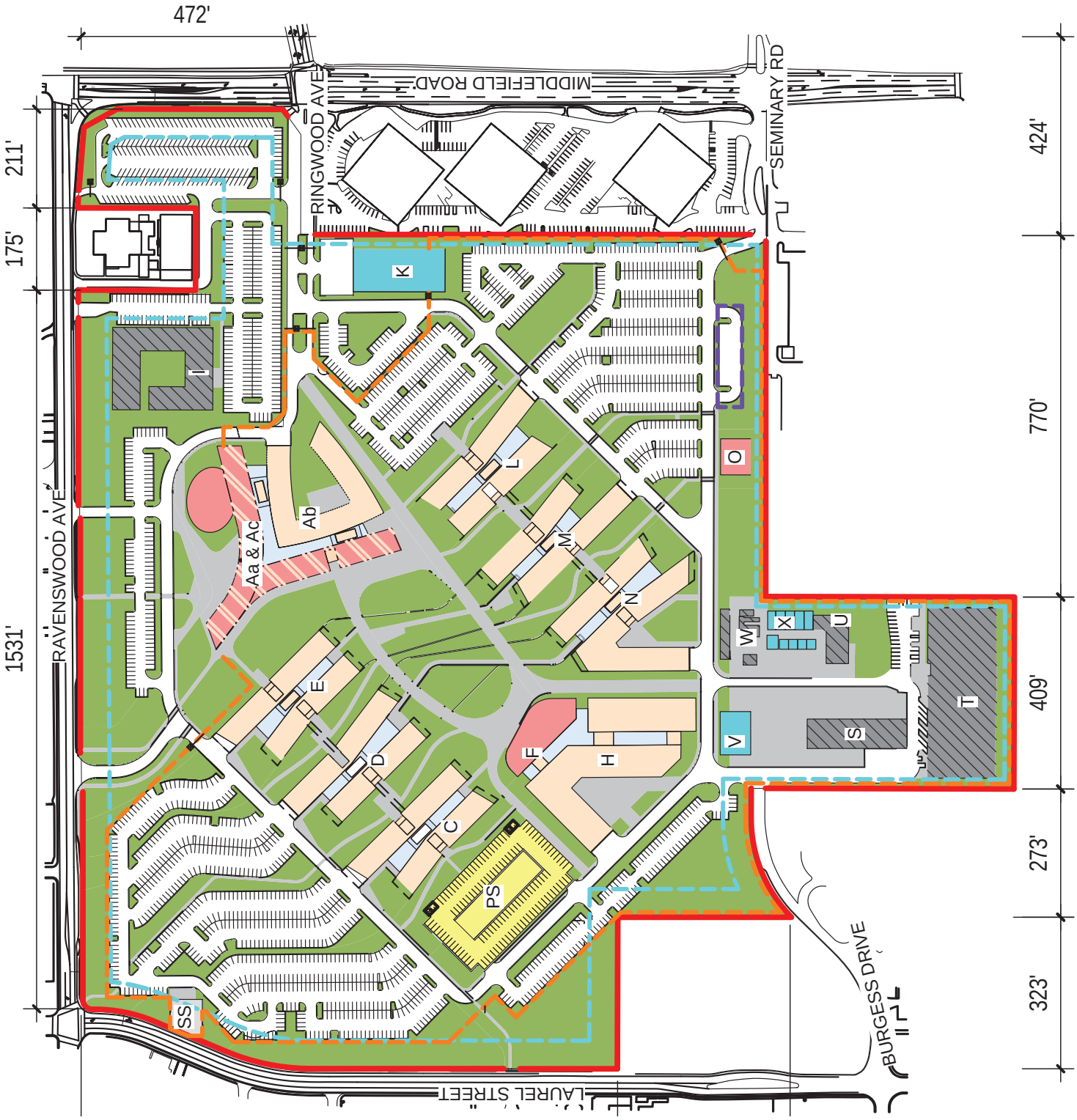
The new campus design draws from several inspirations with the goal of connecting people and encouraging interaction and innovation. In the American tradition of great campus architecture, the campus will be centered on a landscaped public space that connects people and will serve as the heart of the institution. Layered over the "central green," the campus design team has interwoven landscaped treatments with buildings in a naturalistic way, using concepts that emulate streams, rivulets, and hillocks. These landscape ribbons will run through the entire campus. The contrasting bands will weave across the site, defining green and built zones

as well as uniting the overall composition. Buildings will be further stitched together with connecting pathways on various levels, including along the ground plane at the front and rear of the buildings, and through the central spine. These planned pathways will allow people many ways to reach other colleagues and places. The internal circulation of the buildings will spur interaction and connection offering public break spaces, visual connectivity and a range of collecting areas for fostering communication and innovation. The combination of the central gathering space with the interweaving streams of activity will create a walkable environment and will offer a diversity of places for people to enjoy, during both work and rest.

Each new building will leverage the central green and exterior landscape ribbons by featuring an open gallery that will draw the open landscape into the core of the building, encourage interaction, and improve visibility of communal gathering spaces. Smaller conference rooms and team working spaces will surround the gallery space, encouraging collaboration among colleagues.

New employee amenity space will further expand opportunities for professionals working in different disciplines to come together to share ideas and to spark creativity. New auditorium space will be designed to enable multi-disciplinary teams to share ideas, present findings, and engage in scientific debates. Larger dining facilities will move employees away from their desks, encouraging informal discussions. New fitness facilities similarly will enable employees to re-charge and will promote chance interactions.

Overall Site Plan



Design Principle 2: Plan for Flexibility to Adapt Space as Needs Change

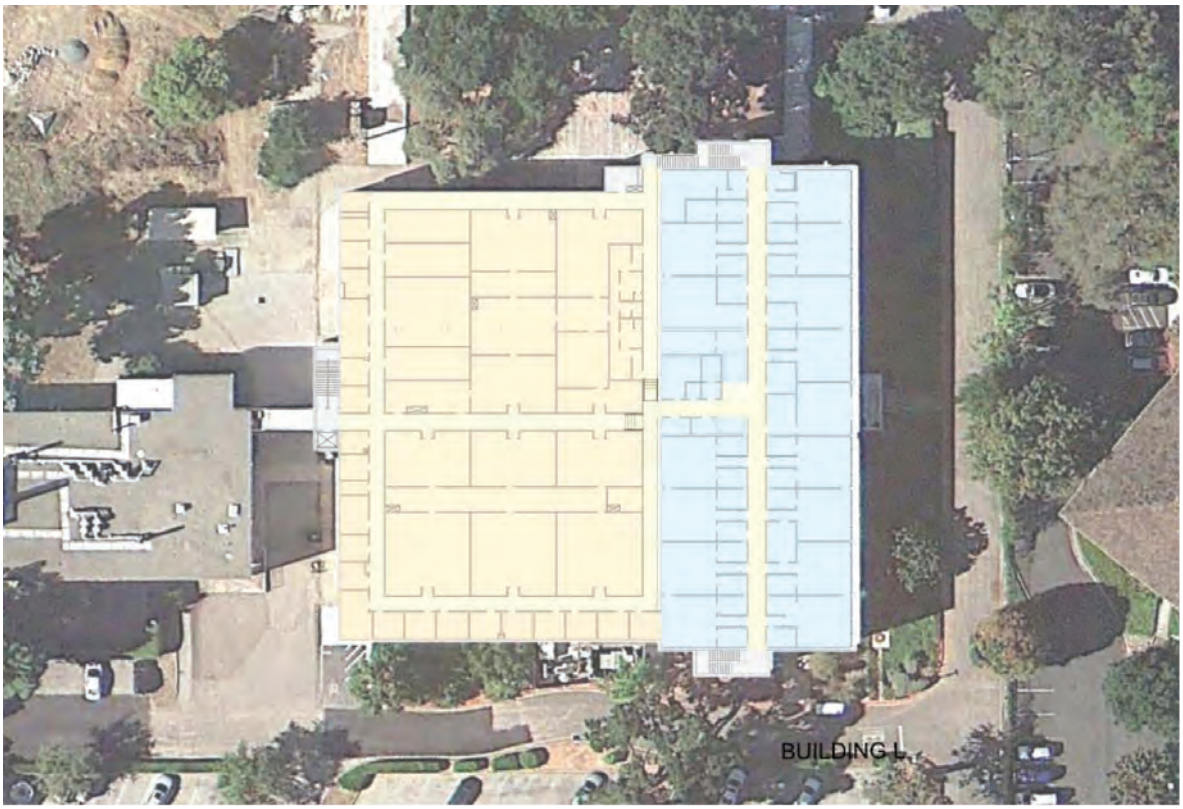
- Accommodate multiple types of users within the same building envelope
- Allow spaces to adapt based upon changing business needs
- Locate key resources in strategic locations
- Provide flexible infrastructure

The design team has created a flexible building prototype for six of the new campus buildings that can easily accommodate different types of uses and programs from very highly defined laboratory research space to more standard offices. This type of flexible floor plate will ensure that building use can conform to evolving research needs over the next quarter of a century.

The prototypical building design will feature open flexible space with plentiful access to perimeter light and views. Within this open framework, space can be configured readily in a traditional laboratory layout with bench space and supporting storage space for equipment and materials. Depending upon research needs, laboratory size can vary to accommodate differing equipment and team sizes. The same floor plate can be divided into individual offices, meeting rooms, and workrooms. Key to this flexible design is a building grid and floor heights that will not be a constraint for future uses.

The general footprint of the prototypical building will allow it to be used as a single building, or as two easily programmable building wings connected at the center. Each wing will share infrastructure and service cores united by a common open courtyard filled with light and air.

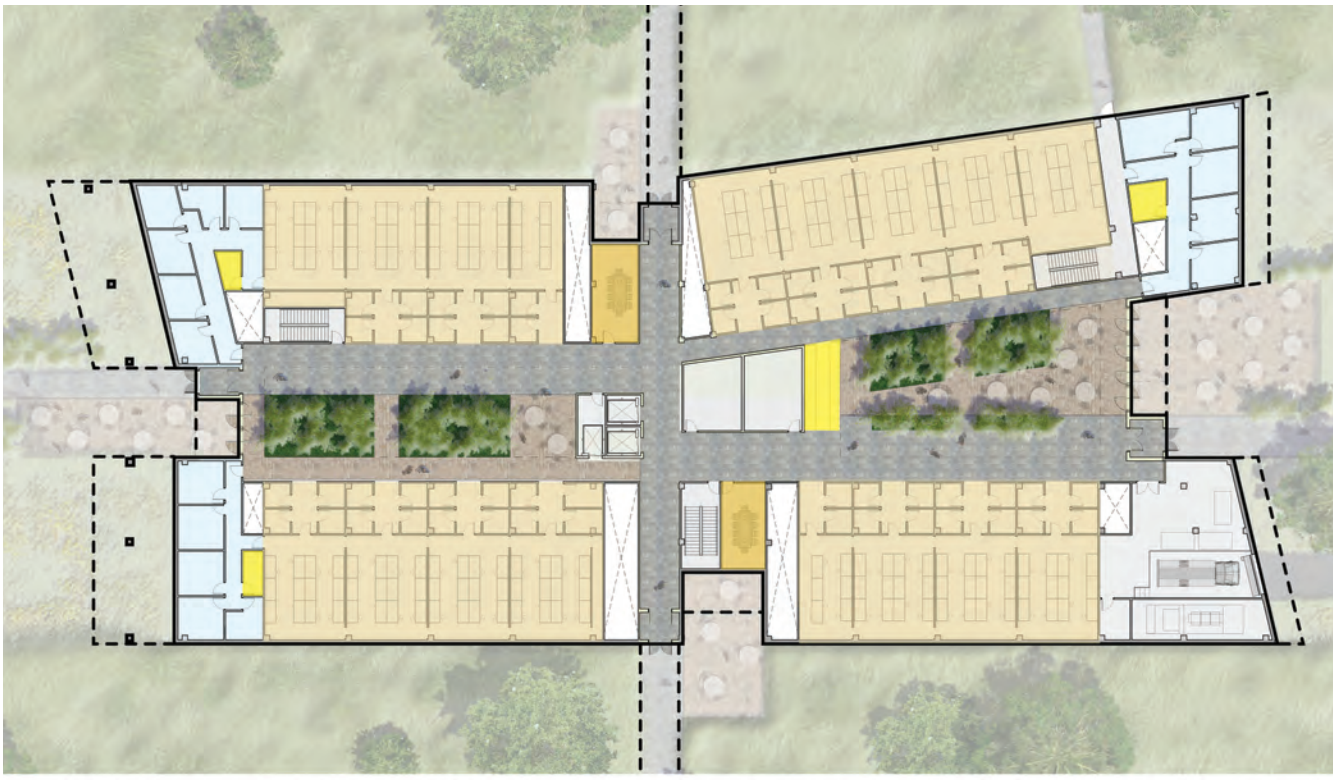
Existing Building L Floor Plan (most labs receive no natural light)



Existing Building L Lab Space

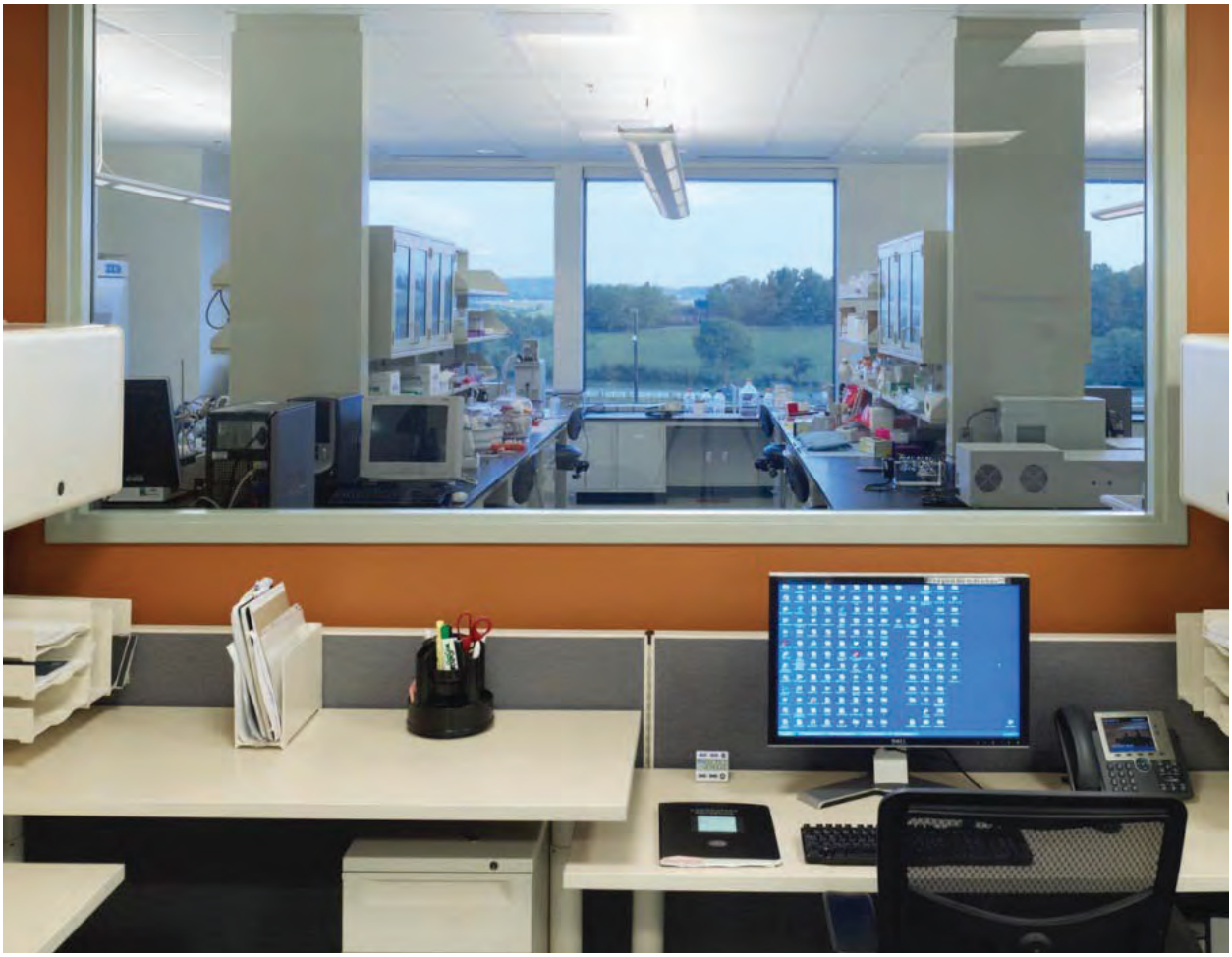
Existing Building L Support Space

Proposed Typical Lab Floor Plan



Proposed Typical Lab Space

Proposed Lab Support Space



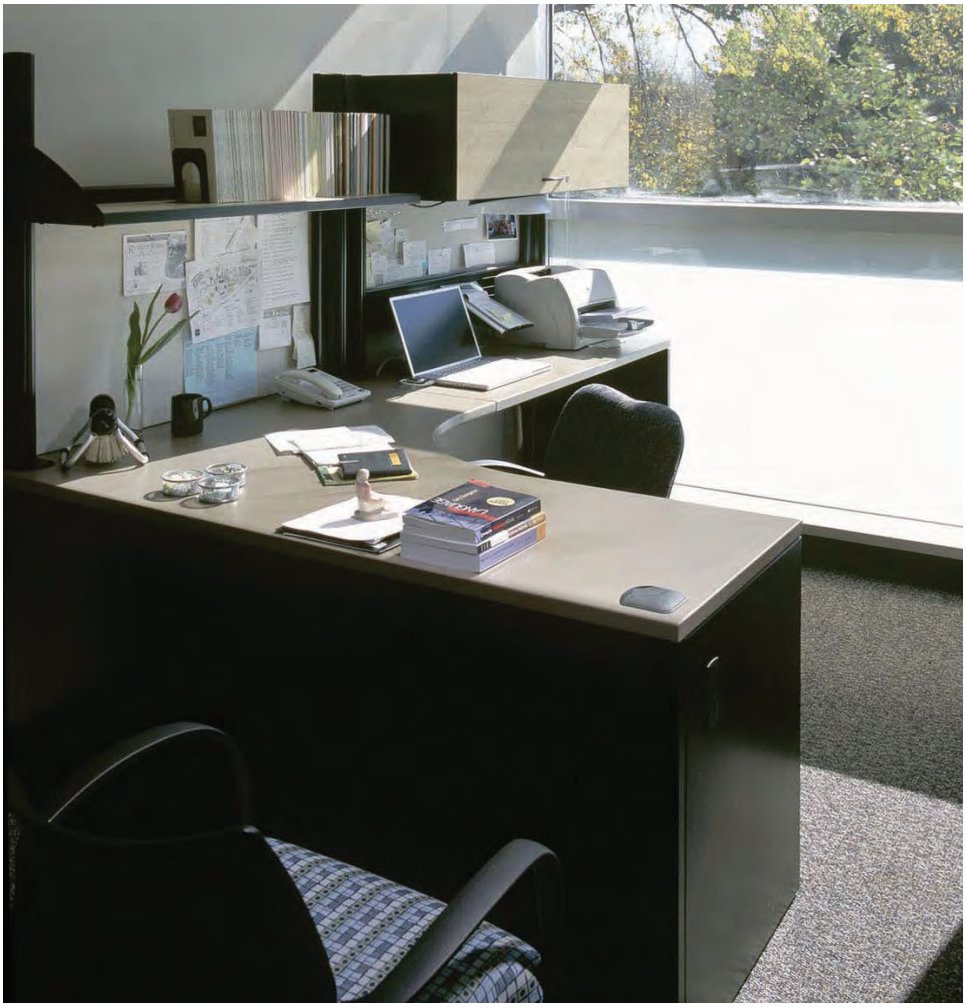
Existing Building A Floor Plan (long corridors, few gathering spaces)

Proposed Typical Office Floor Plan

PROGRAM TYPE

- COMMUNAL SPACE
- OFFICE
- COMMUNAL SPACE
- CIRCULATION
- CORE/SERVICES

Proposed Office Space



In addition to the six prototypical, flexible research/office buildings, the proposed site plan includes replacement of an existing high-bay research space to accommodate a variety of research projects.

The proposed site plan also includes an entrance building that can be configured to include auditorium space, meeting rooms, and offices. This space, like the other new spaces, will enable multiple uses in a single building and will be readily adaptable to meet future needs.

Design Principle 3: Energize the In-Between

- Make work and processes transparent
- Spark connections; support discovery
- Blend indoor-outdoor spaces
- Create consistent, intuitive way-finding
- Create a hierarchy of public and private spaces

As described above, the central green will serve as the focal point of the campus. An interior perimeter walking path will connect each of the new buildings, augmented by bridge connections on upper levels. Buildings will be visible from one another, organized around the central green, and accessible from multiple locations.

The central open gallery within each new building will organize the internal workings of the building much the same way as the central campus green space but on a smaller scale. It will become the heart of the building, focusing people on activity, interconnectivity, and sharing. Way-finding will be clear and intuitive with centralized vertical circulation and common gathering spaces. Activity will be visible with opportunities for maximum daylight penetration and open views from research spaces and offices out to the open spaces and outdoors.

Design Principle 4: Build Common Rituals

- Instill a sense of belonging
- Give a unique character to each district
- Provide community hub amenities

The campus will be pedestrian-oriented and allow for common rituals such as daily employee arrival and entry, as well as a distinctive and welcoming new public face and visitor arrival procession. Amenities will be added to promote a healthy and productive workplace, including expanded onsite dining facilities, employee fitness centers, a new auditorium, and an integrated system of outdoor gathering and walking spaces.

The new campus design will provide places for communal activities and gatherings unique to SRI as an institution. The central green also will allow for new common activities from organized large gatherings for events or performances to the casual gathering for an impromptu discussion or picnic. New recreation and playing fields, and spaces for campus gardens, will provide more active spaces, enabling employees to recharge, connect with one another, and support a healthy lifestyle.

Design Principle 5: Celebrate the Homegrown

- Showcase SRI's legacy of innovation
- Recognize SRI's uniqueness

The seven-decade history of SRI is a unique and proud one. It is a legacy of innovation as colorful as it is important. Today, SRI's main lobby features a display case of selected SRI innovations and their impact on society. Modernizing the campus design offers an opportunity to extend the theme of this display throughout campus and building amenities. For example, a timeline can be extended from the public entrance display through the conference center and then continuing into the central green and other walkways and courtyards. Subtle, elegant markers and graphic displays can be woven into the areas to provide context for SRI's work, to add visual interest, and to educate visitors and staff alike about the special ways SRI has contributed to the research community, its clients, and society at large.

Design Principle 6: Promote Sustainable Campus Design and Operations
Use high energy and water efficient building materials and fixtures

- Design buildings to take advantage of natural shade, sunlight, and climate
- Promote water conservation in landscaped areas
- Design buildings to take advantage of the prevailing winds and breezes on site
- Design buildings to use environmentally tempered areas for social collaboration and for circulation.

Energy-efficient building designs, utility systems and materials will be used to reduce energy demand and associated greenhouse gas emissions. The design of the overall campus and individual buildings will take advantage of measures to attain sustainable goals, including choice of materials and placement of buildings to maximize passive solar energy gains and prevailing wind patterns. Individual buildings will utilize operable windows to allow occupants to take advantage of Menlo Park's temperate climate for natural ventilation. SRI will increase the planted, permeable area on campus to increase storm water absorption and carbon dioxide uptake.

D. Landscape and Lighting Design

Overall Plan

The existing campus landscape is an eclectic mix of planting and hardscape. While lush, green landscaping surrounds parts of the campus exterior, the landscaped interior spaces are not interconnected. There are relatively few areas of common, usable green spaces and surface parking areas contain few canopy trees.

The proposed landscape plan will reinforce the overall campus design by using trees (both existing and new), shrubs, ground cover, paving, and site elements such as walls and fences to delineate a clear "front door" to the campus; highlight vehicular and pedestrian circulation; define the large central green; extend that central green through the campus, between buildings and into parking lots; frame views; and contribute to unique campus districts.

The landscape design also will employ principles of sustainability by emphasizing the use of native and xeric plant material. Trees, shrubs, forbs and groundcovers will be arranged in combinations representative of native California landscapes. Existing trees will be incorporated into the design, and many new trees will be added.

Landscape Plan Proposed

Campus Edges

The campus edges will receive special treatment. Enhanced landscaping is proposed at the campus edges to provide a shady, soft edge that will be visually appealing to neighbors and passersby. The most public portion of the campus perimeter will contain heavily planted areas to screen campus buildings and to ensure the campus continues to fit into its surroundings. The proposed site plan includes 60-foot setbacks along Ravenswood Avenue, Laurel Street, and the southwest boundary between SRI and the Classics Communities neighborhood. Existing SRI buildings will be retained on the southern “tab” area of the site; therefore setbacks in this area will continue to be 20 feet. Setbacks along the edges of the site adjacent to the United States Geological Survey buildings and commercial uses on the southern and eastern side of the campus similarly are proposed to be 20 feet.

Frontage Improvement Sections

SECTION A-A'

SECTION B-B'

SECTION C-C'

SECTION D-D'

Surface Water Treatment

More of the campus land area will be dedicated to landscaping and other pervious surfaces than exists under current conditions. Landscaping and other pervious materials currently cover 24 percent, or 15.45 acres, of the campus. At full development of the Campus Modernization Project, pervious landscaped area will increase to approximately 37 percent, or 23.53 acres of the site. Bioretention planters will be designed to meet storm water quality requirements. Peak discharges for the 10-year storm and 100-year storm events will be lower than under existing conditions. (Please see BKF Stormwater Runoff Memorandum dated 10/22/12, attached as Exhibit A.)

Tree Preservation and Planting

Central to the design of the new campus is the preservation of as many trees as is feasible. The existing campus is in no small part defined by its heritage trees. Species include native oaks and redwoods, as well as adapted non-native species such as eucalyptus and magnolias. A substantial number of trees are located along the property line at Ravenswood Avenue and Laurel Street, delineating the edge of the campus and creating a visual buffer to passersby and adjacent properties. Most trees on the site have consistently been maintained by a professional arborist and are in good health. The proposed campus landscape plan will preserve several hundred trees, while planting many more.

Heritage trees will be preserved in place whenever feasible. Heritage trees that cannot be preserved in place will be relocated on site if they are healthy, safe, suitable candidates for relocation (as determined by a professional arborist) and relocation is likely to be successful.

Currently, there are 520 heritage trees and 767 additional non-heritage trees on the SRI campus, for a total of 1,287 trees. Surface parking and interior roads have been designed to accommodate many of the existing heritage trees, including the substantially vegetated edge along Laurel Street and Ravenswood Avenue. Sculpted topography and low retaining walls will be used to maintain existing grades and preserve trees within the central green and in the landscaped spaces between the new buildings. The resulting plan preserves 419 heritage trees in their original location and relocates 10 additional heritage trees, for a total of 429 protected heritage trees. Thirty-five heritage trees are proposed for removal based upon the arborist's determination that these trees are unhealthy or unsafe. Fifty-six heritage trees are proposed for removal exclusively due to their location within the Project footprint. All of the heritage trees to be removed will be replaced at a 2:1 ratio, as required by the City's tree ordinance. In addition, while 182 replacement trees would be required under the tree ordinance, SRI intends to plant approximately 1,000 new trees on the campus. New trees will be added to the campus perimeter to reinforce the green edge of the campus, to surface parking lots to provide shade, along interior roadways to highlight primary corridors, and at the new central green and between new buildings to further define campus districts. (Please see Arborwell Tree Inventory, dated 2012, attached as Exhibit B.)

Overall Trees Proposed

Proposed Plant Species

Trees
Acer rubrum "October Glory"
Aesculus californica
Arbutus "Marina"
Cercus occidentalis
Citrus species
Cornus nutallii "Eddie's White Wonder"
Ficus carica
Malus "Prairiefire"
Nyssa sylvatica
Pinus radiata
Pinus sabiniana
Pistacia chinensis "Keith Davey"
Platanus x acerifolia "Bloodgood"
Platanus racemosa
Tristania conferta
Tristaniopsis laurina "Elegant"
Quercus agrifolia
Quercus douglasii
Quercus lobata
Salix nigra
Sequoia sempervirens
Ulmus parvifolia "Frontier"

Shrubs
Ceanothus thyrsiflorus
Dondonea viscose
Lupinus arboreous
Myrica californica
Phormium californica
Photinia arbutifolia
Rhamus californica
Rhus integrifolia
Rhus ovata
Solidago californica
Vitex agnus-castus
Zauschernia californica mexicana

Perennials and Groundcover
Arctostaphylos uva-ursi "Point Reyes"
Aristada purpurea
Baccharis pilularis "Twin Peaks"
Carex pansa
Juncus patens
Lantana montevidensis
Mimulus aurantiacus
Muhlenbergia rigens
Salvia gregii "Diane"

Lighting

Lighting design is a critical part of the landscape. Outdoor lighting will be replaced with low-voltage lighting systems, shielded to reduce spillover effects. Lighting will be used to provide a safe and comfortable environment on the campus, while minimizing lighting effects on surrounding neighborhoods and the night sky.

The existing campus exterior lighting systems utilize a variety of light sources to illuminate roadways, parking lots and pedestrian pathways throughout the site. The type of exterior light sources used on the campus range from high and low-pressure sodium sources to Light Emitting Diode (LED), compact fluorescent, linear fluorescent, and metal halide sources. Many non-cutoff and unshielded sources are used, which contribute to light pollution and light trespass beyond the property line. Further, the reliance on mostly high-pressure and low-pressure sodium light sources, which inherently render colors poorly, causes difficulty when trying to differentiate between colors of objects.

Under the Campus Modernization Project, the campus lighting systems will utilize energy efficient sources to illuminate roadways, parking lots and pedestrian pathways during nighttime hours. Roadways and parking lots will be illuminated with pole-mounted luminaires. Pedestrian pathways will be illuminated with a combination of pedestrian-scale pole-mounted luminaires, illuminated bollards and pathway style fixtures. Building-mounted fixtures will be used at building entries, under canopies and to illuminate pathways immediately adjacent to buildings where necessary.

The new lighting will meet the following performance standards:

- Lighting power densities will meet or exceed the latest efficiency standards contained in the California Energy Code (CEC).
- Lighting will be designed to meet the criteria of the Illuminating Engineering Society of North America (IESNA) and the applicable City of Menlo Park codes and regulations.
- To minimize light pollution, no more than 5 percent of the total initial designed fixture lumens (sum total of all fixtures on the campus) will be emitted at an angle of 90 degrees or higher from nadir (straight down). All luminaires will be full cutoff or “dark-sky” approved by the International Dark-Sky Association, except as required for aesthetic purposes.
- All luminaires will have a maximum illuminance value no greater than 0.20 horizontal and vertical footcandles at the campus boundary and no greater than 0.01 horizontal footcandles 15 feet beyond the campus.

E. Transportation and Parking

Transportation Demand Management and Alternative Modes of Travel

SRI has unique trip-generation characteristics compared to more typical office or research and development land uses. In 2012, SRI was named a Best Workplace for Commuters℠, a national recognition for meeting the National Standard of Excellence in commuter benefits that was created by the National Center for Transit Research and the U.S. Environmental Protection Agency. Its location within ¼ mile walking distance of the Menlo Park Caltrain station, close proximity to downtown services and amenities, and flexible work environment have combined to encourage employees to travel to the campus in modes other than commuting in drive-alone vehicles. Thus, SRI’s vehicle trip generation rates are lower compared to traditional development.

To quantify the amount of vehicle traffic generated by SRI and the percentages of employees using various modes of travel, Fehr and Peers conducted manual and automated surveys at the SRI campus during May and June 2012. (Please see Fehr and Peers Transportation Analysis dated 10/24/12, attached as Exhibit C.)

The Fehr and Peers surveys reveal that SRI generates peak hour vehicle trips at a rate that is 54 percent lower than the standard average rates for general office land uses, and 49 percent lower than the standard average rates for research and development land uses, as published in the Institution of Transportation Engineers' Trip Generation Manual (8th Edition, 2008). Daily trips generated at the campus also are well below industry averages.

Consistent with these relatively low vehicle trip rates, the Fehr and Peers surveys show that a high percentage of SRI employees use transit, bike, walk, or take carpools to travel to the campus. Only 59 percent of SRI employees commute in drive-alone vehicles. By comparison, 78 percent of all employees who work in Menlo Park commute in drive-alone vehicles according to the most recently available census data.

Under the Campus Modernization Project, SRI intends to continue to implement its progressive transportation demand management (TDM) program, which is designed to provide and encourage alternatives to private automobile travel. SRI's TDM program includes the following elements:

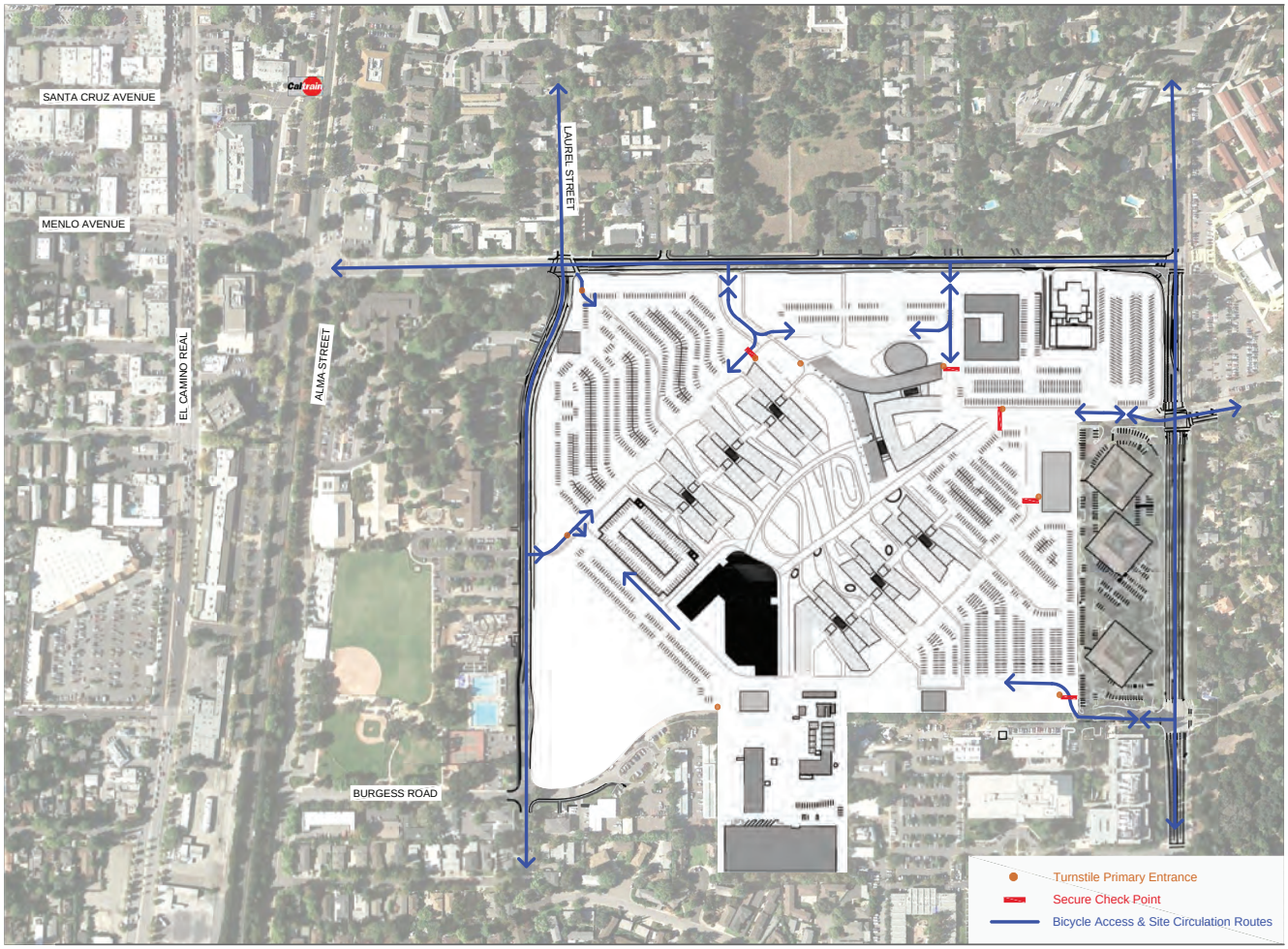
- On-site TDM program coordinator
- Subsidized transit passes for employees
- Carpool matching assistance program
- Preferential carpool parking
- Bicycle parking
- Showers and changing rooms
- Alternative and flexible work schedules
- Guaranteed ride home program
- Promotional campaigns (such as Bike to Work Day)
- On-site amenities, including cafeteria, showers and fitness center, and professional services

Improved Bicycle and Pedestrian Facilities

The Transportation Analysis prepared by Fehr and Peers depicts the existing offsite bicycle, transit and pedestrian circulation systems serving the SRI campus and concludes they are comprehensive and complete.

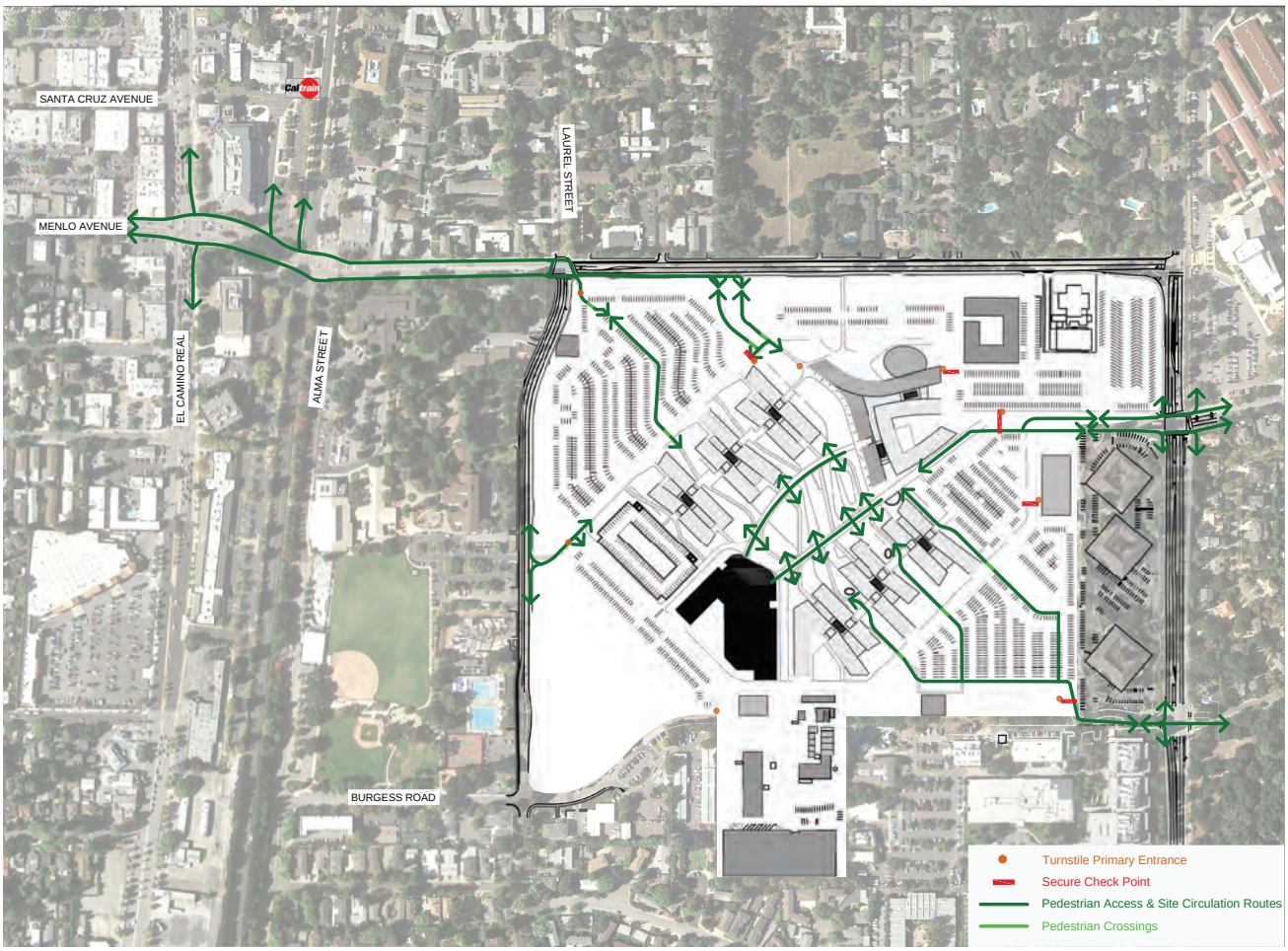
Under the Campus Modernization Project, bicycle access to the campus will be provided at each vehicular driveway plus through the gate at the southeast corner of the Ravenswood Avenue and Laurel Street intersection. Bicycle parking will meet Cal Green requirements and will be distributed throughout the perimeter and courtyard area of the campus to provide convenient parking at various building entrances. Bicycle parking also will be incorporated into the new parking structure near Buildings C and H.

Bicycle Circulation



Pedestrian access will be provided at each vehicular driveway entry and through the gate at the southeast corner of the Ravenswood Avenue and Laurel Street intersection, where the majority of Caltrain commuters enter the campus. A direct pathway will be provided through the parking lot from this corner to the front doors of Buildings A and E. This will provide a significant improvement over existing pedestrian access from this location.

Pedestrian Circulation



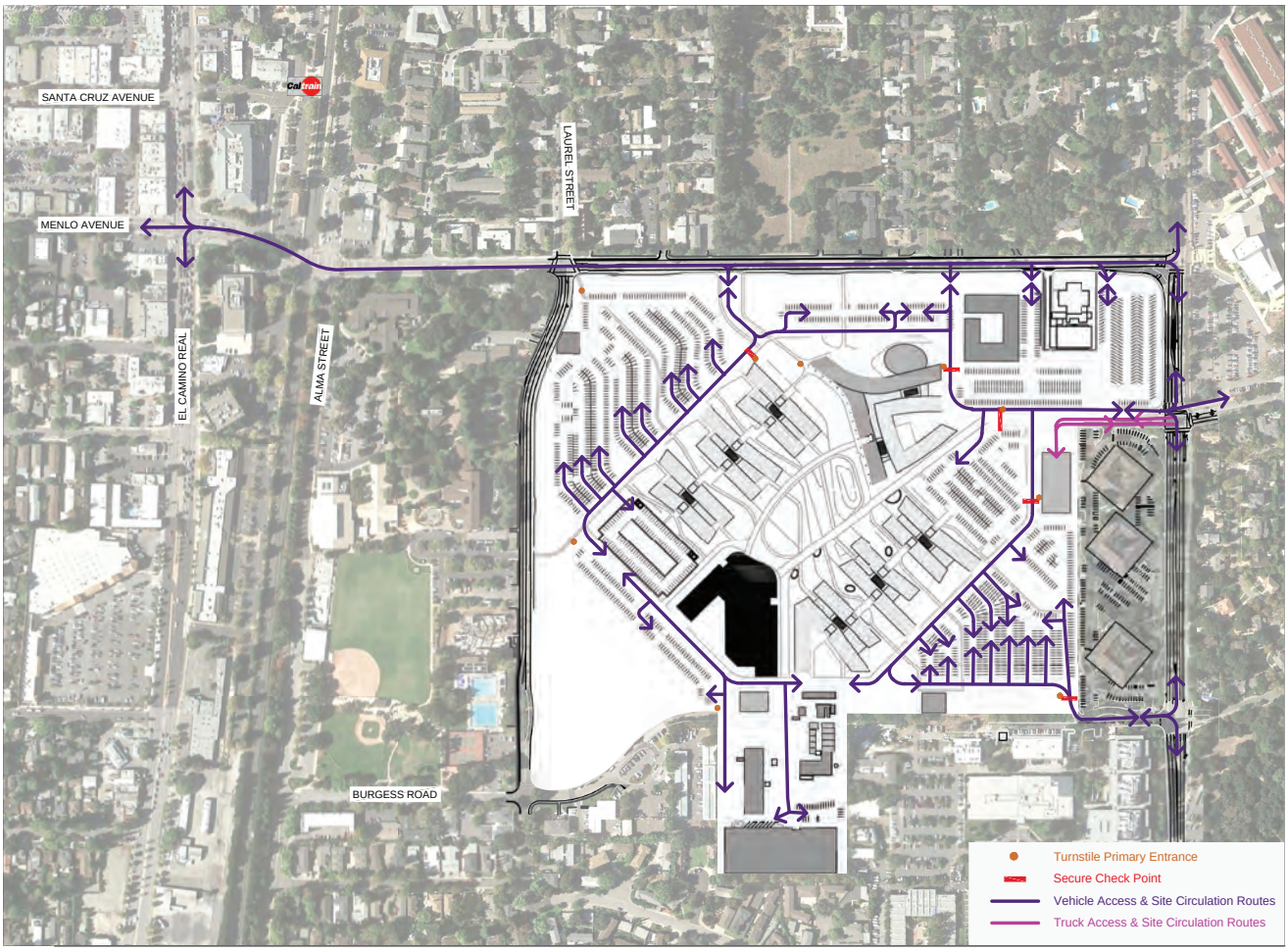
Improved Vehicle Access and Circulation

The Transportation Analysis describes and depicts the existing onsite vehicular access and egress locations, including two driveways on Laurel Street, five on Ravenswood Avenue and two on Middlefield Road (at Ringwood Avenue and Seminary Drive). All driveways are stop sign controlled, except the Middlefield Road/Ringwood Avenue driveway, which is signalized.

Under the Campus Modernization Project, internal campus driveways and roadways will be designed to enable employees to travel easily within a campus loop road system. Access improvements include a consolidated single driveway on Laurel Street instead of the current two driveways on Laurel Street,four driveways on Ravenswood Avenue instead of the current tive driveways, and greater emphasis on utilizing the two existing driveways on Middlefield Road. The provision of multiple driveways serving a campus loop system will make travel direct and efficient. Employee vehicles are anticipated to enter the SRI campus at the first available opportunity, depending on the direction of approach, and then circulate to on-site parking areas convenient to their final destination.

The consolidated single driveway on Laurel Street is proposed to be located opposite Mielke Street, which provides access to City Hall and the Arrillaga Recreation Complex. This will be an improvement over existing conditions, as the new driveway location will operate similar to a four-way intersection and will reduce the number of access points on Laurel Street. Visibility and sight lines at the consolidated driveway will meet required stopping sight distance design standards. Landscaping within 50 feet of either side of the driveway will be kept to low plantings (less than 24 inches high).

Vehicular Circulation



Improved Truck Delivery Access and Circulation

The existing truck loading area is located in the southwest corner of the campus, near Building R and the closed Burgess Drive gate. Delivery trucks and vans enter the campus from the 4th Street gate, and then circulate south through the campus on 4th Street to access shipping and receiving docks at Building R, for a distance of approximately 1,400 feet in each direction.

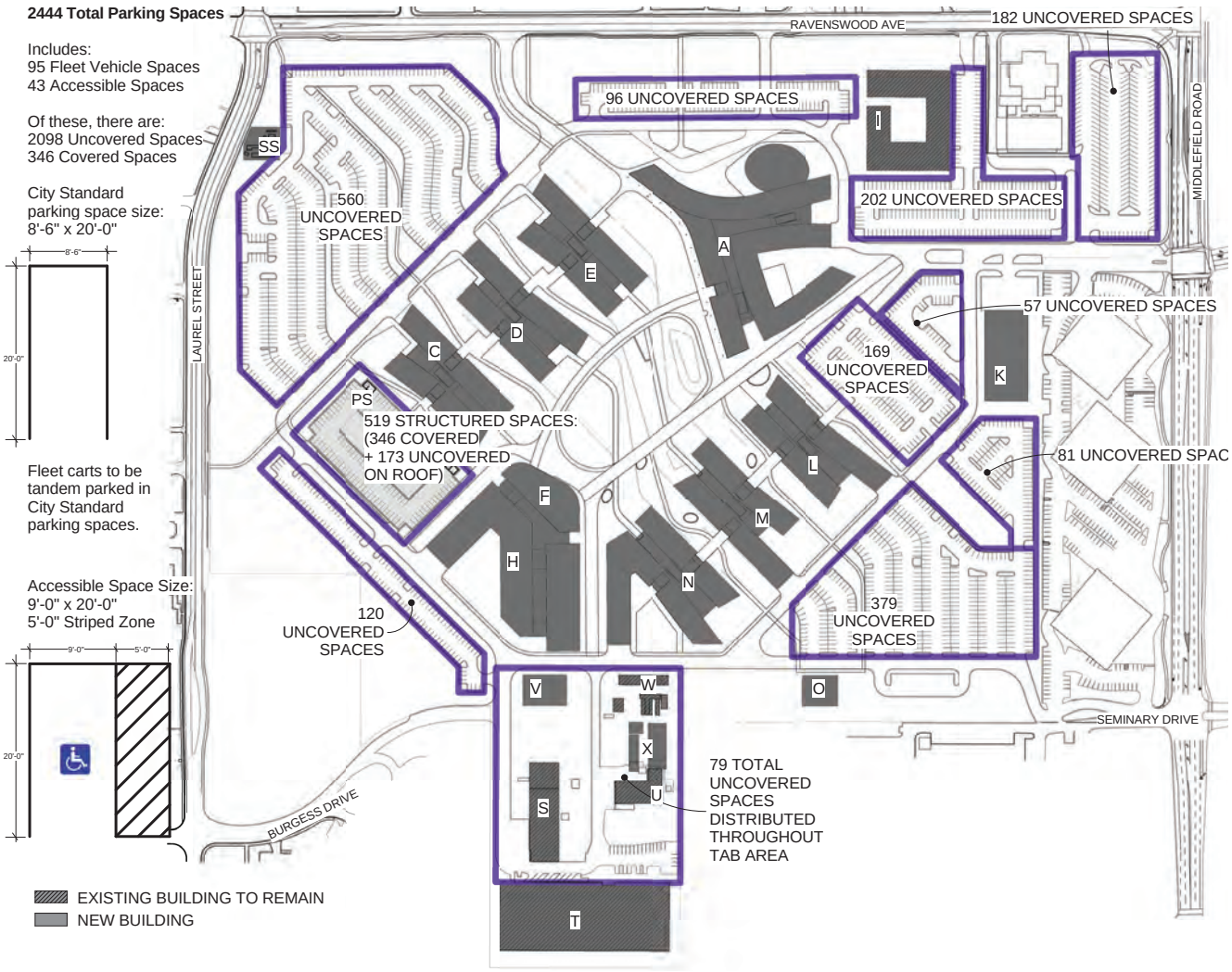
The Campus Modernization Project will improve truck circulation by relocating the shipping and receiving docks and associated loading area to the portion of the site closest to the Middlefield Road/Ringwood Avenue gate. This will provide greater separation between existing residential uses and truck circulation and loading. Trucks will enter the campus at the signalized Middlefield Road/Ringwood Avenue intersection, and circulate on the new internal loop road to access the new shipping and receiving docks for a distance of approximately 1,000 feet in each direction.

Reduced Onsite Parking

Presently, there are 3,224 surface parking spaces on the SRI campus. Much of this parking is unused, and will not be needed in the foreseeable future. The current campus parking configuration reflects outmoded commute patterns. As explained above, the campus' location near the Menlo Park Caltrain station combined with SRI's leadership in transportation demand management have resulted in exceptionally high rates of commute trips by alternative modes of transportation.

Based on a survey of parking demand at the SRI campus, Fehr and Peers has determined that 2,135 parking spaces will be needed to provide sufficient onsite parking for employees and visitors (1,819 spaces), campus service vehicles (126 spaces) and special events such as conferences (190 spaces). The Campus Modernization Project has been designed to accommodate the anticipated parking demand by providing 2,444 spaces in surface lots and a new parking structure near Buildings C and H.

Vehicular Parking



F. Utilities

Electricity, Chilled Water and Natural Gas

The SRI campus is served by an existing cogeneration plant, which provides efficient and clean electricity, steam and chilled water to power, heat and cool campus buildings. Underground PG&E pipelines provide the natural gas used to operate the cogeneration plant, as well as to provide the gas needed for burners and other gas-powered appliances in individual buildings. A PG&E electrical line also serves as a back-up power source to be used when peak electricity demand exceeds the capacity of the cogeneration plant, or during maintenance of the cogeneration plant.

Under the Campus Modernization Project, the cogeneration plant will continue to be used as the primary source of electricity and building heating and cooling. The existing cogeneration plant boiler will be replaced with a new, efficient 47,400 lbm/hour high-power steam boiler. Heat exchangers and distribution pumping stations will be added to convert steam to hot water in order to more efficiently heat the new campus buildings. Three new 1,500-ton high-efficiency electrical centrifugal chillers, a 1,200-ton steam absorption chiller, and a mechanical multi-cell induced draft cooling tower also will be added to increase cooling capacity and efficiency. Chillers will be piped and operated in parallel and chilled water will be generated at a 14 to 16-degree Fahrenheit differential temperature to promote energy and cost savings. Cooling tower fans will be provided with variable frequency drives for capacity control and noise mitigation. Motors will be premium efficiency. Condenser water will be distributed from the chilled water plant to the cooling tower cells through an above-grade piping system by constant speed condenser pumps. The condenser water supply, return, and equalization system will be manifolded to enhance system redundancy, reliabilityand flexibility to promote energy consumption and cost savings.

Utility pipelines and ducts will be installed in an efficient loop, with water, sewer, gas and electrical distribution lines installed at the outer perimeter of the new campus buildings and mechanical steam, heating hot water, and chilled water installed at the perimeter of the new campus green, to the interior of the new campus buildings. This will improve access to utilities for ongoing maintenance, as well as overall efficiency of the utilities system.

Variable speed pumps will distribute hot water for individual building heating and chilled water for individual building cooling through a direct-buried, pre-engineered/fabricated piping system and utility tunnels. Natural gas and electrical lines will be relocated as needed to serve new campus buildings.

The existing electrical distribution substation will be modified so that each section of the substation will serve one building, which will increase the reliability of the system.

Technical consulting firm EXP U.S. Services, Inc. quantified existing energy demand and consumption on the SRI campus and calculated future demands and consumption at full development of the Campus Modernization Project. As summarized in the following table, the analysis shows that at full development of the Campus Modernization Project, annual electricity consumption will decrease by 10 percent, annual chilled water consumption will decrease by 7.6 percent, and annual natural gas demand will increase slightly by 1.7 percent compared to existing conditions. (Please see exp Development Permit Submittal, dated 10/22/12, attached as Exhibit D.)

EXP Utility Profile Summary — Table 3

Utility	Utility Provider	Existing Campus Year 2011		Full Campus Modernization Project		Percent Increase/Decrease in Annual Energy Consumption
		Peak Annual Demand	Annual Consumption	Peak Monthly Demand	Annual Consumption	
Electricity	SRI on-site cogeneration paralleled with PG&E	5.0 MW	23,413,247 kWh	8.2 MW	21,001,406 kWh	- 10%
Chilled Water	SRI on-site congeneration	2,776 tons	3,921,922 ton-hours	4,230 tons	3,625,632 ton-hours	- 7.6%
Natural Gas	PG&E	40,419 MBH	2,052,838 therms	45,748 MBH	2,086,897 therms	+ 1.7%

Emergency Generators

Existing emergency generators on the SRI campus are decentralized and located adjacent to or inside of the individual buildings to which they supply emergency/standby power. The table below identifies the existing emergency generators on the campus.

EXP Existing Emergency Generator — Table 4

Generator Tag and Service	Generator Size		
	Volts	Amps	Capacity (kW)
Building U (Cogeneration Plant)	277/480	752	500
Building - T	277/480	800	400
Building – S	277/480	400	275
Building – I	120/208	60	15
Building – L	277/480	527	350
Building – PN	277/480	1,526	1,000
Building – GH	120/208	48	15

As part of the Campus Modernization Project, existing emergency generators that are serving buildings planned to be demolished will be decommissioned. New emergency generators will be provided in support of life safety and critical standby electrical loads. New generators will be located in the building (or group of buildings) they will serve. The following table identifies the generators that will supply emergency/standby power to the campus at full development of the Campus Modernization Project.

Campus Modernization Project Emergency Generator — Table 5

Generator Tag and Service	Generator Size		
	Volts	Amps	Capacity (kW)
Building - U (Cogeneration Plant)	277/480	752	500
Building – T	277/480	800	400
Building – S	277/480	400	275
Building – I	120/208	60	15
Building – L	277/480	600	350
Building – M	277/480	600	350
Building – N	277/480	600	350
Building – H/F	277/480	400	275
Building – C	277/480	400	275
Building – D	277/480	400	275
Building – E	277/480	400	275
Building – X	277/480	1526	1,000

Water and Sewer

The water supply to the SRI campus is fed from two metered connections to Menlo Park's water system, one at Laurel Street and one at Middlefield Road. Under the Campus Modernization Project, both of these feeds will continue to be used.

BKF engineers identified the existing water use at the SRI campus based on historical average water meter readings for the site and information in SRI's South Bayside System Authority (SBSA) Wastewater Discharge Permit. BKF determined future water demand at full development of the Campus Modernization Project by using the 2010 California Green Building Standards Code (Cal Green) baseline water demand calculations where applicable, and then reducing baseline water use by 20 percent. The 20-percent reduction will be achieved by selecting plumbing fixtures with demands lower than the baseline defined by Cal Green, such as by using toilets and urinals similar to those identified in BKF's Water Demand Memorandum dated 10/22/12. (Please see BKF Water Demand Memorandum dated 10/22/12, attached as Exhibit E.)

As shown in the following tables, it is anticipated that full development of the SRI Campus Modernization Project will reduce site water demand from 201,994 gallons per day to 179,252 gallons per day, a decrease of 11.3 percent. Although the campus square footage will not change, and employee count will increase by 68 percent compared to existing conditions, implementation of water conserving fixtures will reduce the sanitary water demand from 42,930 gallons per day to 32,520 gallons per day, a 24.2 percent reduction. Further, although demands for process and wash/rinse water are anticipated to be higher due to the increase in employees, cooling system demands will be substantially reduced, and the overall demand for non-sanitary water uses will be reduced 13.2 percent from 115,404 gallons per day to 100,159 gallons per day. The Campus Modernization Project includes an increase in landscaped area, and irrigation demand is projected to increase from 43,660 gallons per day to 46,573 gallons per day, an increase of 6.7 percent.

Existing Domestic Water Demands — Table 6

Use	Water Use (gpd)
Indoor Water Demand (Sanitary)	**42,930**
Other Water Demands	
Process	20,430
Wash/Rinse	2,580
Boiler	44,002
Cooling	48,392
Total Other Water Demands	**115,404**
Irrigation Water Demand	**43,660**
Total Water Demand	**201,994**

Notes:

1. Estimate demands based on the 2010 SBSA Waste Discharge Permit Application.

Existing Domestic Water Demands — Table 7

Use	Daily Uses	Flow Rate	Unit	Dur-ation	Unit	Occupants	Water Use (gpd)
Baseline Indoor Water Demand (2010 California Green Buildings Standards Code Worksheet WS-1)							
Water Closet (female)	3	1.6	gpf	1	flush	1,500	7,200
Water Closet (male)	1	1.6	gpf	1	flush	1,500	2,400
Urinal	2	1	gpf	1	flush	1,500	3,000
Lavatory	3	2.2	gpm	15	sec	3,000	4,950
Kitchen Sink (break room)	1	2.2		15	sec	3,000	1,650
Showers	0.1	2.5	gpm	480	sec	3,000	6,000
Total Baseline Indoor Water Demand (Worksheet WS-1)							25,200
Total Baseline Indoor Water Demand with 20% Required Reduction							20,160
Other Indoor Water Demands							
Dishwasher (break room)	0.02	6	gal	1	run	3,000	360
Food Service	1	2	gal	1	meal	3,000	6,000
Health Club	0.1	20	gal	1	visit	3,000	6,000
Total Other Indoor Water Demands							12,360
Total Indoor Water Demands (Sanitary)							**32,520**
Other Water Demands							
Process							37,876
Wash/Rinse							4,783
Boiler							44,000
Cooling							13,500
Total Other Water Demands							**100,159**
Irrigation Water Demand							**46,573**
Total Water Demand							**179,252**

Notes:

1. Assumes 50 percent male and 50 percent female employee distribution. Males use the water closet 1 time per day and the urinals 2 times per day. Females use the water closet 3 times per day. Both use the lavatory sink 3 times per day. New water closets will be maximum 1.6 gallons per flush. Urinals will be maximum 1.0 gallons per flush. Lavatories will be maximum 2.2 gallons per minute fixtures. An average run time of 15 seconds per visit is used for lavatories.
2. Other fixtures for employee kitchen/breakrooms and shower facilities are also included. We have assumed breakroom kitchen sinks with 2.5 gallons per minute faucets and and average of 1 uses per employee for 15 seconds each day for washing of coffee cups and miscellaneous items. This is less than the 4 minutes identified in the green building code since it is a minor usage. We have assumed 1 kitchen breakroom dishwasher run per 50 employees per day using 6 gallons per run. We have assumed showers with 2.5 gallon per minute heads and 1 shower per 10 employees for a 480 second duration.
3. Assumes on site food service that include one meal per day per employee.
4. Assumes health club facility that includes one visit per day per each 10 employees.
5. Laboratory process and washing/rinse water determined by prorating the existing condition by campus population and adding 10 percent for laboratory expansion and flexibility.
6. Boiler and cooling demand based on values obtained from campus model provided by mechanical engineer.
7. Site irrigation demands developed using City of Menlo Park Water Budget Calculation Form.

The SRI campus currently discharges to a private sewer system at two locations at the southeast portion of the site. The private sewer system then discharges to the West Bay Sanitary District main on Middlefield Road, and ultimately to the SBSA Treatment Plant. The Campus Modernization Project will use the existing sewer connections.

BKF identified the existing sewer discharge at the SRI campus based on the SBSA Wastewater Discharge Permit. BKF determined future sewer discharge at full development of the Campus Modernization Project by using the water demand calculations described above. (Please see BKF Sanitary Sewer Memorandum dated 10/22, attached as Exhibit F.)

As shown in the following tables, average daily sewer discharge is anticipated to be reduced from 80,077 gallons per day under existing conditions to 73,646 gallons per day under the Campus Modernization Project, a reduction of 8 percent.

Existing Sanitary Sewer Demands — Table 8

Use	Water Demand (gpd)	Discharge to Sewer (gpd)	% of Water Demand Discharged to Sewer
Indoor Water Demands (Sanitary)	42,930	42,930	100%
Process	20,430	18,380	90%
Wash/Rinse	2580	2,580	100%
Boiler	44002	19	0%
Cooling	48392	16,168	33%
Total Sewer Demand		**80,077**	

Notes:
1. Water and Sewer demands based on the 2010 SBSA Waste Discharge Permit Application. Percent of Water Demand Discharged to Sewer is calculated from the values for use in developing proposed demands.

Proposed Project Sanitary Sewer Demands — Table 9

Use	Water Demand (gpd)	Discharge to Sewer	Sewer Demand (gpd)
Indoor Water Demands (Sanitary) [1,2]	32,520	100%	32,520
Process [1,2]	37,876	90%	34,088
Wash/Rinse [1,2]	4,783	100%	4,783
Boiler [1,2]	44,000	0%	0
Cooling [1,3]	13,500	17%	2,255
Total Sewer Demand			**73,646**

Notes:

1. Water demands based on SRI Water Demand Summary by BKF Engineers.
2. Percent discharge to sewer based on 2010 SBSA Waste Discharge Permit Application.
3. Discharge to sewer provided by mechanical engineer.

G. Recycling and Waste

Recycling and trash enclosures will be fully enclosed, with smaller collection points located along the outer perimeter of the new buildings, and a recycling and centralized waste sorting and storage area located at the eastern edge of the campus.

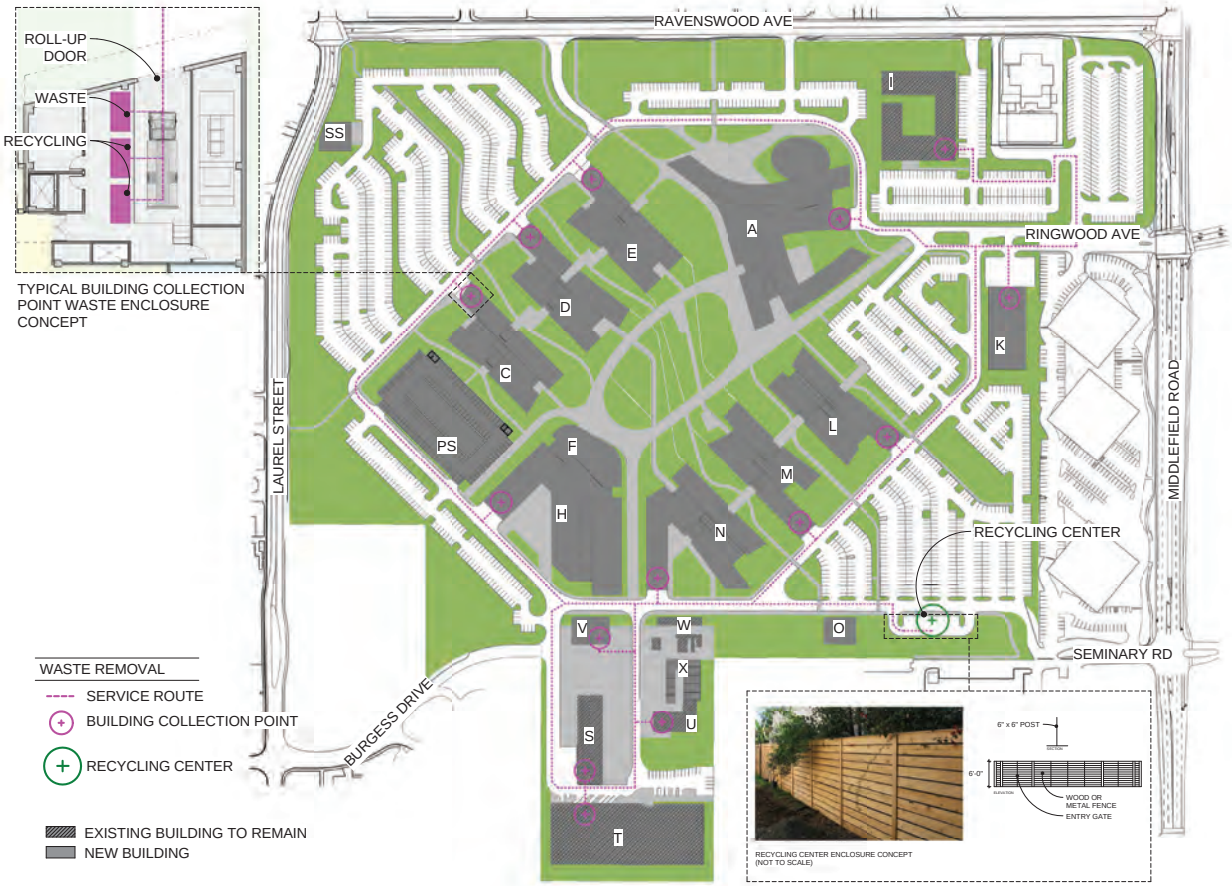
SRI employs sustainable resource recovery practices on its campus. Resource recovery includes collecting, sorting, and processing materials that are traditionally viewed as waste. Recycling and composting are among the best known resource recovery practices. Through a variety of actions, SRI has increased employee awareness about resource recovery, while ensuring it is a positive contributor to the community.

SRI's resource recovery practices include the following:

- Break rooms, dining rooms and conference rooms are equipped with recycling stations for three waste streams
  - Mixed Recyling (Blue)- Cans, glass/plastic bottles, aluminum foil, newspaper/magazines, plastic (marked)
  - Waste/Landfill (Black)- Black plastic, plastic bags, straws, candy wrappers, condiment packages, chip bags
  - Compostable (Green)- Paper trays/containers, beverage cups, soup bowls, unfinished food/ organics
- Labs are furnished with mixed recycling bins
- Private offices include desk-side mixed recycling bins
- Copy centers include large paper bins for recycling
- Batteries and light bulbs are properly collected and disposed of by the Environmental Health & Safety department
- The campus implements a metal recycling sorting program and yard for all reusable metals

- The campus motor pool implements a tire recycling program through a third party
- The campus HVAC department pays to remove used filters, which are used by a third party to provide energy
- Green waste is collected and removed to be used for composting
- Café staff compost all food waste; most dining ware is compostable
- Outdoor recycling stations are provided, and portable ones are used for large picnics
- Wood is removed from the waste stream to be recycled
- Cardboard is removed from the waste stream and is sold by a third party
- Toner and ink cartridges are recycled by a third party
- Projector bulbs are returned to the manufacturer for recycling
- Confidential materials are shredded and recycled by a third party
- Cooking oil is collected by a third party, with the majority used for bio-diesel fuel

Conceptual Waste Plan Proposed

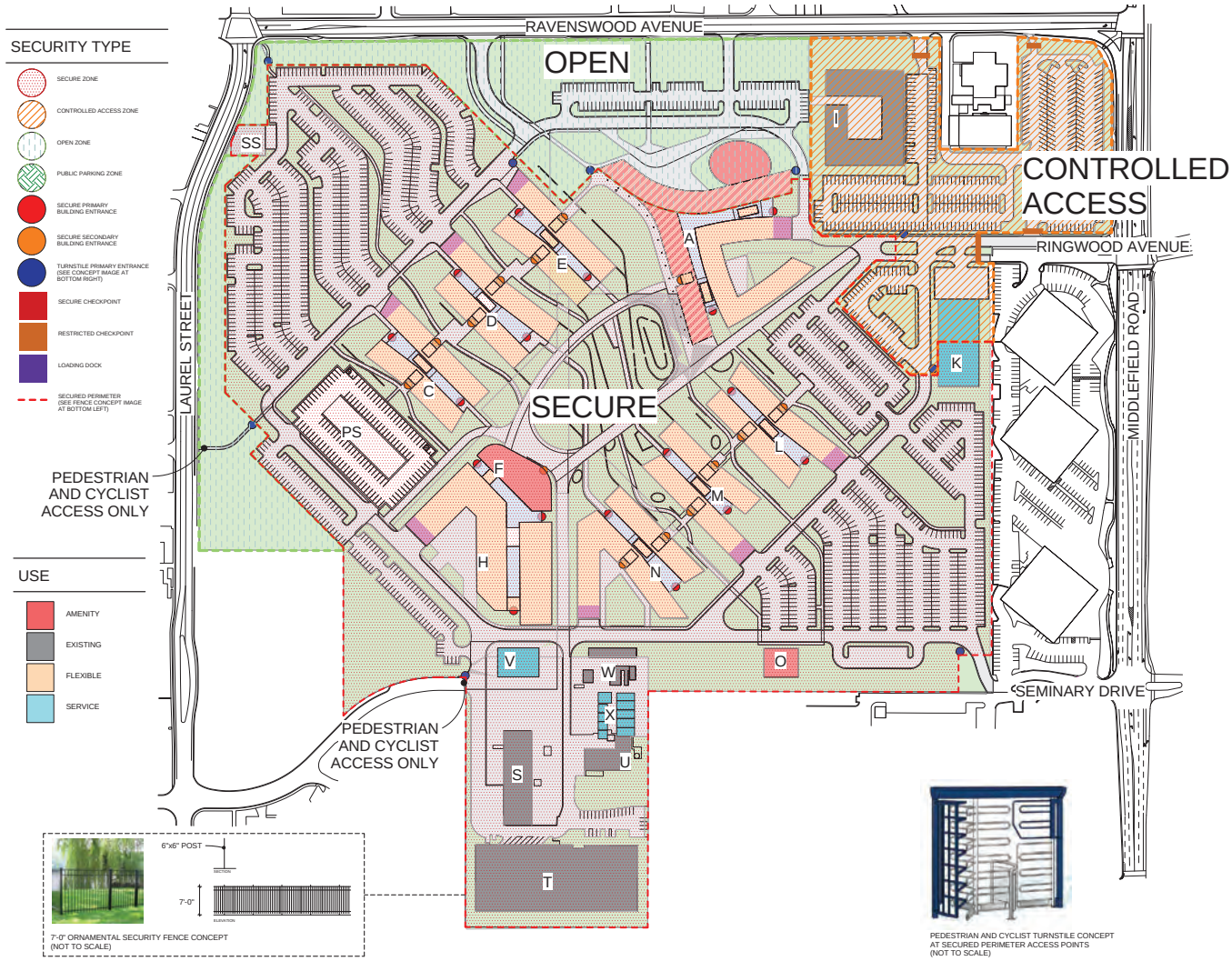


H. Security

Improved security fencing and gates will surround the portions of the campus that will be closed to public access. Parking areas nearest to Burgess Park and Menlo-Atherton High School will have separate fencing and controls so that shared community access can be provided on evenings and weekends. Public access will be limited to the front of the campus, on Ravenswood Avenue.

Along the most public campus edges, the security fence will be located behind a vegetated screen to reduce its visibility from outside the campus. The fence will be dark in color, ornamental metal, and 6 feet high.

Security Plan



SRI maintains small quantities of a variety of hazardous materials used in research, maintenance and cleaning. The nature and type of these materials change over time based on changes in the research that is being conducted on the campus. Storage and disposal of these materials is highly regulated, and SRI complies with all applicable laws designed to protect onsite and offsite populations and the environment.

I. Hazardous Materials Storage and Waste

Hazardous materials are stored in a manner that protects the material from fire, physical damage, reaction with incompatible materials, and release into the environment. SRI complies with the provisions of the Uniform Fire Codes to ensure that storage and safety cabinets and safety cans meet requirements for fire protection and secondary containment. SRI also complies with its Environmental Health & Safety manuals and guidelines, and with Department of Transportation specifications for storage of waste materials.

All activities at SRI that involve hazardous materials are conducted in a manner that minimizes the risk of injury to people or an accidental release of hazardous materials. SRI complies with its Environmental Health & Safety Materials Management handbook and maintains an inventory of all materials used on the site.

Hazardous Waste

SRI's Environmental Health & Safety department maintains a waste storage facility on the campus, where SRI sorts materials for either offsite disposal or storage and recycling. Hazardous wastes are handled and transported in accordance with laws and regulations protecting persons and the environment.

Monitoring and Inspection

Industrial waste discharge is monitored twice annually by the South Bayside Systems Authority at two locations near the SRI property line: a manhole at the southeast end of First Street and a manhole at the southeast end of Third Street.

Satellite waste accumulation areas and the Building W waste-handling facility are inspected weekly by the operators.

Underground fuel storage tanks located near Buildings A and 306 were removed, and a site investigation determined that no remediation action is needed. An additional underground fuel storage tank located at Building 412 was cleaned, epoxy coated, backfilled and covered in December 2006. No groundwater monitoring is being performed at this time.

Emergency Equipment

An extensive emergency equipment inventory is maintained at SRI, including all equipment and materials necessary for responding to spills. Detailed emergency equipment inventory lists are located in the onsite emergency response van and in the onsite disaster response trailer. The disaster response trailer has supplies necessary to care for emergency response personnel at the site during the 72 hours following an earthquake or other major disaster, including communications and medical supplies.

Emergency Response

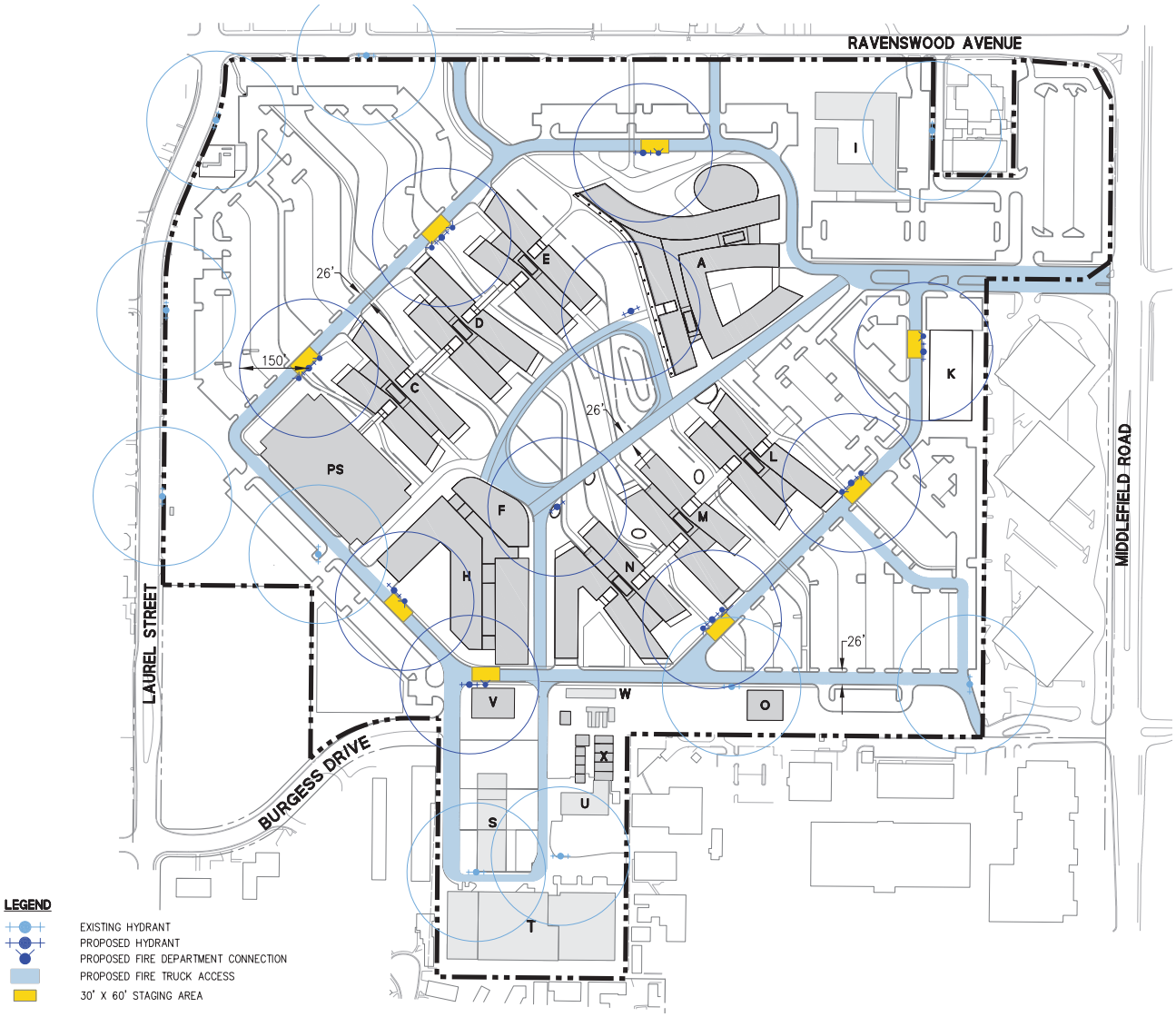
The Menlo Park Fire Protection District (MPFPD) maintains pre-fire plans for all buildings at the SRI campus. Pre-fire plans are developed from information contained in the Hazardous Materials Management and Business Plans and Hazardous Materials Inventory, as well as from information provided by SRI's fire prevention experts and from site tours performed with SRI's Support Operations group.

SRI has trained critical response staff onsite. Three members of the SRI emergency response team are also members of the MPFPD search and rescue Task Force 3 hazardous materials team, and train with them. SRI plans to continue close coordination with the MPFPD training officer, leading to joint training exercises at the campus. Information obtained from these joint exercises will be used to further modify pre-fire plans and SRI emergency procedures to enhance coordinated emergency response between SRI and MPFPD.

J. Fire Department Access and Facilities

New fire hydrants, fire truck access routes, and fire department staging areas will be constructed throughout the campus, substantially improving fire department access.

Fire Department Access



K. Construction

Buildings will be replaced gradually to minimize campus disruption. No more than two buildings will be under construction at any one time. The application plan set includes conceptual phasing diagrams dividing the campus into four quadrants. SRI anticipates that it will commence construction in the eastern quadrant because that quadrant contains open areas in which new buildings can be constructed prior to moving researchers and equipment from existing campus buildings. The order in which other quadrants will be constructed is unknown and will depend upon future program needs.

In some campus locations, interim surface parking lots, fencing and utilities will be installed to enable campus operations to continue during build-out of the site plan. In addition, there will be interim periods when overall gross floor area on the campus will be higher than gross floor area at full development of the Campus Modernization Project due to the need to complete new buildings before moving research functions from existing buildings.

CONCEPTUAL
EAST - DEMOLITION PLAN

PHASING - DEMOLITION

- EXISTING TO REMAIN - BUILDING
- DEMOLITION - BUILDING
- DEMOLITION - LANDSCAPE /ASPHALT

NOTES:

1. THE PHASING INFORMATION IS CONCEPTUAL IN NATURE. THE EAST PHASE LIKELY WILL BE CONSTRUCTED FIRST. AFTER COMPLETION OF THE EAST PHASE, THE OTHER THREE PHASES MAY PROCEED IN ANY ORDER.

2. AS PHASES ARE CONSTRUCTED, SECURITY FENCING WILL BE PLACED IN TEMPORARY LOCATIONS AS NEEDED. THE SPECIFIC LOCATIONS SUCH AS FENCING ARE NOT YET KNOWN

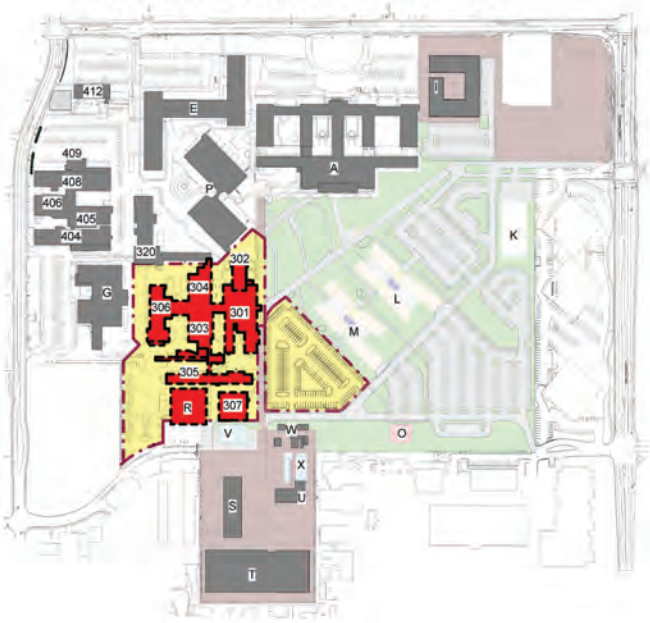
3. AS PHASES ARE CONSTRUCTED, TEMPORARY UTILITY RE-ROUTING AND CONNECTIONS MAY BE NEEDED IN ORDER TO PROVIDE SERVICE TO NEW AND EXISTING BUILDINGS PRIOR TO THE CONSTRUCTION OF PERMANENT UTILITIES

CONCEPTUAL
EAST - DEVELOPMENT PLAN

PHASING - DEVELOPMENT

- NEW BUILDING
- NEW LANDSCAPE
- NEW PERMENANT ASPHALT
- TEMPORARY ASPHALT
- NO DEVELOPMENT CHANGES PROPOSED

CONCEPTUAL
SOUTH - DEMOLITION PLAN



PHASING - DEMOLITION

- EXISTING TO REMAIN - BUILDING
- DEMOLITION - BUILDING
- DEMOLITION - LANDSCAPE /ASPHALT

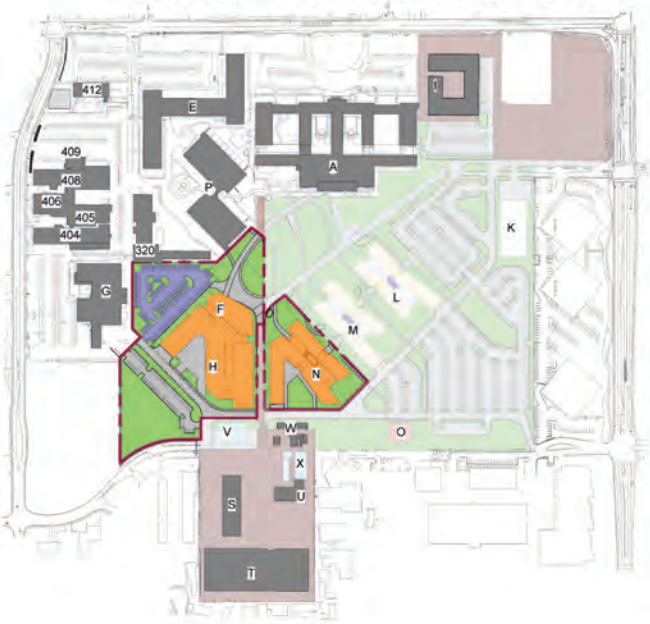
NOTES:

1. THE PHASING INFORMATION IS CONCEPTUAL IN NATURE. THE EAST PHASE LIKELY WILL BE CONSTRUCTED FIRST. AFTER COMPLETION OF THE EAST PHASE, THE OTHER THREE PHASES MAY PROCEED IN ANY ORDER.

2. AS PHASES ARE CONSTRUCTED, SECURITY FENCING WILL BE PLACED IN TEMPORARY LOCATIONS AS NEEDED. THE SPECIFIC LOCATIONS SUCH AS FENCING ARE NOT YET KNOWN

3. AS PHASES ARE CONSTRUCTED, TEMPORARY UTILITY RE-ROUTING AND CONNECTIONS MAY BE NEEDED IN ORDER TO PROVIDE SERVICE TO NEW AND EXISTING BUILDINGS PRIOR TO THE CONSTRUCTION OF PERMANENT UTILITIES

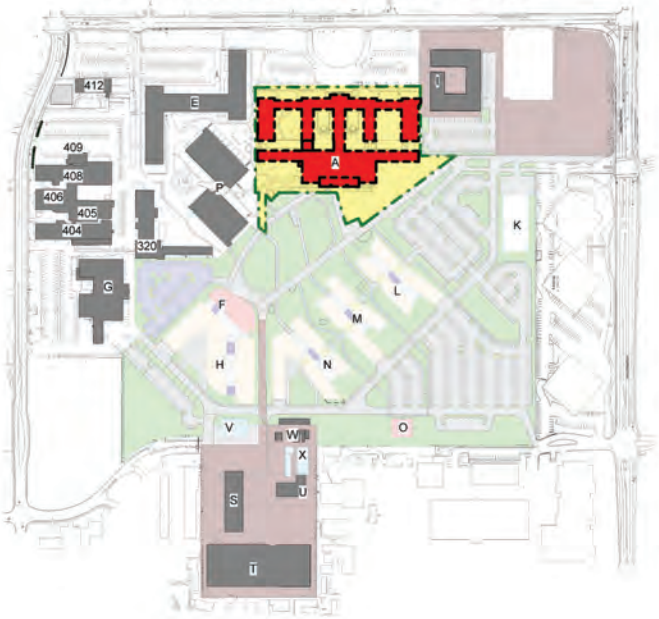
CONCEPTUAL
SOUTH - DEVELOPMENT PLAN



PHASING - DEVELOPMENT

- NEW BUILDING
- NEW LANDSCAPE
- NEW PERMENANT ASPHALT
- TEMPORARY ASPHALT
- NO DEVELOPMENT CHANGES PROPOSED

CONCEPTUAL
NORTH - DEMOLITION PLAN



PHASING - DEMOLITION

- EXISTING TO REMAIN - BUILDING
- DEMOLITION - BUILDING
- DEMOLITION - LANDSCAPE /ASPHALT

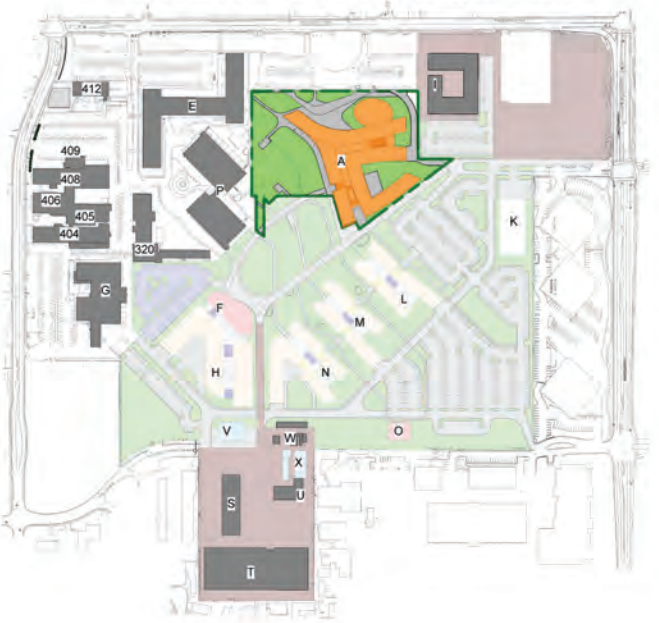
NOTES:

1. THE PHASING INFORMATION IS CONCEPTUAL IN NATURE. THE EAST PHASE LIKELY WILL BE CONSTRUCTED FIRST. AFTER COMPLETION OF THE EAST PHASE, THE OTHER THREE PHASES MAY PROCEED IN ANY ORDER.

2. AS PHASES ARE CONSTRUCTED, SECURITY FENCING WILL BE PLACED IN TEMPORARY LOCATIONS AS NEEDED. THE SPECIFIC LOCATIONS SUCH AS FENCING ARE NOT YET KNOWN

3. AS PHASES ARE CONSTRUCTED, TEMPORARY UTILITY RE-ROUTING AND CONNECTIONS MAY BE NEEDED IN ORDER TO PROVIDE SERVICE TO NEW AND EXISTING BUILDINGS PRIOR TO THE CONSTRUCTION OF PERMANENT UTILITIES

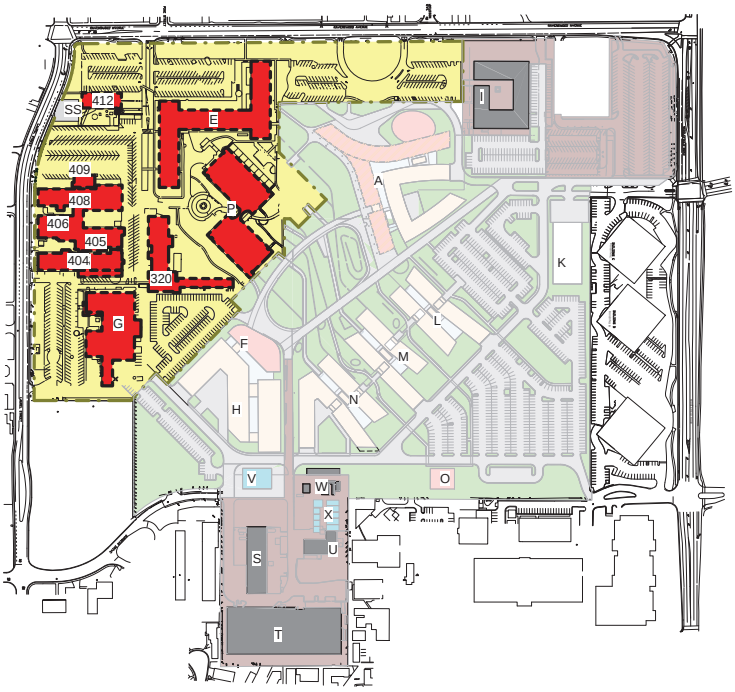
CONCEPTUAL
NORTH - DEVELOPMENT PLAN



PHASING - DEVELOPMENT

- NEW BUILDING
- NEW LANDSCAPE
- NEW PERMENANT ASPHALT
- TEMPORARY ASPHALT
- NO DEVELOPMENT CHANGES PROPOSED

CONCEPTUAL
WEST - DEMOLITION PLAN



PHASING - DEMOLITION

- EXISTING TO REMAIN - BUILDING
- DEMOLITION - BUILDING
- DEMOLITION - LANDSCAPE /ASPHALT

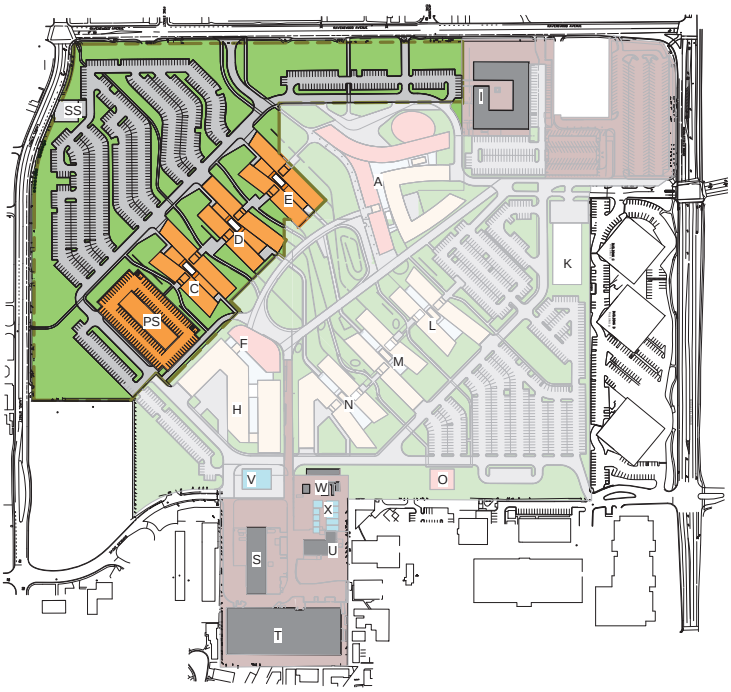
NOTES:

1. THE PHASING INFORMATION IS CONCEPTUAL IN NATURE. THE EAST PHASE LIKELY WILL BE CONSTRUCTED FIRST. AFTER COMPLETION OF THE EAST PHASE, THE OTHER THREE PHASES MAY PROCEED IN ANY ORDER.

2. AS PHASES ARE CONSTRUCTED, SECURITY FENCING WILL BE PLACED IN TEMPORARY LOCATIONS AS NEEDED. THE SPECIFIC LOCATIONS SUCH AS FENCING ARE NOT YET KNOWN

3. AS PHASES ARE CONSTRUCTED, TEMPORARY UTILITY RE-ROUTING AND CONNECTIONS MAY BE NEEDED IN ORDER TO PROVIDE SERVICE TO NEW AND EXISTING BUILDINGS PRIOR TO THE CONSTRUCTION OF PERMANENT UTILITIES

CONCEPTUAL
WEST - DEVELOPMENT PLAN



PHASING - DEVELOPMENT

- NEW BUILDING
- NEW LANDSCAPE
- NEW PERMANENT HARDSCAPE
- TEMPORARY HARDSCAPE