Stanford Facts 2009

Stanford — Historical Facts
Stanford University was founded by Leland and Jane Stanford in 1885 and opened its doors on October 1, 1891. The first cornerstone in the Main Quad was placed on May 14, 1887.

Stanford Campus
Stanford has more than 49 miles of roads, a 49-megawatt power plant, two separate water systems, three dams and lakes, 88 miles of water mains, a central heating and cooling plant, a high-voltage distribution system and a post office. Stanford provides or contracts for its own fire, police and other services.

Stanford Land
8,180 acres
- Main Campus (including Medical Center, Golf Course, Foothills to ridge): 2,616 acres
- Jasper Ridge: 1,186 acres
- Stanford Research Park: 700 acres
- Stanford Shopping Center: 69 acres
- Sand Hill Road: 62 acres
- SLAC: 424 acres
- Other Managed Lands (including agricultural lands): 3,123

Stanford Buildings
14.2 million gsf
700 major buildings

Trees
43,000 campus trees; Coast Live Oak most common

Number of Students, Faculty and Staff
- Total undergraduates: 6,812
- Total graduates: 8,328
- Total faculty: 1,874
- 424 appointed to endowed chairs
- 27 winners of the Nobel Prize since the founding of the University
- Total staff: 10,345 including:
  - Managerial and professional: 5,127
  - Clerical and technical: 3,042
  - Service and maintenance: 756
  - Stanford Linear Accelerator Center: 1,420

Housing
Stanford is a residential teaching and research university. Nearly 95% of undergraduates and about 52% of graduate students live in University housing. Undergraduate campus housing is guaranteed for four years for entering freshmen. Housing for single graduate students consists of University-owned apartments, residences, and spaces in cooperative houses.

Information from Stanford Facts 2009, produced by the Office of University Communications
www.stanford.edu

Design and photography: Karin Moriarty
http://lbre.stanford.edu
STANFORD UNIVERSITY
LAND, BUILDINGS AND REAL ESTATE
ANNUAL REPORT
2008/09
SECTION 1 - LAND AND BUILDINGS
2008/09 Capital Projects Map

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## 2008/09 Capital Project Descriptions

This section provides detailed descriptions of capital projects active in 2008/09 (as of June 2009 Board approvals.)

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ARRILLAGA GYMNASIUM AND WEIGHT ROOM

Background
The Department of Athletics, Physical Education, and Recreation (DAPER) proposed to build a new practice gymnasium next to Maples Pavilion in order to address the high demand for recreational basketball courts. Maples Pavilion has a limited amount of practice courts for the men's and women's basketball and women's volleyball teams.

Additionally, the women's softball and field hockey teams were in need of locker facilities. DAPER needed to provide such facilities to comply with Title IX requirements as mandated by the NCAA. The teams were sharing facilities within the Arrillaga Family Sports Center, which is located remotely from the Boyd and Jill Smith Stadium (for softball) and the artificial turf field (for field hockey).

Scope
The new 19,951 gross square foot (gsf) practice gymnasium supports the sports and recreational basketball and volleyball programs, and includes two basketball courts and three volleyball courts. In addition, the new gymnasium provides modern facilities and equipment for the varsity weight program, which was previously located at 340 Bonair.

The site for the new gymnasium is located adjacent to Maples Pavilion to take full advantage of support facilities such as lockers, showers, and rest rooms. The practice gymnasium complements the existing scale and character of Maples Pavilion. The concrete walls, metal roof, and glass window system match the palette of the Maples Pavilion addition completed in 2005. The ground floor of the new gymnasium is one-level below grade in order to reduce the height of the facility so that it complements the height and scale of the Maples Pavilion concourse. The landscaped area west of the facility is sloped down to this lower level in order to maximize natural light and connections to the associated facilities in Maples Pavilion. It is aligned with the face of Maples Pavilion and continues the landscape/lighting vocabulary on the Campus Drive face. A tunnel was constructed to connect Maples Pavilion to the new practice facility.

The project scope included the renovation of 10,000 gsf of space within 340 Bonair to provide replacement maintenance facilities as well as locker and shower space for the softball and field hockey teams and rest room facilities for the general public.

To keep within expansion limitations under the General Use Permit, DAPER has deferred the implementation of several previously planned Athletics facilities. In addition, with the construction of new maintenance facilities in 340 Bonair, the existing DAPER Corporation Yard was demolished, providing a GUP credit of 12,680 gsf.

Project Data
Phase: Complete
Architect: Hoover and Associates
Contractor: Vance Brown Builders
Gross Square Feet: New construction 19,951
Department: Athletics, Physical Education, and Recreation

Arrillaga Gymnasium - View from Campus Drive

Arrillaga Gymnasium - View of Basketball Court
CROTHERS HALL AND CROTHERS MEMORIAL HALL RENOVATION

Background
Crothers Hall and Crothers Memorial Hall comprise a total of 104,344 gsf of coeducational housing that previously supported 236 graduate students. With these graduate students reassigned to the newly opened Munger Graduate Residence, both Crothers Hall and Crothers Memorial Hall were repurposed for undergraduate housing. The renovated project houses 376 undergraduate students, the original design capacity for these buildings. A new Resident Fellow apartment was added in the renovation as well as Student Housing offices and associated support spaces. This project also renovated the Mark Taper Law Student Center (4,344 sf), which previously provided gym space for Law School students. This space, renamed the Mark Taper Student Center, has been repurposed and converted into an administrative center linking the two Crothers dormitory buildings into one Crothers complex.

The Crothers Hall site is bounded by Galvez Mall, Escondido Road, Arguello Way, and Crothers Way bridging academic and residential life.

Scope
The buildings were renovated to be consistent with characteristics inherent to the original design and building type. Exterior modifications, such as the addition of ramps, windows and door replacement, etc., are consistent with the architectural style of the building and neighborhood context. Building colors, materials, and overall design elements respond to the Central Campus Design Guidelines. Where added or replaced, newly installed light fixtures enhance the interior and exterior of the building and were selected carefully to complement the unity of the neighborhood.

The renovation brought the structures up to building code and seismic performance standards. The scope also involved maintaining principal entry points to the buildings from Escondido Mall, Crothers Way and Galvez Mall along with the major pedestrian/bike routes at Galvez and Escondido Malls. Landscape improvements were made to ensure maintenance of the central courtyard between Crothers Hall and Crothers Memorial Hall as the main public central space for large community gatherings and events. Finally, the renovation introduced a variety of outdoor areas within the courtyard to encourage interactions and study.

Project Data
Project Phase: Complete
Architect: DES Architects & Engineers
Contractor: Devcon Construction Incorporated
Gross Square Feet: Renovation 104,344
Department: Residential & Dining Enterprises (R&DE)
**DURAND PHASED RENOVATION - PHASE 3**

*Background*
The renovation of the Durand Building is part of the Panama Mall Master Plan, which involves the renovation of multiple buildings along Panama Mall and the relocation of several programs and departments. Over the past few years, the School of Engineering (SOE) has led a comprehensive programming effort in concert with the new SEQ 2. The Master Plan’s main objectives are to improve adjacencies between departments, to create flexibility for current and future research groups and teaching facilities, and to project a physical image befitting the academic stature of the departments and programs.

The 120,000 gsf Durand Building has five floors including a basement and is located at the intersection of Lomita Mall and Panama Mall at the center of the SOE. The building currently houses the Department of Aeronautics and Astrophysics, two Mechanical Engineering groups (Biomechanical Engineering, and Mechanics and Computation), the Stanford Center for Professional Development, the Institute for Computational and Mathematical Engineering, and Engineering Research Administration.

The programmatic goals for the renovation of Durand include the following:

- Consolidate and relocate MSE (Materials Science and Engineering) to Durand and the Geballe Laboratory for Advanced Materials (GLAM)
- Consolidate Aeronautics and Astrophysics (Aero/Astro) to better optimize its space
- Provide all building occupants with modern teaching, research and administration facilities
- Improve and create shared facilities for the entire building
- Free up space in Peterson for the new Hasso Plattner Institute for Design (the d.institute)

*Scope*
The entire renovation project will be implemented in four phases, which are expected to be completed by October 2010. Phases 1 and 2 were complete in September 2007 and in May 2008 respectively.

Phase 3 included renovation and code upgrades in the basement, sprinkler upgrades on the third floor, and renovation of a server room in the basement. It was complete in March 2009.

During Phase 4 (future project) portions of the basement and the first, second, and third floors of Durand will be renovated for MSE, Aero/Astro and the Dean’s Reserve. This phase will be further subdivided for implementation as additional portions of the building become available once the Mechanical Engineering building is complete.

*Project Data*

**Project Phase:** Phase 3 - Complete  
**Phase 4 - Future**

- **Architect:** CAS  
- **Contractor:** Dome Construction  
- **Gross Square Feet:** Renovation 8,300  
- **School:** Engineering (SOE)
LORRY I. LOKEY STANFORD DAILY BUILDING

Background
The Stanford Daily previously occupied over 4,500 gsf of space within the 10,323 gsf Storke Student Publications Building. The Storke facility, located at 537 Lomita Mall between Panama Mall and Santa Teresa Streets, was no longer the most suitable place for Daily functions. The inadequate conditions of the existing building (including lack of accessibility and other code compliance issues) and the siting of the new Mechanical Engineering building resulted in the need to demolish Storke, and to relocate the Stanford Daily to a brand new 5,000 gsf facility. The new building was approved in 2007 after a Site Study was completed by the University Architect’s Office working in collaboration with the Department of Project Management, the Office of the Vice Provost for Student Affairs, and the Stanford Daily.

The location selected for the building is at the southeast corner of Panama Mall and Dueña Street, where the Old Union parking lot used to be. The new location provides not only adjacency to the Old Union and other student organizations but also the centrality and late night safety requested by the Stanford Daily. While designed with the Daily’s needs in mind, the space remains under the management of the Vice Provost for Student Affairs.

Scope
The new 5,000 gsf facility is a two-level structure with an exterior stairway. The building design integrates well with the neighboring architecture of Panama Mall. Many site challenges were encountered during design such as low two-story eave height limitations along Panama Mall, deep side-yard setbacks imposed by the adjacent Old Union Building, and placement within the 100-year flood path.

The new structure was designed to maximize long-term flexibility for a campus newspaper. While it contains a few private offices, the majority of the space is an open floor plan housing multiple workstations with internal circulation and building support functions. The building has two stairways, one exterior, and all floors are accessible via an elevator. The exterior architectural elements relate contextually to the buildings along Panama Mall. The building has a clay tile, hipped mansard roof and clerestory, and the exterior wall finish is stucco with metal windows. The building concept is based on a centralized lobby element. The user groups are organized around this lobby, which continues from the north to south edges of the building and vertically connects to the second floor with an open stairway and two large floor slots. These floor slots allow the clerestory to bring in natural daylight to the ground floor. At the same time the slots also contribute to the building’s ventilation system. The building has a hydronic heating system and is naturally ventilated.

Project Data
Project Phase: Complete
Architect: Cody Anderson Wasney (CAW) Architects
Contractor: Meade Construction
Gross Square Feet: New Construction 5,000
Department: Vice Provost for Student Affairs (VPSA)
MUNGER GRADUATE RESIDENCE

Background
Since the inception of the original concept to construct a student-housing complex for Law School students, the design of the project significantly evolved, emerging into the current 600-bed Munger Graduate Residence. Numerous design elements were addressed in response to concerns from both the Board of Trustees and the community. The final design resulted in a residential complex that houses an increased percentage of graduate students on campus and also offers graduate student housing that is unparalleled in the nation. The opening of the Munger Residence enabled the return of Crothers Hall and Crothers Memorial Hall to relieve overcrowding within existing undergraduate facilities. This project meets Stanford’s General Use Permit (GUP) housing linkage requirements, entitling the construction of 999,000 gsf and Stanford’s capital plan now proposed through 2012.

Scope
The housing residences provide 600 new beds of premium quality graduate student housing in a unit distribution of 238 studios, 18 one-bedroom units, 30 two-bedroom units, and 71 four-bedroom units. Unit square footage ranges from 500 sf for the studios to 1,870 sf for the four-bedroom units. The entire new complex encompasses five buildings, four and six-stories, on the site bounded roughly by Campus Drive, the Student Services Building, Haas Center, Lane A, the Law School, Stern Hall, and Arguello Way. The project also constructed a 31,000 gsf Commons Program featuring a great hall supported by a production kitchen; cafe; convenience store; conference and meeting rooms; and administrative space.

Parking Structure 6 (PS 6): The four-story underground parking structure, next to Munger.

Enabling Projects: Several subprojects were required to facilitate the construction of the new residence, and are now complete:
- The Relocation of Mariposa House, Serra House, and Rogers House took place in 2006, and all three buildings were relocated to a site on the Tresidder parking lot, adjacent to the Bechtel International Center.
- The Owen House and the Drell Residence were relocated to a site along Lane A, adjacent to Mars House and Sigma Nu House.
- The Zapata House at Stern Hall was demolished and reconstructed as an addition to Stern Hall.
- Substantial utilities and access improvements were completed.
- Wilbur lot was reconfigured to provide replacement parking to address the loss of regional parking capacity.
- The Campus Bike Shop was demolished, and its operation was relocated to Tresidder.

Project Data
Project Phase: Complete
Architect: Hoover Associates
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 469,517
Department: Residential & Dining Enterprises (R&DE)
Background
The Stanford Institute for Economic Policy Research (SIEPR) is a non-partisan economic policy research organization designed to unite economists from a variety of entities within the university to analyze, discuss, and debate economic topics and issues. SIEPR’s research program is conducted within three key centers: the Stanford Center for International Development (SCID), the Center on Employment and Economic Growth (CEEG), and the Center for Public and Private Finance (CPPF). Additionally, SIEPR hosts a number of conferences throughout the year.

SIEPR currently occupies space within the Landau Economics Building. In the past five years, SIEPR’s annual budget has grown from $2.8 million to over $6 million. This substantial increase has come without any additional space, making it necessary to house SIEPR scholars and research assistants in shared and cramped quarters and to convert the SIEPR library into additional office space. SIEPR’s continued growth and ability to impact policy research hinges on the successful resolution of its space limitations.

Scope
The new 35,337 gsf building will provide office and support space for faculty, fellows, and research assistants as well as a conference and seminar center. The site is located at the corner of Galvez Street and Memorial Way, next to the Landau Economics Building. A series of connective elements have been designed to create synergy between the proposed new facility and the existing Landau Building.

The new facility will be a three-story structure that will be divided into two wings with a glass connector. The architecture of the new building references attributes of important Stanford buildings. The arched entry is reminiscent of Memorial Auditorium’s grand entry and the rhythm of two-story arches and deep window niches are derived from Green Library. The new building is similar in height to the existing Landau Building and the Alumni Center, and respects Memorial Auditorium as the tallest building in the neighborhood. The ground floor of the main building will include a large conference room (capacity for 180 people), a small conference room and a main lobby area. The ground floor connects to a large courtyard, which can be used for gathering and pre-function events. The courtyard is surrounded by arcades on two sides and also serves as the main connector between the old and the new building. A landscaped seat wall/trellis parallel to Galvez Street has been designed to provide an edge to the SIEPR courtyard as well as to visually connect the Landau Building and the new SIEPR building. All other floors of the building are mainly comprised of office spaces.

The new building will use the existing color palette of Stanford, with red clay tile roof, beige stone and stucco walls, dark wood soffits and steel framed windows. New street trees and landscape will supplement the streetscape along Galvez Street and Memorial Way. The Memorial Auditorium loading dock and service area were reconfigured in early spring of 2008.

Project Data
Phase: Construction
Architect: Ike Kligerman Barkley Architects/ Kornberg Associates
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 35,337
Department: Dean of Research (DOR)
JEN-HSUN HUANG ENGINEERING CENTER

Background
The SEQ 2 Master Plan includes the construction of four major academic buildings: Jerry Yang and Akiko Yamazaki Environment and Energy building (Y2E2), Jen-Hsun Huang Engineering Center (HEC), Center for Nanoscale Science and Technology (Nano Center) and the Bioengineering and Chemical Engineering Building (BioE/ChemE). The Master Plan also includes the connective elements, associated demolitions, and utilities and infrastructure in support of these buildings.

The Jen-Hsun Huang Center, at the heart of the new SEQ 2, will be the headquarters for the school and a major destination for the west campus. The Center will be an inspiring, vibrant environment, embodying the SOE’s values of entrepreneurship and innovation, depicting the School’s rich history and connections to Silicon Valley, and serving as a living example of the future of engineering.

The Center will be located on the southern portion of the HEPL building site. The new facility will house the Dean’s Office, and the Management Science and Engineering Department.

Scope
The new 128,821 gsf building is composed of three stories above ground and a basement, which will be partially exposed on the south side. The same architectural elements, sustainable design features and exterior skin materials will be carried forward from the Y2E2 building. The roof will be constructed with infrastructure in place for future installation of photovoltaic (PV) panels on the south roof. The PV panels will provide 53KW for on site energy production for the building. Another prominent sustainable element is the atria roof design, which has many technical features to help with day lighting, natural ventilation and temperature control in the building. Windows will be operable and fenestration is designed to address solar orientation impacts to each façade. Continuous arcades are featured on the north façade of the Center. External terrace courtyards will enhance the exterior of the building.

Completion of the building and connective elements is expected in March 2010.

Project Data
Project Phase: Construction
Architect: Boora Architects
Contractor: Hathaway Dinwiddie
Gross Square Feet: New Construction 128,821
School: Engineering (SOE)
JEN-HSUN HUANG ENGINEERING CENTER FIT-UP

Background
The planning and construction of the Huang Engineering Center and the Center for Nanoscale Science and Technology have proceeded in concert with each other and represent Phase 2 of the SEQ 2 Master Plan. Both buildings received Construction Approval and were budgeted without a portion of their respective fit-up scopes.

Scope
The fit-up for the Huang Engineering Center includes construction enhancements to the building interior, and equipment and specialty room build-outs that are outside of the base building project scope. These build-outs are necessary for teaching and research programs to fully function.

The fit-up scope includes enhanced finishes, infrastructure, specialized fit-up, and audio/visual (A/V) equipment installation for the Stanford Center for Professional Development (SCPD) auditorium and classrooms, the Boarroom and conference rooms within the Huang Engineering Center. It also includes the build-out of a café; a full catering kitchen serving the boardroom; a wood and metal shop facility; and a shared server room. Story telling throughout the building is also part of the fit-up scope.

Fit-up scope that is being implemented as part of the base building construction includes approximately $1,500,000 for infrastructure that is now in place (for example, conduits in concrete floors, electrical panels, etc).

The A/V scope, necessary for the functioning of the conference, classroom and auditorium facilities, will be implemented during the base building’s course of construction. The A/V equipment will be installed in conference rooms, SCPD classrooms, and the auditorium.

The café, the full catering kitchen, the wood and metal shop facility, and a shared server room will be completed with the base building. The café may lag behind schedule dependent upon how quickly a permit is issued by the County Board of Health. The café will come on line by mid-June 2010 prior to the occupant move-in. Storytelling (interpretive displays) and enhanced interior finishes will be installed in the major public spaces through out the building.

Fit-up will occur simultaneously with the base building construction and is anticipated to complete about March 2010, when the building receives Temporary Certificate of Occupancy (TCO). The School has entered into a contract with a food service vendor for the café that will require a separate building/health department permit. This scope of work is expected to be complete before the occupant moves occur in mid-June 2010.

Project Data
Project Phase: Project
Architect: Boora Architects
Contractor: Hathaway Dinwiddie
Gross Square Feet: New Construction 128,821
School: Engineering (SOE)
WILLIAM H. NEUKOM BUILDING

Background
Crown Quadrangle has been the home of the Stanford Law School since the completion of the building in 1975. During the intervening 30 years, the spatial needs of the Law School have increased causing a number of programs to be housed outside of Crown Quad in other buildings, both on and off campus. The Law School’s goal is to consolidate various programs and centers in a single complex. The first phase of the Law School Master Plan includes the new William H. Neukom Building (formerly known as the Law School Clinics and Faculty Office building).

Scope
This project involves the construction of a new three-story building for the Law School that will provide academic space for faculty, fellows, and researchers including faculty offices, Law School clinics, administrative support, seminar rooms, and support spaces. The 60,000 gsf facility will be located at the corner of Nathan Abbott Lane and Lane A, on the site of the existing Kresge Auditorium (which was demolished in August 2009) adjacent to the existing faculty and classroom buildings. A series of connective element projects will be designed to create synergy between the proposed new building and the existing buildings and campus. There will be an exterior courtyard on the second floor of the new building.

The decision was made to limit the new building to three stories with floor elevations corresponding to the existing buildings. This was done to create a visually unified Law School campus, to increase interaction among the faculty by limiting their distribution to two floors, and to align the parapet of the new building with the existing buildings.

Interior spaces will be configured to optimize programmatic adjacencies and efficiently accommodate the building program. The cylindrical “tower” is positioned at the hinge of the axis linking the Law School and the Munger Graduate Residence to define a prominent focal point and primary entry to the Law School. Seminar rooms, clinics, and support staff areas are located on the ground floor to provide easy access for visitors and to activate the ground floor. The second and third floors are organized around the faculty courtyard, which is similar in size to Crocker Garden, and contains faculty offices and the Dean’s office suite. A small faculty lounge containing items such as a sitting area, kitchen and mailboxes is located off the courtyard for informal social gatherings. Conference rooms and open meeting areas will be distributed to foster both formal and informal interaction among and between faculty and students.

Project Data
Project Phase: Construction
Architect: Polshek Partnership
Contractor: Dome Construction
Gross Square Feet: New Construction 60,000
School: Stanford Law School (SLS)
LI KA SHING CENTER FOR LEARNING AND KNOWLEDGE

Background
The Learning and Knowledge Center (LKC) will be housed in two buildings: the Li Ka Shing Center for Learning and Knowledge (LKSC) now under way and the planned Fairchild Building renovation (formerly LKC 2). The Center will include a full complement of teaching, learning, knowledge management, and public assembly facilities for the School of Medicine (SOM). The learning and information use practices and activities enabled by the new facilities will transform medical and bioscience education and training, and contribute to the translation of discovery to clinical medicine.

Scope
This project will construct a 118,000 gsf building that will house a conference center, classrooms, student study and social areas, and medical simulation and virtual reality environments on four floors above grade and a basement level. The basement of LKSC will house the Center for Immersive and Simulation-based Learning, whose main objectives are:

- Provide an integrated environment for hands-on learning of clinical, procedural, cognitive, and interpersonal skills.
- Allow for reconfiguration of the space to simulate a range of medical environments.
- Facilitate the integrated experience of patient care as well as enabling the development of discrete skills.
- Focus on medical students by supporting interns, residents, Continued Medical Education/Continued Education Units (CME/CEU), and allied health professionals.
- Enable learning along a scale of complexity from the early years of medical school through the seasoned practitioner.
- Encompass evaluation, education and training
- Support research on pedagogy, new technologies and human performance.

The first floor will accommodate classroom environments with different teaching formats: lecture hall setting, case style learning, and various sizes of small group discussions. The second floor will house a large conference center (capacity 350), divisible into three smaller rooms, and contiguous breakout space.

The third floor will provide a central location for the Dean's Office, as well as boardroom space; offices to support teaching, and three seminar rooms. The fourth floor will provide space for various student groups—medical, graduate students and postdoctoral fellows—in the form of study areas, a social meeting space and lounge, and a small fitness area.

The existing SOM’s buildings have a wide variety of architectural styles, palettes, and scales. The new LKSC building and associated connective elements provide the ideal opportunity to establish a strong, cohesive identity for the School. Situated at the edges of both the Main Campus and the Main Medical Center, LKSC serves as an architectural transition between two different sets of design guidelines.

The 14,600 gsf Fairchild Auditorium was demolished in October 2007 to clear the site for the new building.

Project Data
Phase: Construction
Architect: NBBJ
Contractor: Whiting Turner
Gross Square Feet: New Construction 118,000
School: Medicine (SOM)
Background
The School of Medicine’s (SOM) Connective Elements project will, in addition to solving significant service and delivery problems, create a “front door” and establish a “sense of place” for the School through the use of exterior design elements, circulation and landscaping that will unify the architectural and site aesthetic of the SOM campus.

Scope
The Connective Elements project, also known as the School of Medicine Master Site Plan, was commissioned to study the development options and infrastructure to be implemented over the next 15-20 years in support of the School’s Capital Plan. The SOM Master Site Plan’s objectives include:

• Provide a compact development plan that preserves future expansion potential, maintains the walkability of the campus and encourages interaction between disciplines
• Establish an identifiable “front door” for SOM, which is distinct from the hospital and improves connections east and south toward the campus
• Solve current and future service and delivery access to new and existing buildings
• Consider constraints and required phasing during upcoming development of the region

The Connective Elements encompass primarily that part of the SOM campus bounded by the Clark Center, Fairchild Science Building, Beckman Center, Center for Clinical Science Research (CCSR), Medical School Office Building (MSOB), LKSC, and the existing parking lot. The project scope includes five components: utilities relocation (Phases 0 and 1A); utilities relocation (Phases 1B and 1C); loading dock and tunnel; RAF ramp relocation; and landscape and sitework. These components play a critical role in bringing together the variety of existing buildings and future buildings.

The utilities relocation project moved and reorganized many major utilities within the SOM area to consolidate them into defined pathways. This effort cleared sites for the loading dock and tunnel as well as for the future Stanford Institutes of Medicine (SIM) buildings. Construction of the Phase 0 and 1A Utilities were complete in September 2007. The Phase 1B and 1C Utilities are expected to be completed concurrently with the building in the spring 2010.

The tunnel and the new 5,890 gsf dock opened in the fall of 2008. The loading dock facility serves all of the SOM buildings. The tunnel runs east-west along the south side of CCSR connecting to the existing tunnel system. The loading dock is nestled between the Lokey Stem Cell Research Building (a.k.a. SIM 1) and the future Stanford SIM 3 building and is situated below grade to minimize its visibility. It connects into a centralized tunnel system serving the needs of existing and future SOM buildings.

The RAF ramp relocation includes work to reorient the driveway access to the RAF dock from its current location in the parking area south of Fairchild to a direct turn from Campus Drive.

Site work and landscape design include the area west of Clark Center to the new loading dock west of Governor’s Lane, and south of CCSR, Beckman, LKSC and Fairchild Science to Campus Drive West. It also includes the Discovery Walk, which extends from the Clark Center to CCSR, the Foundation Walk from Campus Drive West, a formal entry plaza for LKSC, a small parking area, and a large green space.

Project Data
Phase: Construction (Site and Landscape)
Architect: NBBJ
Contractor: Whiting Turner
School: Medicine (SOM)

SOM Connective Elements - View of Discovery Walk
LORRY I. LOKEY STEM CELL RESEARCH BUILDING

Background
The School of Medicine’s long-range plan, in support of the Dean’s Strategic Plan, calls for the development of new research facilities focusing on “Institutes.” The School has developed five Institutes of Medicine: Cancer Center; Institute for Stem Cell Biology and Regenerative Medicine; Cardiovascular; Neurosciences; and Immunity Transplantation and Infection. The initial Stanford Institutes of Medicine building, now called the Lorry I. Lokey Stem Cell Research Building (a.k.a. SIM 1), planned by the School, will have stem cell research as its theme and will house the Stem Cell Biology and Regenerative Medicine Institute (SCBRM) and the Cancer Center. Researchers from other SOM institutes will also occupy the building.

The Lokey Stem Cell Research Building is also part of the larger SEMC (Science, Engineering and Medical Campus) initiative. SIM 1, along with the Learning and Knowledge Center (LKSC and LKC 2), the Stanford Institutes of Medicine buildings (SIM 2 and 3) and the Foundations in Medicine buildings (FIM 1, 2 and 3, replacing Grant, Alway, Lane and Edwards) will form the new School of Medicine campus.

Scope
The new 200,000 gsf facility is sited south of the Center for Clinical Sciences Research (CCSR) building along Campus Drive, with a basement vivarium and three above-grade floors of research labs and support facilities. This building will be connected to other adjacent research facilities (RAF, CCSR, and Beckman) via a tunnel. Numerous research core facilities in addition to the vivarium are being planned. The cores include Imaging, Proteomics/Genomics suite, Tissue Bank, and a Stem Cell FACS (fluorescent activated cell sorter) suite.

The Lokey Stem Cell Research Building entry plaza sits at the intersection of the Medical Center Promenade and the School of Medicine Discovery Walk. The entry plaza and the SIM 1 garden on the southwest corner break down the scale and length of the building in order to minimize the impact on Campus Drive. The face of the SIM 1 building on Campus Drive is set back 50’ behind the natural landscape buffer of redwood, oak trees and understory ground cover planting typical of Campus Drive. The east/west orientation of the building allows the labs and offices to be located on the north and south faces of the building to maximize natural light and to encourage natural ventilation. Service will be accommodated through the regional loading dock/tunnel system as well as through the RAF service area.

The design for the Lokey Stem Cell Research facility builds on the “architectural kit of parts” for SOM that was established in the Clark Center design, which serves as a transition between the design guidelines for the Main Campus and the design guidelines for the Medical Center. The three-story building façade gesturing to the Main Campus has a primary structural framework of stone, precast columns, an aluminum window system, and a cardinal red metal overhang element to tie into the designs of the Clark Center and LKSC. The primary entrance for the Lokey Stem Cell Research Building is situated on the Discovery Walk and is highlighted by a dynamic three-story glass lobby and red entry feature that celebrate the entrance and the termination of the Medical Center Promenade.

Project Data
Project Phase: Construction
Architect: Zimmer, Gunsul, Frasca
Contractor: Whiting Turner
Gross Square Feet: New Construction 200,000
School: Medicine (SOM)

Lokey Stem Cell Research Building - View of Construction Site
**Background**

The SEQ 2 Master Plan includes the construction of four major academic buildings: the Jerry Yang and Akiko Yamazaki Environment and Energy Building (Y2E2), the Jen-Hsun Huang Engineering Center (HEC), the Center for Nanoscale Science and Technology (Nano Center) and the Bioengineering and Chemical Engineering building (BioE/ChemE). The plan also includes the connective elements, associated demolitions, and the utilities and infrastructure in support of these buildings.

The Nano Center will feature the most advanced equipment available to explore matter at the nanoscale, such as an e-beam lithography tool and an atomic force microscope, much of it located underground to provide the stringent control of vibration, light, and cleanliness that is essential for nanoscale research. The Center will make labs available to approximately 70 researchers from all over campus, including leaders in the natural and physical sciences, engineering, and medicine.

**Scope**

The Nano Center will be located on the northern portion of the old HEPL building site. The 102,219 gsf facility will house a broad spectrum of laboratories including a Nanopatterning lab, optical facilities, optical materials labs, a flexible cleanroom, crystal shop, and biological research labs. The building will also support the Ginzton Laboratory and the proposed Institute for Nanoscience and Technology. The new building will be a three-story above grade facility with a basement and subbasement housing low vibration laboratories.

The Nano Center will feature a series of arcades on the south façade of the building. The architectural vocabulary is based on the design concepts outlined on the SEQ 2 Master Plan, which was approved by the Board of Trustees in December of 2004.

**Project Data**

Project Phase: Construction

Architect: Boora

Contractor: Hathaway Dinwiddie

Gross Square Feet: New Construction 102,219

School: Dean of Research (DOR), Engineering (SOE), and Humanities and Sciences (H&S)
**Background**

The planning and construction of the Nano Center and the Huang Engineering Center (Phase 2 of the SEQ 2 Master Plan) have proceeded in concert with each other. Both buildings received Construction Approval and were budgeted without their respective fit-up scope.

The fit-up for the Nano Center includes complete interior construction of the labs and tool hookups. The fit-up is necessary for occupancy of the building.

**Scope**

The fit-up of the Nano Center consists of the development of approximately 75% of the lab space available in the building. In particular, the scope includes the relocation of labs currently located in the Ginzton Laboratory Building. The lab facilities will include a brand new Nanopatterning Center (approximately 9,000 gsf) with flexible clean rooms, space for two TEMs (transmission electron microscopes), electron beam (e-beam) lithography equipment, and other research equipment. In addition, a lab from Astrophysics will be relocated to the Nano Center.

The Nano Center will include 19 shared facilities that will serve multi-disciplinary programs within the Dean of Research, School of Engineering, Humanities and Sciences, and School of Medicine. The proposed budget includes installation of research equipment, though the equipment itself will be acquired separately by the departments.

Whereas the Center for Nanoscale Science and Technology will encompass 102,218 gsf, the fit-up project will occur in about 30,000 gsf of the new laboratories. The building will have two and three stories above ground, and will have a basement and a partial subbasement. The Nano Center is currently under construction. A portion of the Nano Center fit-up will be implemented simultaneously with the shell building, and the actual tool hookups will take place after TCO (Temporary Certificate of Occupancy) is granted. Laboratories will be relocated in phases and the final estimated completion date is August 2010.

**Project Data**

Project Phase: Concept

Architect: CAS

Contractor: Hathaway Dinwiddie

Gross Square Feet: Fit-up 30,000

School: Dean of Research (DOR), Humanities and Sciences (H&S), and Engineering (SOE)
OLMSTED ROAD STAFF RENTAL HOUSING

Background
The Department of Athletics, Physical Education, and Recreation (DAPER) had become reliant on using mortgage subsidies and housing assistance in recruiting and retaining coaches in a very competitive environment. In lieu of providing a subsidy for the purchase of homes where equity increases are retained by the faculty and staff, DAPER proposed instead to construct and retain on-campus housing for coaches. Housing is currently provided by means of subsidies and by the few homes owned by DAPER.

Scope
The project scope includes the construction of 25 units of staff housing – 17 single-family detached homes and four duplexes totalling 53,824 gsf. The approximate 3.0-acre site selected for the development is bound by El Camino Real, Stanford Avenue, Olmsted Road, and the expansion site of the second child care center. The single-family detached units will be three bedrooms each, and will range in size from 1,929 sf to 2,035 sf based on three different floor plans. The duplexes will offer two-bedroom units ranging from 1,170 sf to 1,300 sf. Each unit will include an attached 400 to 500 sf, two-car garage. The architectural styles of the two-story housing have been designed to meld into the surrounding neighborhoods, taking architectural cues from the bungalow cottages in College Terrace with respect to massing, scale, proportion, detail and color, and complementing the architecture of the proposed faculty homes along Stanford Avenue. The planned architectural styles include Bay Area Bungalow, California Craftsman, Historical California, European, and Classic Traditional styles, which will provide an assortment of differentiated styles that are appropriate for a residential development at Stanford. Careful color selection and application, appropriate scale and design of style-specific details, along with simple room forms and porch integrations, will provide for a timeless quality. The homes will make use of wrap-around porches, bays, dormers, gables and other architectural features that will animate the community green spaces and provide pedestrian level interest. These homes will not be perceived as “turning their backs onto El Camino,” nor will they lack architectural detail on the Olmsted Road side, where most residents will enter and exit the homes.

The collection of homes meets the setback and buffer recommendations of the El Camino Plan. Although primary access to the housing will be off of Olmsted Road, pathway connections to El Camino and to the university provide flexibility for guest parking and encourage alternative means of transportation for those staff that will rent the homes. The majority of the existing mature trees on the site will remain and be supplemented with residential landscaping appropriate for the use and region.

The project scope also includes associated utilities for connection to Stanford systems as well as improvements and modifications to storm drainage system. Additionally, the project includes landscaping, lighting, and associated site improvements, including enhancements to the El Camino Real streetscape.

Project Data
Phase: Construction
Architect: Hunt Hale Jones
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 53,824
Department: Athletics, Physical Education, and Recreation (DAPER)
OLMSTED TERRACE FACULTY HOMES

Background
High-quality affordable housing on campus plays a critical role in recruiting and retaining Stanford faculty. To provide new affordable homes for faculty, the Board of Trustees approved plans, budget and schedule for the development of single-family detached homes on a parcel located between Stanford Avenue and Olmsted Road in the southeastern area of campus, adjacent to Escondido Village graduate student housing and the College Terrace neighborhood. The homes will be sold via a non-renewable 51-year ground lease to eligible faculty and staff for the cost of the improvements. The resale price of the homes will be subject to an appreciation cap by fixing to an index in order to maintain the affordability of the homes into the future.

Scope
This project entails the construction of 39 single-family detached homes on the selected 6.7-acre parcel at a density of 5.8 units to the acre along Stanford Avenue. The homes will range from 1,900 to 2,350 sf on lot sizes that average 5,500 sf. These two-story homes will offer three or four bedrooms, two full bathrooms and a powder room, a private office, a kitchen/great room, a private yard/patio, and a two-car garage. Each home will have a designated guest parking space. The units are clustered around shared private courtyards. Shared private driveways will minimize curb cuts on Olmsted. The low-density site plan was designed to maximize the unit yield along this linear, narrow parcel, while also providing for a public access jogging trail and public sidewalks along Stanford Avenue and Olmsted Road. The project requires significant site work in order to make the parcel developable for residential use, including the construction of a large underground storm drain utility and construction of a parking lot for Escondido Village residents’ exclusive use. Sales of the homes are expected to commence in spring 2010. The construction of the project will be complete by spring 2011.

Project Data
Project Phase: Construction
Architect: William Hezmalhalch Architects
Contractor: Regis Contractors of Northern California
Gross Square Feet: New Construction 85,000
Department: President/Provost (PRES/PROV)
PETERSON RENOVATION

Background
The School of Engineering, working with the Department of Project Management, completed a Master Plan to assess the feasibility of realigning space along Panama Mall. One objective of this study was to meet the needs of three School of Engineering groups: The Hasso Plattner Institute of Design, also known as “d.institute,” the Stanford Center for Design Research (CDR) and the Design Group of the Mechanical Engineering Department. The Master Plan identified the Peterson Building as the appropriate building to accommodate these programs. The programmatic goal of the Peterson Renovation project is to create an innovative collaborative space where d.institute, CDR and Design Group faculty, students, and other design partners can work together on collaborative projects. The interior design should reflect the character and culture of each of the groups, invite creativity and collaboration, prioritize functionality of the space, and promote strong interconnectivity among building occupants and visitors. The ultimate goal is to create a world-class facility for interdisciplinary design and “design-based-learning.”

Scope
The renovation includes a seismic upgrade, new MEP systems, new fire alarm and fire sprinkler system, new elevator, rest room renovation; and the demolition and infill of the original interior courtyard. The scope will include limited exterior upgrades in accordance with the guidelines of the Panama Mall Master Plan. Peterson Building (Building 550) is one of the original 1900 sandstone buildings on campus. Multiple additions over the years have transformed its original narrow rectangular shape from an “L” to a large square footprint with very dark interiors. The renovation project will replace the original courtyard with a two-story atrium space designed as the main interaction space for the new programs and will be shared by all three groups. The original stone and stucco façades will be restored and exposed in the building interior, and light will penetrate into the center through a rectangular clerestory. The building is considered a qualified historic building by Santa Clara County and Stanford University.

The main south entrance from Panama Mall will connect the building with the Mechanical Engineering facility across the street. The north entrances connect the facility with Escondido Mall and Lomita Mall. All entrances lead to the central atrium, which is the new interior lobby and heart of the building.

The original 1949 infill structure will be replaced maintaining the scale, mass and rhythm of the original building. The architectural style and glass and metal frame materials will clearly differentiate old from new, following the Secretary of the Interior’s Standards. The new metal roof follows the profile of the original clay tile roof but is easily distinguished from the original in terms of materials and color.

A new gracious entry from Panama Mall, integrates Building 550 with the future Panama Mall design as a major east/west bicycle and pedestrian corridor. A new patio adjacent to the new east entrance is designed for gathering and pre-function events. The east service area is maintained and adequately screened with buffer planting. Planting and irrigation design are consistent with Stanford’s water conservation policies.

Project Data
Project Phase: Construction
Architect: Cody Anderson Wasney and MKThink
Contractor: Vance Brown
Gross Square Feet: Renovation 42,461
School: Engineering (SOE)
Visitor Information Center & Track Bleachers Expansion

Background
The space at Montag Hall and Memorial Auditorium for greeting and introducing visitors, prospective students and parents to Stanford was inadequate in several respects. Not only was the existing space within these facilities insufficient for displaying and presenting materials and for organizing individual and group tours, but their locations were not optimally located for those visitors not familiar with the campus. The need for a more centralized location was essential to improve this service. The entry point into campus at the corner of Campus Drive and Galvez, which currently includes Cobb Track and Angell Field as well as the Track House store, was chosen as the best site for creating the new Visitor Information Center.

At the same time, DAPER’s ability to host several significant track and field events each year was constrained due to limited seating and space provided by the North and South Track Bleachers. To address the space shortage, DAPER routinely had to erect temporary bleachers in order to provide sufficient seating as well as platforms for media and officials, and portable ticket booths. It was determined that the combination of remodeling space within the existing Track House and expanding space at the Track Bleachers offered a creative solution for both programs.

Scope
The project scope includes the renovation of the Track House, expansion of both the North Bleachers and the South Bleachers, as well as the reconfiguration of the Track House Parking Lot.

The remodeling of the Track House includes a reception area and pre-function space, university displays and materials, as well as a conferencing and meeting space for groups and prospective students. The new Visitor Center is to offer a warm and inviting ‘first experience’ for the Stanford Visitor. A cohesive site plan will integrate the functions of the new Visitor Information Center at the former Track House with the expanded Track Bleachers for the bookstore retail operation and the Athletics ticket center.

The South Track Bleachers were expanded by 3,084 gsf to provide additional bleacher seating as well as newly developed space underneath the bleachers to accommodate the relocated retail operation.

The North Track Bleachers were expanded by 940 gsf to provide under bleacher space for a new ticket office for track and field events as well as storage for the track team, which was relocated from the South Track Bleachers.

The Track House parking lot was reconfigured to provide a new plaza and drop-off, a staging area for bus parking and for organizing tours, and new pedestrian walkways.

Project Data
Phase: Construction
Architect: Hoover and Associates
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 4,024
Department: Athletics, Physical Education, and Recreation (DAPER)
AUTOMOTIVE INNOVATION FACILITY

Background
The Automotive Innovation Facility (AIF) will provide a place where basic and applied research that taps into software, hardware, and materials can be tested in real vehicles with the goal of improving vehicle systems, safety, energy efficiency, and economics. The building will house high-profile Stanford projects that include the autonomously operated Stanley and Junior (Stanford’s winning entries in the 2005 and 2007 DARPA Grand Challenge, respectively) drive-by-wire research in the lab of Chris Gerdes, and the Center for Positioning, Navigation, and Time, which is working on the next generation of Global Positioning System (GPS), as well as the Stanford Solar Car.

Scope
The new facility will be constructed on Oak Road, near the southeast corner of Stock Farm Road. The lab will encompass 8,000 gsf in an industrial-type, one-story, metal frame construction building. Exterior spaces will include patios, bike parking, and a small test track for the experimental vehicles.

The building is located facing Oak Road with a 101’ setback from Stock Farm Road. The building will open itself internally to the site, via roll-up doors, taking advantage of optimal south solar orientation and ample covered outdoor work bays fronting a vehicle test track and gathering landscape area. The architecture of the building echoes its neighbors; which have simple forms, enclosing large volumes of space and articulated ridge lines. The forms, materials and detailing of the building will be simple, unadorned and reflective of the garage-like program. The height of the building is 28’ to the higher eave.

The building will be of a pre-engineered industrial system. It will possess efficient lighting with daylight sensors, and efficient passive solar design, with long north and south exposures, clearstory windows, and large overhangs on the south face. Ventilation monitors at the roof provide naturally convective ventilation as well as relate to the more rural context of the adjacent buildings. The building houses open work bays, meeting and support rooms, a shop that will host the noisiest type of work, and a transparent kitchen and lounge that interrupts the work bays, and provides a place for teams of different disciplines to compare notes, and trade ideas.

Existing and relocated trees along Stock Farm Road and Oak Road will screen the side and back elevations of the building as seen from Stock Farm Road while framing views to the building entry. All existing major oaks are preserved. Screening shrubs will be planted along the building’s north and west edges to provide a sense of enclosure and entry, respectively. A landscaped bike parking area will be located to the west of the building. Vehicular access is provided by an asphalt drive entering from Oak Road aligned with the existing drive across the street. The asphalt drive services the south side of the building, as well as the two ancillary uses to the site while doubling as a test track. South of the asphalt drive, a screened gravel area, allows storage of trailers and experimental vehicles.

Project Data
Project Phase: Project and Construction
Architect: Cody Anderson Wasney (CAW Architects)
Contractor: Hillhouse Construction
Gross Square Feet: New Construction 8,000
School: Engineering (SOE)
MECHANICAL ENGINEERING BUILDING

Background
The Mechanical Engineering (ME) building is part of the Panama Mall Master Plan. This project will consolidate BioMechanical Engineering (BME) and Mechanics and Computations Groups (M&C) functions in a new building. The new building will be located in close proximity to the Mechanical Engineering Research Laboratory Building (MERL), as well as neighboring SEE programs along Panama Mall. The project has now been placed on the Delayed and Suspended Projects list.

Scope
The project will construct a new stucco and stone, three-level structure with a mansard-style, terra-cotta tile roof on the site of the existing Storke Student Publications Building. The Storke Building and Building 630 will be demolished prior to construction of the ME building. The new building’s architecture balances the scale, palette and texture of the older buildings along Panama Mall, but also serves as a transition to the larger Schools of Engineering and Earth Sciences buildings such as Durand and Mitchell. The building’s height is 45’ to the eave.

The new ME building will be located on the east side of Lomita Mall, at the midpoint between Panama Mall and Santa Teresa Street fronting the open landscaped space south of Terman Engineering. Strategically, this site places the new building immediately adjacent to the Mechanical Engineering Research Laboratory (MERL) facility and strengthens the school’s presence in the Panama Mall vicinity.

The new 21,000 gsf structure will include faculty, staff and student offices; Bio-Motion Facility and computational spaces; conference rooms and collaborative spaces; ADA-compliant restrooms; an elevator; and a new exterior courtyard and landscaping. Opportunities for sustainable design elements will be considered and integrated into the project scope, where appropriate.

The building will utilize balconies as exterior circulation paths on the west façade to leverage the GUP square footage allocation. These balconies will also serve as a passive solar design device to reduce the building’s energy requirements. A stone façade wall on Lomita Drive will provide a quality-building front to the Terman block and complement the scale of Mitchell and other larger buildings along Panama Mall.

Project Data
Project Phase: Project
Architect: Cody Anderson Wasney (CAW) Architects
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 21,000
School: Engineering (SOE)

Long Range Vision

Street trees along Lomita Drive will soften the building face as well as contribute to the control of the western sun. A landscaped bike parking area will be located to the west of the building. A buffered trash enclosure will be provided to the south near Santa Teresa. A new courtyard to the east of the building and connective element features will begin to further connect the new building with MERL, Bldg. 570, the Product Realization Lab and other Panama Mall Mechanical Engineering buildings as well as the future replacement for the Press building to the south.
KNIGHT MANAGEMENT CENTER

Background
The Graduate School of Business (GSB) is currently constructing its new campus between Serra Street, Campus Drive East and Arguello Way. With 419,000 sf in eight buildings and 50% of its 12.5-acre site preserved for open space, the Knight Management Center (KMC) consolidates the GSB facilities into a vibrant and unified indoor/outdoor, living/learning community. Located across from the School’s Schwab Residential Center, KMC provides students, faculty, and staff the sense of being in a small town, one that remains connected to the broader Stanford campus. The architecture of the GSB campus captures the essence of Stanford, and offers greater transparency to showcase the collaborative culture of the School.

Scope
The KMC buildings will be organized around four primary places and connected by open arcades that will serve as circulation and program space; the courtyards and arcades will also create an opportunity for natural light in the majority of the buildings’ spaces. A Welcome Center on the ground floor of the Anne T. and Robert M. Bass Center will be used as a main central focus area, and is intended to provide a clear welcoming sense to visitors and students.

The KMC will establish a new 21st century benchmark for creating a vibrant, engaging ‘sense of place’ that reflects both the mission of Stanford University and the differentiating brand attributes of GSB. The connective elements of the project are designed to encourage a highly interactive living/learning environment for MBA and PhD students, the Sloan Masters Program, as well as the School’s executive education program. The four primary places include the following:

- **Town Square**: the social hub of the GSB encouraging active interaction between students, faculty, and the rest of Stanford. The Bass Center (including the Welcome Center), the Arbuckle Dining Pavilion, the Hemsley Family MBA Student Lounge, and access to the underground parking garage will be located at the perimeter of this space.
- **McCoy Family Courtyard**: the quiet, more contemplative cloister space surrounded by faculty offices and classrooms.
- **Knight Way**: the more energetic academic space where classrooms, seminar spaces, and breakout rooms provide a variety of educational and collaborative opportunities.
- **Community Plaza**: the space reserved for organized events, which includes the Lecture Hall, the Arbuckle Dining Pavilion, and the Student Commons.

A main entry on Serra Street establishes a front door that leads into the Town Square, while secondary entries on Serra Street, Arguello Way and Campus Drive encourage a permeable and inviting campus. By aligning building entries across Serra Street and continuing a pattern of lawns and groves, the GSB campus will be consolidated while also connected to the larger Stanford campus.

The hardscape and landscape of the exterior spaces support the program, activities and collaborative culture of GSB. The buildings are predominantly three stories with a glass fiber reinforced concrete (GFRC) exterior envelope. The red tile mansard roofs in the “Stanford blend” and the arcades reference some of the greatest attributes of Stanford architecture. The KMC will also serve as a ‘cutting edge’ example of an environmentally sustainable campus and reflect the commitment of the leadership of the GSB and Stanford by targeting a LEED Platinum Certification.

Project Data
Project Phase: Construction
Architect: Boora Architects
Contractor: Turner Construction
Gross Square Feet: New Construction 419,000
School: Graduate School of Business (GSB)
**BING CONCERT HALL**

**Background**
The university has launched an initiative that is engaging the entire campus in innovative efforts to reimagine the role of the arts. The Stanford Arts Initiative will raise the arts to a new level of prominence on campus, deepen the many ties binding Stanford to the community and the larger world, and create an arts-rich environment that will increasingly distinguish the University of the Future.

The Bing Concert Hall will be an acoustically exceptional hall that will be well suited for a range of music groups from small chamber ensembles to a medium-sized orchestra. The new hall will present visiting artists in an environment ideally suited to their art and will potentially give Stanford the reputation for being one of the country’s premier hosts of chamber, recital, and world music.

**Scope**
The new 119,000 gsf concert venue will feature a vineyard style hall with seating for approximately 877 patrons. The new facility will provide well designed and functional ‘back of house’ spaces such as green rooms, dressing rooms, rehearsal space, storage and service spaces. The Concert Hall will have public areas, which include a lobby, spaces for master classes, receptions, pre-show community events and offices for house management staff. The site is bordered by the Alumni Center, Campus Drive East, Lasuen Street, and Frost Amphitheatre and is opposite the Cantor Center.

The Concert Hall architecture blends notions of a contemporary world-class concert hall with attributes that support Stanford’s sense of place. The Concert Hall’s stucco mass is an iconic, oval form with vertical notches on the exterior face, a larger notch on the entry side and a secondary notch that can be seen from the Alumni Center and the Visitor’s Center. Its massing and height are similar to the central entrance feature of the Cantor Center. The lobby component of the hall provides a sense of scale and highlights the glass transparency of the lobby wall. A prominent overhang on the entry side and an arcade on the south side provide protection for pre-function events and breakout space during intermission. In the spirit of Memorial Auditorium and the Old Union, the exterior materials, primarily stucco and glass, will be consistent with the Stanford color palette.

The interior architecture continues the blend of clean, tailored lines combined with a sense of warmth. Interior lobby light wells harvest the natural light and provide opportunity to bring unique landscape elements into the lobby. The interior of the Concert Hall juxtaposes natural wood appointments in the performance area and patron seating levels with uplifting lighter and softer materials that highlight the ‘sails.’ Special attention has been paid to providing an abundance of rest room facilities for patron’s comfort.

**Project Data**

**Project Phase:** Design

**Architect:** Polscheck

**Contractor:** TBA

**Gross Square Feet:** New Construction 119,000

**Department:** President/Provost (PRES/PROV)
LINAC COHERENT LIGHT SOURCE OFFICE BUILDING

Background
The Linac Coherent Light Source (LCLS) Experimental Complex at the SLAC National Accelerator Laboratory received Concept and Site Approval from the Board of Trustees in February 2006. Funding for this project is provided by the U.S. Department of Energy (DOE) Office of Science, who will be the owner of the proposed office building and equipment on land leased from Stanford University. SLAC personnel will manage the construction of this new facility. By terms of the ground lease with the DOE, the Stanford Board of Trustees can disapprove the general plans and specifications if the proposed construction or means of ingress, egress or landscaping is not deemed harmonious and compatible in design, engineering or construction with previously approved buildings.

The LCLS will be the first laser in the world that produces “hard x-rays.” These x-rays will be extremely brilliant (billions of times brighter than existing x-ray sources) and have extremely short pulse durations (more than a thousand times shorter than typically available today). This unique combination of x-ray characteristics will enable LCLS beams to be used as an “atomic scale ruler” to measure spacings between atoms and how they change during chemical reactions; to create completely new states of matter and study their properties; and to apply new approaches to image nanoscale materials in their dynamic, molecular form. LCLS is the next generation tool for studying a wide range of matter and understanding function in disciplines from physics and chemistry to biology. LCLS takes advantage of the infrastructure and experience already at SLAC (in particular the high energy electron linear accelerator) and, with new hardware and facilities, will convert it into a truly remarkable scientific instrument that will enable breakthrough science for decades to come. LCLS was among the group of highest ranked new facilities in the DOE Office of Science “Facilities for the Future of Science – a Twenty-Year Outlook” (September 2003).

Scope
The LCLS will serve an international scientific community that will include Stanford students and faculty. The new office building and underground experimental halls will provide the primary space for users from industry, national laboratories, universities and foreign institutions directly associated with the LCLS experimental science program. Existing space at SLAC will house additional maintenance and linac operations personnel. It is projected that the SLAC engineering, technical, and administrative staff supporting the LCLS operation will number around 250 people by late 2008/09. The scientific user community is expected to initially comprise six scientific teams of about 40-50 people each (approx. 300 total over the year). At any given time, about 10-15% of these users would be on site.

The new office building will be energy efficient and environmentally sustainable with a design target and construction of LEED® Gold Certification. The new structure has been sited off of the PEP Ring Road and east of the SLAC central campus, and is located adjacent to the existing LCLS laboratory facilities to support current research program needs. The new two-story office building, approximately 18,000 to 22,000 sf, ties in with existing SLAC site utilities. The building height and horizontal roof elements, exterior color, and material will be consistent with current design guidelines for SLAC and supportive of efforts under way to provide a unified identity of SLAC throughout its campus. The landscape design and site planning will be consistent with SLAC campus site guidelines and will provide modest amenities for both occupants and visitors.

The LCLS project is being designed, constructed and operated in compliance with all requirements of the National Environmental Policy Act (NEPA) and its implementing regulations. Design, construction and operation activities have been evaluated in the NEPA Environmental Assessment (EA1426) for the LCLS project which resulted in a Finding of No Significant Impact (FONSI). Above ground structures have successfully been located out of the view-shed of the neighbors.

Project Data
Project Phase: Design
Architect: DES Architects
Contractor: Rudolph & Sleten
Gross Square Feet: New Construction 22,000
Department: SLAC National Accelerator Laboratory
ACCESS CONTROL ENTERPRISE SYSTEM

Background
In support of maintaining a secure campus and in response to the safety incidents at similar institutions, Stanford implemented a Security System Standards and Guidelines Program in fiscal year 2006-07 to enhance campus security, crisis, and emergency response capabilities. This program launched projects for a campus-wide mass notification system, a siren system, and a centralized, integrated Access Control Enterprise System (ACES). The multi-faceted scope of ACES is to select a security system application and platform with flexible, modular components to serve the campus; establish a security standard for new construction, renovations and retrofits of existing facilities; and implement a prototype of the new system in Residential and Dining Enterprises (R&DE) buildings.

R&DE is a member of the University’s Security System Standards and Guidelines Committee. This group convened to discuss goals, strategies, and technologies to enhance current building security systems, particularly post-911, and Virginia Tech. An analysis of entry systems determined that our current card access system, Diebold, was inadequate to provide the scale and security needed. A thorough study was conducted and a product was identified – the Lenel OnGuard application.

With the responsibility for the safety of our students as a key priority, the student residences were identified as a primary opportunity. R&DE identified the key student locations including residences (undergraduate and densely populated graduate residences) and dining locations for the project. Working with Information Technology Services (IT Services), a proposal to acquire and implement the OnGuard application in the residences was developed. This system will provide controlled access, monitor and report incidents regarding propped doors, make public alert announcements and can simultaneously lock perimeter doors in the event of an emergency.

Scope
The key student residences identified consist of approximately 175 buildings with 1,400 doors/ openings. The project selected the Stern Complex with approximately 9 buildings and 100 doors/ openings as a pilot location. The pilot was conducted in May and June of 2008, with follow-up carrying through July and August 2008.

Implementation of the system requires three main components:

- The Application: Installation of OnGuard, a robust campus-wide system including integration into existing campus systems (Registry, etc.), R&DE systems (SHARE, etc.), and campus card system (Diebold).
- The Network to support the connectivity: Secure, independent network utilizing existing cabling.
- The Construction to electrify and alarm the residence doors: Devices (card reader, localized alarm, audio alarm, mass notification link, video camera prep), perimeter door hardware, electric locking hardware, tie-ins to accessibility (ADA) doors, telephone entry system (Door King), cabling and raceways, and control panels.

The Application was installed as planned by July 1, 2008. The installation of the software itself went smoothly, as did the initial integration into campus systems. Construction components included card readers, camera prep, phone entry system tie-in, service junction box, speakers/alarms, request to exit devices, contacts, building controller, and power supplies. This project is the initial implementation of ACES on campus.

Project Data
Project Phase: Concept/Design/Construction
Department: Residential & Dining Enterprises (R&DE)
**BIOENGINEERING/CHEMICAL ENGINEERING BUILDING**

**Background**
The Bioengineering/Chemical Engineering building (BioE/ChemE) and associated connective elements is the final jewel of the Science and Engineering Quad 2 (SEQ 2) and a component of the university’s larger SEMC (Science, Engineering and Medical Campus) initiative. This building will be constructed on the northwestern portion of the new SEQ 2, directly north from the existing Y2E2 building; and directly west of the under-construction Nanoscale Center, thereby completing the new quadrangle.

BioE/ChemE will be a facility embodying interdisciplinary study through the placement of two related programs-Bioengineering and Chemical Engineering-side by side. Bioengineering’s mission is to create a fusion of engineering and the life sciences that promote scientific discovery and the development of new technologies and therapies through research and education. Chemical Engineering is focused on conceptualizing and designing processes for the production, the chemical or physical transformation of, and the transportation of materials. The building will be predominantly comprised of wet laboratory spaces designed for intensive research for each of the departments.

**Scope**
The 153,000 gsf Bioengineering/Chemical Engineering building will match the architectural character of the neighboring Y2E2, HEC, and Nano Center buildings, including limestone veneer, trellises, concrete pavers, landscaping, benches, lighting, etc. The existing Ginzton Laboratory building will be demolished to clear the site for the new BioE/ChemE building.

The new building will consist of three stories above grade and a single basement level below grade. The building will include laboratory research facilities and support spaces, faculty offices, classrooms, and conference spaces. This project includes connective elements that link the various precincts of the quadrangle to each other. The primary connective element is the arcade which links the buildings on the east/west axis along both sides of the quad. Other features include a variety of exterior landscape "rooms" with benches, shrubs, planted mounds, and trees, together defining and forming exterior gathering places.

Mass excavation for the building is anticipated to start in late 2010 and the overall project is anticipated to be complete in early 2013.

**Project Data**
Project Phase: Concept and Site
Architect: Boora
Contractor: TBD
Gross Square Feet: New Construction 153,000
School: Engineering (SOE)
EAST CAMPUS DINING COMMONS

Background
Stanford’s Housing Master Plan proposes to better serve students with an improved housing system and enhanced opportunities for Residential Education. Crothers Hall and Crothers Memorial Hall were renovated to house 376 undergraduates as well as staff, faculty, summer conferees and other guests. This project provides additional food service and residential education programming in support of the Crothers buildings and other undergraduate housing in a new dining commons on Escondido Road. In addition to high-quality nutritious meals, program space will be provided in the dining commons, supporting Residential Education in building community with their respective residents during meals that foster intellectual engagement. The new complex will also serve as a regional dining facility, offering an alternative dining location for students housed in Toyon Hall.

Scope
The project proposes to construct a 26,400 gsf two-story dining facility on the Toyon parking lot to support 410 students. The facility will feature a first floor small dining room, kitchen, regional prep stations and support areas along with a second floor servery with several adaptable “exhibition style” cooking platforms and main dining hall. The design features include cooking stations, dining/seating areas and a production and catering support kitchen. The facility will also include both formal and informal student meeting space to function as a student commons in support of the Crothers complex and other regional dormitories.

Site and Circulation Planning
- Offer limited service vehicle access from the north on Arguello Way
- Maintain access for bicycles and emergency as required by the project
- Provide convenient pedestrian paths for Crothers Hall and Toyon Hall
- Locate service/trash/generator area within a screened and landscaped buffered service area between Branner Hall and the new facility

Architecture
- Setbacks/Buildable area: minimum of 40’ setback from Toyon Hall; 60’ from existing Crothers Memo-

Project Data
Project Phase: Concept and Site
Architect: Hoover Associates
Contractor: Vance Brown Builders
Gross Square Feet: New Construction 26,400
Department: Residential & Dining Enterprises (R&DE)
CITY OF PALO ALTO RESERVOIR EASEMENT

Background
In December 2008, the Board of Trustees approved an Easement with the City of Palo Alto for consideration of a minimum of $3,000,000 for an underground municipal water storage reservoir on the site known as El Camino Park (ECP). The Board further recommended that the Vice President for Land, Buildings and Real Estate, or his designee, be authorized to execute on behalf of the Board of Trustees, once they so approve, all documents and other instruments necessary to effect the easement. On January 12, 2009, City Council approved the Agreement to Grant Easements between the City and The Board of Trustees of the Leland Stanford Junior University (“the Agreement”) for five permanent easements required to move the proposed El Camino Park Emergency Water Supply Storage Project forward. Owned by Stanford, El Camino Park is under a long-term lease to the City until 2033. The five easements, which will permit the construction, maintenance and operation in El Camino Park, are for 1) a 2.5 million gallon underground reservoir, 2) a pump station and well, 3) a pipeline connecting the reservoir to the pump station, 4) an overflow pipeline, and 5) a water supply line. The purchase price of the easement under the Agreement is $3 million, which is the appraised fair market value, determined from an appraisal completed by Hulberg and Associates. This amount was paid to Stanford on January 30, 2009.

The City of Palo Alto approached Stanford in March 2000 about building an underground reservoir with ancillary facilities at the El Camino Park. The reservoir—which would serve North Palo Alto, including the Stanford Shopping Center, Stanford Medical Center, Stanford West Apartments and Oak Creek Apartments—would meet the need of an eight-hour minimum emergency demand, as recommended by the California Department of Health Services. The 15-acre ECP was leased to the City of Palo Alto on July 1, 1915. It expires June 30, 2033. The ECP is currently being used for recreational purposes (playing fields) and a transit center.

On March 5, 2007 the Palo Alto City Council certified an EIR for numerous water service facilities within the City limits that included the recommendation of the ECP as the preferred location for the emergency water reservoir, pump station, and well. There were four sites analyzed by the EIR including three sites on Stanford land: the ECP site, Stanford Shopping Center parking lot at Sand Hill Road and El Camino Real, and the university parking lot on Quarry near Arboretum. During the EIR process, Stanford submitted a memo to the Palo Alto staff indicating a willingness to discuss further the ECP site and explaining the difficulties in using the other two proposed sites for the reservoir. The City, with input from Stanford, developed and refined their design and determined the exact location of the reservoir within the ECP land area.

Scope
The City of Palo Alto will build a below ground 2.5 million gallon emergency water reservoir, upgrade the existing Lytton Avenue pump station, add piping to connect the pump station to the water reservoir, and add piping to the storm system for the outflow of water in case of fill system failure. The location for the below ground water reservoir is under the baseball field at El Camino Park. The easement area is approximately 1.3 acres. Park and other appropriate surface uses could still occur over the reservoir.

The Board of Trustees authorized LBRE to negotiate a Purchase and Sale Agreement and Easement Agreement. Following Stanford’s approval, the City of Palo Alto staff presented for approval to the City Council the recordation of the Easement. The close of escrow for the purchase of the easement occurred before March 31, 2009.

Project Data
Project Phase: Land Use
Architect: n/a
Contractor: n/a
Gross Square Feet: n/a
Department: Land, Buildings & Real Estate (LBRE)

Reservoir - Aerial View of Reservoir Site
2009/10 – 2011/12 FORECASTED PROJECTS MAP

FORECASTED PROJECTS - MAP LEGEND
1  SOM  Jili and John Freidenrich Center for Translational Research (FCTR)
2  H&S  Cognitive and Neurobiological Imaging (CNI) Center
3  PRES/PROV  Scientific Research Computing Facility at SLAC (not shown on map)
### 2009/10 – 2011/12 FORECASTED PROJECT DESCRIPTIONS

This section provides brief descriptions of forecasted projects based on the 2009/10 Budget Plan.

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The Jill and John Freidenrich Center for Translational Research
School: Medicine (SOM)
Estimated Completion Date: 2012

The School of Medicine proposes to construct the Jill and John Freidenrich Center for Translational Research (FCTR) on the existing building site at 800 Welch Road. This new facility will revolutionize Clinical and Translational Research (CTR) at Stanford by providing a home to create and catalyze interactions among those involved in clinical and translational research at Stanford University. The FCTR will provide a focal point for CTR at Stanford by bringing together the two major NIH (National Institutes of Health)-funded clinical and translational biomedical research units in the School of Medicine into a single supportive environment. The FCTR will house the NCI (National Cancer Institute)-supported Stanford Cancer Center and the NCRR (National Center for Research Resources)-supported Center for Clinical and Translational Research and Education, called Spectrum. The FCTR will facilitate CTR at Stanford in several key ways:

- Currently, CTR research staff (including study coordinators, research nurses, biostatisticians, dietitians, lab technicians, and budget and regulatory specialists) are dispersed throughout the university, which makes it difficult to maintain effective clinical research teams. The FCTR building will assemble and organize resources and personnel from across the university to increase efficiency, catalyze innovation, and promote interdisciplinary interactions among investigators and research staff involved in CTR.

- Additionally, much of Stanford’s clinical research is currently performed in outdated and inaccessible hospital space. The FCTR building will provide inviting and efficient space for the conduct of CTR and will therefore improve the comfort and safety of research subjects and staff. This is particularly crucial for the increasing number of pediatric subjects involved in CTR at Stanford.

- Finally, the project will improve the sustainability and efficiency of CTR at Stanford by using a “green” and sustainable design approach to construct an environmentally friendly facility.

FCTR - “Under One Roof” Diagram
FCTR - Sections
Cognitive and Neurobiological Imaging (CNI) Center

School: Humanities and Sciences (H&S)

Estimated Completion Date: 2010

The School of Humanities and Sciences is developing plans for a new Cognitive and Neurobiological Imaging (CNI) Center for the Department of Psychology, located in Jordan Hall. This interior renovation project involves extensive architectural, structural and M/E/P modifications to create an MRI (magnetic resonance imaging) suite in the basement, and an MEG (magnetoencephalography) imaging facility on the 4th floor. The goal of this project is to create a unique, multi-disciplinary imaging center that will bring together scientists from a multiplicity of backgrounds to develop a comprehensive understanding of human thought and emotion.

Scientific Computing Research Facility at SLAC

Department: Dean of Research (DOR) and Information Technology Services (ITS)

Estimated Completion Date: 2012

Information Technology Services (ITS) and SLAC Computing Centers are both operating at the upper limits of their capacity and are unable to provide additional computing needs required by the growth of research computing programs on both campuses. To meet the rising demand of computing requirements, DOR, in conjunction with ITS, has proposed a new, modular, scalable, energy-efficient and high density scientific research computing facility that will support the research computing requirements of both SLAC and Main Campus-based research programs.
2008/09 CAPITAL PROGRAM DESCRIPTIONS

This section provides brief descriptions of all LBRE capital programs.

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*Fountain at Stanford Porter Drive - LBRE Offices*
2008/09 Capital Program Descriptions

Investment in Plant Program
This program represents the maintenance component of the Annual Investment in Plant Assets and includes deferred and planned maintenance for building subsystems such as roofing, elevators, HVAC, electrical, and plumbing. The Investment in Plant Program managed by LB includes both non-formula and administrative buildings and roads.

General Use Permit (GUP) Mitigation
The three-year plan addresses capital expenditures for GUP mitigation. These planned expenditures are required to fulfill the Conditions of Approval of the General Use Permit and Community Plan approved by Santa Clara County in December 2000. Ongoing expenditures have included the Trails Easements, Water and Habitat Conservation programs, and Transportation Demand Management programs. Funding for these expenditures will continue to be generated by GUP Entitlement Fees. These fees are levied on capital projects that increase the school/department's current core campus space allocation.

Capital Utilities Program (CUP)
CUP consists of projects that focus on the maintenance and improvement of Stanford's energy and water infrastructure in response to campus growth. The projects fall into four categories: 1) System expansion, 2) System replacement, 3) Controls, and 4) Regulatory. The program ensures the high reliability of the utilities systems (including electrical, steam, chilled water and wastewater) and their compliance with federal and state-mandated regulations.

Whole Building Energy Retrofit Program
The Whole Building Energy Retrofit Program is the implementation phase of the "12-Building Energy Study" completed in 2004. The Study found that energy use in Stanford’s largest energy consuming buildings could be reduced by almost one-third. To understand the scale, these same 12 buildings use over 15 million dollars in steam, chilled water and electricity annually and represent fully one-third of campus energy use. If all recommendations in the study were implemented, over $4 million dollars per year in energy cost would be avoided. The simple payback for these recommendations averaged less than four years.
Stanford Infrastructure Program (SIP)

SIP consists of campus planning and transportation projects and programs for the improvement and general support of the university’s academic community, hospitals and physical plant. These projects include the construction of parking, bicycle and pedestrian paths, lighting and outdoor art, and campus transit, roads, and parking lot infrastructure, and other site improvements.

Storm Drains

After sustaining significant damage and interruptions in operations during the February 1998 storms, Stanford recognized the need to engineer and implement improvements to the campus storm drainage system. In order to provide increased flood protection and meet the GUP 2000 Conditions of Approval, the system needed to move beyond conventional engineering standards by engineering and implementing improvements such as surface diversions and runoff detention facilities that would handle infrequent but larger storm runoff flows. The program is currently completing these drainage improvement measures, and continues to focus on the engineering and implementation of recently adopted storm water quality regulations and on correcting drainage system deficiencies.
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STANFORD FACTS

2009

Stanford – Historical Facts
Stanford University was founded by Leland and Jane Stanford in 1885 and opened its doors on October 1, 1891. The first cornerstone in the Main Quad was placed on May 14, 1887.

Stanford Campus
Stanford has more than 49 miles of roads, a 49-megawatt power plant, two separate water systems, three dams and lakes, 88 miles of water mains, a central heating and cooling plant, a high-voltage distribution system and a post office. Stanford provides or contracts for its own fire, police and other services.

Stanford Land
8,180 acres
- Main Campus (including Medical Center, Golf Course, Foothills to ridge): 2,616 acres
- Jasper Ridge: 1,186 acres
- Stanford Research Park: 701 acres
- Stanford Shopping Center: 69 acres
- Sand Hill Road: 62 acres
- SLAC: 424 acres
- Other Managed Lands (including agricultural lands): 3,123

Stanford Buildings
14.2 million gsf
700 major buildings

Trees
43,000 campus trees; Coast Live Oak most common

Number of Students, Faculty and Staff
- Total undergraduates: 6,812
- Total graduates: 8,328
- Total faculty: 1,874
- 424 appointed to endowed chairs
- 27 winners of the Nobel Prize since the founding of the University
- Total staff: 10,345 including:
  - Managerial and professional: 5,127
  - Clerical and technical: 3,042
  - Service and maintenance: 756
- Stanford Linear Accelerator Center: 1,420

Housing
Stanford is a residential teaching and research university. Nearly 95% of undergraduates and about 52% of graduate students live in University housing. Undergraduate campus housing is guaranteed for four years for entering freshmen. Housing for single graduate students consists of University-owned apartments, residences, and spaces in cooperative houses.

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www.stanford.edu

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