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SJSU

FACILITIES DEVELOPMENT PLAN

October 2017

ACKNOWLEDGMENTS

The 2017 Facilities Development Plan was prepared under the direction of Charles Faas, Vice President of Administration and Finance/CFO, and overseen by Ashraf Fouad, Senior Director, Planning Design & Construction, and Daniel No, Associate Director, Planning Design & Construction. It was produced by the Field Paoli Consulting Team and included multiple reviews by the Facility Development Plan Advisory Committee which included faculty and administration representatives.

The core planning group listed below benefited greatly from the time and information contributed by many stakeholders working for and with the University, including those listed in the additional Acknowledgments on Page 80 of this report.

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ENTRANCE TO TOWER HALL, SAN JOSÉ STATE UNIVERSITY

INTRODUCTION

San José State University (SJSU) is one of the 23 campuses in the current California State University system. It is the oldest state institution for higher education in California, founded in 1857 as part of the San Francisco School System. An act of the legislature moved the campus to San José in 1871. Fifty years later, in 1921, it became San José State Teachers College, with authorization to grant bachelor's degrees. After several additional name changes, the present name, San José State University, was adopted through legislation in 1974.

Today, the University's main campus occupies 88.5 acres on 19 city blocks, located directly east of downtown San José and one block south of City Hall. The only public university in Silicon Valley, it is strategically positioned for faculty and students to benefit from the technology, engineering, art and science centers in San José and the surrounding technology community. The university motto is "Powering Silicon Valley."

In a temperate climate zone, with a history of well-managed infrastructure, San José State University is also well situated to become both a model and a leader for sustainable growth, and for education in technology and sciences to address energy use, resource management and climate change.

[Note: The South Campus, an additional 62-acre site approximately 1.5 miles south of the main campus, is planned predominantly for athletic use, as outlined in a separate master plan completed in April 2014. It is not included in this planning report which covers the Main Campus.]

PURPOSE

The purpose of this 2017 Facilities Development Plan is to set the groundwork for a new SJSU Strategic Plan and future new Master Plan to follow.

The goals are five-fold:

1. To review the 2001 University Master Plan and provide campus leadership with tools to address existing conditions and prepare for future master planning
2. To provide detailed academic and enrollment assessments to assist the University in making the best use of land and resources and preparing for growth
3. To describe development opportunities for new and renovated facilities to meet increasing student enrollment, changing learning environments and changing pedagogy
4. To propose strategies that can strengthen the overall identity and function of the campus in support of student and faculty success
5. To increase visibility and strengthen physical connections to the City of San José

PLANNING HISTORY

The history and campus planning of San José State University have largely centered around Tower Hall which sits at the heart of the original campus now known as the Northwest Quadrant. Built in 1910, Tower Hall is the oldest structure on campus; most recently it has housed administrative offices, including the president's office and a large auditorium. As the campus has expanded, adding three more quadrants, the University has grown to include eight colleges, a residential district with a current 4,000+ bed capacity, and a complement of student activity centers and recreational facilities including the 8-story Dr. Martin Luther King Jr. Library opened in 2003, the expanded Student Union reopened in 2016, and a new Recreation and Aquatics Center scheduled to open in 2019.

PLANNING FOR THE FUTURE

As of September 2016, SJSU's total enrollment headcount was approximately 32,000 students, with approximately 2,000 faculty members and an additional 1300 administrators and staff.

The challenge going forward is to identify potential campus sites for continued growth, while also renovating existing buildings to improve efficiency and capacity. Campus leadership recognizes the need to increase academic, administrative, student activity and residential spaces to support both student success and a university community with increasing enrollment. To achieve these goals, physical planning must include administrative effectiveness, and faculty support and success -- as well as student success -- as facilities are upgraded or replaced. Campus presence and open spaces must also be enhanced.

SCOPE OF WORK

The 2017 Facilities Development Plan began with a detailed review of the existing campus context including surrounding land use, campus frontages and access, circulation and open space, and existing building uses and capacity.

An in-depth analysis of recent enrollment trends and academic space utilization followed [see Chapter 8]. This information was then used to assess academic space allocations required to support enrollment growth through the fulfillment of the current Master Plan ceiling, while also positioning the University for future development.

Based on projected academic space needs, planning strategies are proposed to strengthen the campus fabric:

1. To improve existing facility performance and add new facilities to meet SJSU enrollment targets, support student success, and meet faculty professional development needs
2. To strengthen the overall identity and functional use of the campus, including circulation and landscape, security, access and wayfinding
3. To expand connections to the surrounding city and community

Six priority development sites for new facilities are identified. The illustrative site plan on the facing page shows conceptual massing to provide a baseline estimate of added capacity that could support future campus growth. The building volumes do not illustrate architectural character nor do they reflect a commitment to specific projects.

Similarly, suggested building programs and phasing strategies in this report describe how new facilities on these sites might support a diverse range of academic needs while existing programs and support services remain in use during construction. These examples are not a commitment to specific building programs; rather, they illustrate the type of coordinated and phased moves that will be required to meet enrollment targets, educational needs and faculty development as SJSU expands its academic mission.

PLANNING PROCESS

The planning process was designed with an approximate nine-month timeline. A Facility Development Plan Advisory Committee composed of faculty and administration representatives met monthly with the Planning Team during the initial fact-finding period.

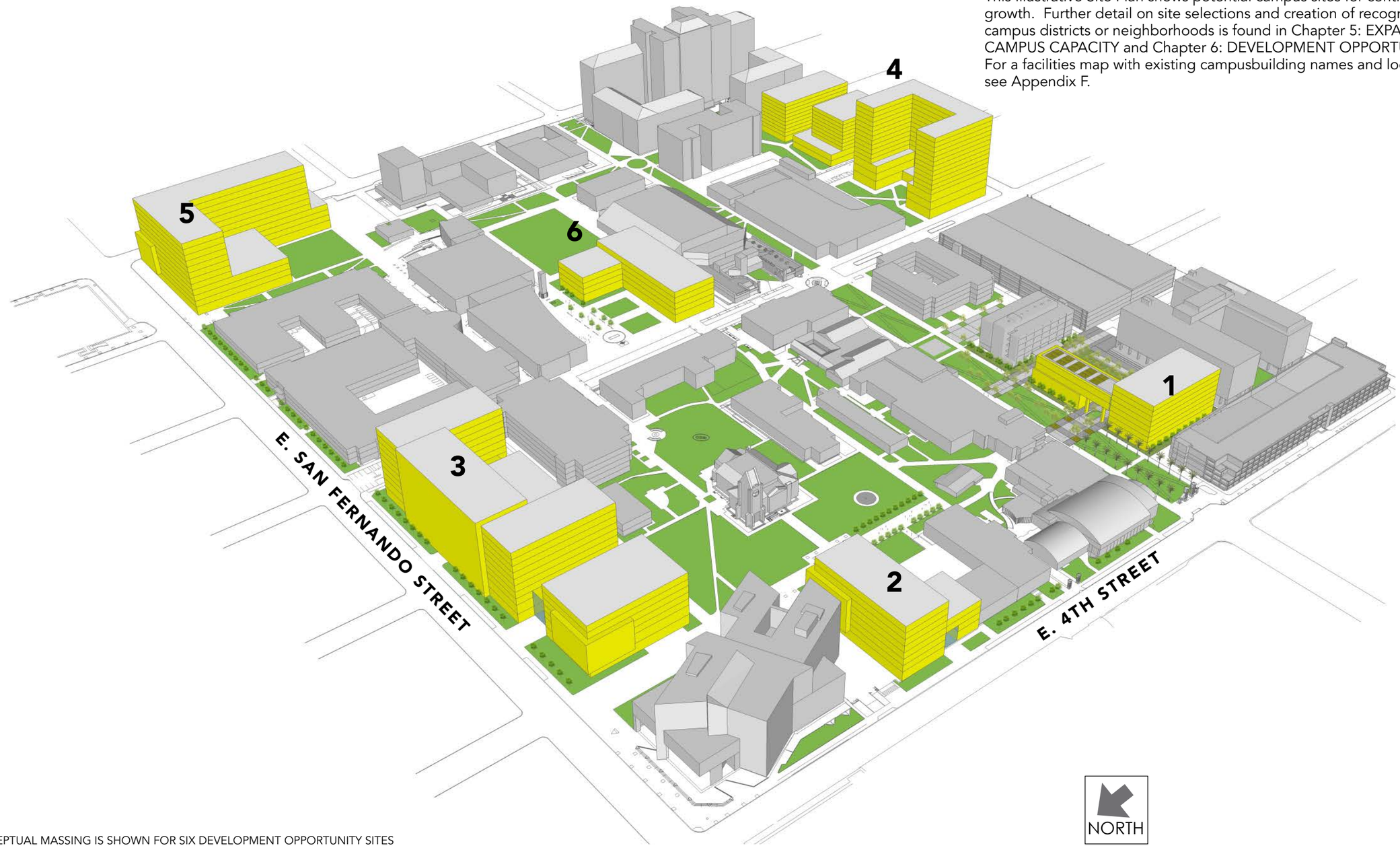
A comprehensive interview phase spanned over the first four months. The planning team developed a detailed Stakeholder Questionnaire with Planning, Design and Construction to document existing academic programs and needs, facility conditions, and campus administrative and operational services. Interviews included Deans, Associate Deans and faculty from each of the eight colleges; Library Administration; Academic Affairs; Division of Student Affairs; Auxiliaries including the Student Union, Associated Students, Housing and Spartan Shops [Food Service]; CommUniverCity; Facilities Development and Operations, including Planning Design & Construction, Energy, Utilities and Sustainability, and Environmental Health & Safety; and Transportation, Landscape, University Police, Accessibile Education Center, Environmental Health & Safety, and Information Technology Services.

As part of our data collection, the planning team also met with Academic Planning, Academic Scheduling, the Academic Space Advisory Committee and University Advancement. At each milestone, we met and discussed findings, campus goals and strategies with Charles Faas, Vice President for Administration and Finance.

During the documentation phase, a draft report was shared with President Mary Papazian, Jaye Bailey, Vice President and Chief of Staff, and Charles Faas. A final meeting was held with the Advisory Committee prior to the assembly of the completed 2017 Facilities Development Plan.

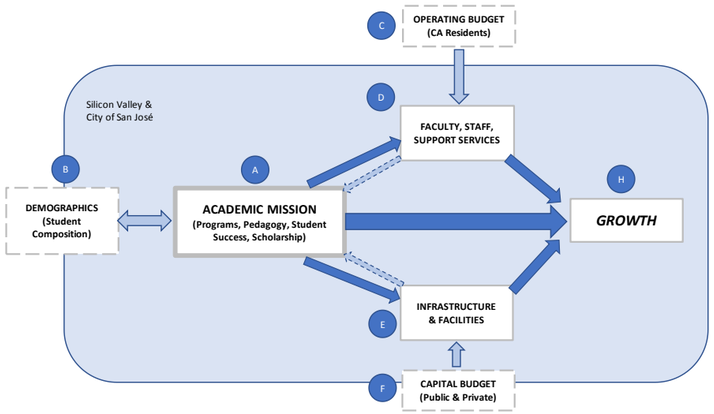
2017 FACILITIES DEVELOPMENT PLAN

This Illustrative Site Plan shows potential campus sites for continued growth. Further detail on site selections and creation of recognizable campus districts or neighborhoods is found in Chapter 5: EXPANDING CAMPUS CAPACITY and Chapter 6: DEVELOPMENT OPPORTUNITIES. For a facilities map with existing campusbuilding names and locations see Appendix F.



CONCEPTUAL MASSING IS SHOWN FOR SIX DEVELOPMENT OPPORTUNITY SITES

ACADEMIC SPACE NEEDS ASSESSMENT -- OVERVIEW



ELEMENTS OF A GROWTH PLAN

Projected Enrollment, Staffing & Academic Space Needs

San José State University's enrollment, faculty, staff and facilities will grow by over 14 percent to reach its current Master Plan ceiling. At an annual growth rate of 0.75 percent (the current CSU rate), the University would reach its enrollment ceiling in 2031. At a faster rate of 1.25 percent annually, it would reach the Master Plan ceiling in the year 2025. This latter rate – 1.25 percent – would require a growth plan to enable the University to provide for enrollment growth and the supporting faculty, staff, and facilities in nine years. This would also allow time for San José State University to initiate a new Master Plan study several years in advance of the need to expand the enrollment ceiling.

Most importantly, growth in state-supported instruction depends first on the California budget for higher education and then on the share of annual growth funding that SJSU can negotiate with the CSU. San José State University can develop an argument based on academic quality and student success to justify receiving a larger share of the CSU annual growth funding. SJSU needs funding for about an additional 2,350 California resident Full-Time Equivalent Students (CYFTES) to reach its current Master Plan ceiling. Increasing out-of-state students as well would increase the total Fall student headcount by over 4,600.

New facilities and renovations would need to be funded and constructed at a rate that would support desired enrollment growth. The University will need to increase its physical capacity to serve nearly 3,000 additional FTES after the new Interdisciplinary Science Building is completed to reach the current Master Plan capacity. This would require a minimum of about 200,000 net new assignable square feet (ASF) to meet instructional needs – particularly, lecture and support space. In addition, the University would need to construct about 550,000 net new ASF to completely eliminate the current and future space deficit in support and research facilities.

To reach its current Master Plan ceiling SJSU will need to increase tenured and tenure-track faculty by at least 92 positions. SJSU would also need to hire over 200 additional staff to support enrollment growth.

B. Student Recruitment	2016	Master Plan Ceiling	Increase
Fall Student Headcount (regular) [1]	32,156	36,780	4,624
Special Session CYFTES[2]	2,164	4,387	2,223

C. Operating Budget	2016	Master Plan Ceiling	Increase
CA Resident CYFTES (CSU target)	22,507	24,859	2,352
Non-CA Resident CYFTES	2,801	4,387	1,586

D. Faculty & Staff	2016	Master Plan Ceiling	Increase
Instructional Tenure Track, Tenured Faculty	639	731	92
Staff and management	1,421	1,625	204

E. Educational & Support Facilities	2016	Master Plan Ceiling	Increase
Lecture ASF	132,049	144,150	12,101
Other ASF[3]	1,605,039	2,430,300	
Interdisciplinary Science Building[4]	*71,128*		*754,133*
Net AYFTES taught (estimate)	21,857	*25,000*	3,143
Built Capacity (net AY FTES)	21,809	25,000	
With Interdisciplinary Science Bldg.	*22,104*		*2,896*

TABLE 1

Elements of a Growth Plan

The diagram to the top left illustrates how facilities development fits among and relies on all the elements involved in preparing a plan for San José State University to grow to and beyond the University's current Master Plan ceiling of 25,000 net FTES. The following discussion describes each element and Table 1 on the left shows data for 2016, at Master Plan buildout, and the difference. ***The baseline projections to reach the current Master Plan ceiling assume no change in present patterns for California resident enrollment, but include an increase of non-resident/international and Special Session students to 15 percent each, per stated SJSU goals.***

A. Academic Programs
   1. Expand, enhance and/or create new high quality academic programs that
   2. Motivate faculty interest,
   3. Meet regional, state or national need, and
   4. Have the capacity for students to complete their degrees on time.

B. Student Recruitment
   1. Attract additional well-qualified students from new markets.
   2. Increase out-of-state/international students and Special Session, each to 15 percent of total.

C. Operating Budget
   1. Obtain funding from CSU for additional California resident students and revenues from additional out-of-state and/or international students.

D. Faculty and Staff
   1. Recruit and retain additional tenure-track faculty.
   2. Recruit additional management and support staff.

E. Educational and Support Facilities
   1. Construct or renovate classrooms to accommodate 21st century teaching and learning in a range of sizes, particularly to meet current and future demand for smaller classrooms.

[1] The projected master plan ceiling headcount is based on the current average student unit load.
[2] Regular Fall headcount includes CA residents and non-CA residents, but not Special Session because it is offered through Self-Support and not included in State funding formulas. Appendix C includes definitions of the various measures of enrollment and space.
[3] Other ASF does not include facilities for Housing, ASI, Special Session or other auxiliaries because they are funded separately, so their needs must be added to the ASF requirements listed here.
[4] Square footages for a new Interdisciplinary Science Building are based on a preliminary program.

2. Construct or renovate additional space to meet direct instruction and support space needs, including space for recreation and other student life activities.
3. Add student housing to meet University-sponsored housing goal with students living on or near campus (a demonstrated factor in student success).[5]
4. Make housing available for faculty and staff to enhance retention.

F. Capital Budget and Phasing
1. Prioritize renovation and construction of educational facilities
2. For each building project, fund a multidisciplinary programming study to address life-cycle, energy use, utility infrastructure, accessibility, and flexible space allocation to ensure long lasting use
3. Continue to pursue public and private funding for capital projects
4. Consider offsite opportunities for faculty housing, student housing, academic facilities

Patterns and Trends Affecting Instructional Space Needs Over Time

- Since the 2001 Master Plan, college enrollments have changed significantly, resulting in different course requirements.
- Curriculum and pedagogy differ across colleges, so when enrollments shift teaching needs change significantly.
- Patterns are most apparent at the lower division level because these students take courses in colleges other than their major.
- Over the years scheduling practices, room assignments, and space utilization have shifted so that there is a need to reconcile space designations.
- Space assignments typically lag changing enrollments, resulting in improvising and contingency planning to match space with teaching needs.

Academic Space Needs by Master Plan Buildout

Table 2 shows that at Master Plan capacity there would be serious deficits in lecture, instructional support, and research space under baseline assumptions. Analysis has indicated that there is currently a discrepancy between lecture classroom sizes and enrollments as taught, so, in addition to increasing lecture space the University needs to realign existing space to fit teaching needs. In contrast, based on present teaching patterns, there would continue to be a surplus of lab space. The Faculty Office "surplus" reflects space in older buildings that were constructed with two-person offices that no longer meet CSU faculty office standards. The assignable square feet shown in the table provide a general estimate of how much space CSU calculates the University should have available to support instruction in different disciplines. Clearly, the design, equipment needs, seating configuration, safety considerations, location and scheduling are important practical determinants of lab and classroom capacity.

College	Lecture ASF[7]	Lab ASF[8]	Support ASF[9]	Graduate Research ASF	Faculty Office ASF
Applied Sciences & Arts		6,505	169,254	37,028	34,245
Business		90	5,849	5,169	15,384
Education		1,091	5,717	15,207	10,325
Engineering		163,587	277,866	502,789	24,886
Humanities & the Arts		88,527	62,760	34,850	51,291
Science		70,532	40,739	21,390	37,340
Social Sciences		4,498	9,632	11,702	21,011
Other			17,386		
Future Totals 'Required' per CSU	144,150	334,830	589,203	628,135	194,481
Existing (2016-17)	132,049	394,102	250,049	76,952	215,642
Surplus (Deficit)	(12,101)	59,272	(339,154)	(551,183)	21,171
New Interdisciplinary Science Building		*26,778*	*4,190*	*31,210*	*4,510*
Surplus (Deficit) with new Science Building (2020-21)	*(12,101)*	*86,050*	*(334,964)*	*(519,973)*	*25,681*

	Lecture Seats	Lab Stations
Estimated Future Total Seats or Stations 'Required'	9,610	4,477
Existing (2016-17)	8,162	5,746
Surplus (Deficit) *without new science building*	(1,448)	1,269

TABLE 2: Future Assignable Square Feet 'Required' by Projected Baseline Master Plan Enrollments on Campus (for Selected Instructionally-Related Functions)[6]

[5] Minimum future student housing demand is based on a 13 percent capture rate from the Housing Demand Study Report prepared for San José State by Brailsford and Dunlavey in 2014.
[6] Required space is calculated based on current instructional patterns, extended to full Master Plan enrollment of 25,000 net FTES.
[7] As lecture space is not assigned by discipline, this table only shows total ASF and seats.
[8] The CSU standards vary by discipline for lab, studio, and graduate research space.
[9] The CSU uses the term "instructional activity" to cover instructional support space, including self-instruction computer labs, equipment areas, galleries, auditoria, practice rooms, indoor physical education facilities, locker rooms, and student lounges. Standards vary by discipline.

2. EXISTING CONDITIONS

PREVIOUS CAMPUS PLANNING

The specific mandate for the 2017 Facilities Development Plan is to review the 2001 Master Plan which is summarized below. A number of other campus plans, assessments and visions prepared over the past two decades were also reviewed for this plan. See the Reference Materials for a full list of sources.

SJSU 2001 Master Plan Summary

Increasing Enrollment: The 2001 Master Plan was written at a time when high school graduation rates were increasing and expected to peak in 2008-2009. Anticipating the need to educate more students, the California State University system then mandated an increase in SJSU enrollment to 25,000 full time equivalent students, a gain of almost 30%.

Sixteen years later, the University is still growing towards its current Master Plan ceiling and also anticipating future growth in response to several factors: a commitment to helping first year students graduate in less time; an increase in graduate students prepared to do independent research; an ability for SJSU graduates to find employment in the rising and expanding technology, engineering and health care industries immediately surrounding the campus; and a desire to provide student services, including on-campus housing, advising, recreation, and health services that will support student success.

Funding Sources: Funding for capital projects was a concern in the 2001 Master Plan and continues to be a major concern going forward. In addition to specific facility upgrades and replacements, the campus would benefit from a major utility network overhaul and a targeted study and implementation of accessibility improvements. The University has established many partnerships with both public and private entities over the past two decades and continues to partner with the City of San José and industry leaders. New capital projects may also provide opportunities for city and private donor participation.

Increasing Capacity: To add capacity, the 2001 Master Plan advocated increased density — building up. This remains a critical recommendation for all new facilities, in addition to strategic renovations of existing buildings. Corresponding energy-efficient design and sustainable practices for building use will be increasingly mandated and regulated over the coming decade.

FIRST BUILDING AT SAN JOSÉ SITE FOR THE NORMAL SCHOOL COMPLETED IN 1872

In comparison with the 2001 Master Plan, the 2017 Campus Planning Goals show an added emphasis on sustainability and University presence.

2001 MASTER PLAN GOALS

1. Provide teaching and research space to meet the University Mission
2. Preserve the existing balance of open space
3. Maintain the campus character
4. Blend with the surrounding community and create linkages with the City
5. Provide adequate parking

2017 CAMPUS PLANNING GOALS

1. Provide teaching and research space to meet University Mission's academic needs while being environmentally responsible
2. Replenish and improve use of existing open spaces
3. Define campus character
4. Create a campus that opens to the City while defining a recognizable University realm with Spartan pride
5. Advocate for transit systems to serve the University

HISTORIC CAMPUS GROWTH

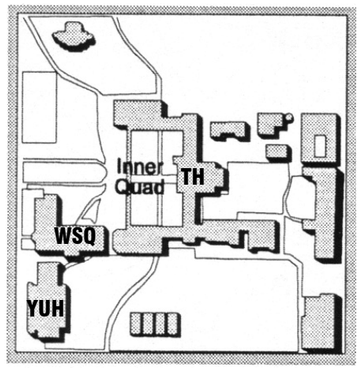
In 1871, the State Legislature granted California State Normal School the right to occupy permanently Washington Square Park at 4th and San Carlos in San José. These grounds define the NW quadrant of SJSU today. In 1910, when Tower Hall was built, it was still part of the Normal School campus and replaced two previous campus buildings, one destroyed by fire, and one damaged by an earthquake and demolished. Flanking buildings, a library and a health building, were eventually added, one to either side, and connected by arcades to create a formal west-facing quad. It was not until 1974, 64 years and several name changes later, that the school officially became known as San José State University.

Site plans reprinted from the 2001 Master Plan show the evolution of the growing campus.

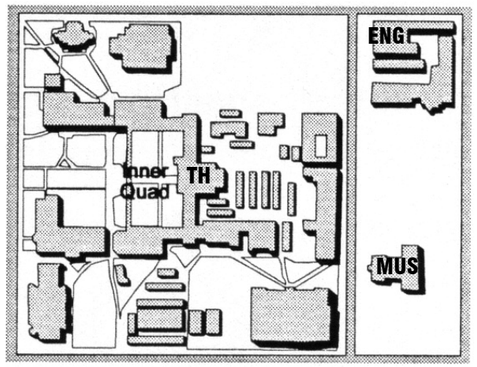
- In addition to the Tower Hall complex [TH], the 1944 plan shows both Uchida Hall [YUH] and Washington Square Hall [WSQ] which were constructed in the 1930s.
- In the mid-1950s, more buildings were constructed on the original site and the campus also expanded east to 8th Street where the Music Building [MUS] and original Engineering Building [ENG] were added.
- A decade later, the University had undergone enormous growth, expanding further east and south to occupy its current footprint of 18 city blocks. As the 1966-1967 plan shows, several earlier structures had been demolished, including the Health and Library buildings flanking Tower Hall, which opened up most of the Tower Lawn area as it appears today.
- From 1970 on, building demolitions, renovations and new construction have continued to modernize facilities and increase academic capacity. The North Parking Garage, not shown, was completed in 1970, and occupies the 19th campus block at the northwest corner of E San Fernando and 10th Streets.
- The early 1990s plan includes high-rise structures added between 1967-1991, including Duncan Hall [DH], The Business Tower [BT], and Joe West Hall [JWH], a residential building in the southeast quadrant. This site plan also shows 1980s construction including Clark Library (now Clarke Hall) [CL], the Event Center [EC], and the West Parking Garage.

In the 2000s, the campus continues to evolve. The King Library, the Student Union expansion and new Campus Village residential halls in the SE quadrant are major new facilities supporting the campus community.

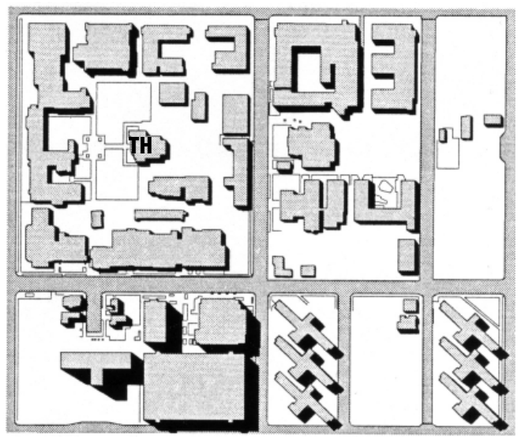
1944



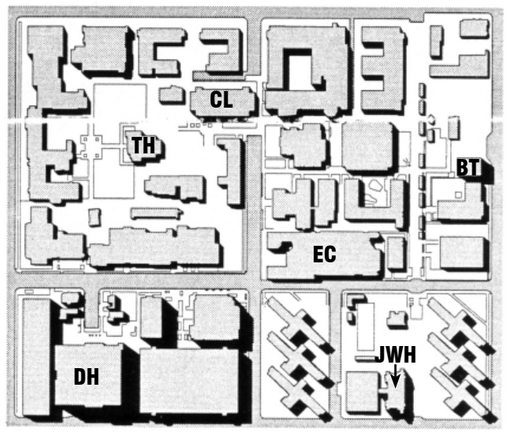
1954-1955



1966-1967



1992-1994



AREA LAND USE

The City of San José is the third largest city in California. As part of Silicon Valley, it continues to undergo exponential growth related to expanding industries and new startups in the fields of technology, health, business and engineering, among others.

The city land use map for the area surrounding the campus shows the expansion of downtown and increasing density along the west and northwest campus boundaries. Residential blocks along the east and south sides are beginning to show a change in scale with some larger residential footprints.

As density increases in both the residential and commercial sectors of the city, the University is also faced with the need to increase density effectively, to keep pace with academic and research opportunities for its student and faculty populations.

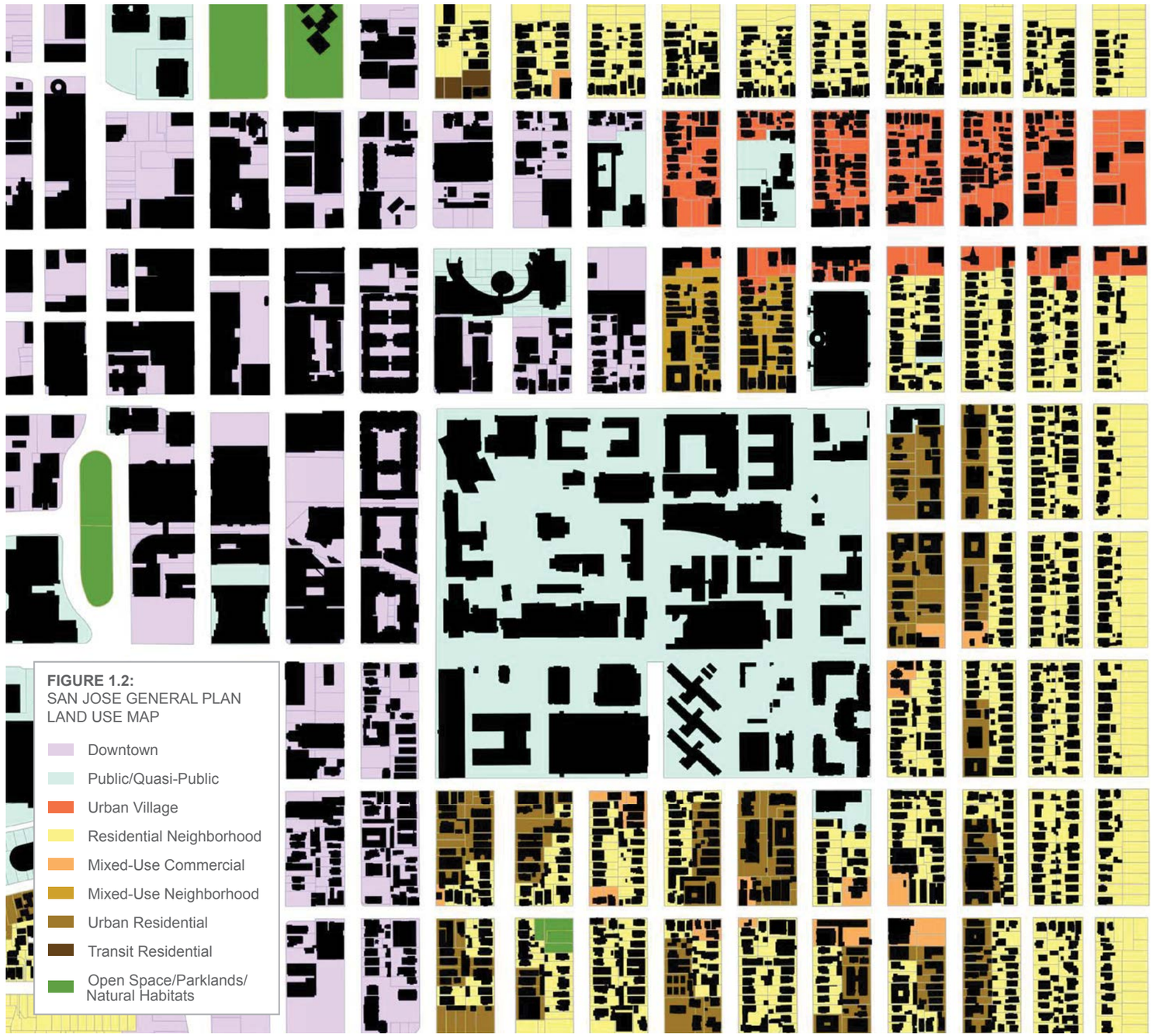
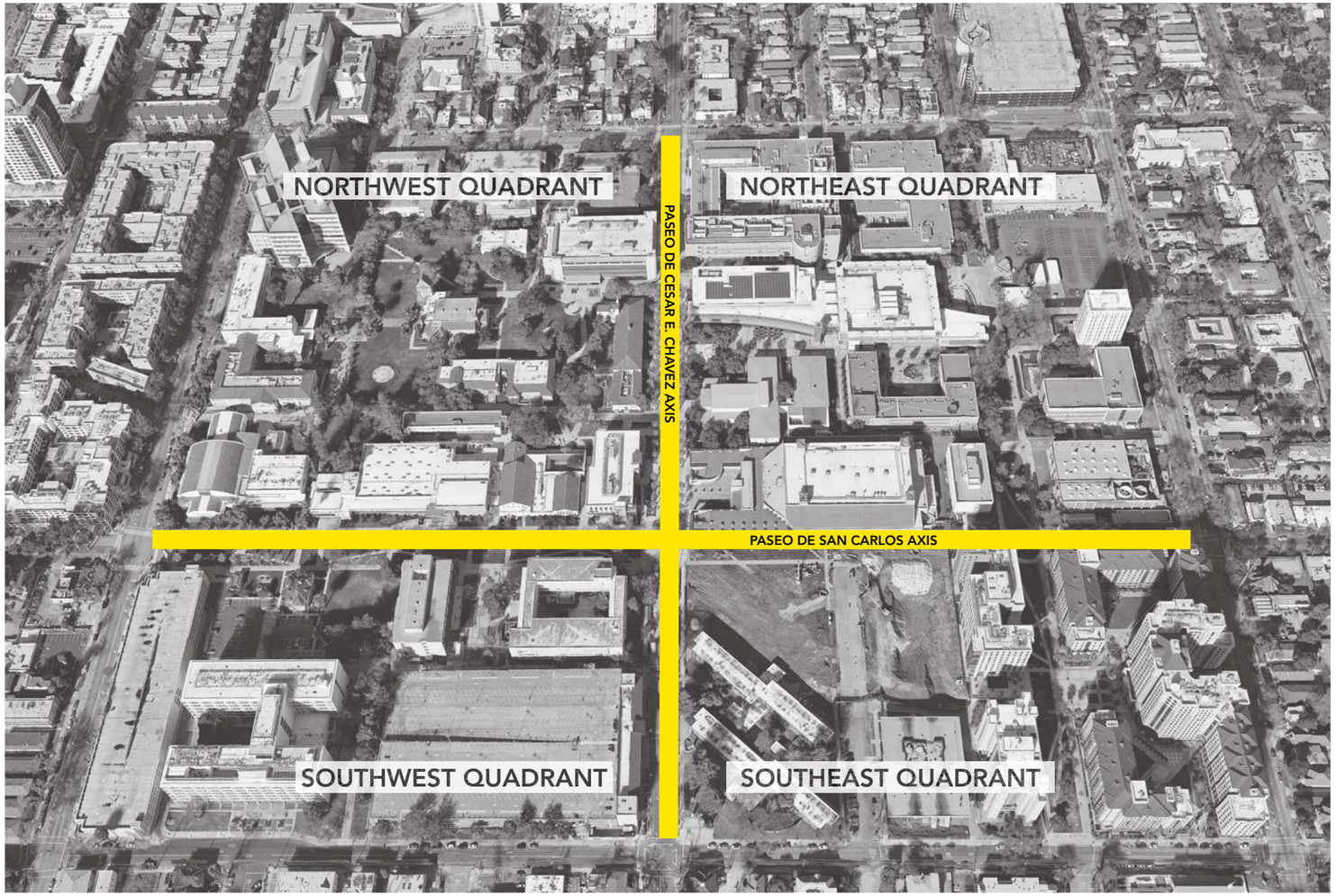


FIGURE 1.2:
SAN JOSE GENERAL PLAN
LAND USE MAP



PASEO DE CESAR E. CHAVEZ, WHICH FOLLOWS THE CITY STREET GRID FOR NORTH-SOUTH 7TH STREET, AND PASEO DE SAN CARLOS, WHICH ALIGNS WITH EAST-WEST SAN CARLOS STREET, MAKE THE CAMPUS DIVISION INTO FOUR QUADRANTS HIGHLY VISIBLE ON MAPS AND IN AERIAL VIEWS

CAMPUS QUADRANTS

The division of the campus into four quadrants resulted from the incremental acquisition of adjacent city blocks over time. The northern quadrants are 6 blocks each; the southern two are comprised of 3 blocks each. A single block outside the main campus perimeter is occupied by the North Parking Garage added in the 1970s.

The distinct character of each quadrant is partially defined by its history and current use. The original NW quadrant is still recognizable as the historic district, with Tower Hall as the centerpiece, and three other remaining academic buildings constructed between 1910 and 1930. Building uses, including the King Library, are predominantly academic.

The NE quadrant includes the first expansion of the original campus and houses academic buildings from the 1950s through the 1970s. With a major expansion and renovation to the Student Union, it is now defined as a student life district as well as the hub for the Engineering, Arts and Business Colleges. Along 10th Street, the east boundary, it also includes Facility Development and Operations, the Corporation Yard, and the Central Plant.

The SW quadrant, with three academic buildings from the 1960s is the center for the majority of science and education programs. The west and south parking garages occupy a large footprint in this sector.

The SE quadrant is the residential district characterized by a number of high-rise residential halls and associated dining services and recreational programs. This area continues to renovate, expand and improve student services. The latest housing addition is the 10-story CV-2 residence hall opened in 2016, located just east of the construction site for the new Spartan Recreation and Aquatic Center opening in 2019.

TRANSIT & VEHICULAR ACCESS

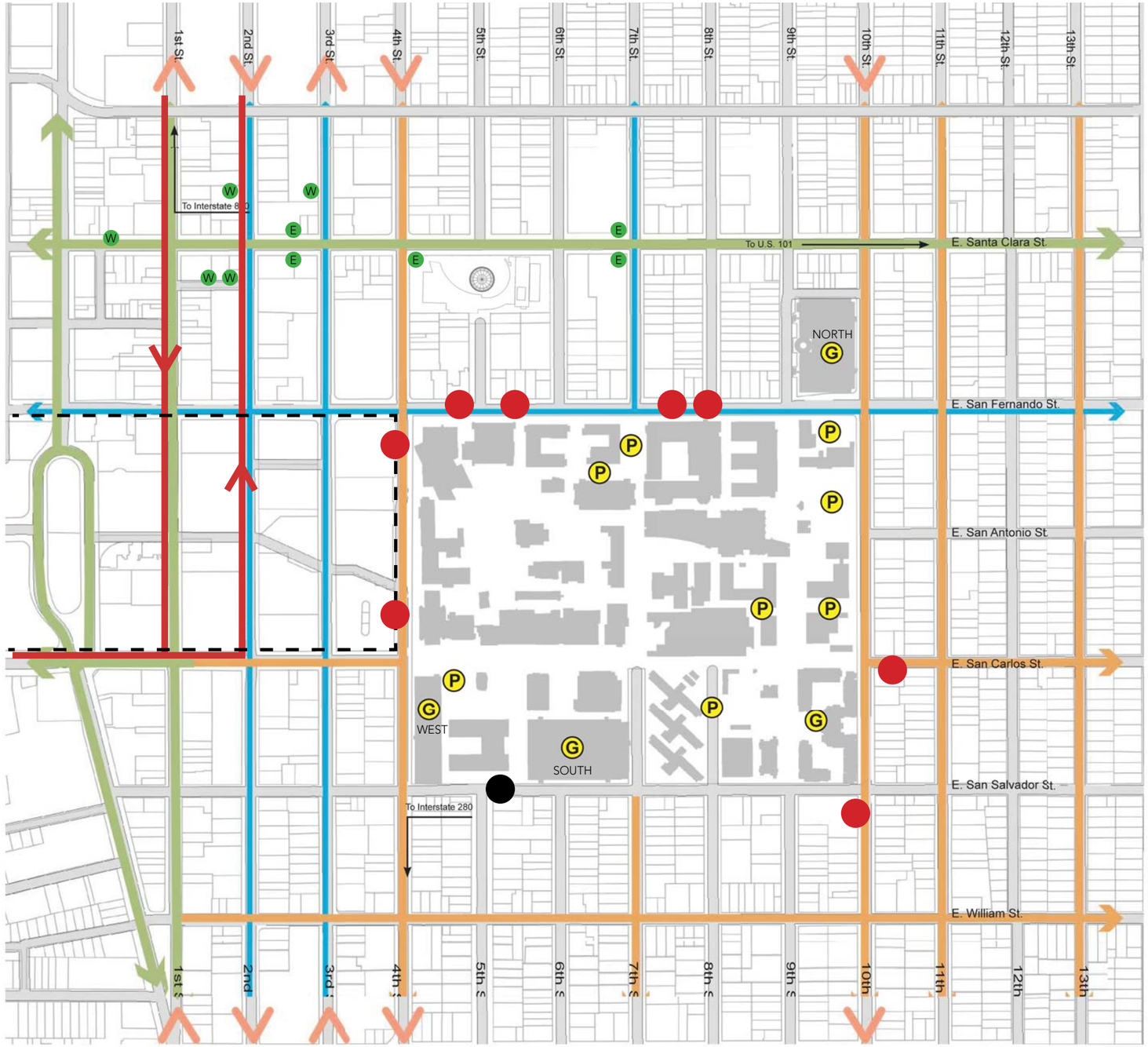
The SJSU campus is served by a network of "minor arterials"-- one-way streets that channel traffic through adjacent residential neighborhoods. Several "major collector" streets gather local traffic and connect to the "main arterials" which lead to and from nearby freeways -- US 101, I-880 and I-280.

A network of Valley Transit Authority (VTA) busses and the campus shuttle system also serve the campus. Currently, the nearest BART station is in Fremont. Two downtown San José station locations are under consideration along Santa Clara Street; scheduled to open in 2026, either one will be within walking distance of campus.

Day parking on campus is provided in three shared parking garages with a total capacity of approximately 4,900 vehicles, including 61 accessible spaces and ~740 spaces designated for employee use. The campus currently has a limited amount of surface parking for ~330 cars; these spaces provide accessible parking, additional employee parking, and limited parking for building maintenance and construction.

On-campus residents may also obtain a permit for overnight parking at either the South Parking Garage or the underground Campus Village Parking Garage which is for residents only.

A shuttle service connects to South Campus athletic programs approximately 1.5 miles away. During periods of heavy student traffic at the beginning of each semester, the shuttle system serves overflow parking at a Park N Ride lot on the South Campus.



CAMPUS ENTRY POINTS

The accompanying map shows multiple entry points into campus, accommodating a combination of pedestrian, vehicular and service traffic.

On-site parking capacity does not meet current demand. Surface parking lots 11 and 13 are scheduled to be removed for planned development in the near future. Existing parking structures also require structural and accessibility upgrades to function well.

PARKING SUMMARY

3 SHARED PARKING GARAGES:

TOTAL GENERAL SPACES	4,125
EMPLOYEE SPACES	741
ACCESSIBLE SPACES	61
TOTAL	4,927

7 SHARED PARKING LOTS ON CAMPUS: [LOTS 1,3,4,7,8,11,13]

EMPLOYEE SPACES	210
ACCESSIBLE SPACES	91
20-MINUTE TIME ZONES	15
R-PERMITS	9
TOTAL	334

TOTAL PARKING SPACES 5,261

Underground residential parking count not included. Data from SJSU campus website.

KEY

- SERVICE ACCESS POINT
- PEDESTRIAN ACCESS POINT
- VEHICULAR ACCESS EGRESS POINT
- SURFACE PARKING
- UNDERGROUND PARKING GARAGE
- PARKING GARAGE
- PARKING LOT ⑧

NORTH

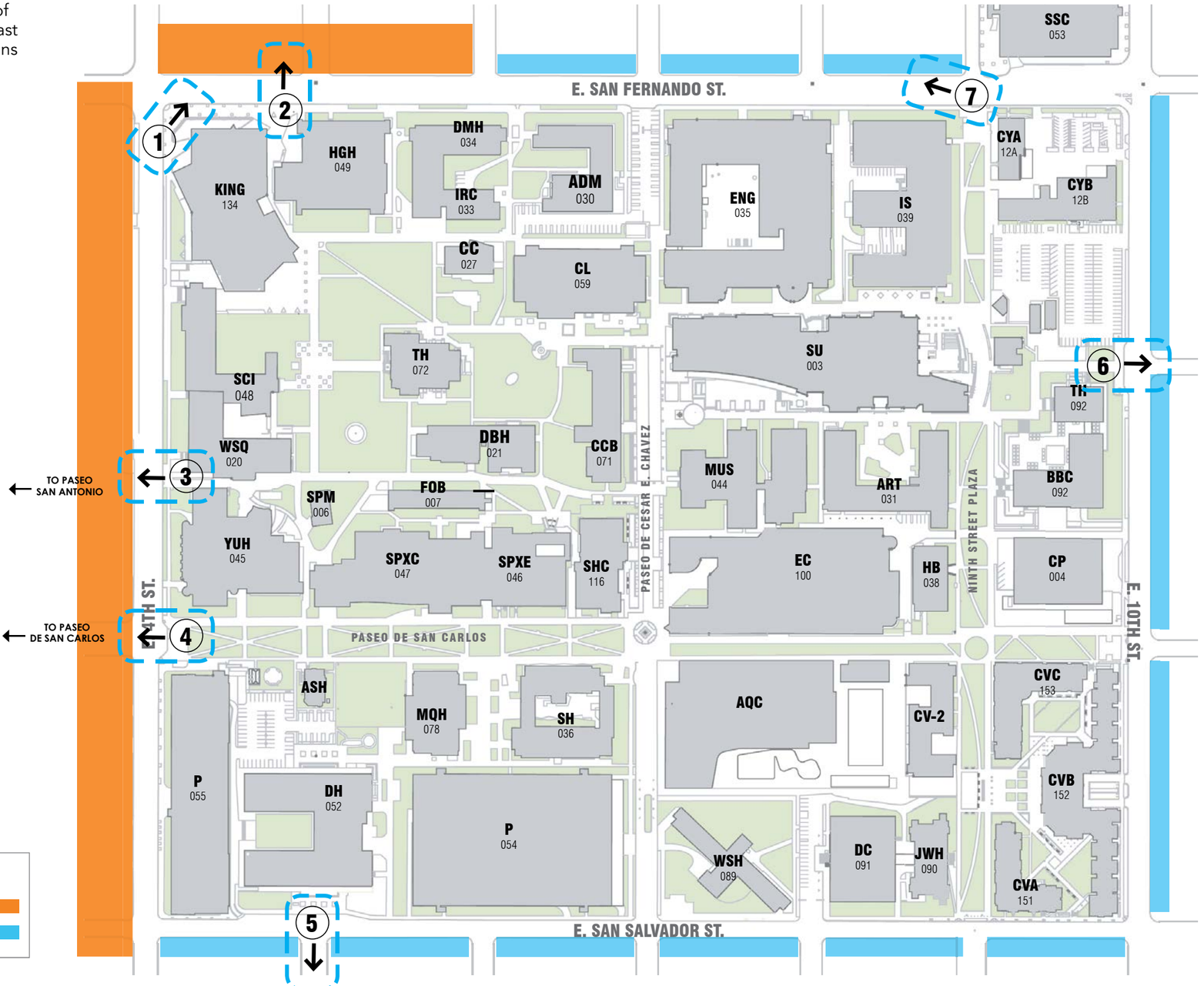
CITY CONTEXT

There is a growing contrast between the northwest and west edges of campus which are increasingly urban, and the lower-rise south and east boundaries where the residential city fabric from the 1950s still remains largely intact.

The view below from the entry plaza of the joint public-private King Library, anchoring the northwest corner of campus, shows San José's growing civic center beyond.

As the accompanying plan illustrates, with few exceptions, campus buildings on all perimeter edges are set back from the street.

1. VIEW FROM KING LIBRARY ENTRANCE



2. LOOKING NORTH ON 5TH STREET TO CITY HALL FROM E. SAN FERNANDO STREET

3. PASEO DE SAN ANTONIO SPANS 4 BLOCKS FROM MARKET STREET TO E. 4TH STREET

4. LOOKING WEST TO PASEO DE SAN CARLOS ACROSS 4TH STREET

5. LOOKING SOUTH TO 5TH STREET FROM DUNCAN HALL

6. LOOKING EAST ACROSS 10TH STREET FROM BUSINESS TOWER

7. NORTH EDGE OF E. SAN FERNANDO STREET

Urban Perimeter

The first three numbered images to the left illustrate the urban side of campus. To the north, the dome of City Hall is visible on axis with E 5th Street [Image 2]. To the west across E 4th Street, a mix of low-rise residential buildings, small commercial tenants, and a group of mid-rise residential apartment buildings reflect the growing commercial sector of the downtown. Two city plazas, with a mix of residential and commercial uses, connect to campus entrances across E 4th Street [Images 3 and 4].

Residential Perimeter

The second three numbered images illustrate the residential edges of campus. To the south and east, and wrapping partially around the north boundary, are quieter streets with older low-rise housing, a few 2-3 story residential buildings, and some commercial and community facilities including small restaurants and places of worship [Images 5, 6 and 7].

CAMPUS BUILDING FRONTAGES

Dating from the 1930s to the 1980s, the majority of the street-facing University academic buildings are low-rise structures set back from the street edge with landscaped lawns. The Science Building and Washington Square Hall on 4th Street are each two stories tall; by comparison, newer residential buildings across 4th Street are five to six stories tall. Along San Fernando Street, four of the five academic buildings are three stories or less; the Engineering Building is four. Anchoring the 100% NW corner, with a taller and more dramatic presence, is the more recent 2003 King Library. It sets the example and direction for larger, taller and contemporary academic facilities to follow.

At 8-stories [including mechanical penthouse], Duncan Hall facing San Fernando Street was the first taller academic building completed in 1967. The Business Tower, 9-stories high but with a noticeably small footprint, followed in 1971. Together with the library, these three are the only mid- to high-rise academic buildings on the 88-acre campus.

Of note are both the horizontal detailing on the longer academic buildings on all four street frontages, and the nod to the historic brick and cream color palette carried over from the historic buildings on the campus interior.

Non-academic residential towers with traditional brick and stucco facades anchor the corner of the SE quadrant, while two five-story concrete parking structures take up most of the frontage in the SW quadrant. While they are currently essential for vehicular access, these garages present long, unattractive facades to the community and block views into the campus interior; some façade treatments and shallow retail storefronts would strengthen these campus frontages.

1.SCIENCE BUILDING FRONTING 4TH STREET


2. DUNCAN HALL WITH LAWN SETBACK THAT CONTINUES ALONG SAN SALVADOR STREET

3. MODERN ARCHITECTURE OF THE MLK PUBLIC-PRIVATE LIBRARY


4. INDUSTRIAL STUDIES FRONTING SAN FERNANDO STREET

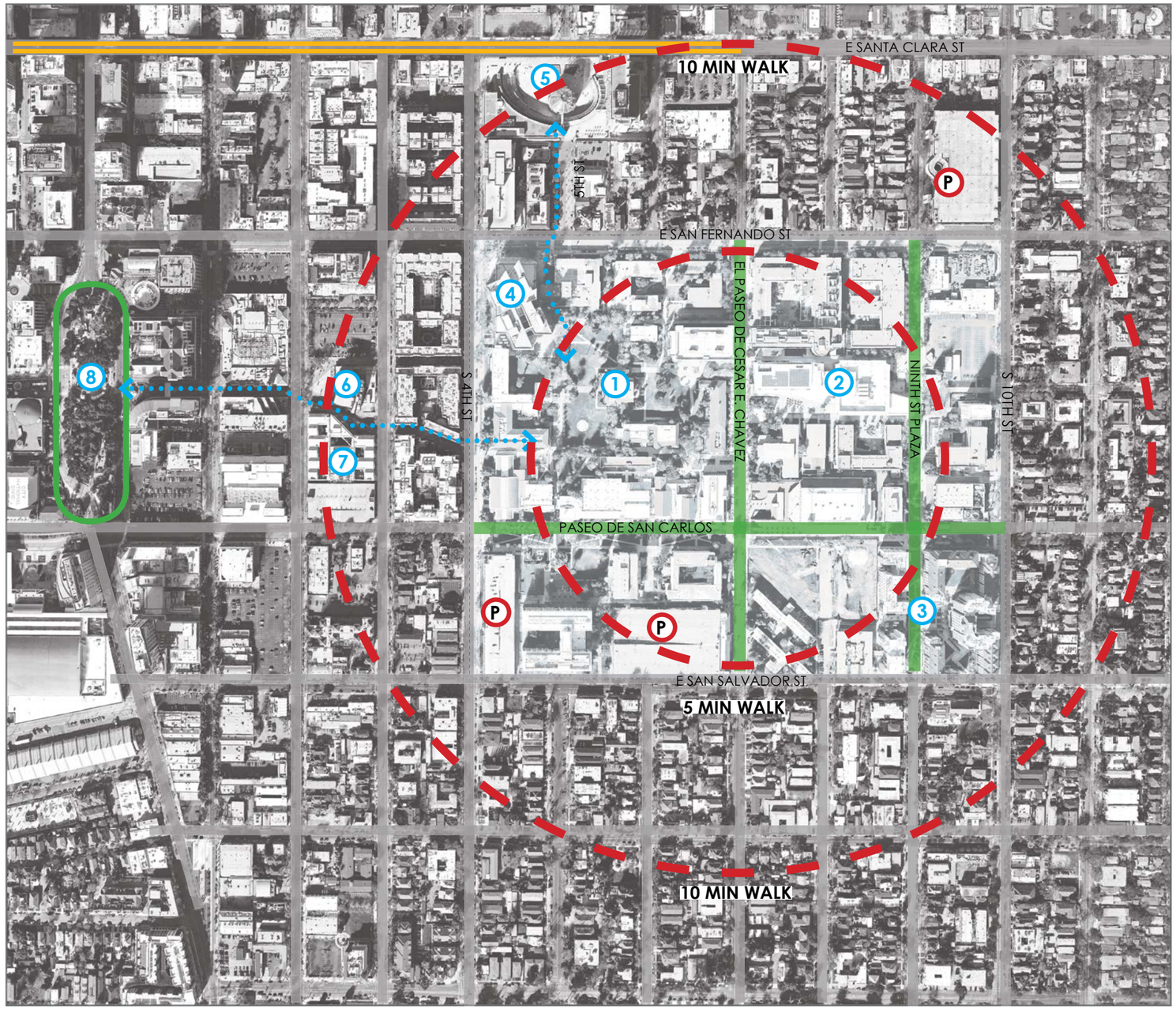

5. HUGH GILLIS HALL FRONTING SAN FERNANDO STREET


6. THE BUSINESS SCHOOL & BUSINESS TOWER SETBACK ALONG 10TH STREET

WALKING DISTANCES

With its compact urban footprint, most of the SJSU campus is covered by a 5-minute walking radius. A 10-minute walking radius from the center of campus can reach Hammer Theatre. A 5-minute walk from E. San Fernando Street can reach the entrance to City Hall at 200 E. Santa Clara Street.

The two pedestrian pathways from the historic NW quadrant [shown in blue] originally aligned with the city street grid for E. 5th Street and San Antonio Street. The latter [replaced by Paseo de San Antonio] was on axis from the Tower Hall entrance to the Old City Hall which occupied Plaza Park [now Plaza de Cesar Chavez] from 1889 until it was demolished in 1958.



KEY

- TOWER HALL (1)
- STUDENT UNION (2)
- RESIDENTIAL VILLAGE (3)
- KING LIBRARY (4)
- SAN JOSÉ CITY HALL (5)
- HAMMER THEATRE (6)
- ALQUIST STATE OFFICE BUILDING (7)
- PLAZA DE CESAR E. CHAVEZ (8)
- AREA UNDER STUDY FOR FUTURE BART STATIONS
- PARKING STRUCTURE (P)
- PEDESTRIAN PASEOS
- TWO CITY PATHWAYS

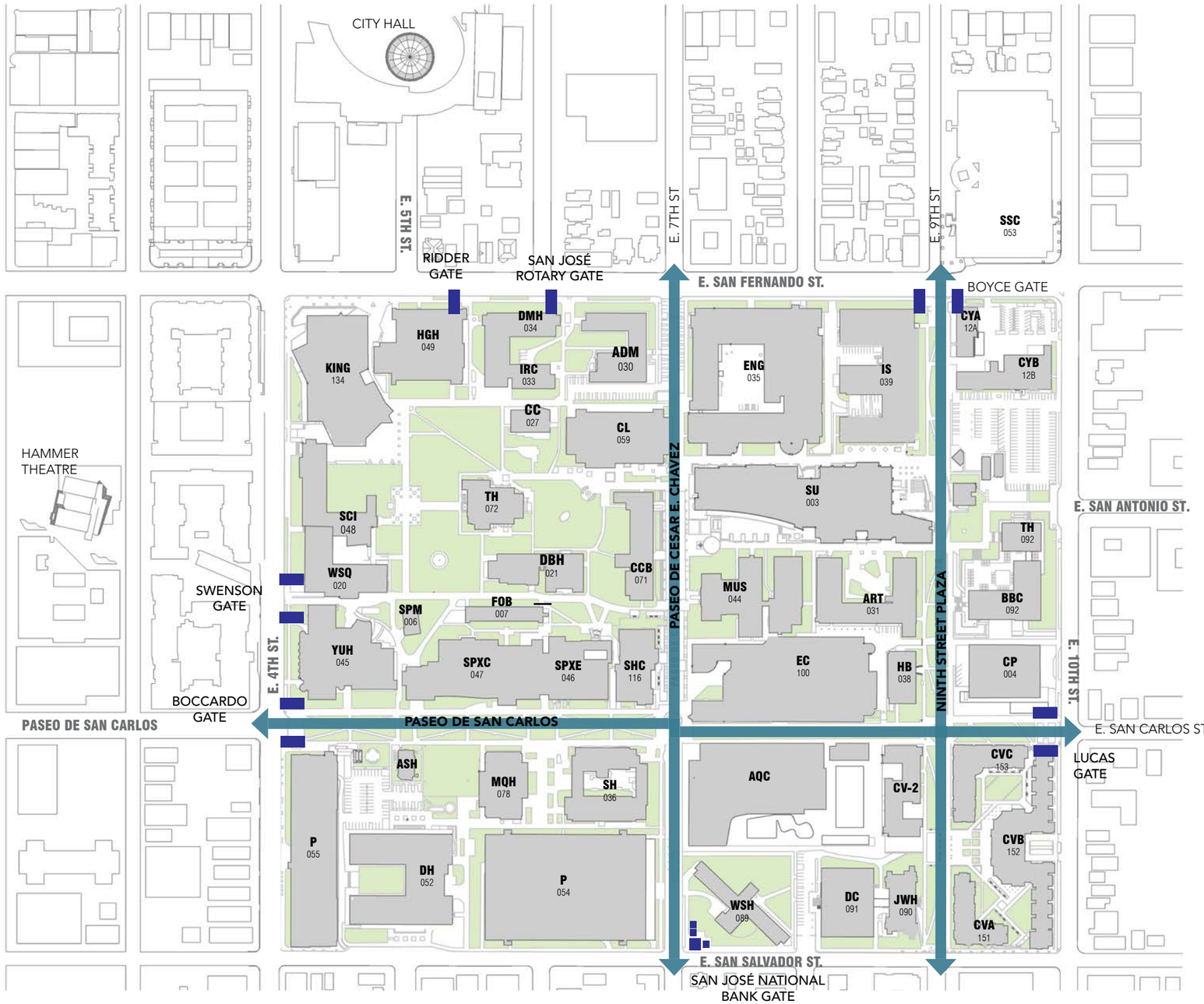
NORTH

PASEOS & CAMPUS GATEWAYS

When the last 10 city blocks were added to the main campus in the early 1960s, three city streets continued to cross through the campus -- 7th and 9th Streets running north-south and San Carlos Street running east-west. In 1993, the City conveyed these rights-of-way to the University for conversion to pedestrian malls which was completed in 1996.

Today, the three paseos continue to serve as the primary pedestrian axes through campus.

Dedicated in 1999, seven oversized gateways announce entrances to campus. Each is named for a major donor to the privately funded $1.5 million Heritage Gateway project. While they vary in size, they are similar in detail, incorporating materials and color palette from the historic central quad. Four of the gates mark existing paseo entrances; the remaining three mark historic entrances into the NW quadrant that are still important secondary entrances for pedestrians.



NORTH

KEY

EXISTING PASEO

EXISTING GATEWAYS (form varies)

BOCCARDO GATEWAY AT PASEO DE SAN CARLOS AND 4TH STREET

SAN JOSÉ NATIONAL BANK GATEWAY COLUMNS AT SOUTH ENTRANCE TO PASEO DE CESAR E. CHAVEZ, ALSO A PRIMARY VEHICULAR ENTRANCEWAY

RIDDER GATE AT HISTORIC ENTRANCE TO NW QUADRANT FROM E. SAN FERNANDO STREET

SOUTH END OF 9TH STREET PLAZA IN RESIDENTIAL SECTOR WITH CV2 ON RIGHT

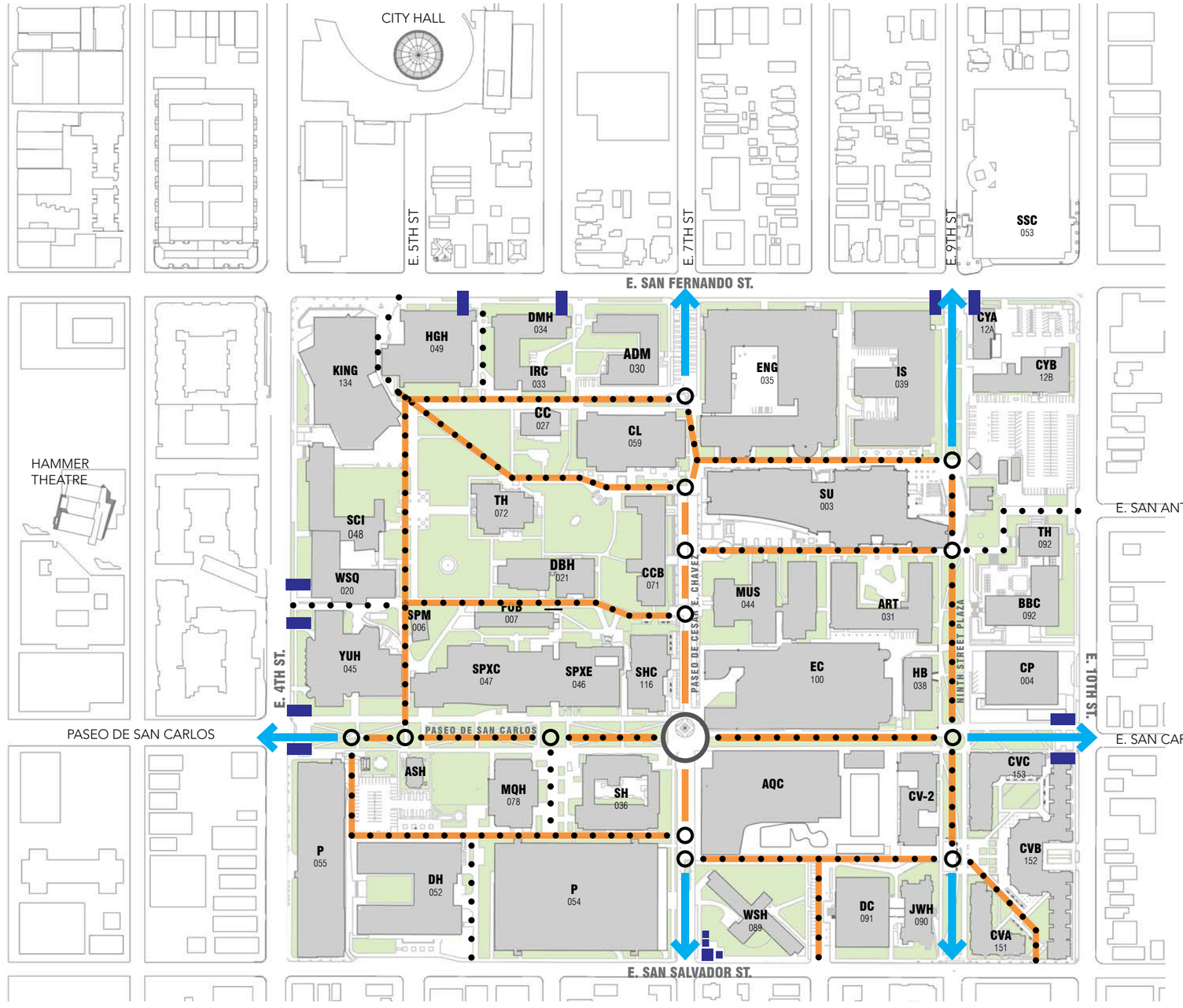
PASEO DE CESAR E. CHAVEZ LOOKING NORTH

PASEO DE SAN CARLOS LOOKING EAST

SECONDARY PATHWAYS

While the paseo grid defines primary campus circulation, an internal ring of pathways divides the campus into a series of well-proportioned smaller blocks.

Many of these connecting pathways have special landscape features or memorial statues and icons that impart to the campus a special sense of place and legacy.



KEY

- PASEO ENTRANCES
- INTERIOR PEDESTRIAN PATHWAYS
- SECONDARY ENTRANCES BETWEEN BUILDINGS
- PATHWAY CONNECTIONS
- ROUNDABOUT FOR SERVICE, DELIVERY, STUDENT DROP-OFF
- EXISTING GATEWAYS (form varies)

NORTH

NORTH ALLEE FROM KING LIBRARY

THE CALIFORNIA NORMAL SCHOOL BELL INSIDE THE SPARTAN ROSE GARDEN ALONG THE NORTHEAST SIDE OF TOWER HALL

WALKWAY BETWEEN CENTRAL CLASSROOM BUILDING (LEFT) AND CLARK HALL

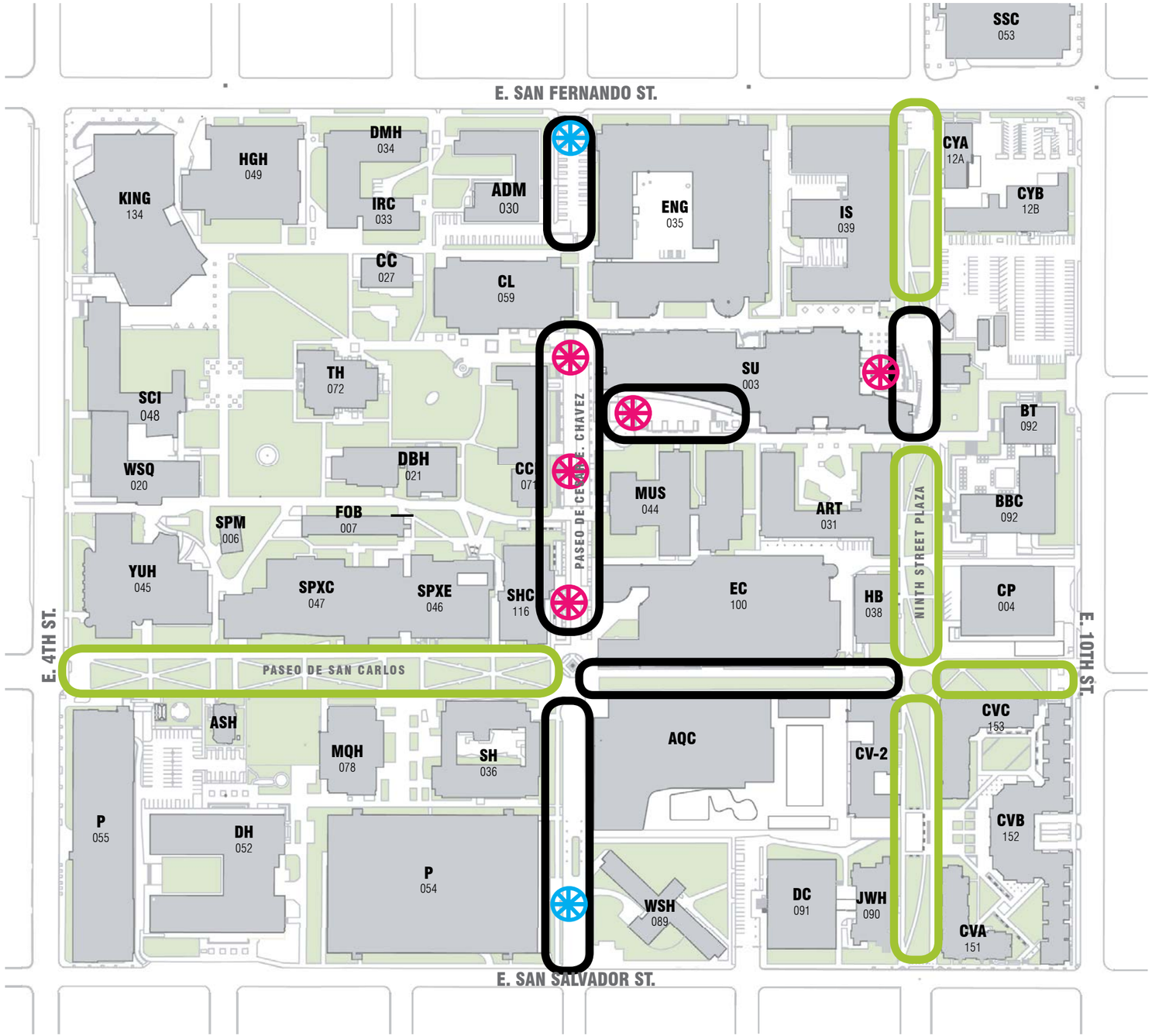
CESAR CHAVEZ ARCH, DESIGNED BY JUDITH F. BACA, MARKS THE PATHWAY ENDING IN PASEO DE CESAR E. CHAVEZ

HARDSCAPE & SOFTSCAPE AT PASEOS

Paseo de Cesar E. Chavez provides a wide pedestrian avenue through the center of campus which is heavily used throughout the day both for walking to classes and as a central gathering space, including planned student events, club registrations, and informal meetings.

By contrast, Paseo San Carlos and the Ninth Street Plaza are more heavily landscaped, quieter allees with open lawns and slower pedestrian traffic.

All three paseos provide service vehicle and fire access throughout campus.



NORTH

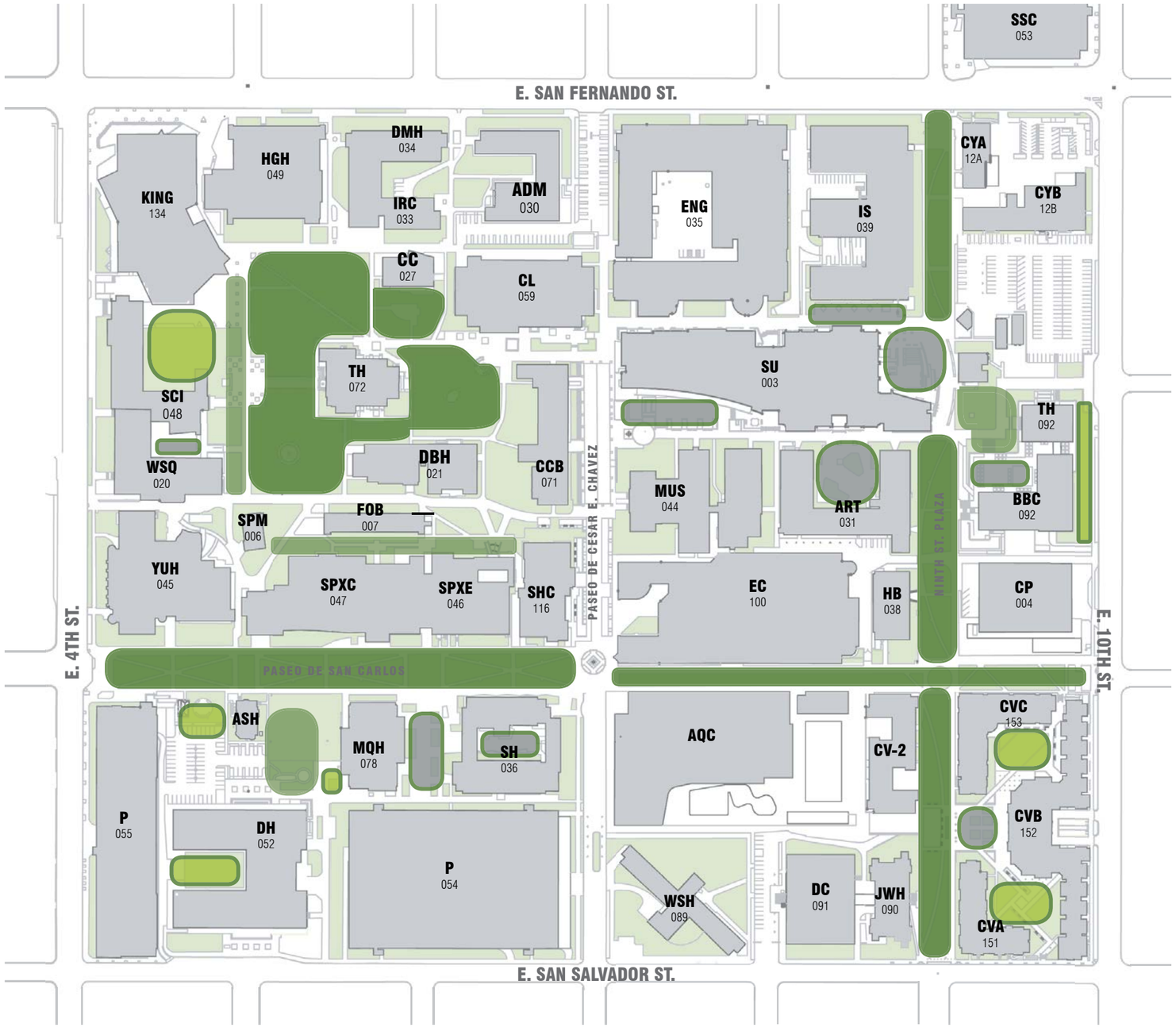
KEY

HARDSCAPE

SOFTSCAPE

SHARED VEHICULAR / PEDESTRIAN ENTRANCE

PRIMARY GATHERING SPACES



HIERARCHY OF OPEN SPACES

In addition to the Tower Hall Quad and paseo lawns, many smaller hard and soft courts are located throughout the 88-acre campus, providing the entire campus community with a wide choice of outdoor spaces for socializing, studying and respite.

COURTYARD AT BOCCARDO BUSINESS BUILDING

KEY

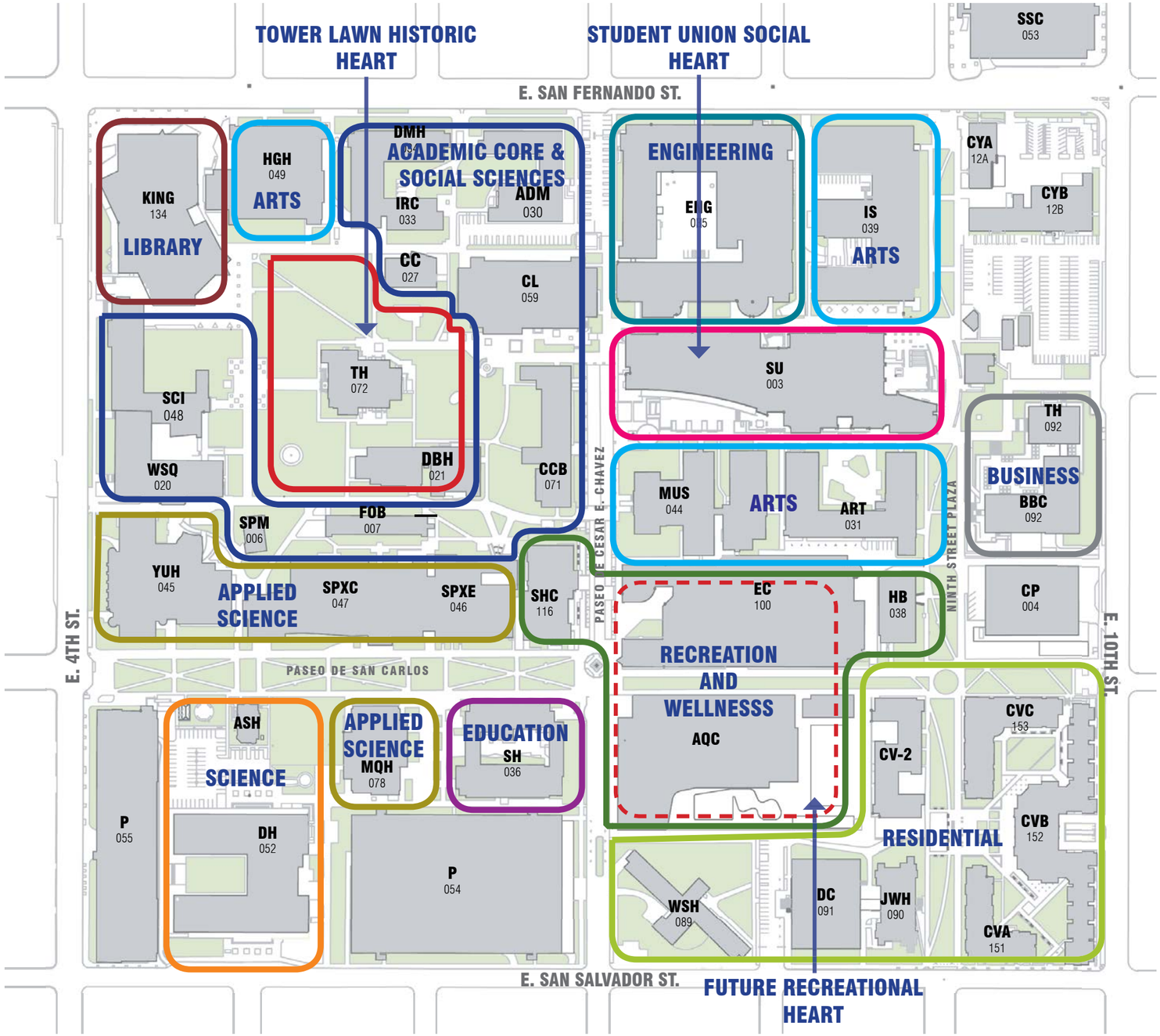
- PRIMARY GREENSPACE
- SMALL LANDSCAPED OPEN SPACES
- HARD COURTS (associated w/building)
- SOFT COURTS (associated w/building)

NORTH

CAMPUS STUDENT LIFE CENTERS

With the 2016 reopening of the Student Union after a major expansion and renovation, the University currently has two recognizable student life centers -- the Tower Lawn Quad with its historic legacy and generous landscaped open space, and the Student Union complex with its vibrant social activity spaces indoors and out. When the Spartan Recreation and Aquatics Center opens in the Southwest residential quadrant in 2019, a third major student activity center will focus on health and recreation. The three gathering spaces are well distributed in the campus interior.

By diagramming primary facility uses [not all overlapping academic course locations are illustrated], the central focus of each core gathering center is made apparent.



KEY

- HISTORIC HEART
- SOCIAL HEART
- RECREATION & WELLNESS HEART
- ACADEMIC CORE & SOCIAL SCIENCES
- LIBRARY
- ENGINEERING
- BUSINESS
- ARTS
- HEALTH & RECREATION
- SCIENCE
- RESIDENTIAL
- EDUCATION
- APPLIED SCIENCES

NORTH

TOWER HALL VIEWED FROM KING LIBRARY

STUDENT UNION INTERIOR

RENDERING OF SJSU SPARTAN RECREATION AND AQUATICS CENTER [GENSLER]

STUDENT UNION EXTERIOR

3. ENHANCING CAMPUS PRESENCE & OPEN SPACE

OVERALL RECOMMENDATIONS

1. Continue to strengthen the existing open space framework of iconic Paseos, Courts and the Tower Quad

2. Transform secondary pathways into two new Paseos to strengthen important connections to downtown San José and the expanding Civic Center

3. Continue to strengthen the existing "Campus Park" perimeter of large trees and building setbacks, in conjunction with designing attractive treeless Portals into the campus at key locations

4. Improve campus edges to accommodate non-solo-driver access such as biking, light rail and bus use, and carshare drop offs

5. Add new large-species trees with each campus project, and minimize use of small-species trees, to provide shade and maintain the grand Campus Park character

6. Design new and renovated building entrances to address and activate campus street frontages while also enhancing lobbies open to the interior campus pathways

7. Improve Wayfinding and update campus maps to feature the open space framework. Show simplified figure-ground of Paseos/ Promenades, Tower Quad and Plazas to increase connection with the on-the-ground experience in recognizable "Districts"

8. Recognize and support need for campus security with adequate lighting, emergency phones, designated passenger drop-offs, and security access

OPEN SPACE FRAMEWORK

The site plan illustrates recommended improvements to the campus fabric including new landscape, signage and drop off zones. Priority projects illustrated on the following pages include new entry portals, two new paseos, and new plazas at important intersections.

EXISTING ENTRANCE TO NINTH STREET PLAZA FROM E. SAN SALVADOR STREET

STRENGTHEN "CAMPUS PARK" PERIMETER

- Maintain and enhance the "Campus Park" perimeter of large mature trees and foundation planting
- Add large-species trees where sparse or missing
- Gradually replace perimeter lawn with shrubs and groundcovers, so that lawn is featured only on usable portions of Paseos/Promenades, Quads and Courts
- Widen Downtown-facing Fourth Street and San Fernando frontage sidewalks and add more street trees, formalizing City's initiative to narrow roadways and increase ease of walking and biking
- Add white zones for carshare, taxi and drop-off use, to increase convenience of non-solo-driver access. Provide 1-2 drop-offs per side of campus
- Continue to provide and fine-tune VTA and shuttle bus stops for maximum convenience
- Add street lights and banners where missing to reinforce regular rhythm along downtown frontages

STRENGTHEN PORTALS INTO CAMPUS

- Bump out sidewalks and add flanking groundcover planting at portals, replacing existing indents
- Add SJSU crosswalk graphic at major portals, to extend campus' walkable realm to its perimeter context and enhance integration with Downtown San José
- Create treeless 100 to 150' wide "windows" at major portals featuring handsome existing or new building corners, as a counterpoint to the generally treed campus perimeter
- Place "San José State University" signage on attractive building corners to enhance identity of University, replacing or updating freestanding columns where possible and maintaining Donor recognition.

STRENGTHEN EXISTING PASEOS

Paseo de San Carlos [Aligns with San Carlos Street]

- ¤ See Priority Open Space Project on page 38

Paseo de Cesar E. Chavez [Aligns with 7th Street]

- ¤ Extend DNA of plaza with flanking palms to San Fernando frontage/portal

Ninth Street Promenade [Aligns with 9th Street]

- ¤ Simplify shape of lawn panels at north end to provide more informal recreation space within campus

4. PRIORITY OPEN SPACE PROJECTS

STRENGTHEN ICONIC SPACES

Historic Tower Hall Quad

- Continue to enhance the Quad as an iconic lawn surrounding Tower Hall but do not replicate this experience elsewhere on campus
- Celebrate and maintain the garden character of the landscape, which is used continuously for student gatherings and formal invocations, and provides a fitting setting for the oldest building on campus
- Require adjacent building renovations or new developments to strengthen indoor-outdoor connections to the Quad
- Simplify and refine walk framework and lawn shapes to increase flexibility of use
- Remove the Computer Center to allow future development along San Fernando Street to fully engage the Quad
- Provide clustered seating for more social and study opportunities
- Improve seating around existing fountain, or consider relocation of Fountain to South Campus for the annual Fire on the Fountain celebration of the Spartan Football Team [lawn could be leveled to serve more gatherings]

"The Commons"

- Enlarge the outdoor social space alongside the Student Union and Cesar Chavez Memorial Arch to create a large central plaza which could be named "The Commons"

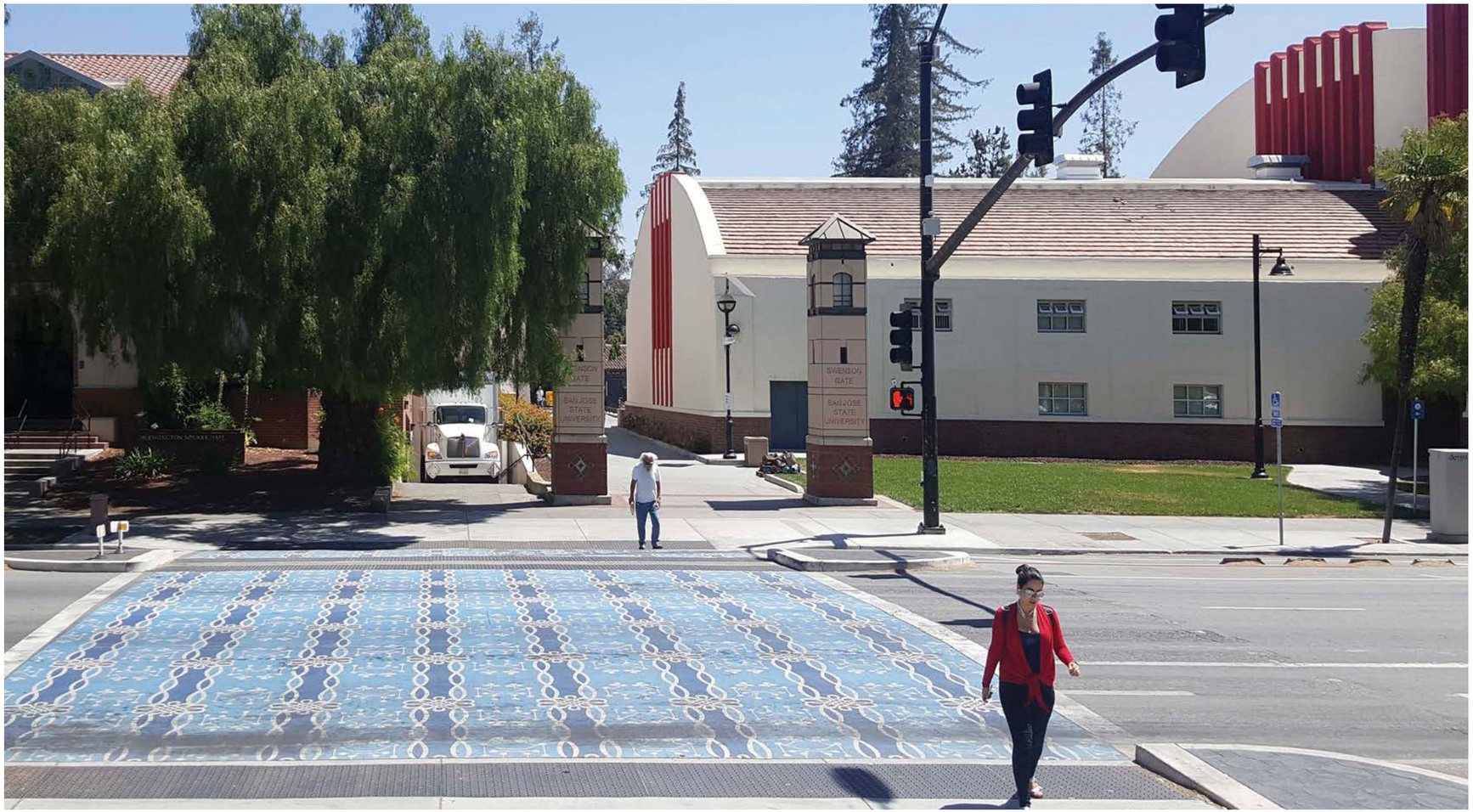
Secondary Courts

- For new facilities, especially those not located alongside the Quad or The Commons, include shaping a new outdoor court as part of the project so it is planned, budgeted and constructed; examples include the new Court alongside the future Interdisciplinary Science Building

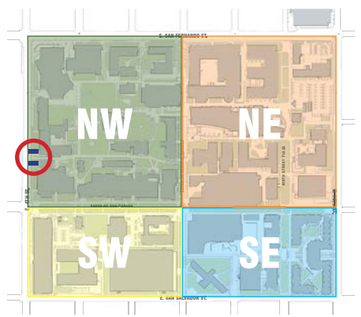
1. PASEO DE SAN ANTONIO PORTAL

Strengthen University's identity and enhance access for this well-used portal connecting Downtown and the Light Rail into the heart of Campus:

- Feature historic Washington Square Hall by moving the large California Pepper Tree at WSH's corner over to the Uchida Hall frontage
- Remove the northerly gate column which blocks the view of the paseo into campus, and remove the top of the southerly column to fit with the proposed building composition
- Update the crosswalk graphic per latest SJSU motifs and shift to align with the paseo into campus
- Infill and extend the existing shrub planting along continuation of the paseo into campus
- Add "San José State University" signage on upper corner of Washington Square Hall
- Work with City to widen sidewalk on campus side, formalizing City's narrowing of roadways



BEFORE



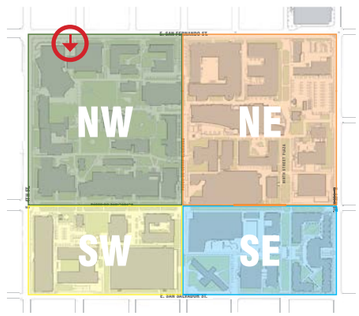
AFTER

2. CITY HALL PORTAL

Create a major portal connecting Downtown, City Hall, the future BART station and the heart of Campus in conjunction with future university development replacing Hugh Gillis Hall, Dudley Moorhead Hall, and the Administration Building:

- Develop a new street-facing entry plaza, flanked by library and future University facilities which can support student, faculty and public gatherings, and expanded food service at this end of campus
- Design new adjacent buildings to have visible people spaces with ground floor uses such as cafes, stores, lobbies to lecture halls and performance spaces, to continue to activate the campus
- Incorporate updated University building graphics, and changing street side banners

BEFORE



AFTER

3. TOWER HALL PROMENADE

Establish a recognizable North-South Paseo aligning with Fifth Street

- New paseo extends the historic quad's west walkway north to create a pedestrian corridor from City Hall and future BART station on Santa Clara Street into center of campus
- New landscape and future development will frame a dramatic view of the San José City Hall dome
- Semi-private seating clusters replace existing linear bench seating under shade trees along west side of quad, to accommodate group study and socializing
- Promenade continues south through the Spartan Complex to connect to the new Science Center and Duncan Hall Court [with through access to San Salvador Street]
- Three new plazas along the Promenade will enrich the University Experience on the West side of campus. The plazas will require repurposing or removal of the small Spartan Memorial Chapel as well as the relocation of the Associated Students House (ASH)

BEFORE

AFTER

4. PASEO DE SAN ANTONIO

Establish a recognizable East-West Paseo extending from 4th Street to E. San Antonio Street

- The existing pedestrian paseo-- from Plaza de Cesar Chavez Park through downtown San José-- extends across 4th Street into campus
- New paseo connects existing informal campus pathways to create a recognizable corridor along the south side of the historic quad, continuing north on Paseo de Cesar E Chavez to arrive at the Cesar Chavez Memorial Arch
- An expanded area south of the Student Union serves as an entry plaza for the Music/Arts site and extends the flow of Paseo de San Antonio into the Student Union
- At its East end, the Paseo arrives at the Business College entrance and continues around the West side of the Business Tower to E. San Carlos Street. Enhancing this campus entrance strengthens connections to the neighboring city businesses.

BEFORE

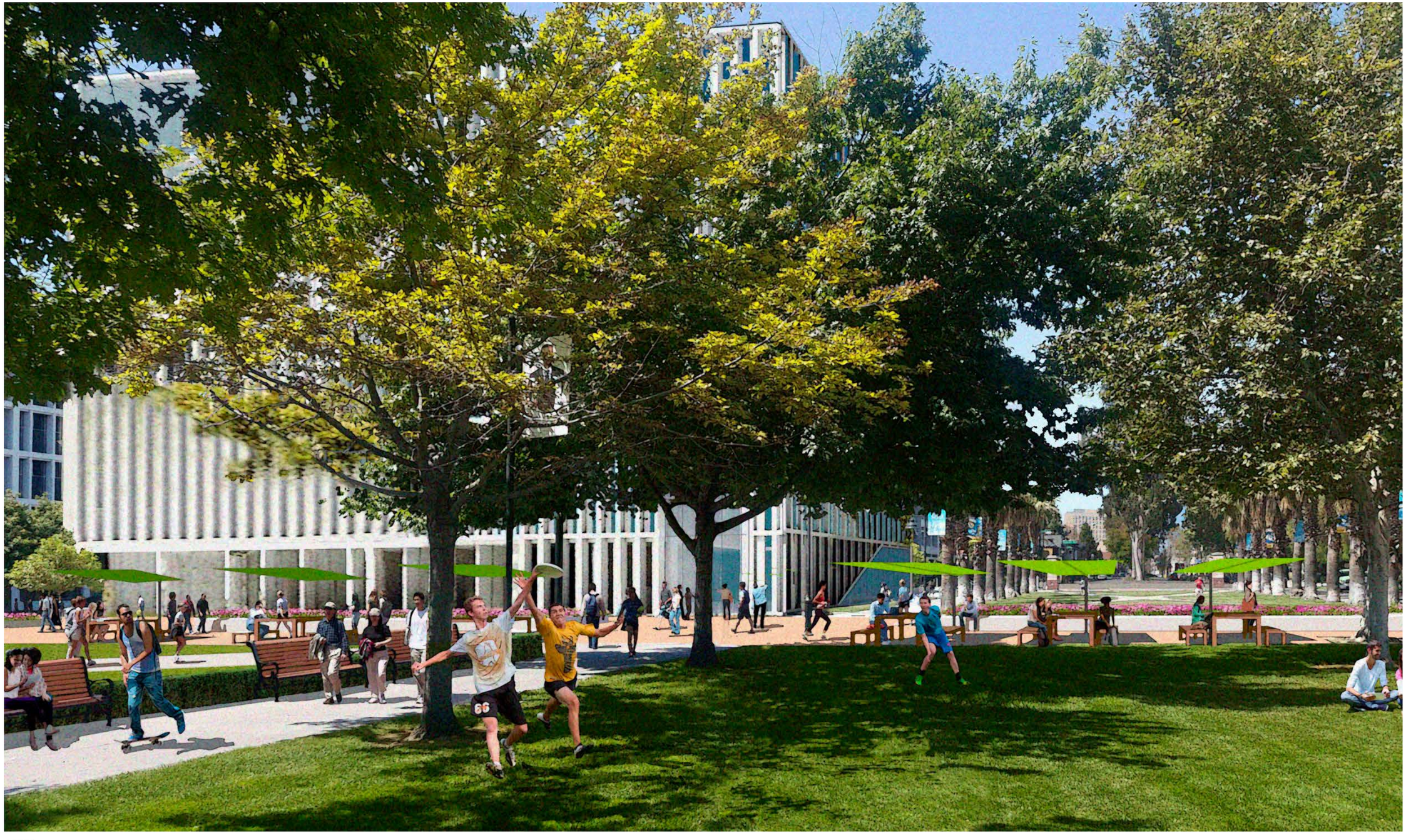
AFTER

5. PASEO DE SAN CARLOS

[Aligns with San Carlos Street]:

- Over time, transition the paseo from being a corridor predominantly for movement to an activated place that students and the campus community enjoy spending time in
- Strengthen the Greenway character of this paseo by eliminating cross-paths at west end facing new ISB site and increasing flexible use including recreational volleyball and frisbee
- With each building project, introduce plaza at building entrance and engage indoor uses with the substantial Paseo de San Carlos outdoor space
- Create a prominent intersection at connection to new Science Quad and the Tower Hall Promenade
- Introduce small plazas and clustered furniture with tree, umbrella or cabana shade to increase places for the campus community to study, socialize and linger

BEFORE



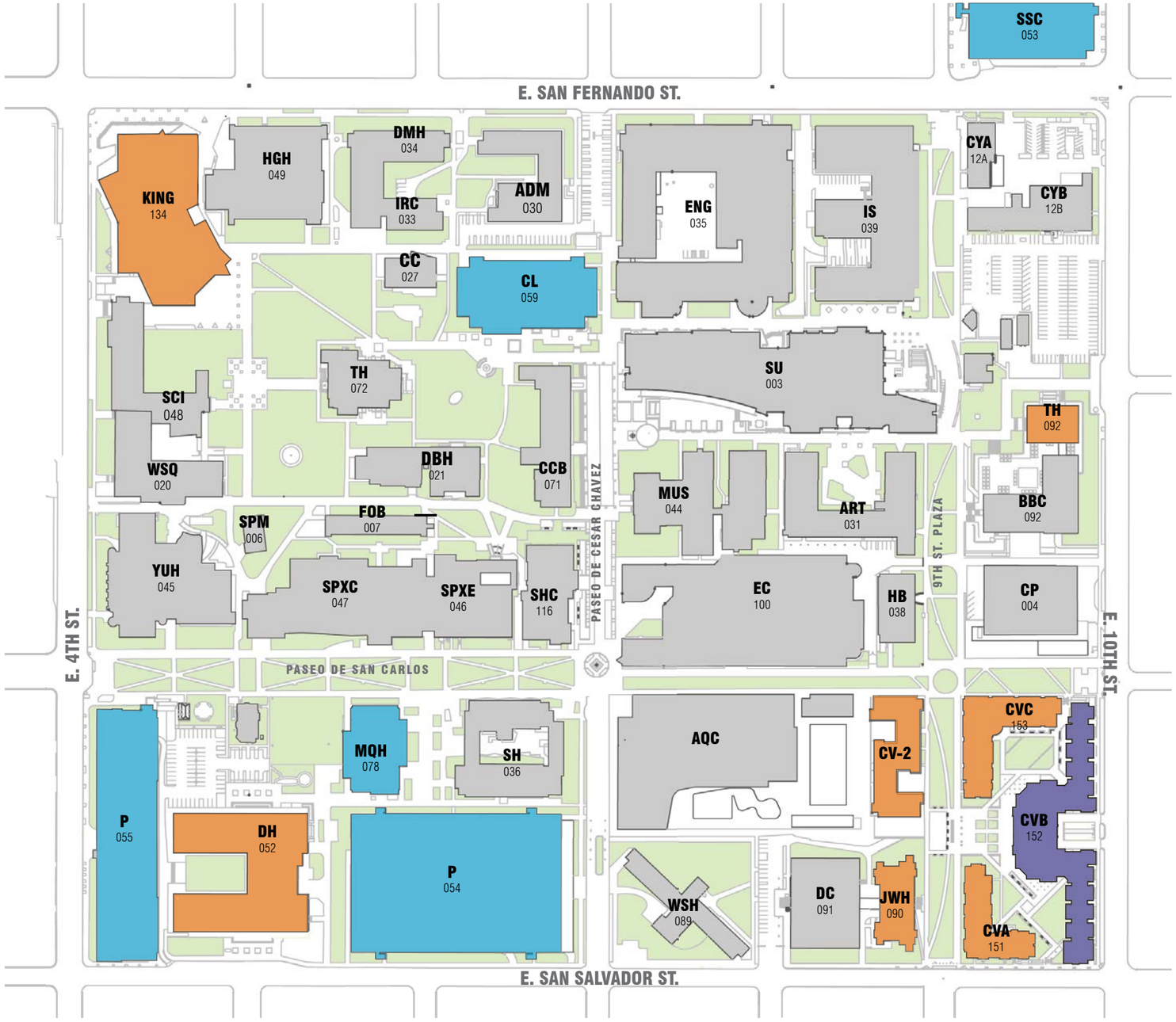
AFTER

5. EXPANDING CAMPUS CAPACITY

DENSITY -- INCREASE BUILDING HEIGHTS

To date, only three academic buildings, including the library, are between seven and nine stories in height. Four residence halls are also in this height category. A single residence hall, Campus Village B, rises fifteen stories in height.

With limited campus acreage, the need to increase academic capacity and the equal need to preserve open space and provide supporting facilities make it imperative that future developments increase density and build higher. The rapid growth and changing face of the surrounding city also exert force on the University to maintain its visibility and standing as a center for academic excellence.



KEY

- 10+ STORIES | 1 BLDGS
- 7 - 9 STORIES | 7 BLDGS
- 5 - 6 STORIES | 5 BLDGS
- 4 STORIES OR LESS

NORTH

CONTINUE CAMPUS BUILDING EVOLUTION

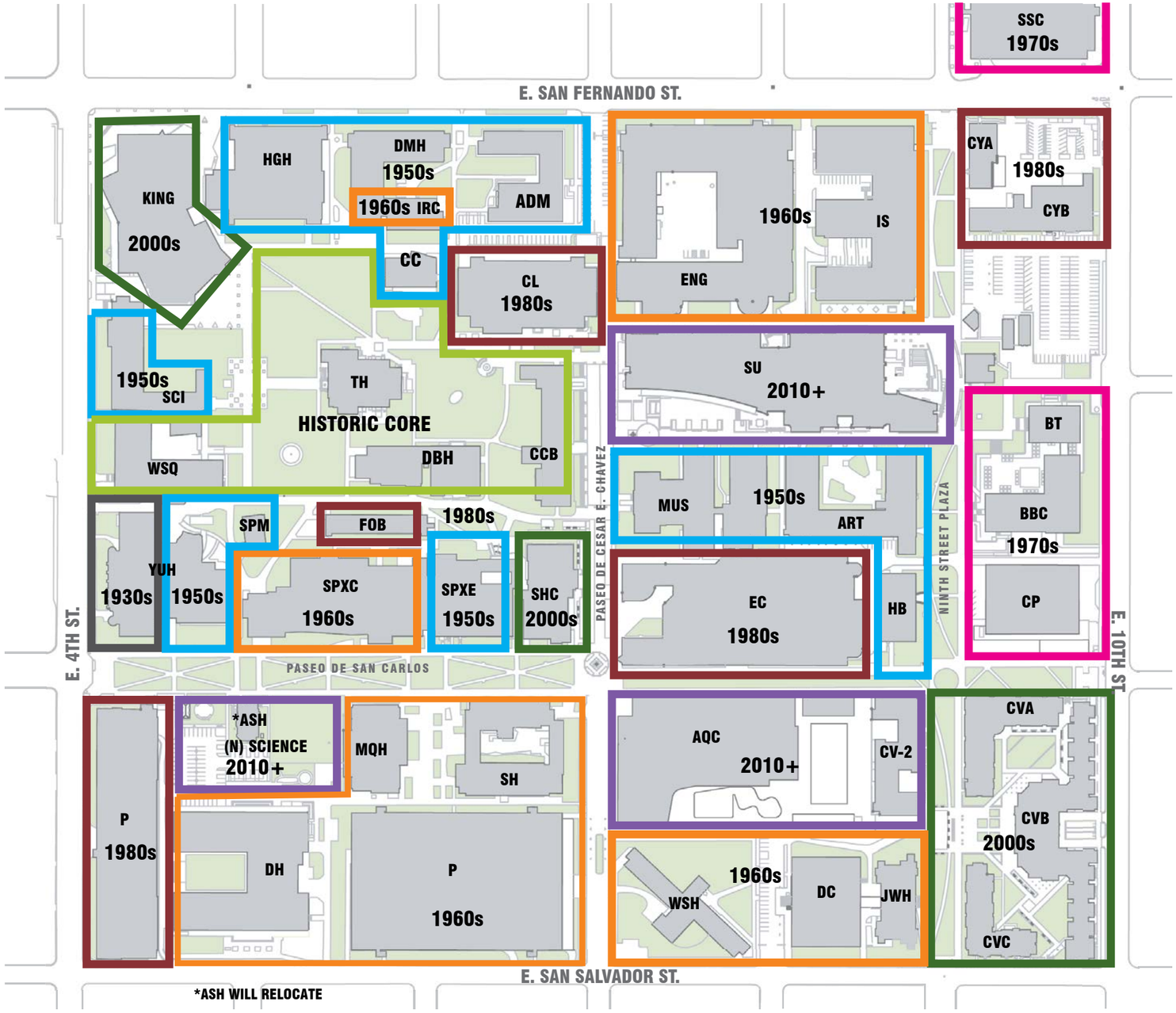
A review of building dates by decade for current campus buildings shows the clustering of construction projects over the years.

Campus buildings are continually in flux to serve changing programming, to undergo infrastructure and code improvements and to enhance student life activities. In the historic core, only four original buildings remain that were built before 1935: Tower Hall [TH], 1910; Dwight Bentel Hall [DBH], 1911; the Central Classroom Building [CCB], 1924; and Washington Square Hall [WSH], 1933. These should be restored and preserved.

Around the campus, many of the facilities constructed in the 1950s and during the building boom of the 1960s still remain in service. Some have undergone renovations and upgrades. But when they are compared with the original building date and information in the Facility Conditions Assessment Report prepared in March 2015 [see matrix in Appendix E], many of these buildings are now good candidates for major renovations or replacements.

Over time, with increasing enrollment, some larger buildings have replaced older structures that have been demolished and\or repurposed. One example is the existing King Library [2003] at the corner of 4th and San Fernando Streets: it occupies the site of the former Wahlquist North Library building [1961, demolished 2000], and it also replaced the former Clark Library [1982] which was converted to Clark Hall, now an administration and classroom building.

New facilities must follow suit, providing added space designed to meet current teaching and technology needs into the future.



KEY

- HISTORIC CORE 1910s to 1930s
- 1930s
- 1950s
- 1960s
- 1970s
- 1980s
- 2000 - 2010
- 2010 - 2030

NORTH

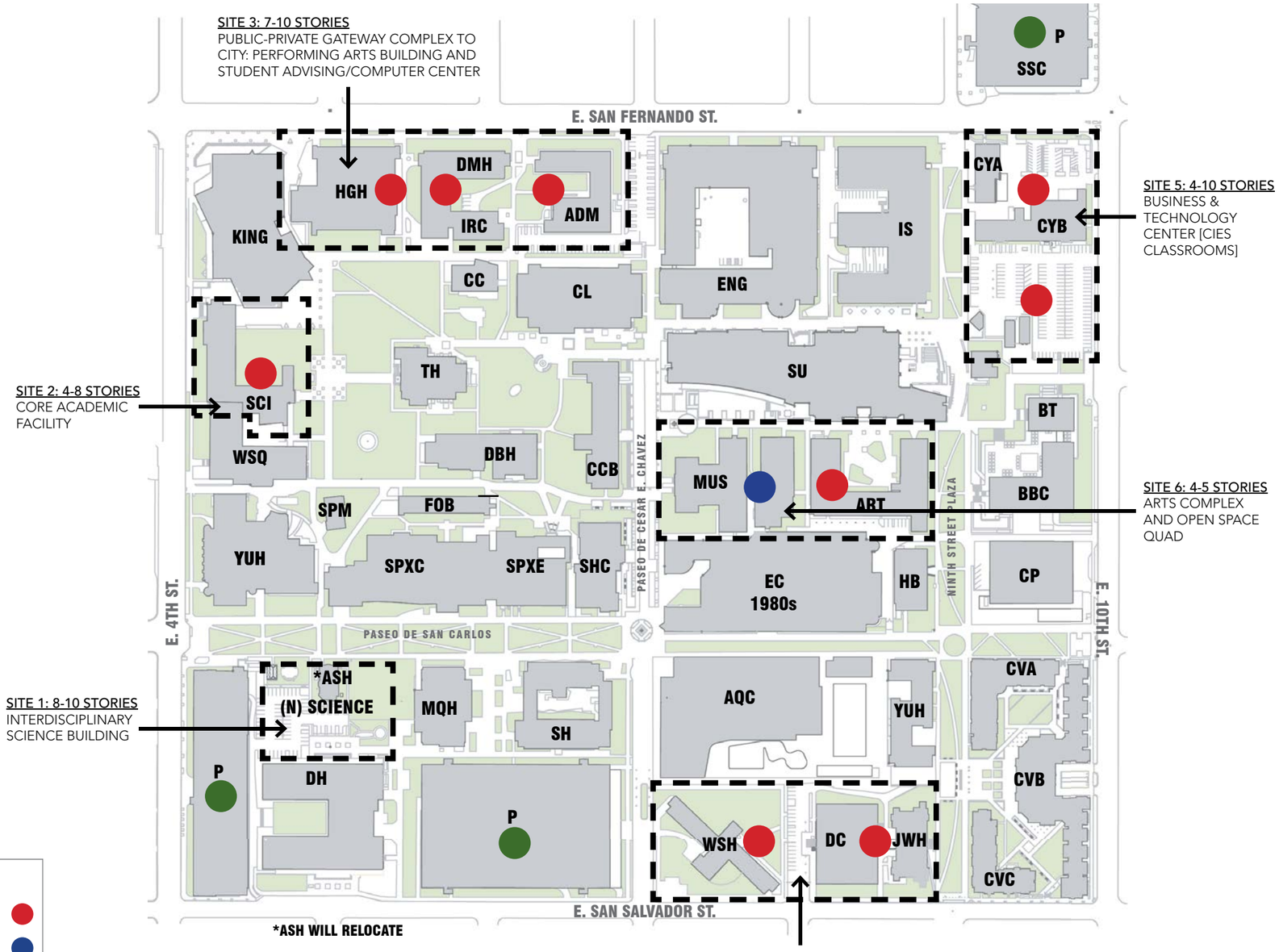
SIX PRIORITY DEVELOPMENT SITES

Advantages

- New state-of-the-art facilities are distributed around campus to activate each quadrant
- Older structures in poor condition are targets for replacement
- Perimeter locations provide high visibility to the City and neighborhoods, strengthening image and awareness of the University community
- Recommended sites can accommodate taller structures, increasing capacity
- New uses can complement adjacent uses to expand academic realm
- Significant new facilities can attract potential public-private and donor partnerships

Overall Goals for New Academic Facilities to Support both Faculty and Student Success

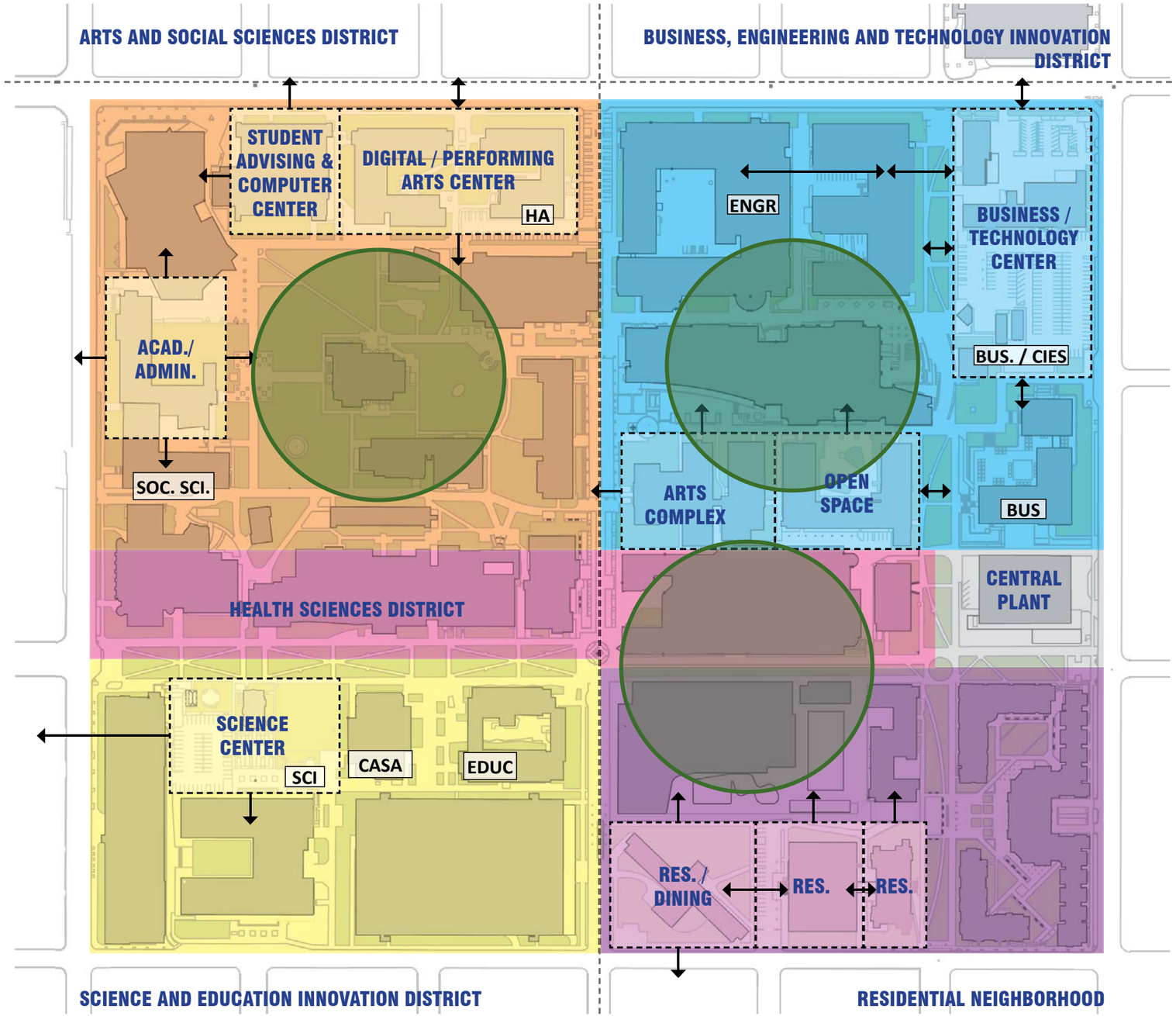
- Increase physical capacity to meet current and future academic needs and enrollment growth
- Program facilities to encourage stewardship by a primary college
- Provide full complement of lecture, lab, research, office and support space for college disciplines
- Locate faculty offices and research facilities in proximity to college deans
- Provide a variety of classroom types and sizes to reflect current data on user needs and changing pedagogy
- Require building designs that engage their surroundings with stronger indoor-outdoor connections, increased use of daylight, and a rigorous focus on sustainability
- Incorporate latest classroom strategies for flexible use and rapid change outs, and size overall space to accommodate future conversion to other uses



NORTH

KEY

- POTENTIAL SITES FOR (N) CONSTRUCTION
- POTENTIAL RENOVATION
- PARKING STRUCTURE



AN INNOVATIVE CAMPUS COMMUNITY

With new facilities, new pathways and enhanced student gathering spaces, it is possible to envision the campus as four districts or neighborhoods that can be identified as destinations. Renaming the four quadrants can strengthen the sense of place.

In this scenario:

- The NW quadrant becomes an Arts and Social Sciences District; three new buildings expand the realm of the corner library
- The SW quadrant becomes the Science and Education Innovation District; the new Science Center including a renovated Duncan Hall has direct access to the City of San José
- The NE quadrant becomes the Business, Engineering and Technology District, linking the existing Business College, Engineering and Industrial Studies to a new multidisciplinary Technology Center
- The SE quadrant becomes the Residential Neighborhood with expanded housing, retail and dining services
- The north side of Paseo de San Carlos becomes a linear Recreation and Health District
- College Administrations are located where they can steward individual new and existing buildings and share expanded office, meeting and research space with co-located faculty

KEY

- ARTS & SOCIAL SCIENCES DISTRICT
- BUSINESS, ENGINEERING, & TECHNOLOGY INNOVATION DISTRICT
- APPLIED SCIENCES & HEALTH DISTRICT
- RESIDENTIAL NEIGHBORHOOD
- SCIENCE & EDUCATION INNOVATION DISTRICT
- NEW CONSTRUCTION AREAS
- CONNECTIONS OUT FROM SITE
- STUDENT LIFE CENTERS
- COLLEGE ADMINISTRATION/FACULTY LOCATION

NORTH

6. DEVELOPMENT OPPORTUNITIES

EXPANDED CAPACITY WITH NEW DEVELOPMENT SITES (SEE FACING PAGE)

Square footage takeoffs listed here represent approximate gross square footage [GSF] for conceptual new building volumes shown in the SketchUp model on the facing page. Below grade usable space and rooftop penthouses are not considered. Data for existing buildings to be demolished is taken from available campus data and subtracted from new space to arrive at a net gain at each site. Added together, the building massing on the six sites provides a rough order of magnitude increase in assignable square footage for academic and support space to serve increasing student enrollment, and administrative and faculty needs into the future.

The gain from these concept developments assumes that existing academic buildings will remain in use with their current ASF totals and allocations. Renovation projects that expand capacity through increased efficiencies or building additions will further increase overall university capacity.

No specific timeline is suggested, but the urgent need for additional academic space is detailed in the Academic Space Assessment in this report. Development of each site will be influenced by a number of factors including available funding at time of design and construction; changes in pedagogy and learning environments; final building programs; and physical site constraints affecting final building heights and services.

The order of sites for this exercise was based in part on keeping current academic programs in service during construction of new facilities. Possible phasing strategies are described for each site. Some proposed developments could occur independently and out of sequence, such as residential improvements on Site 4 or a new building complex on Site 6.

	BUILDING NAME	STORIES	GSF	ASF[1]
SITE 1:	**INTERDISCIPLINARY SCIENCE BUILDING (1-A)**	8	160,690	96,697
	ASH to be relocated			
	SCIENCE CENTER ADDITION (1-B)	4	54,023	35,115
	SF Gained Site 1:		**214,713**	**131,812**
SITE 2:	**ACADEMIC CORE FACILITY (2)**	8/4	273,348	164,009
	SCI to be Removed		(91,366)	(55,862)
	SF Gained Site 2:		**181,982**	**108,147**
SITE 3:	**GATEWAY CITY COMPLEX (3-A)**	10	663,900	398,340
	ADM to be Removed		(39,358)	(25,143)
	DMH/IRC to be Removed		(75,371)	(47,768)
	STUDENT SERVICE & COMPUTER CENTER (3-B)	7	224,897	134,938
	HGH to be Removed		(66,525)	(41,035)
	SF Gained Site 3:		**707,543**	**419,332**

	BUILDING NAME	STORIES	GSF	ASF
SITE 4:	**CAMPUS VILLAGE 3 & DINING HALL (4-A)**	15/2	486,700	292,020
	WSH to be Removed		(38,332)	(22,778)
	CAMPUS VILLAGE 4 (4-B)	10	193,144	115,886
	DC to be Removed		(23,925)	(22,606)
	CAMPUS VILLAGE 4 (4-C)	10	194,120	116,472
	JWH to be Removed		(130,000)	(69,522)
	SF Gained Site 4:		**681,707**	**409,472**
SITE 5:	**BUSINESS TECHNOLOGY CENTER (5)**	10/4	675,200	405,120
	CYA to be Relocated			-
	CYB to be Relocated			-
	SF Gained Site 5:		**675,200**	**405,120**
SITE 6:	**ART COMPLEX (6-A)**	5/4	185,316	111,190
	MUS to be Removed or Replaced		(62,629)	(34,847)
	OPEN SPACE/FUTURE DEVELOPMENT PARCEL (6-B)	5/4	-	-
	ART to be Removed		(81,008)	(54,393)
	SF Gained Site 6:		**41,679**	**21,950**

Notes:

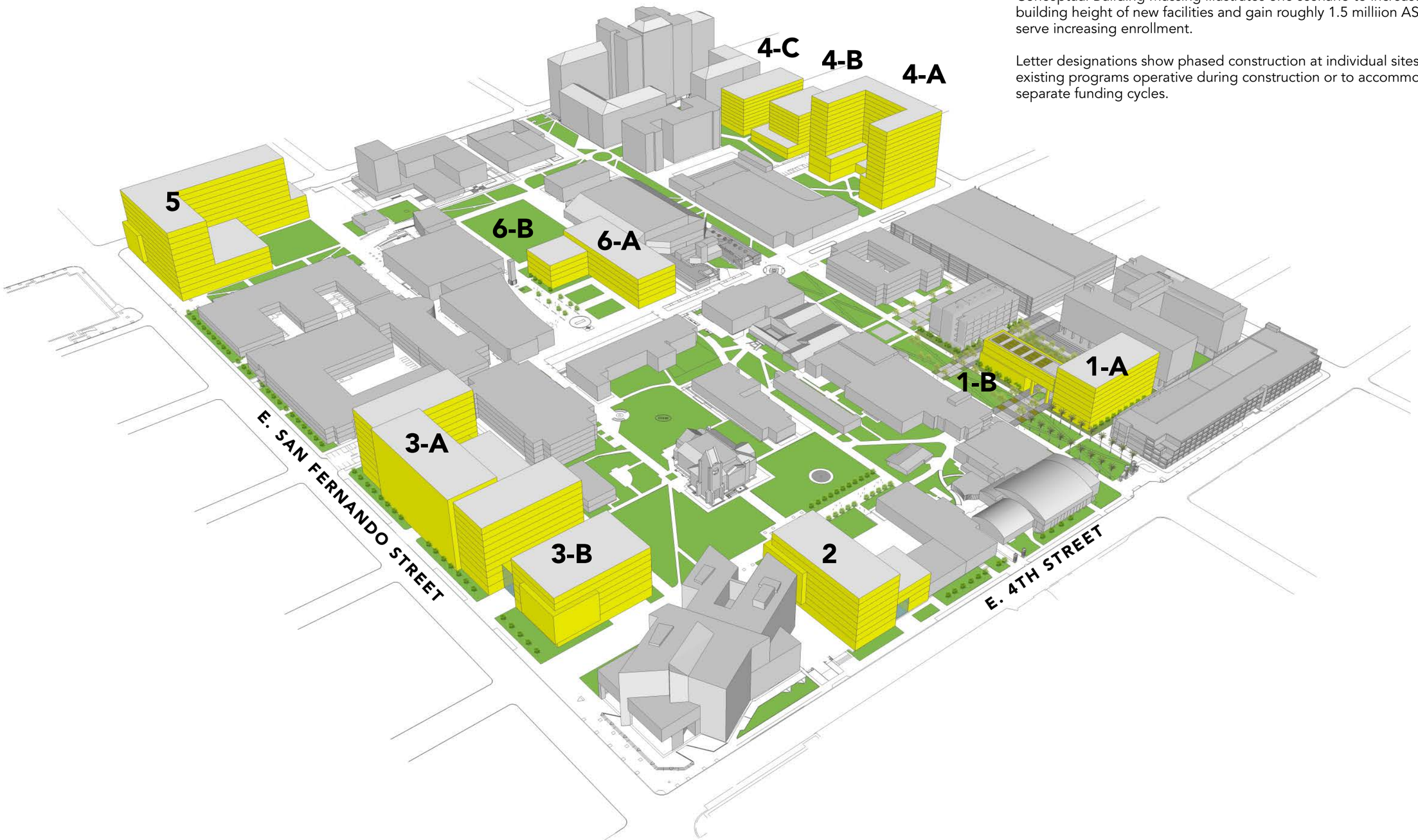
1. ASF for new buildings is computed conservatively at 60% efficiency
2. GSF and ASF for existing buildings taken from Campus Data

OVERALL SQUARE FOOTAGE BY SITE	GSF	ASF
SITE 1: SW	214,713	131,812
SITE 2: NW	181,982	108,147
SITE 3: NW	707,543	419,332
SITE 4: SE	681,707	409,472
SITE 5: NE	675,200	405,120
SITE 6: NE	41,679	21,950
Total SF Gained	**2,502,824**	**1,495,833**
ASF in Academic Buildings not including Site 4		**1,086,361**

2017 FACILITIES DEVELOPMENT PLAN

Conceptual Building Massing illustrates one scenario to increase building height of new facilities and gain roughly 1.5 milliion ASF to serve increasing enrollment.

Letter designations show phased construction at individual sites to keep existing programs operative during construction or to accommodate separate funding cycles.



SITE 1: INTERDISCIPLINARY SCIENCE BUILDING -- SW QUADRANT

Program & Opportunities:

Site 1 has been designated for a new Interdisciplinary Science Building (ISB) with Chemistry and Biology disciplines as major tenants. The new ISB [1-A] will provide state-of-the-art lab, research and storage facilities. Final building height is dependent on mechanical and code requirements for scientific lab use; current projections are for a building 8-10 stories high, with a mechanical penthouse on the roof.

Site Design:

Parameters include a generous entry court connecting to Duncan Hall and MacQuarrie Hall, at the intersection with Paseo de San Carlos and on axis to a future Tower Hall Promenade.

Phasing:

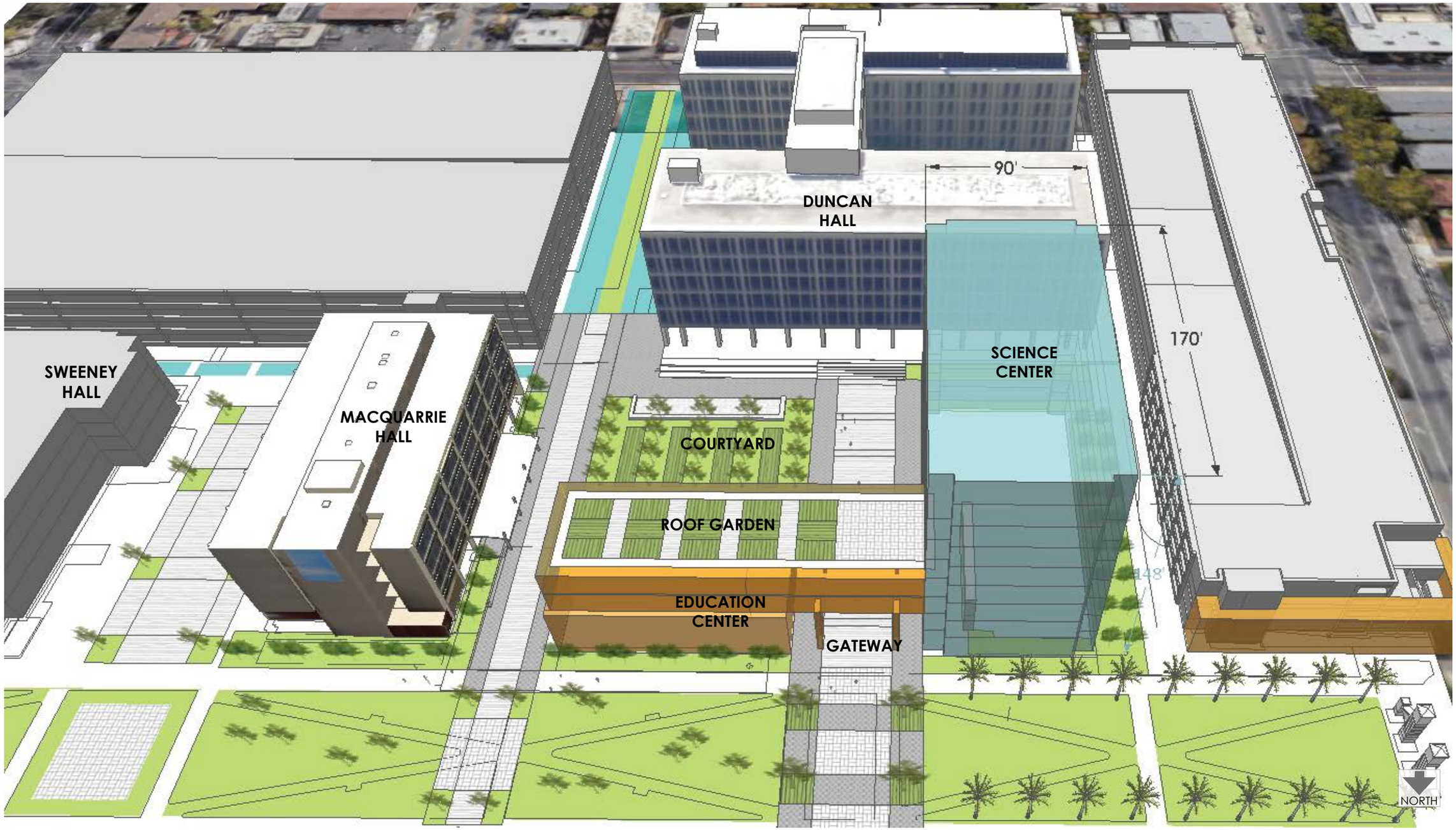
The new Center will permit relocation of faculty and students from poor and deteriorating facilities in the Old Science Building and adjacent Duncan Hall. Once operational, this new facility will also accommodate temporary occupancy of science programs from Duncan Hall while that building is extensively renovated in a two-phased construction sequence.

The second phase of the ISB [1-B] will provide additional multidisciplinary research and innovation space to support the university's growing reputation for science and technology education.

Site preparation requires the Associated Students House (ASH) to be relocated to another site, optimally nearer to the Student Union.

The end result of these moves can be a highly functional Science District.

SITE 1: LOOKING SOUTHWEST, WITH DUNCAN HALL IN THE BACKGROUND AND ASH TO THE RIGHT



SOUTHWEST QUADRANT PLANNING STUDY FOR THE NEW INTERDISCIPLINARY SCIENCE BUILDING INCLUDING A SECOND PHASE EDUCATION CENTER

SITE 2: ACADEMIC CORE FACILITY -- NW QUADRANT [WEST SIDE]

Program & Opportunities:

Fronting 4th Street and adjacent to the King Library, Site 2 is a strategic location to create a larger University presence in the City.

As one option, a larger academic building replacing the Old Science Building could increase classroom, faculty and support space including academic and administrative space lost to the demolition of Dudley Moorhead Hall and the Administration Building as part of the redevelopment of Site 3. It would be in close proximity to other multi-use academic buildings in the NW Quadrant.

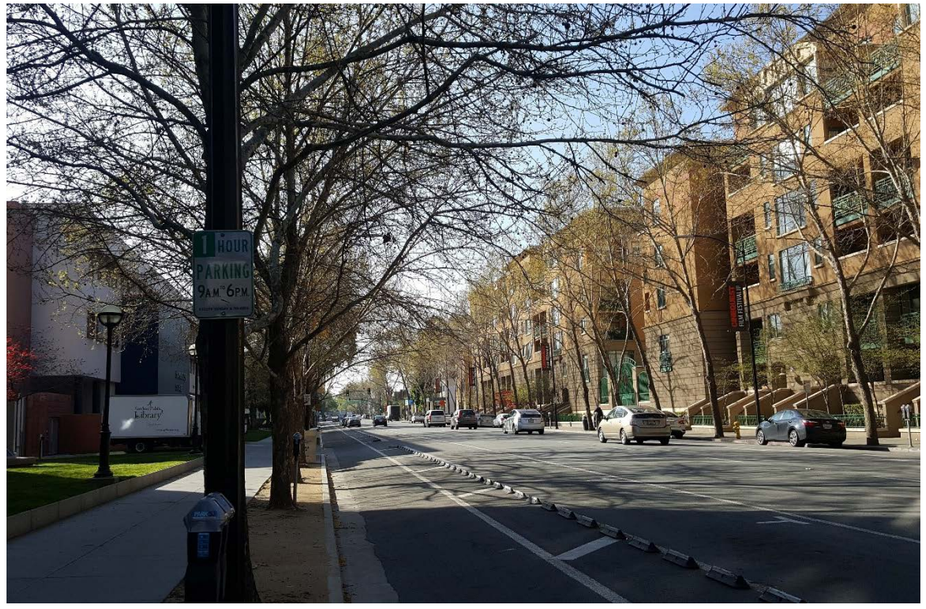
Site Design:

Building massing and height will need to relate to the contrasting expression and heights of the two flanking campus buildings.

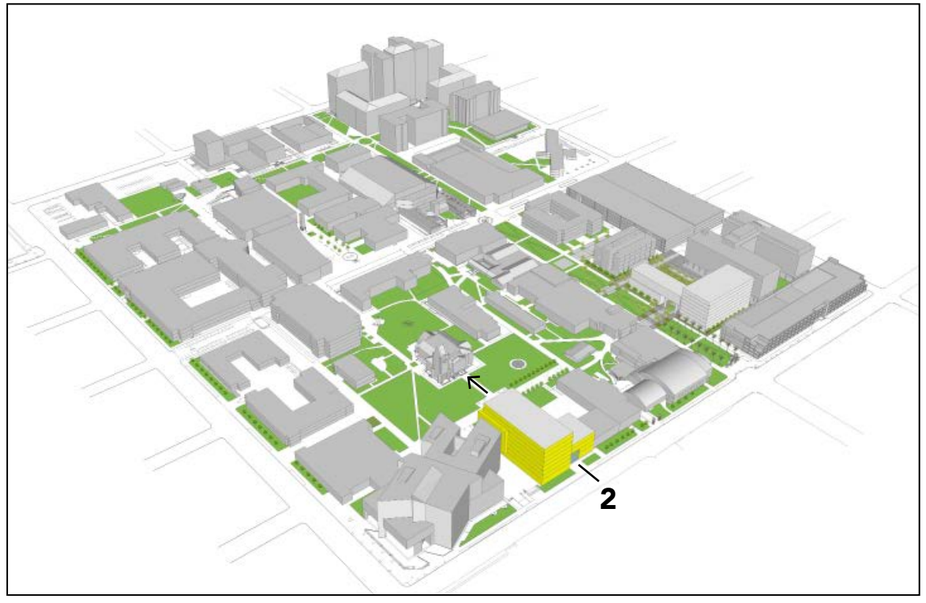
Street side, a glazed building entry could provide a strategic city view to the front door of Tower Hall. Enhanced outdoor courts on the campus interior could be shared with Washington Square Hall.

Phasing:

With remaining science programs relocated to temporary or permanent quarters, demolition of the old Science Building could immediately follow construction of the Interdisciplinary Science Building on Site 1. The NW quadrant becomes a strong academic district for social sciences, arts and general education.



CITY CONTEXT ACROSS 4TH STREET FROM DEVELOPMENT SITE 2



BEFORE: LOOKING NORTH AT SITE FOR A NEW ACADEMIC AND ADMINISTRATION FACILITY ADJACENT TO THE KING LIBRARY [SEEN IN BACKGROUND]

SITE 3: GATEWAY UNIVERSITY COMPLEX -- NW QUADRANT

Program & Opportunities:

A new high-rise complex along E. San Fernando Street will provide a major campus presence fronting the Civic Center, with views to and from City Hall. It would replace three Northside academic buildings which date back to the 1950s: Hugh Gillis Hall [1954] Dudley Moorhead Hall [1957], and the Administration Building [1957].

As one option, a multi-venue arts education facility could occupy the two east parcels [3-A]. It might house digital and performing arts, including film, theatre, music, and arts. A second facility to the east could house a new student advising and computer center [3-B]. In another scenario, a three-building complex might house a smaller Performing Arts Center for theatre, dance and film flanked by the student services building on the west, and a separate music building on the east. Either concept should include active, day-night ground floor uses such as cafes, retail, lecture halls and lounge spaces.

This complex is intended to expand the public-private realm, and to strengthen and support student and faculty use of study and lounge spaces in the library.

Site Design:

A large plaza is proposed to anchor this end of the new north-south Tower Hall Promenade aligned with Fifth Street. It is envisioned as a secure, active, programmed outdoor space, shared with the adjacent library, and serving student and faculty gatherings as well as visitors attending art events or lectures. Convenient street access for theatre move-ins, and nearby parking garages would support these uses.

Phasing:

Occupants from Dudley Moorhead Hall and the Administration Building could relocate to a new academic facility on Site 2 or to another existing facility. The two-phased development of Site 3 would allow Hugh Gillis Hall to remain in operation until occupants can relocate to the adjacent new Arts Complex. Hugh Gillis Hall could then be demolished for the construction of the second academic facility [3-B] lining the new Tower Hall Promenade. Renovation of the nearby Hammer Theatre to include a scene shop would also open up additional programming space in this new Gateway Complex.

BEFORE: EXISTING ACADEMIC BUILDINGS ALONG EAST SAN FERNANDO STREET

AFTER: CONCEPTUAL RENDERING SHOWS TWO NEW ACADEMIC FACILITIES ALONG EAST SAN FERNANDO STREET. THE ENTRANCE TO A LARGE ACTIVE PLAZA AT THE NORTH END OF THE PROPOSED TOWER HALL PROMENADE IS SEEN IN THE FOREGROUND.

SITE 4: EXPANDED RESIDENTIAL DISTRICT -- SE QUADRANT

Program & Opportunities:

The recent addition of Campus Village 2 [CV2] housing and the upcoming Spartan Recreation and Aquatic Center are already adding to a desirable student and faculty Residential District. A new high-rise complex replacing Washburn Hall, the existing Dining Commons, and Joe West Hall will substantially increase both housing capacity and campus amenities.

The first new building [4-A], on the site of Washburn Hall, could provide ground floor lobby, retail, and food service, with a state-of-the-art Dining Hall on the two floors above. Housing and student activity spaces would occupy upper floors. Building height is intended to match that of Campus Village A, increasing bed capacity and infilling the southern edge of the district. Views to and from dining areas should activate the surrounding district at all times of day.

Site Design:

New buildings should frame additional green space and complement the modern architecture of CV2 to offer two district housing styles: one traditional at CVA, B, and C, and one contemporary at CV2 and new buildings on Site 4. Service access will continue to be off 7th and 8th streets, and additional underground parking should be explored. Retail shops along 7th Street could improve this busy street frontage shared with vehicular access to the South Parking Garage and service deliveries using the interior roundabout.

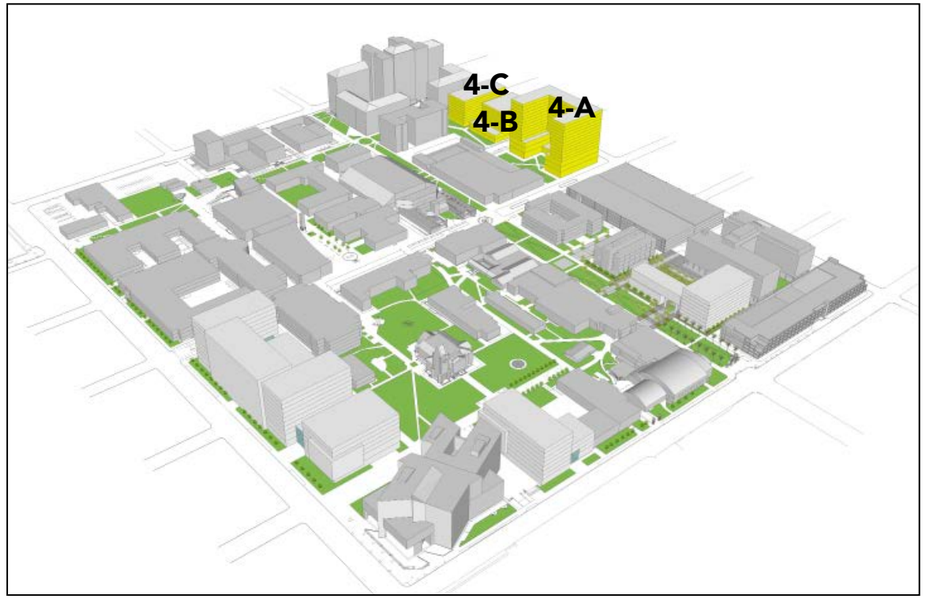
Phasing:

Phase 1 construction replacing Washburn Hall allows the existing Dining Commons to remain on-line during construction of a new Dining Hall. The number of beds out of service will also be substantially less if Washburn Hall is demolished first rather than Joe West Hall.

Phase 2 development [4-B and 4-C] could then replace Joe West Hall and the old Dining Commons with one or two additional residential high-rises serving both junior faculty and students. Increased height of these residential buildings is required to support continuing increases in student enrollment.

A student housing feasibility is now underway by Student Affairs.

VISIONING STUDY FOR A NEW RESIDENTIAL AND LEARNING NEIGHBORHOOD FOR UC SAN DIEGO [SAFDIE RABINES ARCHITECTS W/HKS ARCHITECTS AND CLARK CONSTRUCTION]



LOOKING NORTHEAST FROM SITE 4 TO CAMPUS VILLAGE A, B AND C WITH TRADITIONAL ARCHITECTURE

INNOVATIVE THINKING: THE NEW CORNELL TECH CAMPUS ON ROOSEVELT ISLAND IN NEW YORK [MORPHOSIS]

EXISTING CORPORATION YARD A BUILDING HOUSING FACILITIES DEVELOPMENT AND OPERATIONS

SITE 5: BUSINESS AND TECHNOLOGY CENTER -- NE QUADRANT

Program & Opportunities:

A high-rise signature building should eventually occupy this prominent corner site on campus. One option would be the construction of a new Business and Technology Center, with CIES classrooms consolidated here. Another option would be a new Business College with expanded capacity in a larger Tower wing; a Technology Center could then occupy the site currently occupied by the Business College.

Either option will densify the campus frontage, increase student and faculty activity at this end of campus, and support interdisciplinary programs with the Engineering and Industrial Studies departments. As a counterpoint to the new Science Innovation District in the SW Quadrant, an expanded academic complex in the NE Quadrant could anchor a Business and Technology Innovation District.

Site Design:

The new complex should include outdoor gathering spaces along the 9th Street Paseo and landscape links to adjacent facilities. The Associated Students House [ASH] is proposed to relocate nearby, with one possible site on 10th Street where it would also be a visible historic landmark for the city of San José. A new Portal at the 10th Street campus entrance, detailed similarly to the new Portal proposed at the opposite end of the new Paseo de San Antonio, could enhance campus visibility and heighten awareness of the adjacent college facilities.

The North Parking Garage would be convenient to all users of this new complex. For the foreseeable future, surface parking on the south side of the new facility should remain to provide for service vehicles, construction staging activities, and onsite accessible parking.

Phasing:

Should major building renovation projects elsewhere on campus require temporary relocations of academic staff and programs, a low-rise modular surge building on Site 5 could house rotating occupancies. It would be demolished for new development. To accommodate new construction, both FD&O and the Corporation Yard will need to relocate.

SITE 6: ART/MUSIC CENTER & "THE COMMONS" -- NE QUADRANT

Program & Opportunities:

Located directly across from the new Student Union and near to the Tower Hall Quad, Site 6 is highly desirable for development in the center of campus. The existing 1953 Music Building and the 1959 Arts Building are both in need of major renovation or replacement.

One option would be for music programs to relocate and occupy a larger portion of a new Arts Complex in the NW Quadrant. A new visual and sculptural arts facility would then replace the old Music Building at Site 6, and the existing arts building to the east would be demolished. Another option would be to restore the Music Building, replacing later additions and bringing the historic structure up to current standards for acoustics, accessibility, and academic programming; cost benefit analysis is required. All on-campus arts programs would then move to the new NW Quadrant complex.

Site Design:

A new entry court for the Art or Music facility would expand existing open space at the Student Union. Serving the entire campus, this enlarged plaza could be identified as "The Commons", with the new east-west Paseo passing through. With food service, seating and display space-- The Commons could be an important addition to student life on campus.

The east half of the Site [6-B] could function as a flexible green open space distinct from, rather than part of the Tower Lawn. This would also be a land banked site for future development.

Phasing:

Completion of a new arts complex on Site 2 would have to precede work on existing music and arts facilities on Site 6. Programming of the two sites should be jointly planned to ensure that academic and technical requirements for all users are closely coordinated.

BEFORE: PATHWAY ALONG THE NORTHSIDE OF THE EXISTING ART BUILDING WITH STUDENT UNION ON RIGHT

AFTER: NEW L-SHAPED ART OR MUSIC FACILITY ON SOUTH SIDE OF THE STUDENT UNION WITH ACTIVE, EXPANDED OUTDOOR SPACE IDENTIFIED AS “THE COMMONS”

7. OPPORTUNITIES TO IMPROVE EXISTING FACILITIES

OVERALL RECOMMENDATIONS

The following goals are intended to increase capacity and efficient use of existing academic and support spaces.

1. Conduct an in-depth study of each facility to determine where space allocations can be improved. Recommended improvements should reflect the latest Facility Conditions Assessment Report and current CSU academic data to prepare recommendations for renovations
2. Coordinate planned improvements with University programs for student success, including adequate advising space
3. Where data indicates, and where feasible, renovate existing lecture and lab spaces to meet SJSU scheduling targets for class sizes
4. Coordinate and prioritize renovation projects in line with necessary upgrades recommended in the campus Utility Master Plan
5. Update cost data for renovation projects to reflect current construction cost data for the San José Area
6. For planning purposes, take into account program needs of all users, including administrators, faculty, undergraduate and graduate students
7. With larger renovation projects:
    - Provide intentional program space near building entrances to improve indoor-outdoor connections while maintaining required exit paths
    - Increase daylighting and natural ventilation in public areas
    - Create welcoming, well-signed entrances
8. Incorporate accessibility upgrades in each renovation

THE CENTRAL CLASSROOM BUILDING (1925) REQUIRES SOME UTILITY UPGRADES

THE 1962 PORTION OF THE ENGINEERING BUILDING IS A CANDIDATE FOR MAJOR RENOVATION

SUSTAINABLE IMPROVEMENTS TO CAMPUS UTILITY SYSTEMS

Overview

The 2013 Utilities Master Plan provides a detailed summary of the ten utility systems serving the San José State University campus.[1] Overall, the systems are very well managed and maintained, with power, heat and cooling dispatched to facilities "at a global efficiency as high as 85%."[2]

Priority goals set in 2013 for the following two decades include:

- Moving away from reliance on fossil fuels and reducing the campus carbon footprint
- Planned rehabilitations to minimize shutdowns
- Modifications to operating and maintaining utilities to facilitate predictable, cost efficient budgeting

With desired campus growth ---increase in student enrollment and related facility expansion---advanced planning, adequate funding and implementation are critical to achieving the above goals.

The biggest hurdle are the recent targets for a reduction in greenhouse gas emissions approved by the California State University in May 2014 as part of an expanded systemwide sustainability policy. SJSU is one of ten campuses using STARS (Sustainability Tracking, Assessment & Rating System) to examine and report on sustainability activities.

Sustainable Focus and Utility System Upgrades

In response to the aggressive emission reduction targets, and as part of the campus-wide commitment to sustainable practices, SJSU is planning to install a new fuel cell Co-Generator plant within the next 5 years, and gradually replace the campus steam system with more efficient hot water service [which will require larger pipes].

Since 2006, SJSU has been reducing energy use and introducing sustainable practices including the following completed and planned improvements:

- A campus-owned and operated, separately piped, recycled water system uses City recycled water for all landscaping and toilets in new buildings [required to have dual plumbing system]
- Campus has own well which provides adequate domestic water with ties to City's domestic water system for back-up
- The steam system with underground tunnels has been highly reliable, but it is fossil fuel intensive and the campus is moving towards a districted heating hot water system
- The existing chilled water system will be upgraded to a loop system for load diversity [Some facilities like the Event Center will continue to have independent chillers for backup]
- The existing 6MW Co-Generator gas turbine is recommended to be replaced with fuel cell technology

Increasing Campus Capacity While Reducing Energy Demand

In 2013, the 20-year projection was for an additional two million square feet of built space [increasing from approximately 4 million square feet to 6 million].

The Concept Plan for Opportunity Sites in this 2017 Facilities Master Plan illustrates one scenario to add approximately 2.5 million square feet of capacity within the campus footprint in the long term.

In order to add new space and use existing space effectively, strict measures have to be adopted to result in an overall reduction in energy demand. Steps can include:

- Promote and eventually require net zero and net positive new facility designs for replacement buildings [generating all or more energy than they require]
- Schedule more class time within existing building footprints where energy systems are already in use [24-hour labs might be located together so some floors or entire buildings can be closed on weekends or all summer]
- Install solar systems wherever possible, although solar alone will not meet main campus utility needs. Solar panels are in the process of being added to the West and South Parking garages. There is no nearby land to create a large solar farm, but all new buildings on the South Campus, which is not connected to the main campus Central Plant, could add battery storage and photovoltaic systems
- Make building envelope improvements
- Continue to educate campus community about energy use and climate impacts [existing dashboard in Student Union, information campaigns]

[1] Campus systems include a central energy plant providing electricity, steam and chilled water to buildings; and separate utility systems for natural gas, fire water, domestic water, recycled water, sanitary sewer, and stormwater and telecommunications.

[2] San José State University Utilities Master Plan 2013, prepared by Salas O'Brien with contributions from University utility managers.

PRIORITY RENOVATIONS OF EXISTING BUILDINGS

Major Renovations of Existing Facilities

In addition to the facilities proposed for replacement on the six Opportunity Sites for Development, two academic buildings have been listed in previous reports as candidates for major renovations, These are Duncan Hall slated to start renovation following completion of the adjacent new Science Building in 2021; and the 1962 portion of the Engineering Building which requires substantial utility upgrades.

Second Tier Renovation Projects

The Computer Center on the north side of the Tower Hall Quad can function until replacement facilities are available. It is shown demolished in the 2017 Renovation Framework because of its location and also the need for the campus to upgrade technology services to keep pace with rapidly changing systems and energy regulations.

The Industrial Studies Building, primarily used for aviation studies and art, is in poor condition; it ranks below the other selections for major renovation in part because of the significantly greater capacity of both Duncan Hall and the Engineering Building to serve academic needs.

The Health Building which houses the School of Nursing needs major repairs or future replacement; an alternative location for temporary occupancy needs to be in place prior to start of work.

Campus Village A,B and C are in need of electrical, HVAC, fire detection, and plumbing improvements.

Deferred Maintenance

It is important that deferred maintenance projects identified and tracked by the Facilities Development and Operations be included in annual funding for capital improvements.

Historic Renovations

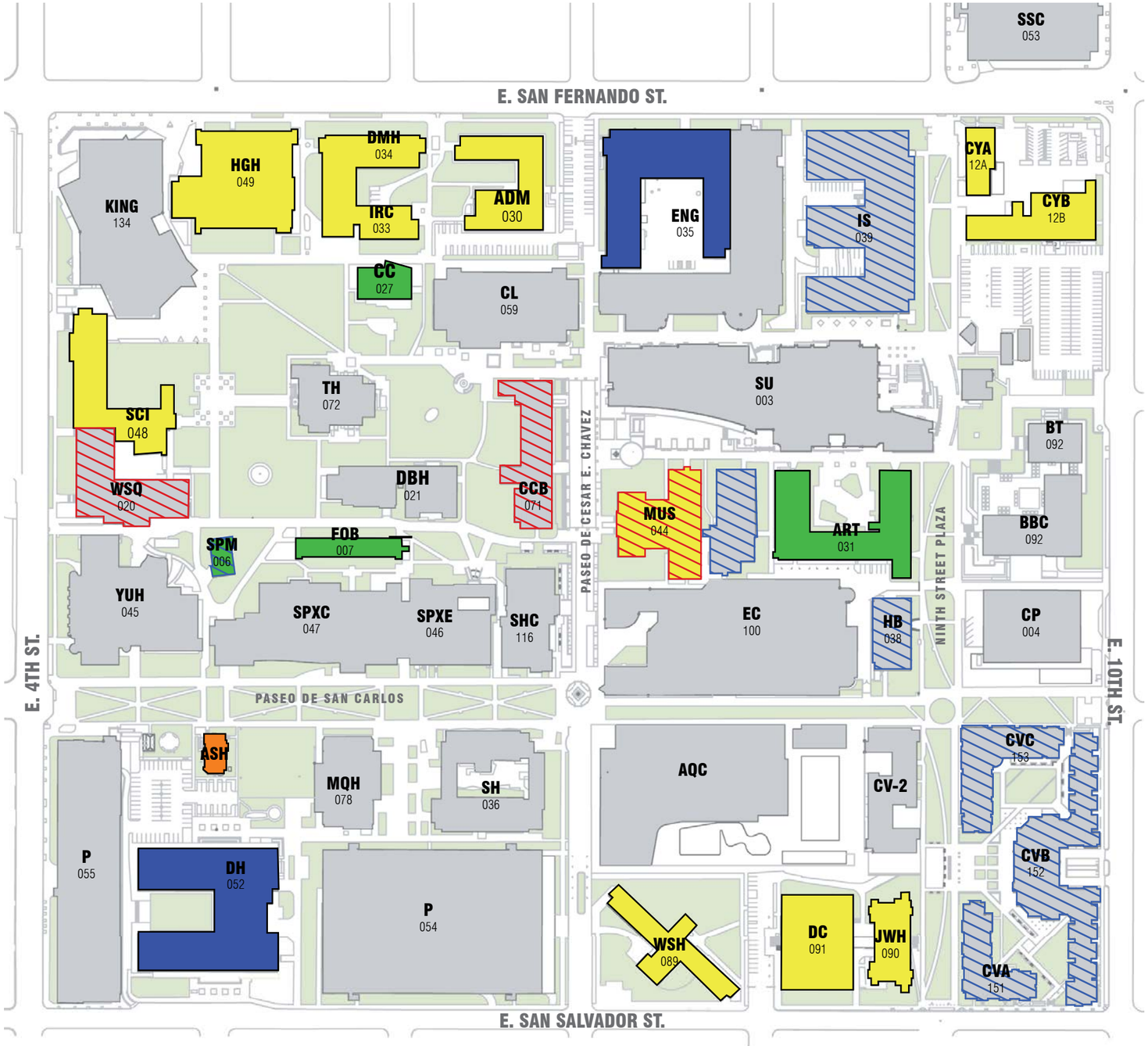
Based on the importance of the historic fabric of the campus to alumni and current students, the four designated historic buildings in the Tower Hall Quad should be renovated as needed to remain in service. The 2014 Facilities Conditions Assessment Report identified Washington Square Hall and the Central Classroom Building as needing utility upgrades.

There are three additional historic structures. The Associated Students House will be relocated to accommodate the ISB; the Spartan Memorial is a candidate for repurposing or demolition to expand use of this campus space; and the existing Music Building requires further study to determine effectiveness and cost of reuse.

ASSOCIATED STUDENTS HOUSE TO BE RELOCATED

DUNCAN HALL TO BE RENOVATED

WASHINGTON SQUARE HALL TO BE PRESERVED



KEY

- MAJOR RENOVATIONS
- 2ND TIER PRIORITY RENOVATIONS
- HISTORIC RENOVATIONS
- DEMOLISH & REPLACE WITH OPEN SPACE
- DEMOLISH & REPLACE WITH NEW FACILITIES
- RELOCATE

NORTH

TEACHING & LEARNING SPACE UPGRADES

The following goals from the Academic Affairs Working Plan – Priority 1: 21st Century Teaching and Learning Spaces [2014-2016][1] should continue to inform priority upgrades to existing classrooms:

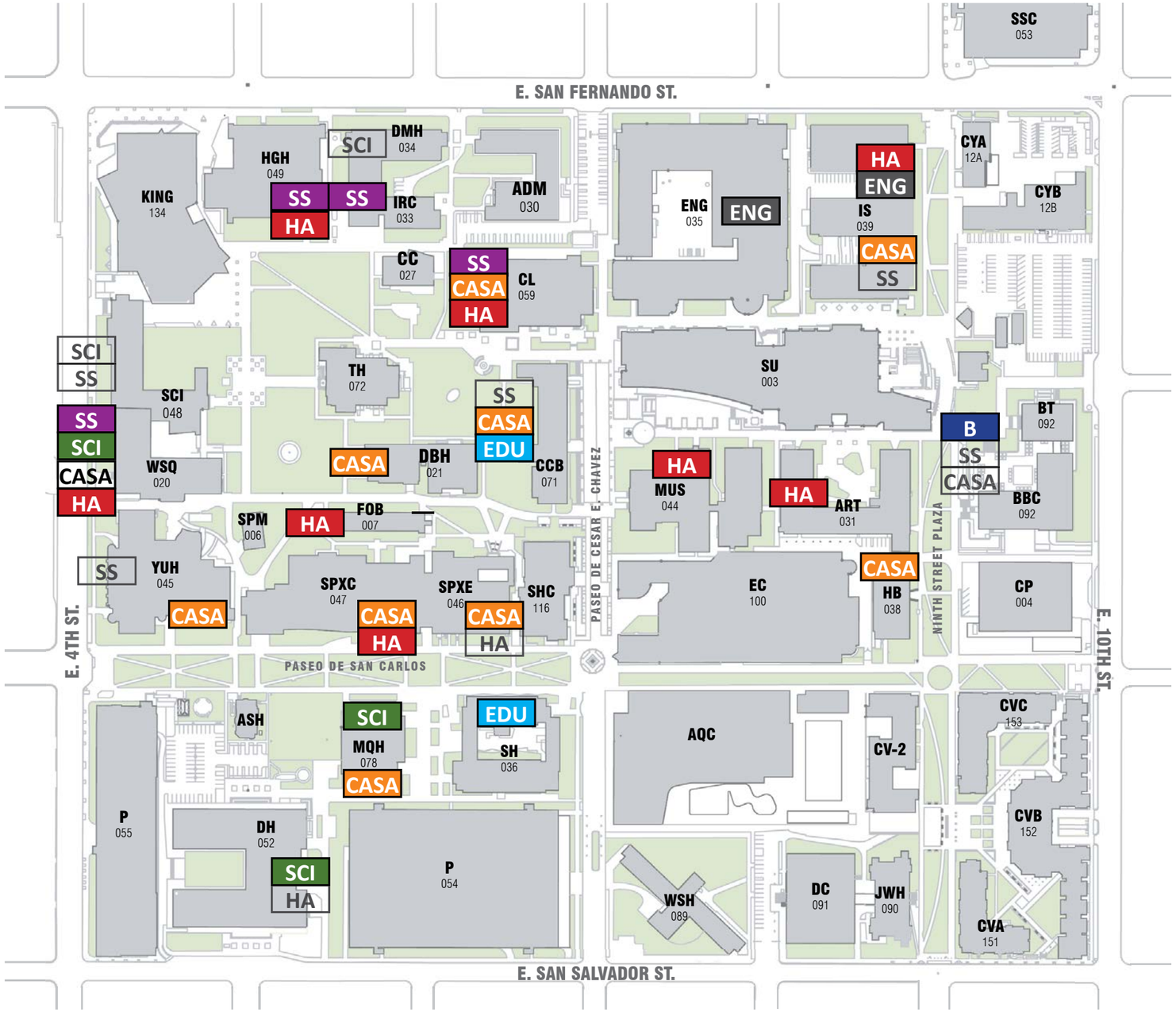
- Physical comfort in terms of temperature, space per student and seating types [e.g., students noted that lecture seating in Business College is too tight together]
- Functional furnishings and adequate maintenance
- Adequate overall space for accessibility, for efficient room change outs, and for avoiding trip hazards with good cord management
- Updated and reliable technology also including window shades, dimmable lighting, whiteboards not in conflict with projection screens

Additional measures to enhance teaching environments should include the following:

- Prioritize lecture classroom configurations to meet teaching needs
- Add smaller, flat floor lecture spaces for under 25 persons [recent classes have been assigned to larger classrooms due to availability, not demand]
- Convert some less desirable larger spaces to two smaller classrooms
- Incorporate new classroom models that allow multiple arrangements and quick changeups
- Replace classroom spaces that have been reassigned for administrative use
- Complete accessibility upgrades to all lecture rooms and update accessibility reports for other academic spaces
- Continue to add graduate research space in new and renovated facilities; this is an expanding use which was not part of CSU programming prior to 1990
- Take advantage of wide corridors to create additional lounge and waiting space for students while maintaining exiting requirements

CLASSROOM IN CLARK HALL IS LONG & NARROW; DIVIDED INTO TWO, IT COULD PROVIDE TWO IMPROVEDTEACHING SPACES FOR 25-PERSON AND UNDER OCCUPANCY

[1] At the direction of the Provost, and based on extensive faculty reviews of classroom space, the 21st Century Teaching and Learning Spaces planning team developed a series of recommendations for classroom improvements to be undertaken between 2014-2016. 94 classrooms were selected for upgrades. FTEs were used to assign impact to those receiving priority.



CONSOLIDATING ACADEMIC PROGRAMS BY COLLEGE

There are opportunities to increase efficient use of space by consolidating existing smaller program spaces with primary administration and teaching spaces for each college.

Using 2014 data in this scheduling illustration, the biggest impact would be for the College of Social Science to consolidate offices and scheduled classrooms in four buildings in lieu of nine. The College of Science, with its new building and renovated Duncan Hall, could reduce existing locations from five buildings down to two. Relocated classroom space is shown as removed ["RMV"] from its current location.

CIES has 12 dedicated classrooms which are not called out individually on this plan but which should be consolidated if feasible as part of an overall reassignment process.

Future enrollment and academic programming updates will necessarily revise any single scenario. There may also be extenuating circumstances related to joint college programs, faculty office locations, or availability of classrooms, but the goal should be to maximize space usage while minimizing time for both students and faculty to arrive at assigned class locations.

KEY

- CASA — 9 bldgs. (11)
- EDUCATION — 2 bldgs.
- SCIENCE — 2 bldgs. (5)
- SOCIAL SCIENCE — 4 bldgs. (9)
- ENGINEERING — 9 bldgs. Adjacent + Aerospace
- BUSINESS — 2 bldgs. Adjacent + Lease Space
- HUMANITIES & THE ARTS — 8 bldgs. Adjacent (10) + Sculpture Facility, Hammer Theatre, Foundry
- PROGRAM SPACE RELOCATED (11) (E) bldg total
- + = OFF CAMPUS

NORTH

CAMPUS SUCCESS INITIATIVES

The student population is ethnically diverse and active, with over 440 clubs, fraternities and sororities in walking distance, and more than 3,800 students living on campus. Another 6,900 students live within 1.5 miles of campus. The south campus, 2 miles away, provides intercollegiate athletics and physical education programs.

Enhance Existing Student Life Facilities

- Identify space in campus buildings for regular club use that does not conflict with academic scheduling
  - Create usable nighttime meeting space in library
- Protect existing student life program areas from being repurposed
  - Adequate administrative space should be provided in new and renovated academic facilities to retain needed study, meeting and lounge space for students in Student Union
- Continue to improve site lighting and nighttime security across campus
- Design more food spaces around campus
  - All six opportunity development sites accommodate additional food service. Some new building frontages could also accommodate future retail tenants to enliven streetscapes
- Program new and renovated facilities to include quiet study space
  - Student Union is generally a noisy and crowded social environment
  - CV2 is an example of a residence hall with programmed quiet study space
- Build in sufficient storage space for equipment and supplies
  - Space needed for rental equipment for events
- Consider dedicated commuter space including lounge space and showers
- Consider Friday classes to maintain activity on campus and extend scheduling of existing facilities; energy usage will be a factor in class scheduling

Support Scholarly Community

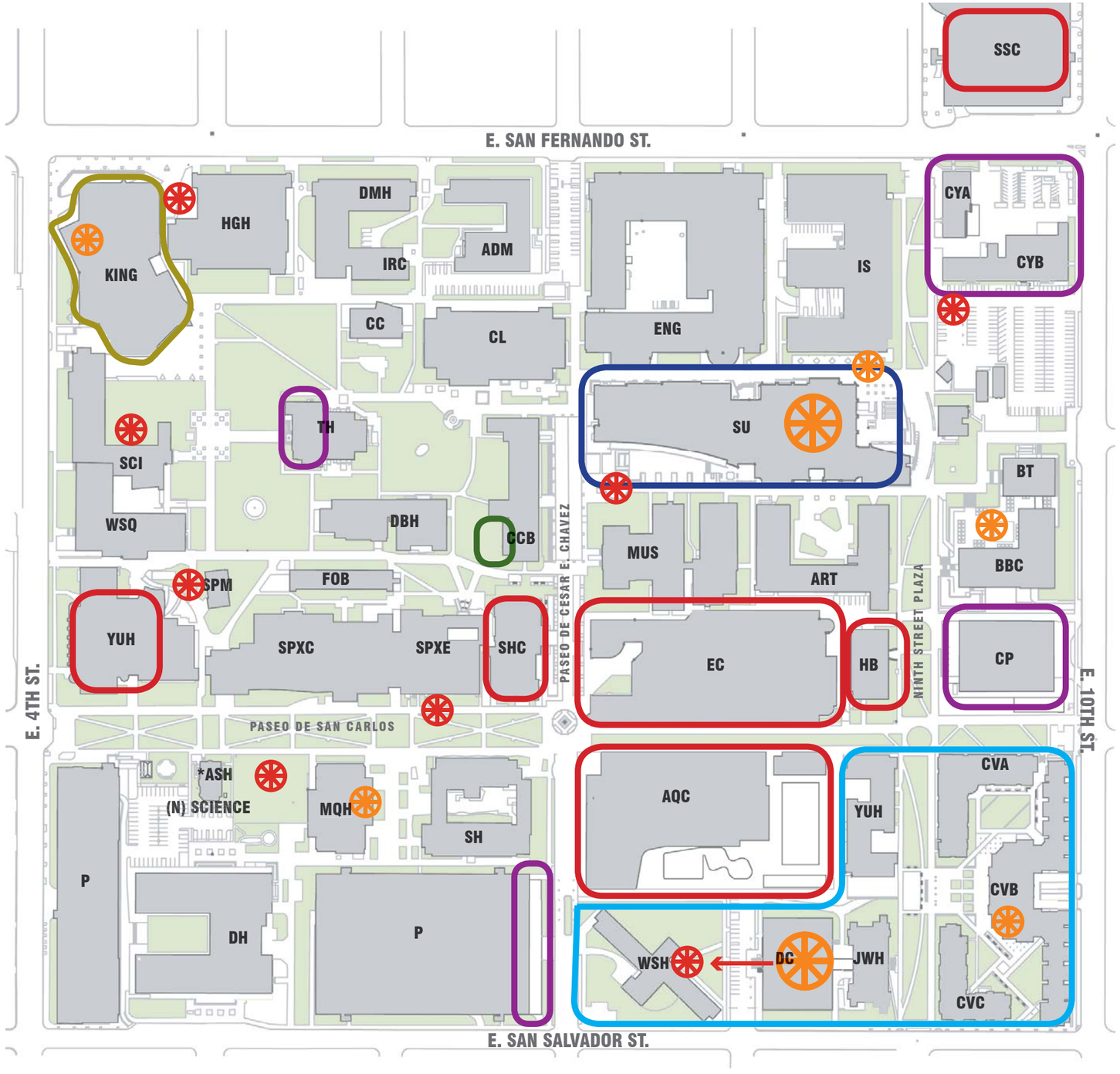
- Review faculty office assignments:
  - New offices should be programmed for individual occupancy for full-time faculty
  - Group faculty offices to facilitate collegial interaction
  - Provide private space for conference calls and student conferences which could be shared, scheduled space near open offices
- Provide dedicated labs and studios for faculty research, creative activity and other forms of professional development (as incentives for faculty hiring and retention)
  - Design a variety of spaces for collaboration among faculty and between faculty and students
- Continue to expand "Next Generation" meeting spaces with advanced audio\video and telepresence [remote control video conferencing] technology
- Provide college and department administrations with central office, storage and conference room facilities near faculty office clusters
- Explore options to make affordable housing accessible for faculty (and staff). Possibilities may include
  - Long term lease agreements or purchase of existing buildings close to the University for conversion to housing
  - Developer partnerships or private financing to build new off campus housing

Strengthen and Promote Community and City Connections

- Promote CommUniverCity programs to the campus community
  - A multidisciplinary team of faculty, community residents, community benefit organizations, and city agencies provide services to underserved neighborhoods in central San José
- Share information on off-campus facilities as University assets
  - Hammer Theatre, the Art Sculpture Facility on south Fifth Street, offsite Business conference space, and the student-run Chavez Child Development Center are a few examples of the University's connections to the city
- Continue and increase well-established connections to nearby technology industries for internships, mentorships, and eventual employment

STUDENT STUDY AND LOUNGE SPACE IN STUDENT UNION

COMMUNIVERCITY'S JUSTICE STUDIES PROGRAM ASSISTS DACA APPLICANTS WITH ELECTRONIC APPLICATION FORMS



STUDENT LIFE FACILITIES

The University, including an active Associated Students Auxillary, supports a diverse range of recreational and social activities across campus, including scheduling meeting space for over 400 student clubs (see proposed enhancements listed on the opposite page).

More permanent food venues are needed, notably in the NW Quadrant to provide more choices for the campus community over the academic year.

KEY

- EXISTING FOOD
- NEW FOOD
- STUDENT UNION
- RECREATION + WELLNESS
- STUDENT HOUSING + SUPPORT
- DAYCARE
- LIBRARY
- EXISTING ADMINISTRATIVE & SUPPORT FACILITIES

Three Food Trucks move around campus; not shown.

NORTH

STUDENT SUCCESS INITIATIVES

As part of the university commitment to reducing time to degree, Academic Affairs and Student Affairs are providing services to support increasing unit loads and to increase student connection to campus.

Increasing overall enrollment will also require amenities for faculty support and success.

Student Success Centers

New Student Success Centers have been added to seven colleges for undergraduate students majoring or wanting to major in related disciplines. The goal is to provide general peer advising and to direct students to free tutoring assistance, while also offering a dedicated lounge space to meet and study with colleagues. At some locations, laptops are available for takeout.

Important factors for these centers include:

- Clear signage and wayfinding; locations are not always obvious
- Inviting entrances
- Group seating areas; students still cluster in lobbies where the sense of community is present
- Semi-private or private advising areas to encourage student use

Increased On-campus Housing for Students

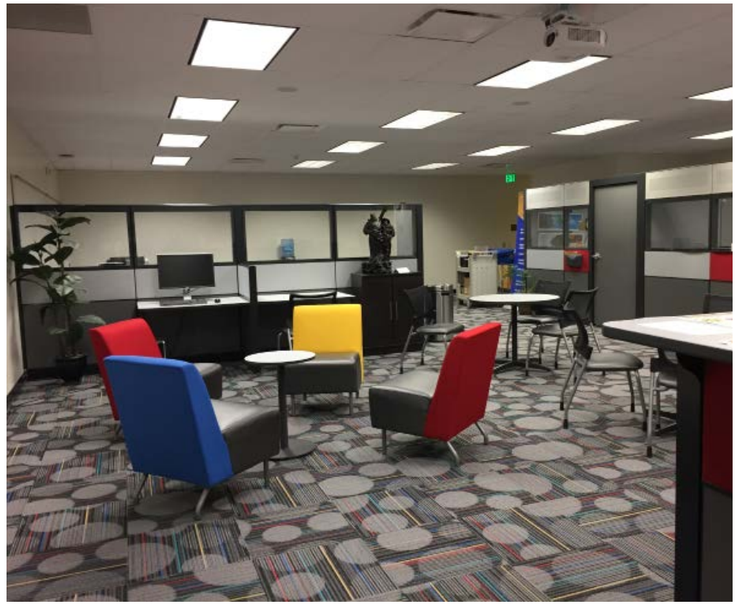
The University is continuing to expand residential housing capacity for students with a full component of food service, lounges, and classroom spaces that also serve summer conferences.

ENGINEERING STUDENTS CHOOSE TO HANG OUT IN UPPER LEVEL LOBBIES

BUSINESS STUDENTS STILL HANG OUT IN CORRIDORS

STUDENT SUCCESS CENTERS NEED IMPROVED SIGNAGE AND WELCOMING ENTRANCES

SOME LOBBY SPACES [CLARK HALL SHOWN] MIGHT BE REPURPOSED FOR STUDENT USE



HA STUDENT SUCCESS CENTER - CLARKE HALL 2ND FLOOR

SOCIAL SCIENCE STUDENT SUCCESS CENTER - CLARKE HALL 2ND FLOOR

EDUCATION STUDENT SUCCESS CENTER - SWEENEY HALL

CASA STUDENT SUCCESS CENTER - MACQUARRIE HALL 5TH FLOOR

ENGINEERING STUDENT SUCCESS CENTER - ENGINEERING 3RD FLOOR

BUSINESS STUDENT SUCCESS CENTER - BBC GROUND FLOOR

8. ACADEMIC SPACE NEEDS ASSESSMENT

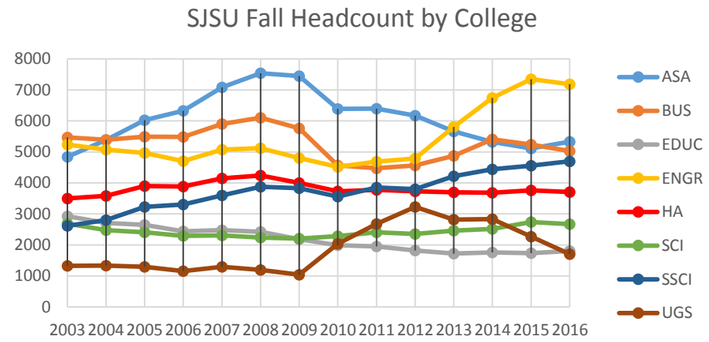


Figure 1. Fall Headcount by College, 2003-2016

INTRODUCTION TO ACADEMIC SPACE NEEDS ASSESSESSMENT

Fundamentally, enrollment drives space requirements in the California State University system (CSU). Of course, the relationships are more complex, as academic policy, curricula, funding sources, demographics and external demand all influence enrollment. Enrollment itself is multidimensional – major, student level, pedagogy (mode of instruction), technology, and course scheduling. And universities need facilities for faculty development, student housing, support services, and administrative functions as well as teaching and learning.

This analysis begins with a summary of the colleges and their academic programs. It then moves on to more detailed discussion of recent trends in enrollment by student level, pedagogy and mode of instruction, faculty professional development, and support space needs. The following section projects the magnitude of enrollment, staffing, and academic space needs to be met in order for San José State University to reach its current Master Plan enrollment ceiling.

Quantification of academic space needs is based on the most recent CSU analysis of enrollments and the space and facilities database (SFDB) for the University on file in 2016.[1] The CSU formulas focus on meeting the instructional needs of scheduled classes and labs supported by the General Fund that meet face-to-face on campus. The formulas are based on the assumption that space can be assigned efficiently to meet utilization standards; and do not address the age, location, configuration, quality or other space attributes that are critically important to teaching and learning.

In sum, the CSU space generation formulas indicate that San José State University has built sufficient space for direct instruction (classrooms and laboratories) at present enrollment levels, but will need additional space to meet future enrollment growth to and beyond the current Master Plan ceiling. Even at present, however, some teaching spaces, particularly lecture space, are not sized and configured appropriately for current instruction. Further, the University lacks the critical support and research space that students and faculty need for their studies and professional development.

The challenges going forward include both reconfiguring facilities to meet contemporary and future needs to support teaching and learning and expanding facilities to accommodate future enrollment growth, when current facilities no longer have sufficient capacity for instruction.

Appendix A1 summarizes present trends and future needs from the perspective of college stakeholders.

RECENT ACADEMIC & ENROLLMENT TRENDS WITH SPACE IMPLICATIONS

Analysis of enrollment trends at San José State University over the past decade and a half (since the adoption of the 2001 physical master plan for the campus) illustrates how changing patterns directly affect space needs. The following analysis addresses these aspects of academic programs, student enrollment, faculty, and their space implications.[2]

- College Enrollment Patterns and Trends
- Student Profile
- Pedagogy and Mode of Instruction
- Faculty Profile
- Support and Research Space

College Enrollment Patterns & Trends

Student Majors by College

Enrollment patterns in the colleges are affected by their reputation for program quality and external factors, including demographic trends and economic conditions. San José State University's location in Silicon Valley attracts students to programs in Applied Sciences and Arts, Business, Engineering, and the International and Extended Studies. State policy and funding affect student interest in Applied Sciences and Arts, and Education (particularly teaching credential programs). Colleges with some of the less well-known fields (called "discovery majors") appeal to undeclared students through their General Education offerings, and typically enroll more upper than lower division students. Further, growth in some high demand fields ("impacted" programs) is constrained by faculty availability and/or facilities as well as operating budget.

The College of Business was the largest college in 2003, but was surpassed in headcount in 2005 by Applied Sciences and Arts, which enrolled about one-fifth of all SJSU students through 2012. The Business share is now stabilizing at about 16 percent. Engineering passed Business in 2011 and Applied Sciences and Arts in 2013, growing to over 22 percent of total headcount. Humanities and the Arts, and Social Sciences have traded places, with Social Sciences now fourth, increasing from 9 to 14 percent of total headcount, and Humanities and the Arts in fifth place. Science is next with a stable share of about 8 percent; and Education is the smallest college with a share that has declined to just over 5 percent. The proportion of undeclared undergraduates has changed dramatically, with a current share of about 5 percent of total headcount. See Figure 1.

[1] The CSU data uses 2014-15 enrollments as the baseline, as more recent years had not yet been analyzed at the time this report was prepared. The SFDB will next be updated in Fall 2017. The CSU standards are contained in the State University Administrative Manual (SUAM): see http://calstate.edu/cpdc/SUAM/

[2] This analysis uses Fall semester data, as enrollment is generally higher during that term and thus space requirements follow. The primary sources are the SJSU Office of Institutional Effectiveness and Analytics and its web-based data warehouse; the SJSU Facilities Planning and Operations office; and the CSU data posted on the Analytic Studies, and Capital Planning, Design and Construction (CPDC) websites. Comparable data is available for multiple reports dating back to 2003, so Fall 2003 is the base year for most of this analysis, and Fall 2016 represents current data. Interviews with campus stakeholders, including college deans and associate deans, and administrators from Academic Affairs and Student Affairs contributed to the interpretations and explanations of patterns and trends.

Course Offerings and Enrollments by College

Because the curricula and other requirements vary by major and student level, course demand shifts as student enrollment patterns change. Figure 2 shows this in summary form for the past decade and a half. Most directly, the increase in students in Engineering and decrease in Education are matched by growth or decline (respectively) in courses taught, measured cumulatively as Full-Time Equivalent Students, or FTES taught.

However, as Figure 3 indicates, the relationships are more complex because undergraduates, particularly at the lower division, take General Education and support courses across the University.

The most obvious effects are on the colleges of Science and Humanities and the Arts, which experienced little change in the number of majors, yet offered significantly more courses to serve enrollment growth in other disciplines. In comparison, while the number of majors increased in both Engineering and Social Sciences, the FTES taught by these colleges did not grow as much, because their students also take classes in Humanities and the Arts, and in Science.

Current College Enrollment Patterns with Facility Implications

The colleges at San José State University can be grouped as follows based on enrollment patterns and trends, and space implications:

- **Business and Engineering** are large colleges that primarily teach their own undergraduate majors (although they depend on other colleges for General Education and support). They have stable or growing graduate programs with a professional, even corporate orientation, and see Special Session as an opportunity. They make adjustments in course offerings based directly on changes in the number of their own students. Their need for teaching space follows, and currently each college is largely housed within two buildings near to one another.
  - Business sees strength in general business programs at the undergraduate, career-entry level, but interest in the Master of Business Administration (MBA) has declined. At the graduate level more specialized programs like Taxation are growing.
  - Engineering is particularly strong in Electrical, Computer and Software engineering at both the undergraduate and graduate levels. Mechanical Engineering is also growing at the undergraduate level.
  - Both colleges currently have significant numbers of international students.

- **Humanities and the Arts, Science, and Social Sciences** are large colleges that are the primary providers of General Education (and support courses) and thus teach a majority of their undergraduate courses to students in other colleges, particularly at the lower division level. They have modest graduate programs and very little involvement in Special Session. Their need for teaching space tends to be divided – (1) general lecture and lab space for General education and support courses, depending primarily on enrollments in other colleges; and (2) more specialized facilities for their own majors, particularly at the upper division level. These colleges occupy a number of buildings dispersed across the campus, particularly Humanities and the Arts and Social Sciences. The planned new interdisciplinary science building will consolidate science facilities in the southwest quadrant of the campus.
  - Humanities and the Arts has seen demand in Design Studies (with its digital emphasis) and sees future opportunities in undergraduate Liberal Studies and graduate Linguistics and Language Development programs.
  - Science has significant strength in Biological Sciences at the undergraduate level, and sees growth in health-related fields at the graduate level.
  - Social Sciences has seen growth in Communication Studies; and Psychology remains strong. Undergraduate enrollment in Anthropology, Economics and Environmental Studies has been growing as well.

- **Applied Sciences and Arts** is a hybrid. It is large like Business and Engineering, and has strength at the graduate professional level and, especially, in Special Session. However, this college also offers a varying array of classes to students in other colleges, so course and space needs, particularly at the lower division level depend on enrollments from other colleges. Like Humanities and the Arts, and Social Sciences, Applied Arts and Sciences needs more specialized facilities at the upper division

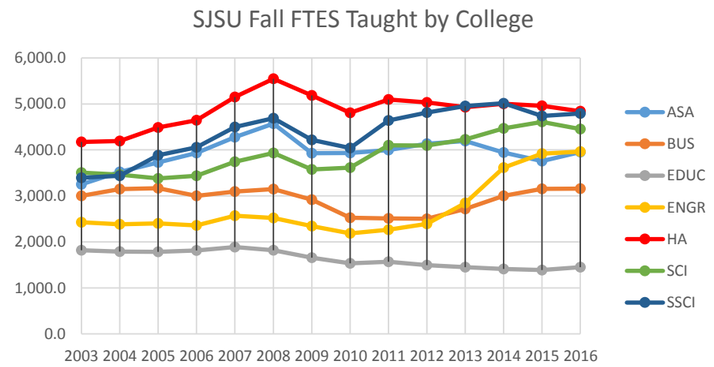


Figure 2. Fall FTES Taught by College (2003-2016)

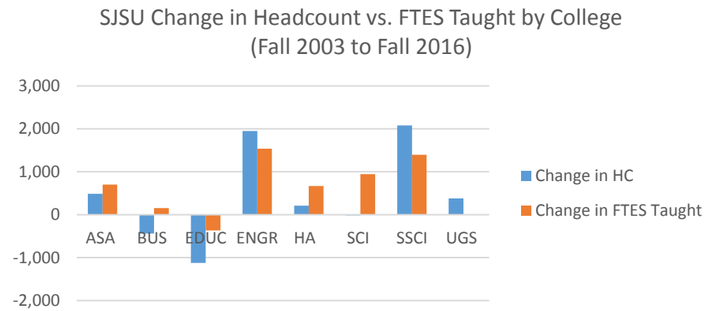


Figure 3. Change in Headcount Compared with Change in FTEWS Taught by College (Fall 2003 - Fall 2016)

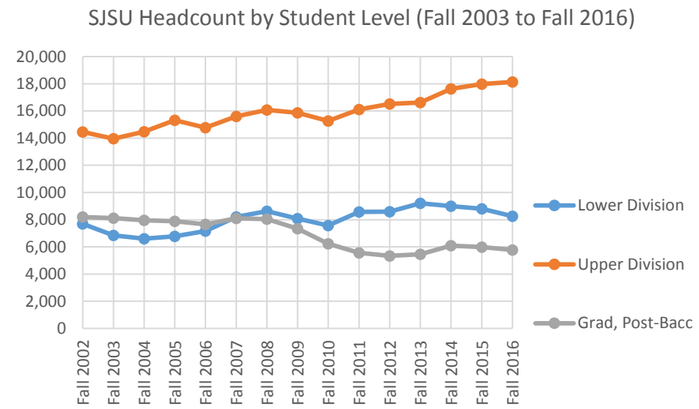


Figure 4. SJSU HeadCount by Student Level (Fall 2003 to Fall 2016)

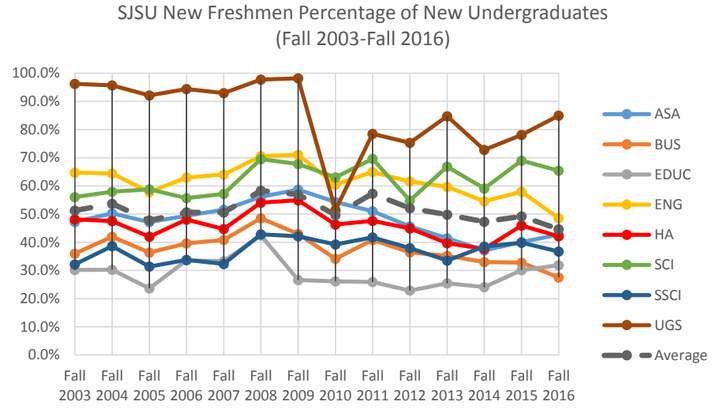


Figure 5. New Freshmen as a Percentage of New Undergraduates (Fall 2013 - Fall 2016)

for its own majors, and its space is dispersed across the campus.

- Applied Arts and Sciences sees particular strength and/or growth opportunities in the applied, health-related fields, which are moving toward more graduate and even doctoral programs. Library and Information Science is very strong in Special Session.

- **Education** is unique. It is not only the smallest college, but also the only one in which graduate and credential enrollment exceed undergraduate enrollment. Education has virtually no involvement in Special Session. It is also distinct in that it is currently housed within one building.
  - Education's strong programs are in Child and Adolescent Development (undergraduate) and Counselor Education (graduate). Teaching credential program enrollment varies with external demand. The doctoral program in Educational Leadership is stable and Education is anticipating a new doctoral program in Audiology.

- **International and Extended Education (CIES)** has a distinct dual role – to increase and support international student enrollment and to sponsor Special Session and extension programs, which serve additional students and generate revenues beyond state-supported programs. CIES is interested in increasing international students at the undergraduate level and providing a full range of support services for these students. CIES is also expanding Special Session (particularly in graduate professional fields) and extension programs in a wide range of formats. Programs delivered online or off campus do not compete with state-supported programs for classroom space, whereas those offered during the day on campus do.
  - Business and Engineering currently have the largest international student enrollment.
  - Applied Arts and Sciences, and Business have the strongest presence in Special Session, and Engineering and Science have smaller programs.

Student Profile

Fall headcount in state-supported programs at San José State University in 2016 was 32,157.[3] Since 2003, the student headcount in state-supported programs has increased by more than 12 percent and instruction (FTES taught) has grown by over 22 percent. CSU policy and variation in state funding has affected annual change, with growth from 2003 to 2008, a sharp decrease in 2010, and an increase since then.

Figure 4 shows the distribution of students by level, indicating that the proportion of graduate students has decreased while undergraduates, particularly at the upper division level have increased.

Undergraduate Enrollment

Undergraduate enrollment has grown more rapidly than the University as a whole – at nearly 20 percent, with a 25 percent increase in instruction. San José State University has almost doubled the number of new undergraduates – to about 3,200 new freshmen and 4,000 new transfer students in Fall 2016. In addition, improved retention rates have contributed to a larger total headcount and an increase in the average unit load from 12.06 to 12.69 has increased the amount of instruction.

The average age of undergraduates is younger (nearly 22 percent are 19 and younger, and another 59 percent are between 20 and 24). Since 2012, male students constitute more than half of the undergraduate enrollment, a reversal of a national trend, which is likely an effect of the growth of the College of Engineering (discussed below). Among undergraduates the proportion of white students is decreasing (now under 18 percent) and Latino students increasing (now over 26 percent). The proportions of students from other ethnic backgrounds have been more stable, with Asian-American students continuing as the largest single undergraduate group (at over 35 percent).

During the past decade and a half, the balance between lower division and upper division undergraduates has shifted, as also shown in Figure 4. In Fall 2003 just over half of the new undergraduates were freshmen. This percentage increased to nearly 60 percent in Fall 2008 and Fall 2011; then declined to just under 45 percent in Fall 2016. These patterns differ greatly by college, as shown in Figure 5. Engineering and Science (and Undergraduate Studies) have historically enrolled more new freshmen whereas the other colleges have enrolled more new transfer students.[4]

[3] Data refers to state-supported instruction unless otherwise noted. Special Session refers to students matriculated in degree programs through the College of International and Extension Education (self-support). Special Session enrollment has increased by over 1,000 students since 2005 to over 2,600 students in Fall 2016.
[4] This pattern shifted for Engineering in Fall 2016, when just over half of their new undergraduates were transfer students.

The University aspires to balancing the number of new freshmen and transfer students each year but has been challenged by changing yields affected by external factors as well as internal admission practices. For example, freshman yields have decreased when the University of California has increased its freshman admissions, and transfer yields increased in Fall 2016 with the implementation of supplementary admission criteria (presumably because students who took the time to provide the additional information were more committed to attending the University). See Figure 6.

Graduate, Credential & Other Post-Baccalaureate Enrollment

In Fall 2003 nearly 30 percent the new students were graduate students and nearly 8 percent were teaching credential students. Since then, the number and share of graduate and credential students has declined to 21 percent and 2 percent (respectively) of new students in Fall 2016.[5] The size of graduate programs varies significantly, with large and growing graduate programs in Engineering; and large, but declining, graduate enrollments in Applied Arts and Sciences (in state-supported programs). Graduate enrollment in the other colleges is modest, and Education focuses on teaching credentials, master's degrees, and the doctoral program in Educational Leadership.

Graduate student headcount has declined, yet instruction has increased, as programs have shifted from enrolling relatively more part-time students to fewer students taking higher course loads (up to 8.98 units for grad students and 11.81 for credential students in Fall 2016). In addition, the number of teaching credential and non-degree, post-baccalaureate students has decreased. Graduate students are also younger than in the past, with over 70 percent less than 30 years old. Women outnumber men at the graduate level, yet the share of male students has been increasing steadily, to 46 percent in Fall 2016. Similar to the trend in the undergraduate population, the proportion of white students has decreased (to about 22 percent) and of Latinos has increased (to about 14 percent). In contrast to the undergraduate population, Asian-American students are now less than 15 percent of graduate students. International students (often from South and East Asia) constitute the largest group of graduate students (at 39 percent).

International Students

San José State University now hosts over 3,400 international students, most of them in state-supported programs; and over 1,200 domestic students from other U.S. states, most of whom are in Special Session programs.[6] Enrollment of international students can vary over time depending upon political conditions in both their home countries and the United States.

General Space Implications

In addition to the overall growth in headcount, the increase in instruction associated with increased retention and a higher average unit load mean that colleges need space to schedule enough sections to avoid or reduce bottleneck classes and to meet course demand. Lower division course demand increases with larger entering freshman classes; and upper division major course demand increases as students approach graduation. Further, student success initiatives require space for support services such as advising and tutoring – with all colleges establishing Student Success Centers, the Student Affairs division offering Transition and Retention Services as well as more traditional Student Life programs, and the Student Union providing a physical center for student activity.

While international students at San José State University are integrated in classes with domestic students, they typically take higher unit loads and require additional support services, thus generating different space needs than domestic students.

The younger age profile for both undergraduates and graduates as well as the increase in international students can increase the market for student housing designed to meet the needs of different groups of students.

Space Implications of Changes in Headcount by Student Level

The primary implication of changes in headcount for space is on where students take their courses, which will be discussed next. In addition, of course, as enrollment increases in any college more students need advising, which requires office space. Further, the advising needs of freshmen and lower division students differ from transfer students – particularly undeclared freshmen in Undergraduate Studies and other students who seek to change their major. Transfer students are usually more settled in direction but may need to fulfill pre-requisites or support courses and upper division General Education requirements to advance in their programs. And transfer students as well as graduate students may need more advanced project and study facilities than freshmen.

Finally, and perhaps most importantly, the University typically offers a different array of services and activities for entering freshmen than for transfer or graduate students, including housing on campus, meal plans, orientation and first-year experience activities. Thus, as the proportion of freshmen, transfer and graduate students change, the kinds of housing, dining services, recreation, and other activities need to be adjusted to fit their needs, sometimes requiring different venues.

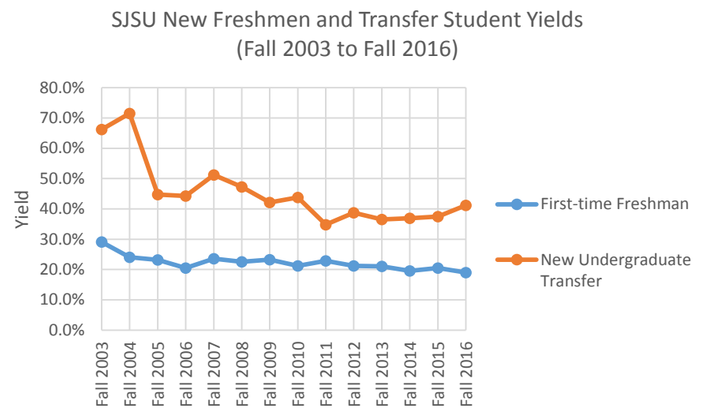


Figure 6. SJSU New Freshmen and Transfer Student Yields (Fall 2003 - Fall 2016)

[5] Spring admissions have varied significantly over the same decade and a half, in part due to changing state funding and CSU policy. A significant number of new transfer students formerly enrolled in Spring, but not any longer. Some graduate students still enter in the Spring semester, but many fewer than in the past.

[6] Students from other states other than California or from abroad pay different fees and, since 2006, are separated from CSU enrollment targets and funding for California residents.

Student Major	Share of Lower Division Courses Taken by College (row percentages)						
	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI
ASA	33.4%	1.4%	2.5%	0.0%	22.1%	19.6%	20.0%
BUS	5.6%	26.8%	0.5%	0.1%	21.7%	18.8%	25.6%
EDUC	9.1%	0.0%	13.1%	0.0%	25.9%	18.6%	32.0%
ENGR	2.1%	2.0%	0.3%	23.7%	17.1%	41.7%	13.0%
HA	7.0%	1.6%	2.0%	0.2%	61.7%	10.5%	16.5%
SCI	6.9%	1.0%	1.1%	0.2%	20.9%	52.9%	16.4%
SSCI	10.5%	2.7%	2.9%	0.0%	25.6%	17.3%	39.4%
UGS	5.8%	4.5%	1.5%	1.4%	25.6%	33.2%	27.0%
Average	**10.1%**	**5.1%**	**1.7%**	**5.3%**	**27.2%**	**27.8%**	**22.1%**

Figure 7. Share of Lower Division Courses Taken by College
(Row Percentages)

Student Major	Share of Upper Division Courses Taken by College (row percentages)						
	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI
ASA	84.1%	1.8%	0.9%	0.1%	4.1%	3.4%	5.5%
BUS	3.7%	76.9%	0.2%	0.1%	12.4%	1.8%	4.9%
EDUC	5.0%	0.1%	77.8%	0.1%	8.0%	4.2%	4.8%
ENGR	0.8%	2.6%	0.0%	81.0%	2.5%	11.6%	1.4%
HA	4.0%	1.2%	1.3%	0.3%	82.7%	3.9%	6.6%
SCI	2.4%	0.8%	0.3%	0.9%	7.6%	83.7%	4.3%
SSCI	6.4%	2.9%	1.3%	0.5%	6.0%	2.5%	80.4%
UGS	9.0%	31.6%	3.0%	3.3%	12.6%	17.2%	23.3%
Average	**16.6%**	**18.9%**	**5.2%**	**14.3%**	**16.0%**	**10.8%**	**18.1%**

Figure 8. Share of Upper Division Courses Taken by College
(Fall 2016)

Pedagogy & Mode of Instruction

Pedagogy varies by college and student level, so it is important to assess where students take their classes and how they are taught.

Course Enrollments by College & Student Level

Figures 7 and 8 compare lower division and upper division patterns. On average, lower division students take three-fourths of their coursework in the three colleges that provide most of the General Education courses: Humanities and the Arts, Science, and Social Sciences. However, the patterns differ significantly by the college in which a student majors. Lower division Engineering students take over 40 percent of their courses in Science, with smaller percentages in Humanities and the Arts, and Social Sciences than other lower division students. Lower division students in Humanities and the Arts follow a contrasting pattern with the smallest percentage of courses in Science.

At the upper division, students take 75 to 85 percent of their courses in their major college, as shown by the highlighted percentages along the diagonal. Still, Engineering students take more Science courses than other majors, except for Science students.

The row percentages can change over time as enrollment shifts among academic programs within a college, or with major modifications in the curriculum for students in a particular college (or if General Education requirements were to change dramatically. Comparing Fall 2003 with Fall 2016, there have been only small variations in the lower division percentages over the past decade and a half. At the upper division, some changes are more apparent: Business students now take more upper division courses in Humanities and the Arts; and Engineering students now take more upper division courses in Science than in the past.

Changes in college size can have a much bigger impact. As discussed earlier, the growth in Engineering has led to growth in Science because Engineering students take so many Science classes at both the lower and upper division levels. Appendix B includes more detailed analysis of course-taking changes.

Space Impacts of Change in Headcount by College & Student Level

Enrollment patterns by discipline and student level make a significant difference in space needs because different modes of instruction require very different kinds of facilities.

On average, over three-fourths of the instruction at San José State University is taught face-to-face in a lecture/discussion classroom format and just over 8 percent in labs or studios. The remainder includes unscheduled supervision classes as well as synchronous and asynchronous instruction off-site or online. This overall pattern has not changed substantially over the past decade and a half.

Of course, college patterns vary significantly as shown in Figure 9. Engineering and Science teach a relatively high proportion of labs; and Humanities and the Arts uses studios. In contrast, Business courses predominantly follow a lecture/discussion format, including some taught off-site. Applied Sciences and Arts, Education, and Social Sciences use other off-site arrangements, such as field placements and online instruction, more than the other colleges.

Sometimes the instructional mode and space type are particular to an individual discipline within a college. For example, physical education activity classes use specialized courts and other interior spaces on-site, which are separate from the lecture/lab totals for Applied Sciences and Arts.

Mode of instruction alone does not distinguish class size, which has crept up in the past decade and a half. As a result some demand for larger classrooms has increased, particularly for lower division courses in subjects that lend themselves to a lecture format – such as Art History, some Business classes, and the Social Sciences. On the other hand, English composition, other writing-intensive courses, and speech communications are typically taught in smaller sections, so the University has kept those classes at about 25 students, on average. Similarly, Math and Physics, other subjects with a large number of lower division sections attempt to keep class sizes between 25 and 35. Most upper division courses average under 40 students and graduate classes tend to be quite small, with some exceptions in Education and Engineering. Thus, as enrollment shifts from one college to another or as the proportion of students shift between entering freshmen vs. transfer or graduate students, space requirements change as well. However, buildings programmed for state-of-the-art instruction at the time they were constructed cannot always be remodeled easily to accommodate changing pedagogy, nor different disciplines or student characteristics. As a result, space assignments typically lag behind demand.

Lecture Space Utilization

The CSU considers lecture space to be generic and San José State University, like most campuses, schedules these facilities centrally with extensive input from the colleges. Nonetheless, preferences for different classroom sizes, attributes, and locations differ by discipline, resulting in uneven utilization patterns. According to CSU space

standards San José State University currently has just about the appropriate assignable square feet in lecture space.

Lecture space is distributed across the campus, with large clusters in the following buildings

- Boccardo Business
- Clark
- Dudley Moorhead
- Duncan
- Engineering
- Hugh Gillis
- MacQuarrie
- Sweeney

The CSU calculates lecture utilization according to the following standard: two-thirds of the seats should be occupied 53 hours per week.[7] Applying this standard, San José State University's lecture utilization runs just over 75 percent.[8] In comparison, other urban CSU campuses typically use their lecture space at 85 percent or above. At San José State University, utilization is fairly even by building and by classroom size.

Utilization tends to be driven down when classrooms of the appropriate size are not available and a smaller section is scheduled in a larger space. For example, classes with 25 to 40 students may be assigned to rooms that seat more than 50 students because the proportion of classes with fewer than 40 students is larger than the proportion of classrooms of that size.

About 5 percent of the lecture/seminar rooms at SJSU seat 25 or fewer students; 40 percent seat 26 to 40 students; one-fourth seat 40 to 50 students; and one-eighth seat 50 to 65 students. These sizes do not match typical class section sizes, as shown in Figure 10.

The final two columns show that lectures and seminars were scheduled in nearly 300 different rooms in Fall 2015. These included nearly 100 teaching labs and 36 other spaces as well as designated lecture rooms. About 40 percent of the teaching labs used for lecture and seminar classes were scheduled for at least 10 sections each. The other spaces used most heavily for lecture and seminar classes included (in descending order) self-instruction computer labs, auditoria, special instruction spaces, and graduate research space.

Figure 10 and the accompanying analysis suggest that San José State University could improve its instructional space utilization by exploring options to better match section size with teaching space. Small lecture and seminar courses appear to lack appropriate teaching space and are redirected into labs and other space types as well as into larger lecture rooms. This reduces utilization for lecture rooms. It also then displaces labs and activities that should be using lab space. And other space types are accommodating small lectures, seminars and activities when they were designed for other functions that are displaced by classes.

Lab Space Utilization

Lab features are often specific to a discipline or small range of disciplines, so lab and studio space is assigned by discipline. Also, lab utilization is measured differently, assuming that students need to be in their labs or studios during non-scheduled times to work on project assignments. According to the CSU, lower division labs should be scheduled at 85 percent occupancy for 27.5 hours per week; and upper division/graduate labs at 80 percent occupancy for 22 hours per week. Applying these standards, San José State University, like other urban CSU campuses, uses its labs overall at 100 percent or above. However, lab utilization varies significantly by facility, as shown in the table below.

Lab Utilization < 90 %	Lab Utilization, 90 to 110%	Lab Utilization > 110 %
Central Classroom	MacQuarrie	Art
Dwight Bentel	Sweeney	Clark
Industrial Studies[10]		Dudley Moorhead (pre-renovation)
Music		Duncan
Washington Square		Engineering
		Science

Further, as noted above, space assignments can lag demand, so as enrollments increase in a college, it tends to use its space more intensely, and colleges with decreasing enrollments use their space less efficiently. Based on recent enrollment trends, then, lab space requirements for the College of Education are decreasing, while Engineering needs more such facilities. Increasing enrollments in the College of Science are filling in existing lab space, particularly in the Biological Sciences, pending replacement by the forthcoming interdisciplinary science building. Growing enrollments in the other colleges (Applied Sciences and Arts, Humanities and the Arts, and Social Sciences) are served primarily by lecture space, rather than discipline-based labs and studios so their classroom assignments are dispersed across campus. behind demand.

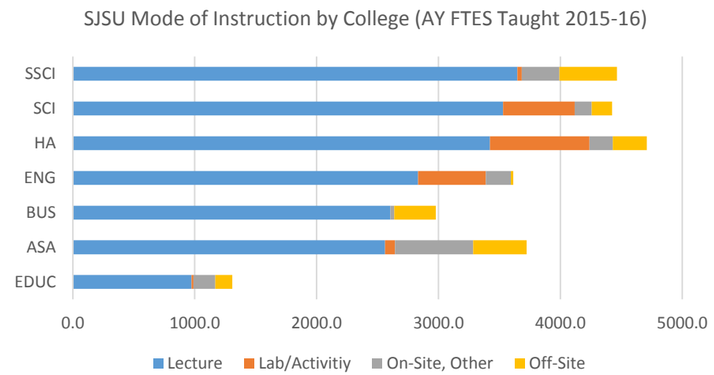


Figure 9. Mode of Instruction on Campus by College (AY FTES 2015-16)

	Lecture Inventory per CSU[9]		Fall 2015 Sections by Enrollment		Fall 2015 Rooms Scheduled by Capacity	
1 to 15	1	0.6%	480	14.3%	52	17.7%
16 to 20		0.0%	260	7.8%	38	12.9%
21 to 25	8	4.9%	587	17.5%	19	6.5%
26 to 40	67	41.1%	1101	32.8%	73	24.8%
41 to 50	40	24.5%	554	16.5%	47	16.0%
51 to 65	22	13.5%	148	4.4%	23	7.8%
66 to 80	12	7.4%	84	2.5%	12	4.1%
81 to 100	4	2.5%	40	1.2%	5	1.7%
101 to 150	6	3.7%	61	1.8%	8	2.7%
151 to 200	1	0.6%	17	0.5%	1	0.3%
201 and above	2	1.2%	20	0.6%	5	1.7%
Size not in SFDB				3.7%	11	
Totals	163	100.0%	3352	100.0%	294	96.3%
Sub-Total <= 25	9	5.5%	1327	39.6%	109	37.1%

Figure 10. Fall 2015 section Size Compared to Room Capacity

[7] The CSU reports utilization rates annually to the California Legislative Analyst's Office.
[8] As Dudley Moorhead Hall, a major teaching facility on campus, was under renovation during Fall 2016, this discussion draws from data for the prior two years.
[9] This table uses the inventory in the SFDB rather than the list used by Academic Scheduling as the CSU calculated space utilization using the SFDB as the space data source.
[10] Utilization in Industrial Studies is affected by the assignment of rooms to CIES for extension programs that are not counted in utilization calculations.

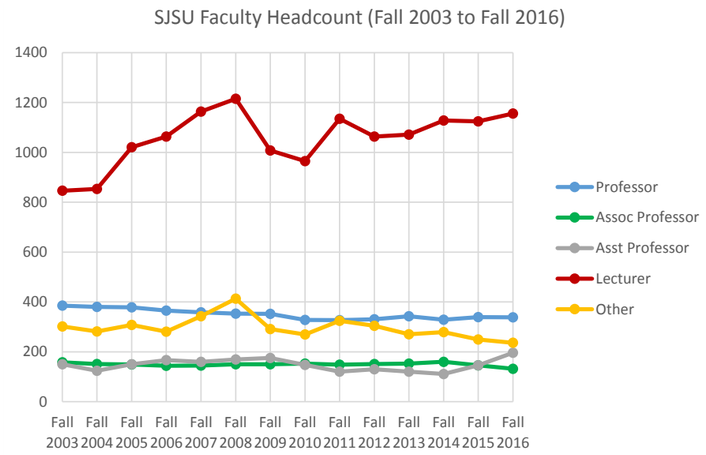


Figure 11. SJSU Total Faculty Headcount (Fall 2013 - Fall 2016)

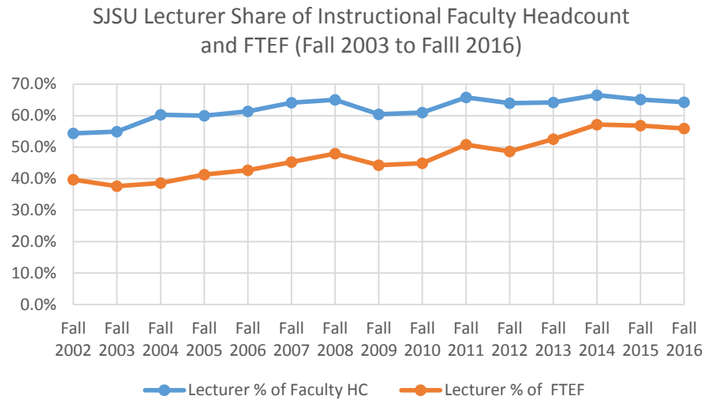


Figure 12. SJSU Lecturer Share of Instructional Faculty Headcount and FTES (Fall 2003 - Fall 2016)

Faculty Profile

The analysis to this point has focused on student and course characteristics because their magnitude is the predominant factor affecting instructional space needs. Pedagogy and the mode of instruction, of course, come from the faculty, so the way they teach, advise and work within each college or discipline drives the kind of space needed for teaching and learning, particularly spatial quality and other attributes such as equipment and technology.

Further, the nature and composition of the faculty affects office, research and other support space needs. Figure 11 shows that the total number of tenured and tenure-track faculty (professors of all ranks) has been relatively stable over the past decade and a half, with a small decline in full professors offset by an increase in junior faculty. At the same, however, the number of lecturers has varied, but has increased overall by more than 30 percent.

Figure 12 indicates that as the number of lecturers has increased from 54 to 64 percent of the instructional faculty, this group has assumed an increasing share of the teaching workload. While most lecturers are part-time employees, their share of the instruction has increased from 40 percent in Fall 2003 to 56 percent in Fall 2016.

Just as enrollment patterns vary by college, so does the faculty profile. Figure 13 shows that lecturers constitute a smaller percentage of the instructional faculty headcount and FTEF in Business and Science as compared with the other colleges.

Space Implications

Office space implications are both qualitative and quantitative. The CSU space formulas calculate office requirements based on full-time faculty equivalency (FTEF) and student to faculty ratio rather than headcount. During the past decade and a half, FTEF has grown by about 7½ percent while total faculty headcount (including lecturers) has risen by nearly 12 percent, increasing the real need for office space at a greater rate than the formulas acknowledge.

At one time, the CSU considered two-person offices to be appropriate for permanent faculty. However, as faculty have become more involved in student advising and professional development, this arrangement isn't workable, and the CSU has changed the standard to one-person offices for faculty. Where possible, colleges now assign each ranked faculty member an individual office. Yet, because many older buildings were designed with two-person offices, some colleges still ask faculty to share – particularly part-time lecturers. Further, the colleges that employ relatively more lecturers face a greater challenge finding office space for them to use for course preparation and meeting with students when they are on campus.

In addition, ranked faculty expect to engage in professional development which may require larger office space to work with students and colleges and research space (discussed in the next section on Support and Research Space).

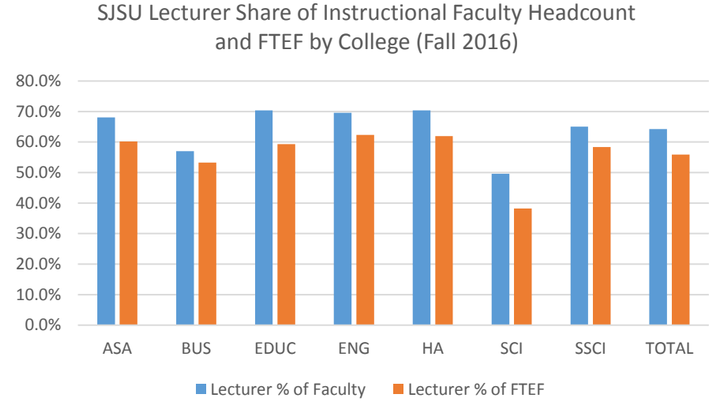


Figure 13. SJSU Lecturer Share of Instructional Faculty Headcount and FTEF by College (Fall 2016)

Support & Research Space

Some disciplines require more support space for instructional activities than others. Engineering, and Humanities and the Arts require more support space – particularly for labs and the performing arts. Physical Education (in Applied Sciences and Arts) is a special case: as noted earlier, physical education activity classes are not considered to be labs, so their space needs are covered in this category. Disciplines that require support space typically also need technical support staff to manage these facilities and equipment; and these individuals need office space or other work areas to meet their responsibilities.

The CSU recognized the need for flexibility in space assignments at the campus level when it devised a model for estimating future space needs. The model includes a category labeled "Instructional Activity" to encompass all the support space needs associated with instruction. The space types listed in Figure 14 all contribute to the support of instruction. The self-instruction, special instruction, and lounge categories provide flexibility for collaborative student work and study space.

In the 1990's the California master plan for higher education recognized the importance of applied research in the CSU. A calculation for graduate research space was added to the space formulas, but the implied backlog was not funded, leading to additional "unmet" space needs in programs with a high proportion of graduate students. At San José State University, the College of Engineering, with its lab-intensive curriculum would generate the most research space, with Business, and Humanities and the Arts well below, based on their curriculum and graduate student enrollments.

PROJECTED ENROLLMENT, STAFFING & ACADEMIC SPACE NEEDS TO REACH MASTER PLAN CAPACITY

This section of the report focuses on the amount of space required to support students and faculty at San José State University in the future. It lays out the assumptions regarding enrollment growth to reach the current Master Plan ceiling and resulting space needs at Master Plan buildout. In addition to meeting the raw future space requirements developed in this section of the report, the 2017 Facilities Development Plan addresses the need for space renovation. The age of many instructional facilities means that the size, configuration, and other attributes of many classrooms and labs do not meet the requirements of 21st century teaching and learning.

Initially, this analysis assumes that the University makes no major changes in academic programs or student enrollment patterns (except to increase out-of-state and/or international students). These estimates then provide a minimum baseline for discussing how several critical factors could increase space needs and in what way.

This section initially focuses on the magnitude of changes required to reach Master Plan buildout and concludes with a discussion of the rate of growth to reach the Master Plan ceiling.

- Academic Space Needs by Master Plan Buildout
- Factors with Greatest Impact on Space Planning
- Overall Rate of Growth

In sum, San José State University's enrollment, faculty, staff and facilities will grow by over 14 percent to reach its current Master Plan ceiling. At an annual growth rate of 0.75 percent (the current CSU rate), the University would reach its enrollment ceiling in 2031. At a faster rate of 1.25 percent annually, it would reach the Master Plan ceiling in the year 2025. This latter rate – 1.25 percent – would require a growth plan to enable the University to provide for enrollment growth and the supporting faculty, staff, and facilities in nine years. This would also allow time for San José State University to initiate a new Master Plan study several years in advance of the need to expand the enrollment ceiling.

Self-instruction computer lab	General storage
Self-instruction lab	Warehouse
Music practice studio	Museum and galleries
Physical Education-indoor	Auditoria
Military Science	Stage
Animal quarters	Auditoria service
Special space education	Locker rooms
Radio-TV	Equipment maintenance/repair
Special instruction	Other special support
Lounge	Other general use[11]

Figure 14."Instructional Activity" Space Types [11]

[11] See Restructuring Campus Capacities, a Report from the Task Force on Facilities Planning and Utilization, Appendix C-1. Spaces Included in the ASF/FTE Model. http://www.calstate.edu/cpdc/Facilities_Planning/Space_Mgmt/Resource_Documents/

	2011-12	2016-17	*Master Plan Baseline*	Measure[12]
Net AYFTES (estimate)	19,865	21,857	*25,000*	Net AYFTES
Built Capacity	21,749	21,809	*25,000*	Net AYFTES
Capacity with interdisciplinary science building (remaining deficit)		*22,104*	*(2,896)*	Net AYFTES
Master Plan Ceiling	25,000	25,000	*25,000*	Net AYFTES
Deficit in lecture ASF			*(12,101)*	ASF
Deficit in other ASF after interdisciplinary science building			*(754,153)*	ASF
Total space deficit after interdisciplinary science building			*(766,234)*	ASF

Table 1. Past, Present, and Future Physical Capacity

College[15]	Projected Lecture FTES	Lecture ASF 'Required'[16]	Projected Lab/Studio FTES	Lab ASF 'Required'[17]	Support ASF 'Required'[18]	Grad Research ASF 'Required'[19]	Faculty Office ASF 'Required'[20]
ASA	2,590		92	6,505	169,254	37,028	34,245
BUS	2,812		1	90	5,849	5,169	15,384
EDUC	1,018		11	1,091	5,717	15,207	10,325
ENG	3,212		704	163,587	277,866	502,789	24,886
HA	4,832		805	88,527	62,760	34,850	51,291
SCI	4,720		704	70,532	40,739	21,390	37,340
SSCI	3,461		35	4,498	9,632	11,702	21,011
Other					17,386		
Totals 'Required' per CSU	22,645	144,150	2,352	334,830	589,203	628,135	194,481
Existing (2016-17)		132,049		394,102	250,049	76,952	215,642
Surplus (Deficit)		(12,101)		59,272	(339,154)	(551,183)	21,171
New interdisciplinary science building				*26,778*	*4,190*	*31,210*	*4,510*
Surplus (Deficit) with new science building (2020-21)		*(12,101)*		*86,050*	*(334,964)*	*(519,973)*	*25,681*

Table 2. Assignable Square Feet "Required" by Projected Baseline Master Plan Enrollments on Campus (for selected Instructionally-Related Functions) [14]

	Lecture Inventory per CSU (Fall 2016)		Lecture Rooms Needed by Master Plan Buildout	
1 to 15	3	1.9%	30	11.8%
16 to 20	4	2.5%	16	6.4%
21 to 25	2	1.3%	80	31.8%
26 to 40	64	40.0%	69	27.1%
41 to 50	40	25.0%	35	13.7%
51 to 65	22	13.8%	9	3.6%
66 to 80	12	7.5%	5	2.1%
81 to 100	4	2.5%	2	1.0%
101 to 150	6	3.8%	4	1.5%
151 to 200	1	0.6%	1	0.4%
201 and above	2	1.3%	1	0.5%
Totals	160	100.0%	253	100.0%
Sub-Total <= 25	9	5.6%	127	50.1%

Table 3. Future Lecture/Seminar Classroom Needs by Size

Academic Space Needs by Master Plan Buildout

The baseline projections to reach the current Master Plan ceiling assume no change in present patterns for California resident enrollment, but include an increase of non-resident/international and Special Session students to 15 percent each, per stated SJSU goals.

Table 1 shows that San José State University's current built capacity is very close to recent enrollment levels. The new Interdisciplinary Science Building will add some capacity, but future growth will require additional facilities before SJSU reaches its Master Plan ceiling of 25,000 net AYFTES.

Table 2 shows that at Master Plan capacity there would be serious deficits in lecture, instructional support, and research space under baseline assumptions. In contrast, based on present teaching patterns, there would continue to be a surplus of lab space. The Faculty Office "surplus" reflects space in older buildings that were constructed with two-person offices that no longer meet CSU faculty office standards.[13] The assignable square feet shown in the table as 'required' does not constitute an entitlement for any college, but rather a general estimate of how much space the University should have available to support instruction in different disciplines. Clearly, the design, equipment needs, seating configuration, safety considerations, location and scheduling are important practical determinants of lab and classroom capacity.

Earlier analysis indicated that there is currently a discrepancy between lecture classroom sizes and enrollments as taught, and that over one-fourth of SJSU's lecture and seminar classes are taught in laboratory space.

Table 3 projects lecture/seminar space needs by size at Master Plan capacity, compared with the current inventory in the SFDB and as shown by Academic Scheduling. It shows the future distribution of lecture/seminar rooms by size, following the baseline assumption of no significant changes in pedagogy prior to Master Plan buildout. The adjustments shown in Table 3 would enable the University to accommodate lectures and seminars in appropriate teaching space. Of course, the design for both new and renovated lecture space also needs to address seating configuration, technology and other attributes that contribute to effective teaching and learning.

[12] Please see Appendix C for definitions of each measure.
[13] More than half of the faculty and professional office stations listed in the SFDB are in spaces that are 150 asf or larger. The standard for new construction or renovation is 110 assignable square feet for a single-person faculty office.
[14] Required space is calculated based on current instructional patterns, extended to full Master Plan capacity.
[15] The CSU aggregates data for the ASF/FTE (assignable square feet per full-time equivalent student taught) model by two-digit HEGIS code. At SJSU a two-digit HEGIS code can represent instruction in more than one college. For this analysis, each HEGIS code was assigned to the college with the predominant instruction in labs (or studios) because that is the primary driver of discipline-based space.
[16] As lecture space is not assigned by discipline, this table only shows total ASF and seats.
[17] The CSU applies different standards by discipline for lab and studio space. Various disciplines within a college may have different standards.
[18] The CSU uses the term "instructional activity" to cover instructional support space, including self-instruction computer labs, equipment areas, galleries, auditoria, practice rooms, indoor physical education facilities, locker rooms, and student lounges. Standards vary by discipline.
[19] The CSU standards vary by discipline for graduate research space.
[20] The faculty office allocation includes departmental administrative support space, but not college administration.

Factors with Greatest Impact on Space Planning

The CSU baseline projections in Tables 1 through 3 assume no changes in the proportion of students by level or major, or any changes in pedagogy. Thus, they constitute a conservative baseline that most likely underestimates future space needs for academic and support services.

Projecting future academic space needs depends on a series of assumptions about the following interacting factors:

- Student composition
- Student demand for current and future academic programs
- Pedagogy and course scheduling (including off-site enrollment)
- Faculty composition
- Rate of enrollment growth

Student Composition

Living on campus (or in close proximity in University-sponsored housing) and taking a full load are success factors that improve graduation rates nationwide for undergraduate students. In the short-term better retention can increase the number of upper division students. Then, as more students complete their degrees on time, the number of new students who can be admitted each year increases.

- Increasing the proportion of freshmen would increase demand for student housing and support services as well as lower division classes. As three colleges provide most of the lower division instruction, Humanities and the Arts, and Social Sciences will need access to more small classrooms, and Science will need more lab facilities to teach freshman and sophomore courses.

- Increasing student load and the number of students living on campus would increase the need for study and project space, and the demand for services and activities "24 by 7."

Increasing out-of-state or international students would increase demand for student housing and support services, including during summer and breaks. Out-of-state and international students tend to take higher course loads.

Graduate students' needs differ significantly from undergraduates' so increasing graduate programs would broaden support service demands, especially during evening hours, as well as increase the need for project and other research facilities for advanced work.

Academic Programs

The most space-consuming academic programs are those that emphasize lab or studio instruction (and need similar space for student and faculty research and professional development); those that have large support space needs; and/or those that depend on other colleges with these needs for support courses. At SJSU, the most space-consuming programs are these:

- Engineering, with large space standards for labs, graduate research, and support space; and heavy dependence on Science for support courses.
- Biological and Physical Sciences, with large space standards for lab, graduate research, and support space.
- Fine and Applied Arts, with large space standards for studio and graduate research space, space; and very high proportions of studio instruction as part of the curriculum.

Several of these more space-consuming programs are in demand. If they continue to grow faster than other programs, they would begin to consume the current surplus of lab space – if existing space can be renovated and reconfigured to meet their instructional needs. Engineering was the fastest growing field during the past decade and demand will likely continue. Engineering enrolls a large proportion of international students, so the rate of growth may slow temporarily due to national politics. Art (especially digital) has experienced high demand.

The less space-intense colleges (Applied Sciences and Arts, Business, Education, and Social Sciences) have seen stable or declining enrollments on campus. In contrast, growth in Applied Sciences and Arts, and Business programs off-campus or in Special Session does not require additional academic space on campus.

It is important to note why the Health Professions are not in the "space-consuming" list for facilities on campus. Their curriculum places students in off-campus settings for clinical experience and thus they do not require an extraordinary amount of space on campus. Increasing health professions then requires expanding relationships with health care institutions off campus to ensure sufficient capacity to meet enrollment demand.

Pedagogy and Course Scheduling

The need for lecture and seminar classrooms designed for enrollments of 25 students or fewer is likely to continue.

- Humanities and the Arts teaches lower division General Education courses, such as English composition, in small sections so increasing the proportion of freshmen would increase the need for small classrooms.
- An increase in fully-prepared transfer students is likely to contribute to the need for small classrooms, as most upper division lecture and seminar classes are also small, except in Business and Engineering.
- Any increase in graduate students would increase the need for small classrooms, except in Business and Engineering
- Business and Engineering teach more sections in the 26-40 student range than the other colleges. From college interviews Business does this by design; Engineering may do so by necessity (because space and faculty are not available).

SJSU has seen only a modest increase in online, hybrid and off-campus instruction in state-supported classes – and there has been less interest in the space-consuming fields because of their dependence on face-to-face laboratory and studio instruction.

SJSU could take advantage of opportunities to schedule classes and labs more flexibly to meet instructional needs.

- Students living on campus would be available to take classes during evenings, Fridays and weekends.
- Programs for professional graduate students could be designed for evening and/or weekend formats.

Faculty Composition

Full-time tenure-track and tenured faculty need space for research and professional development, including interdisciplinary collaboration space as well as more conventional office space for class preparation and advising.

Increasing the proportion of tenure-track faculty would increase faculty office needs. It will take more of them to meet instructional needs because they teach smaller loads than temporary lecturers and are expected to participate in student advising and other activities.

To reach its current Master Plan ceiling without changing the proportion of tenured and tenure-track faculty, the University would need to increase instructional faculty by 92 positions, to 731 (Fall headcount).

- If SJSU were to increase the proportion of tenured and probationary faculty from its present 32.5 percent share of faculty headcount to 40 percent, the number of additional successful tenure-track recruitments would increase to 221.
- If SJSU were to increase the proportion of instruction taught by tenured and probationary faculty from its present 42 percent share to 50 percent, the number of additional successful tenure-track recruitments would increase to 307.

	CA Resident Annual Increase	Non-Resident Share	Year Enrollment Reaches 25,000
CSU Rate	0.75%	no increase	2037
Baseline (Recent SJSU Trends)	0.25%	to 15 percent	2057
Slow Growth	0.50%	to 15 percent	2037
CSU Rate, with Non-Residents	0.75%	to 15 percent	2031
Moderate Growth	1.00%	to 15 percent	2027
Ambitious Growth	1.25%	to 15 percent	2025
More Ambitious	1.50%	to 15 percent	2024

Table 4. Year of Master Plan Buildout under Alternative Annual Growth Scenarios

Overall Rate of Growth

For the near term, the CSU projects a future growth rate of 0.75 percent in California resident enrollment for the entire CSU. At the CSU rate (along with an increase in out-of-state and/or international students), the earliest that SJSU would reach its current Master Plan ceiling of 25,000 net AYFTES would be in about 2031. At an increased growth rate of 1.25 percent for California resident students, SJSU would reach is current Master Plan ceiling in about 2025. This rate would require an annual increase is CSU funding for about 260 additional CYFTES, or additional Fall headcount of about 500 students each year.

Table 4 shows seven scenarios based on a range in the annual increase of California resident students. The final column shows the academic year (Fall) in which enrollment would reach the current Master Plan ceiling. Appendix D shows the annual increase in enrollment funding, staffing, and space that would be required for the three most likely scenarios.

Several trends could reduce rates:

- Student success initiatives that shorten time to degree would reduce overall enrollments, unless they are offset by new recruitments to existing or new programs.
- Demographic trends reflecting lower birth rates and/or in-migration rates in some California counties and U.S. states could slow demand and make it more challenging to recruit increasing numbers of fully qualified new freshmen.
- A short-term decline in international students would slow overall growth, particularly in Engineering; and contribute to a decline in Business.
- An increase in hybrid, online, and/or off-campus instruction by some programs would shift proportionate space needs even further toward the space-consuming face-to-face programs. However, interviews with deans and associate deans revealed no plans for expanding state-supported off-campus instruction to the extent that it would change the proportion significantly.

On the other hand, some campus initiatives could make a faster rate possible:

- An aggressive recruiting strategy could attract students to existing or new programs, particularly those that take advantage of SJSU's reputation and location in Silicon Valley. Undergraduate students (who are less place-bound) would need incentives to attend SJSU instead of other universities with lower costs (including community colleges for the first two years, or other CSU campuses located in areas with lower living costs).
- SJSU could increase enrollments of out-of-state U.S. students, particularly in programs that would attract students to the Bay Area. The proportion of all non-California student enrollment increased from 5 percent in Fall 2011 to 11 percent in Fall 2016, primarily focused on international students. SJSU has stated a goal of increasing this share to 15 percent of the total, which could include a significant increase in out-of-state U.S. students. These students would need to have the means to pay out-of-state tuition and would require appropriate services, particularly housing.
- The University could renovate some existing space to focus on meeting instructional needs of increased enrollment, particularly small lecture/seminar rooms.

9. BUILDING CAMPUS LEGACY

Pride of Place

As a destination, San Jose State University has remarkable advantages to share with its campus community: an enviable location surrounded by some of the most innovative technology industries in the world; a temperate climate; a history of pursuing sustainable energy and water management practices through the decades; a remarkable diverse range of academic programs and faculty scholars; a diverse student population with Spartan Team spirit; and a physical campus that continues to surprise users and visitors with historic features, contemporary amenities and a landscape of large greenspaces and small found spaces.

The Importance of Message

The 2017 Facilities Development Plan describes important enhancements that can be made to the physical campus framework of buildings and open spaces to support continuing academic achievement and enrollment growth. Proposed improvements include coordinated planning, new development opportunities, stronger connections through the campus and to the city, and ways to upgrade the performance of existing facilities. Sharing messages is an important part of implementation. Improved branding and wayfinding can orient all campus users, remind all passersby of the campus presence and contributions, and reinforce the sense of place and sense of belonging.

10. ACKNOWLEDGMENTS

Academic Affairs
Carl Kemnitz, Deputy Provost
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Sonja Daniels, AVP Student Life

Associated Students, Board of Directors 2016
Tari Wimbley, Executive Director
Joan Wilson, Executive Administrative Assistant
Christina Cortez, Vice President, Director of Business Affairs
Skylar Caesar, Director of Faculty Affairs
Diana Ogbevire, Director of Government Affairs
Thi Tran, Director of Internal Affairs
Luis Cervantes Rodriguez, Director of Sustainability
Bradyn Miller, Marketing and Event Coordinator
Cindy Maroto, Accessible Education Center
Eyedin Zonobi, Manager Transportation Solutions

University Housing Services
Matthew Rees, Senior Associate Director
Margaret Hom, Associate Director

SJSU Food Service - Spartan Shops
Lisa Thomas, Executive Director
Steven Olesen, Senior Director, Procurement & Budget Services

Facilities and Development Departments
Facilities Planning
Chia Tsai, Facility Space Planner

Energy, Utilities & Sustainability
Chris Nordby, Director, Energy and Utilities
Adam Salvadalena, Energy Engineer
Katherine Cushing, Sustainability Director, Office of the President

Environmental Health & Safety
David Krack, Director;
Matt Nymeyer, Specialist
Chadra Gowda, Specialist

Information Technology Services
Bob Wrenn, Interim CIO
Rick Harden, Assistant CIO
Kate O'Malley, Assistant to AVP ITS and CIO

University Police Department
Peter Decena, Chief of Police
Lieutenant Jim Renelle, Support Services

CommUniverCity
Dayana Salazar, Executive Director
Katherine Cushing, Associate Director
Imelda Rodriguez, Community Director
Jennifer Goto, Associate Community Director
Elizabeth Figueroa, Education Programs Manager
Peggy Arana, Administrative Coordinator
Nicole Guzman, Project Coordinator

NOTE: Members of the Facilities Development Plan Advisory Committee, including current and former Campus Planning Board Chairs, are listed on page 2 of this report.

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APPENDIX A1. ACADEMIC PROGRAMS, ENROLLMENT TRENDS, AND SPACE IMPLICATIONS - EXECUTIVE SUMMARY OF STAKEHOLDER INTERVIEWS

Student and Faculty Trends

- Student enrollment and faculty headcount have grown over the past decade and a half, as shown in Figure A. Student headcount has grown by 12 percent and Full-time Equivalent Students (FTES) by 22 percent as students have increased their unit loads. Faculty headcount has also risen by about 12 percent yet Full-time Equivalent Faculty (FTEF) has only expanded by about 7½ percent as the proportion of lecturers and class sizes have increased. While very uneven over the years, the enrollment growth rate averaged less than ½ percent annually.

Academic Programs

- Academic emphasis has shifted away from Applied Sciences & Arts, and Business, to Engineering & Social Sciences in past decade.
- Program quality (reputation) and Silicon Valley location attract students.
- Less well-known fields ("discovery majors") appeal to undeclared students through General Education courses.
- State policy and funding particularly affect interest in Applied Sciences and Arts, and Education (particularly Teaching Credentials).
- Policy and regulations in the U.S. and other countries can disrupt interest by international students.
- Some "Impacted programs" are constrained by faculty availability and/or facilities as well as operating budget.

Student Characteristics

- Undergraduate enrollment has been increasing while graduate enrollment has decreased (except in Special Session).
- The student population is becoming younger, and more ethnically diverse at both undergraduate and graduate levels.

CSU and Campus Initiatives

- Program "Impaction" and changing admission criteria mean that new students don't need the same courses as in the past.
- Student Success initiatives are increasing average unit load and shortening time to degree, resulting in larger entering undergraduate classes to balance enrollment. Academic Affairs and Student Affairs are providing services that support student success by increasing students' "connection" to the campus.
- Special Session is expanding, especially for graduate, professional programs that require their own support services. Some colleges have more developed Special Session and Extension programs which serve additional students and generate revenues.

Faculty, Pedagogy, and Technology

- While faculty and students continue to prefer face-to-face instruction, the format is clearly changing. The number of hybrid classes is increasing; and online and off-campus formats are appropriate for specific situations and course content.
- There is an increasing need for integrated technology in flexible teaching spaces.
- Technology has enabled both permanent and temporary faculty to work from home, reducing the time they spend on campus.

Issues and Opportunities Related to Space Needs

Space Quantity and Quality

- CSU space formulas indicate that SJSU has enough instructional space for current enrollment, but not enough for its approved Master Plan ceiling of 25,000 FTES (in scheduled, face-to-face instruction).
- CSU utilization analysis shows that lecture space is being used at about 75 percent of capacity, well-below the CSU average for large urban campuses.
- Older classrooms and labs are not always equipped with the appropriate technology and seating; and lecture class size has increased
- Instructional space is not always available at preferred locations and times. Peak times are mid-day and early evening, Monday-Thursday
- The campus lacks instructional support and graduate research space to sustain student learning and faculty scholarship and professional development.
- Newer permanent faculty are recruited with the expectation that they will be engaged in professional development, yet office and research space are serious constraints, especially in fields that involve labs or studios.

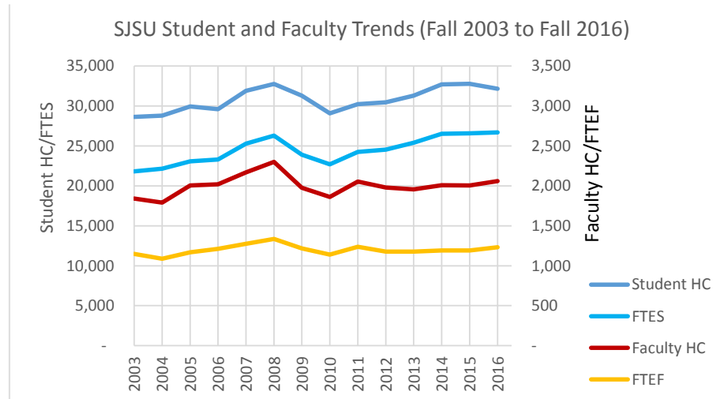

Figure A. SJSU Student and Faculty Trends (Fall 2003 - Fall 2016)

APPENDIX A2. CAMPUS PLANNING AND FACILITIES -- EXECUTIVE SUMMARY OF STAKEHOLDER INTERVIEWS

Overall Observations

- Funding sources impact campus offerings and facility upgrades; academic and enrollment planning influence funding
- Growth constraints include campus size, utility mandates, and budget limitations for new structures
- Existing built space should be repurposed to improve efficiency and scheduling
  - Deans expressed, in individual ways, need for new or renovated space to stay current with programming
  - Some colleges are spread over multiple buildings for faculty offices and classrooms
- There is high awareness that the Science Center is the first new academic building in many years, and other colleges expressed interest in having compatible programs to share new space and technology
- There is a need to increase both interior and exterior gathering spaces that encourage collaboration, student success and legacy giving
  - All deans expressed a strong need for better organized space for Student Success [advising and tutoring] Centers
  - Renovated or new auditoriums, labs, research and studio space--and storage—are needed to facilitate instruction, faculty and student research, and student accomplishment
  - Additional Informal and collaboration spaces are needed

Existing Academic Facilities

- Deans and administrators expressed commitment to making their programs work
- Gap exists between colleges on space amenities and adjacencies
- Some older facilities definitely impede effective teaching; Humanities and the Arts most challenged
- CIES will benefit from a larger on-campus presence at the Student Union

Off Campus Facilities

- Humanities and the Arts arrangement with City to use Hammer Theatre is positive for high-profile programs able to fill 300+\- seats
- Business College leasing space in Santa Clara with parking and corporate interiors that attract students
- Engineering does not see current need for off campus Research Park seen at some other universities

Needed Facility Upgrades

- Needs vary from program to program but upgrades desired for each teaching format
- Several colleges noted the inadequacy of teaching space for research and technology
- Special Session revenue and outside funding help pay for some facility improvements
- More lab space wanted by all, including Social Sciences
- Science noted need for interdisciplinary spaces and work on display
- Instruction is changing to collaborative open work spaces but one setting may not suit another class
- Small\shared faculty offices and lack of faculty research space seen as a hiring deterrent
- Need for commuter support spaces for both faculty and students

Outdoor Space

- Recognized as a critical need and important asset by Student Affairs, Student Union and Associated Students
- Not thought about a lot by colleges, but those with adjacent open space use it
- Students aware green space shrinking, lack of “Free Play” space, and mature trees at end of life
- Rooftop gardens mentioned

Student Union

- New space popular and all spaces well used
- More space already needed and spaces are being repurposed and reassigned
- Need more quiet space

Library

- Going to 24\7 five days per week
- Pursuing renovations to have one-stop desk at first floor
- Looking at feasibility of converting existing unused material storage space in basement to student collaboration space such as maker space, visualization labs, high end computing, etc.
- Joint use creates challenging physical environment
- Students not always using available computers

Housing

- Have to capture incoming students in fall; hard to fill mid-year vacancies
- Competition from off-campus apartments renting to transfer students
- University mandates freshmen commuting beyond 30 miles to live on campus. There are freshmen who live within the 30 mile zone who also want to live on campus. There is demand for increased on campus housing
- Food variety could be improved
- Need available classrooms for summer programs and more storage for student mail

Accessibility

- Campus is proactive in working one on one with students and faculty for access
- Attention required for sizing of equipment and making space renovations a priority

Utilities

- Biggest hurdle is CSU mandated greenhouse gas reductions. For every new building, a comparative amount of built area needs to be taken off-line
- Solar should be added everywhere feasible
- District by district solutions possible. Start with removing steam service from SW quadrant as part of new science building project
- Scheduling needs to be more efficient within existing building footprints to save energy
- Student Affairs noted lack of planning for generator at Wellness Center

Transportation & Parking Impacts

- VTA will be cancelling some bus routes well before BART extension comes online
- Parking lots get full; some students park in nearby city lot; shuttle to south campus is available but less convenient for students who don’t allow enough time to get to class
- Drop-off spaces are needed for housing moves, delivery vehicles, and increasing use of Uber and Lyft
- Renovations planned to improve access inside parking structures

Security

- Security staff goal is to be “visible” throughout campus
- Joint library usage is the biggest challenge
- Better exterior lighting in progress; need more cameras
- Need drop off points interior to campus perimeter for student safety
- Student and parent education important at freshmen orientation

APPENDIX B. DETAILED ANALYSIS OF COURSE ENROLLMENTS BY STUDENT LEVEL

Figures B-1 and B-2 show how the number and proportion of courses that a college offers to students in its own or other colleges has changed over time, using column percentages.

At the lower division level, Business and Engineering are relatively self-contained (see highlighted percentages along the diagonal), offering most of their courses to their own majors (although Business now teaches more courses to UGS students than in the past). The primary providers of General Education, of course, teach courses to students in all other colleges (with Education lowest, as the smallest college with the fewest lower division students). The largest changes are that Applied Sciences and Arts, and Social Sciences now teach a smaller proportion of courses to students from other colleges, whereas Business, Education, and Humanities and the Arts teach more courses outside. Humanities and the Arts, and Social Sciences teach less to Business students (with its declining enrollment) and more to Social Science students (with its increasing enrollment) than in the past; and Science now teaches nearly one-third of its lower division courses to Engineering students, up five percentage points since Fall 2003.

At the upper division level, course offerings are much more self-contained within each college except for the three primary General Education colleges (Figures B-3 and B-4). Social Sciences now teaches less to Applied Sciences and Arts, and Business students (likely a result of declining enrollments in the latter). In contrast, Humanities and the Arts teaches more to Business students, likely related to curriculum change. And, similar to the lower division pattern, Science now teaches nearly 19 percent of its upper division classes to Engineering students, up 10 percentage points since Fall 2003.

	Share of Lower Division Courses Taught by College (column percentages)							College Share of LD Headcount
Student Major	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI	
ASA	43.8%	2.9%	17.3%	0.5%	11.7%	12.1%	18.3%	*16.4%*
BUS	12.8%	81.8%	4.0%	0.7%	14.4%	10.9%	20.0%	*19.2%*
EDUC	2.1%	0.1%	31.9%	0.0%	2.1%	1.5%	2.6%	*2.7%*
ENGR	10.1%	5.2%	1.0%	91.4%	13.5%	27.5%	8.9%	*17.2%*
HA	8.8%	1.5%	10.0%	2.5%	31.4%	7.2%	10.5%	*15.8%*
SCI	7.2%	3.1%	4.3%	2.4%	8.1%	24.7%	7.7%	*11.0%*
SSCI	6.3%	1.6%	11.0%	0.2%	6.9%	4.8%	15.7%	*9.1%*
UGS	8.8%	3.9%	20.5%	2.3%	12.0%	11.5%	16.4%	*8.7%*

Figure B-1. Share of Lower Division Courses Taught by College (column percentages) (Fall 2003)

	Share of Lower Division Courses Taught by College (column percentages)							College Share of LD Headcount
Student Major	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI	
ASA	49.7%	4.1%	21.7%	0.1%	12.2%	10.6%	13.6%	*15.9%*
BUS	6.6%	62.9%	3.5%	0.2%	9.5%	8.1%	13.9%	*12.7%*
EDUC	1.6%	0.0%	14.0%	0.0%	1.7%	1.2%	2.6%	*2.1%*
ENGR	4.5%	8.4%	3.4%	95.5%	13.5%	32.3%	12.6%	*19.8%*
HA	9.4%	4.3%	16.2%	0.4%	30.7%	5.1%	10.2%	*14.6%*
SCI	6.8%	2.0%	6.6%	0.4%	7.8%	19.2%	7.5%	*9.7%*
SSCI	14.0%	7.2%	23.1%	0.1%	12.7%	8.4%	24.1%	*15.9%*
UGS	7.3%	11.1%	11.5%	3.4%	11.9%	15.1%	15.5%	*9.4%*

Figure B-2. Share of Lower Division Courses Taught by College (column percentages) (Fall 2016)

	Share of Upper Division Courses Taught by College (column percentages)							College Share of UD Headcount
Student Major	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI	
ASA	81.7%	2.1%	2.0%	0.2%	5.1%	4.6%	10.6%	*14.8%*
BUS	5.2%	92.8%	0.3%	0.3%	10.1%	5.4%	10.6%	*22.5%*
EDUC	1.4%	0.1%	90.7%	0.0%	5.7%	5.1%	4.3%	*10.5%*
ENGR	1.1%	2.0%	0.3%	97.9%	3.0%	8.3%	2.6%	*14.7%*
HA	3.4%	1.1%	1.7%	0.3%	68.1%	4.6%	7.4%	*14.6%*
SCI	1.4%	0.5%	0.4%	0.5%	3.0%	67.8%	2.6%	*10.3%*
SSCI	4.5%	0.9%	3.9%	0.1%	3.9%	2.7%	59.2%	*10.7%*
UGS	1.1%	0.6%	0.7%	0.5%	1.2%	1.4%	2.6%	*1.7%*

Figure B-3. Share of Upper Division Courses Taught by College (column percentages) (Fall 2003)

	Share of Upper Division Courses Taught by College (column percentages)							College Share of UD Headcount
Student Major	ASA	BUS	EDUC	ENGR	HA	SCI	SSCI	
ASA	81.0%	1.5%	2.9%	0.1%	4.1%	5.0%	4.9%	*16.0%*
BUS	4.9%	90.3%	0.8%	0.2%	17.1%	3.8%	6.0%	*9.3%*
EDUC	1.8%	0.0%	87.3%	0.0%	2.9%	2.2%	1.6%	*5.7%*
ENGR	0.9%	2.4%	0.1%	98.0%	2.7%	18.6%	1.4%	*18.4%*
HA	2.9%	0.8%	3.1%	0.2%	61.9%	4.4%	4.3%	*13.3%*
SCI	1.1%	0.3%	0.5%	0.5%	3.7%	59.9%	1.8%	*18.7%*
SSCI	6.8%	2.7%	4.6%	0.6%	6.6%	4.0%	78.3%	*16.7%*
UGS	0.7%	2.1%	0.7%	0.3%	1.0%	2.0%	1.6%	*1.8%*

Figure B-4. Share of Upper Division Courses Taught by College (column percentages) (Fall 2016)

APPENDIX C. DEFINITIONS AND MEASURES

		2006-07	2011-12	2016-17	*Master Plan Baseline*	Measure
A	Student Headcount	29,604	30,236	32,156	*36,780*	Fall Headcount
B	Fall FTES	23,308	24,257	26,687	*30,525*	Fall FTES
C	College-Year Full-Time Equivalent Students					
	CYFTES, CA Residents (CSU target)	22,132	21,045	22,507	*24,859*	CYFTES
	CYFTES, CA Residents (Census)	22,308	22,198	22,768	*24,859*	CYFTES
	CYFTES, Non-Resident Students (Census)	1,578	1,242	2,801	*4,387*	CYFTES
	CYFTES, Total (Census)	23,887	23,559	25,569	*29,246*	CYFTES
D	Instructional Faculty					
	Tenured and Probationary	651	581	639	*731*	Fall Headcount
	Lecturers/ Temporary	1,035	1,119	1,149	*1,314*	Fall Headcount
	Full-time Equivalent Faculty	1,082.2	1,114.8	1,030.9	*1,179.1*	Fall FTEF
E	Other Employees					
	Staff		1,136	1,218	*1,393*	Fall Headcount
	Management		175	203	*232*	Fall Headcount
F	Special Session*					
	CYFTES, incl. Summer	1,303	2,052	2,164	*4,387*	CYFTES
	Fall Headcount	1,635	2,403	2,577	*5,225*	Fall Headcount
G	Campus Capacity (Instructional and Support)					
	Net AYFTES taught (estimate)		19,865	21,857	*25,000*	Net AYFTES
	Built Capacity		21,749	21,809	*25,000*	Net AYFTES
	Capacity with interdisciplinary science building (and remaining deficit)			*22,104*	*(2,896)*	Net AYFTES
	Master Plan Ceiling	25,000	25,000	25,000	*25,000*	Net AYFTES

Table C. Recent Enrollment and Staffing Data, and Baseline Projections to Master Plan Buildout

The CSU uses several different measures of enrollment for various planning and budgeting purposes: The number of students or Headcount is typically based on Fall, the largest term of the academic year. Headcount is higher than Full-Time Equivalent Students (FTES) because most students do not take a full unit load every term. In 2006 the State of California distinguished undergraduate FTES, based on 15 units per term, from graduate student FTES at 12 units per term, recognizing the different character of graduate education.

Budget planning uses FTES for the entire college year (CYFTES), including summer instruction on state-support, but not Special Session (self-support). The budget process distinguishes California resident CYFTES from (international and domestic) non-resident CYFTES because the State supports California residents, and non-resident students pay different fees. Budgets are based on CSU targets set in advance.

Instructional faculty refers to the employees in faculty positions who are directly involved in teaching. Full-time Equivalent Faculty (FTEF) is calculated based on a full workload of 12 Weighted Teaching Units per semester for tenured and tenure-track faculty and 15 WTU per semester for lecturers and other temporary faculty.

The space planning process focuses on face-to-face instruction scheduled in classrooms and labs on campus, and covers both California residents and non-residents, but not Special Session. Space planning does not count independent study and other unscheduled instruction on campus, off-campus courses, or asynchronous instruction, and does not include Special Session. Currently, about 85 percent of the instruction at SJSU is face-to-face, scheduled on campus. Space planning uses recent campus patterns and trends to determine net AYFTES, focusing on the academic year, excluding summer. The current campus capacity is the net AYFTES that can be taught in present facilities based on CSU space utilization standards.

The Board of Trustees approves the campus Master Plan enrollment ceiling for which the physical campus is designed.

Assignable Square Feet (ASF) is the floor area in enclosed interior areas of buildings, excluding corridors, public restrooms, janitorial facilities, mechanical systems, and building equipment.

Table C shows the relationships among most of these measures.

* Special Session enrollments (as well as faculty and staff) are not included in sections A through F because they are self-support programs, not included in CSU facility funding formulas.

APPENDIX D. THREE FUTURE ENROLLMENT SCENARIOS

Table D illustrates the annual growth for enrollment, faculty, staff, and facilities for three different growth rates — 0.75 percent, 1.0 percent, and 1.25 percent annual increase in CSU funding for California resident students.

The following graphs show the enrollment increase for each of these rates compared with past trends.[3]

	Increase to Master Plan Ceiling	Average Annual Increase from Fall 2016		
		2025	2027	2031
		1.25 %	1.0 %	0.75 %
Fall Student Headcount (regular)	4,624	514	420	308
CA Resident CYFTES	2,352	261	214	157
Non-CA Resident CYFTES	1,586	176	144	106
Special Session CYFTES[1]	2,223	247	202	148
Instructional Tenure-Track/Tenured Faculty	92	10	8	6
Staff and Management	204	23	19	14
Lecture ASF	12,101	1,345	1,100	807
Other ASF[2]	825,261	91,696	75,024	55,017
Built Capacity (net AY FTES) (including interdisciplinary science building)	3,191	355	290	213

Table D. Average Annual Increases for Three Growth Rates

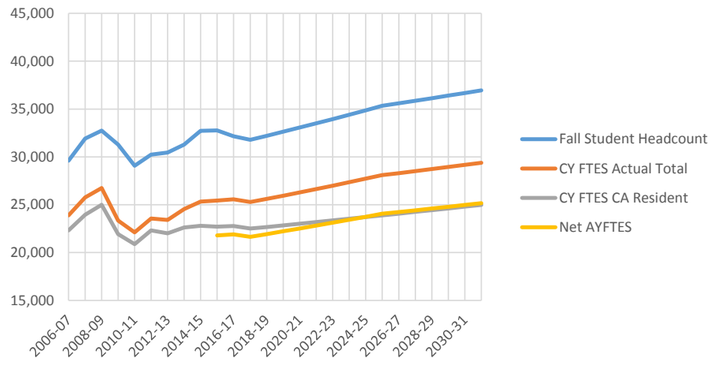

Figure D-1. SJSU Enrollment Projection at 0.75 Percent Annual Growth in California Resident CYFTES

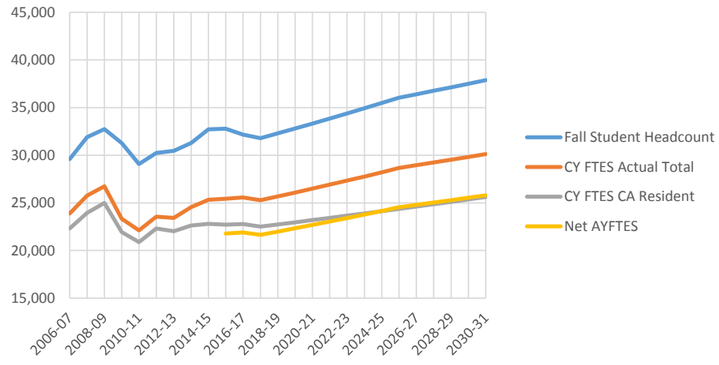

Figure D-2. SJSU Enrollment Projection at 1.0 Percent Annual Growth in California Resident CYFTES

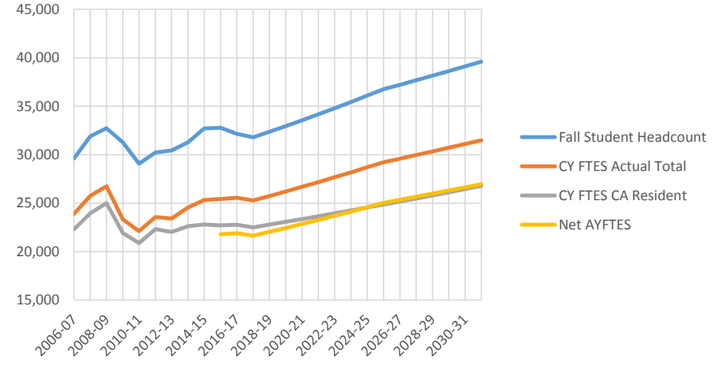

Figure D-3. SJSU Enrollment Projection at 1.25 Percent Annual Growth in California Resident CYFTES

[1] Note that regular Fall headcount includes CA residents and non-CA residents, but not Special Session because it is offered through Self-Support and not included in State funding formulas.
[2] Note that Other ASF does not include facilities for Housing, ASI, Special Session or other auxiliaries because they are funded separately. The new interdisciplinary science building will add just over 71,000 ASF to the existing number. Other space needs could be higher, depending upon the requirements of new or expanding academic programs.
[3] Note that the CA resident CYFTES and net AYFTES lines converge in about 2025 due to a coincidence: CA resident enrollment would be 85 percent of the total if non-California students increase to 15 percent; and net AYFTES is about 85 percent of total CYFTES if non face-to-face instruction continues at 15 percent of all instruction.

APPENDIX E. FACILITY CONDITION ASSESSMENT CHART

O'Connor Construction Management Inc.

Facility Condition Assessment - Replacement & Renovation Cost Adjustment Recommendations

Date: 13 March 2015

				Replacement			Report	CSU	OCMI	OCMI	Recommended	Renovation		OCMI	Recommended
	Building Name	Unit	Size	Cost ($)	Floors	Year Built	Cost/SF	Guide ($/ SF)	Regional Adjust	Recommed	Adj Replace Cost ($)	Cost ($)	Cost/SF	Recommed	Adjust Renov ($)
1	Administration Building	SF	39,358	$ 12,292,000	2	1957	$ 312.31	$ 354.00	$389.40	$428.34	$16,858,606	$6,714,566	$ 170.60	$233.98	$9,209,097
2	Art Building	SF	81,003	$ 25,000,000	3	1959	$ 308.63	$ 374.00	$411.40	$452.54	$36,657,098	$11,349,375	$ 140.11	$205.44	$16,641,406
3	Art Sculpture Facility	SF	6,844	$ 2,131,429	1	1959	$ 311.43	$ 374.00	$411.40	$452.54	$3,097,184	$421,766	$ 61.63	$89.55	$612,869
4	Associated Students House	SF	8,591	$ 2,626,213	2	1904	$ 305.69	$ 315.87	$347.45	$382.20	$3,283,481	$384,088	$ 44.71	$55.90	$480,215
5	Boccardo Business Complex	SF	80,301	$ 23,850,000	3	1971	$ 297.01	$ 352.00	$387.20	$425.92	$34,201,802	$6,806,914	$ 84.77	$121.56	$9,761,372
6	Business Tower	SF	46,200	$ 17,316,667	9	1971	$ 374.82	$ 354.00	$389.40	$428.34	$19,789,308	$6,716,466	$ 145.38	$166.14	$7,675,508
7	Campus Village A	SF	108,150	$ 33,060,759	8	2005	$ 305.69	$ 278.00	$305.80	$382.20	$41,334,930	$7,396,779	$ 68.39	$85.51	$9,247,983
8	Campus Village B	SF	716,675	$ 219,082,937	15	2005	$ 305.69	$ 278.00	$305.80	$382.20	$273,913,185	$49,023,777	$ 68.40	$85.52	$61,293,039
9	Campus Village C	SF	135,000	$ 41,268,632	7	2005	$ 305.69	$ 278.00	$305.80	$382.20	$51,597,000	$9,390,590	$ 69.56	$86.97	$11,740,788
10	Campus Village Garage	SF	290,760	$ 21,088,822	2	2005	$ 72.53	$ 278.00	$305.80	$382.20	$111,128,472	$2,233,037	$ 7.68	$40.47	$11,767,086
11	Central Classroom	SF	34,318	$ 10,750,000	2	1924	$ 313.25	$ 352.00	$387.20	$425.92	$14,616,723	$3,992,126	$ 116.33	$158.17	$5,428,074
12	Central Plant Building	SF	18,153	$ 10,550,000	1	1972	$ 581.17	$ 581.17	$639.29	$703.22	$12,765,500	$1,650,358	$ 90.91	$110.01	$1,996,933
13	Child Development Center	SF	11,500	$ 3,515,476	1	1998	$ 305.69	$ 315.87	$347.45	$382.20	$4,395,301	$534,358	$ 46.47	$58.10	$668,093
14	Clark Hall	SF	192,948	$ 58,982,962	5	1982	$ 305.69	$ 354.00	$389.40	$428.34	$82,647,346	$12,386,207	$ 64.19	$89.95	$17,355,641
15	Corp Yard Offices	SF	11,405	$ 2,400,000	2	1980	$ 210.43	$ 354.00	$389.40	$428.34	$4,885,218	$774,625	$ 67.92	$138.25	$1,576,755
16	Corp Yard Trades Building	SF	26,546	$ 11,300,000	2	1980	$ 425.68	$ 177.00	$194.70	$214.17	$5,685,357	$1,917,934	$ 72.25	$36.35	$964,968
17	Data Center	SF	12,616	$ 3,856,630	2	1955	$ 305.69	$ 315.87	$347.45	$382.20	$4,821,837	$984,866	$ 78.06	$97.60	$1,231,350
18	Dining Commons	SF	23,925	$ 7,313,719	1	1967	$ 305.69	$ 327.00	$359.70	$395.67	$9,466,405	$4,661,624	$ 194.84	$252.19	$6,033,705
19	Dudley Moorhead Hall / IRC	SF	75,371	$ 26,040,385	3	1957/1962	$ 345.50	$ 352.00	$387.20	$425.92	$32,102,016	$15,236,261	$ 202.15	$249.21	$18,782,929
20	Duncan Hall	SF	306,999	$ 259,280,000	8	1967	$ 844.56	$ 459.00	$504.90	$555.39	$170,504,175	$44,544,073	$ 145.10	$95.42	$29,292,465
21	Dwight Bentel Hall	SF	39,691	$ 11,562,500	2	1911	$ 291.31	$ 352.00	$387.20	$425.92	$16,905,191	$2,064,149	$ 52.01	$76.04	$3,017,931
22	Engineering Building	SF	330,479	$ 115,204,082	4	1962	$ 348.60	$ 428.00	$470.80	$517.88	$171,148,465	$32,181,306	$ 97.38	$144.67	$47,808,906
23	Event Center Building	SF	215,117	$ 65,759,883	3	1989	$ 305.69	$ 476.00	$523.60	$575.96	$123,898,787	$14,284,118	$ 66.40	$125.11	$26,912,835
24	Faculty Office Building	SF	16752.00	$ 4,980,000	2	1959	$ 297.28	$ 342.00	$376.20	$413.82	$6,932,313	$2,315,539	$ 138.22	$192.41	$3,223,301
25	Field House Overview	SF	15,438	$ 4,850,000	1	1962	$ 314.16	$ 352.00	$387.20	$425.92	$6,575,353	$1,640,374	$ 106.26	$144.06	$2,223,925
26	Health Building	SF	40,060	$ 12,285,185	4	1959	$ 306.67	$ 381.00	$419.10	$461.01	$18,468,061	$7,674,025	$ 191.56	$287.97	$11,536,201
27	Hugh Gillis Hall	SF	66,525	$ 21,051,852	3	1954	$ 316.45	$ 316.45	$348.10	$382.90	$25,472,741	$10,518,548	$ 158.11	$191.32	$12,727,443
28	Industrial Studies	SF	109,802	$ 35,050,000	2	1960	$ 319.21	$ 352.00	$387.20	$425.92	$46,766,868	$17,922,178	$ 163.22	$217.79	$23,913,385
30	Joe West Hall	SF	130,000	$ 39,740,164	9	1967	$ 305.69	$ 218.00	$239.80	$382.20	$49,686,000	$26,603,886	$ 204.65	$255.86	$33,262,084
31	Koret Building Overview	SF	15,047	$ 4,599,771	1	2001	$ 305.69	$ 316.00	$347.60	$382.36	$5,753,371	$441,104	$ 29.32	$36.67	$551,731
32	MacQuarrie Hall	SF	90,505	$ 31,409,091	5	1965	$ 347.04	$ 347.04	$381.75	$419.92	$38,005,000	$11,894,529	$ 131.42	$159.02	$14,392,380
33	Martin Luther King Library	SF	499,221	$ 152,608,648	8	2003	$ 305.69	$ 311.00	$342.10	$489.81	$244,522,440	$17,445,236	$ 34.94	$55.99	$27,952,228
35	Music Building	SF	62,629	$ 19,709,091	2	1953	$ 314.70	$ 441.00	$485.10	$533.61	$33,419,461	$11,394,728	$ 181.94	$308.50	$19,321,321
36	North Parking Facility	SF	580,783	$ 42,397,159	6	1970	$ 73.00	$ 73.00	$80.30	$88.33	$51,300,562	$2,467,391	$ 4.25	$5.14	$2,985,543
37	Science Building	SF	91,366	$ 47,961,538	3	1957	$ 524.94	$ 459.00	$504.90	$555.39	$50,743,763	$26,703,396	$ 292.27	$309.22	$28,252,447
38	Simpkins Athletics Building Overview	SF	22,244	$ 6,799,848	1	1990	$ 305.69	$ 354.00	$389.40	$428.34	$9,527,995	$1,240,586	$ 55.77	$78.15	$1,738,318
39	Simpkins Stadium Center Overview	SF	21,091	$ 6,060,000	1	1994	$ 287.33	$ 342.00	$376.20	$413.82	$8,727,878	$1,260,666	$ 59.77	$86.09	$1,815,666
40	South Parking Facility	SF	624,735	$ 45,605,655	5	1962	$ 73.00	$ 73.00	$80.30	$88.33	$55,182,843	$4,036,021	$ 6.46	$7.82	$4,883,585
41	Spartan Memorial Building	SF	2,185	$ 667,940	1	1952	$ 305.69	$ 352.00	$387.20	$425.92	$930,635	$331,700	$ 151.81	$211.51	$462,155
42	Spartan Stadium Overview	SF	216,000	$ 140,452,161	1	1933	$ 650.24	$ 650.24	$715.27	$786.79	$169,947,115	$15,035,563	$ 69.61	$84.23	$18,193,031
43	Storage Building Overview	SF	3,315	$ 287,505	1	1990	$ 86.73	$ 145.00	$159.50	$175.45	$581,617	$81,334	$ 24.54	$49.63	$164,537
44	Student Services Center	SF	98,225	$ 30,026,751	1	2000	$ 305.69	$ 354.00	$389.40	$428.34	$42,073,697	$7,405,440	$ 75.39	$105.64	$10,376,555
45	Sweeney Hall	SF	91,187	$ 30,260,000	4	1963	$ 331.85	$ 352.00	$387.20	$425.92	$38,838,367	$10,095,977	$ 110.72	$142.10	$12,958,072
46	Tower Hall / Morris Dailey	SF	23,454	$ 7,883,571	2/1	1910/1920	$ 336.13	$ 354.00	$389.40	$428.34	$10,046,286	$1,400,661	$ 59.72	$76.10	$1,784,907
47	University Police Department	SF	25,391	$ 7,761,865	3	1999	$ 305.69	$ 354.00	$389.40	$471.17	$11,963,579	$1,662,775	$ 65.49	$100.94	$2,562,881
48	Washington Square Hall	SF	73,095	$ 22,400,000	2	1933	$ 306.45	$ 352.00	$387.20	$425.92	$31,132,622	$6,495,099	$ 88.86	$123.50	$9,027,208
49	West Parking Facility	SF	323,350	$ 23,604,550	5	1985	$ 73.00	$ 73.00	$80.30	$88.33	$28,561,506	$2,412,969	$ 7.46	$9.03	$2,919,692
	Total Construction Cost:										**$2,245,594,537**				**$552,875,501**

Main Campus

BUILDING	LOCATION
A Modular A	D3
ADM Administration	B2
AQX Aquatics Center	D3
ART Art Building	C3
ASH Associated Students House	D1
ASP AS Print Shop	B3
ATM	B4
BBC Boccardo Business Complex	C4
BK Bookstore	B3
BT Business Tower	C4
CAR Career Center	B2
CC Computer Center	B2
CCB Central Classroom Building	C2
CH Concert Hall	C3
CL Clark Hall	B2
CP Cooling Plant	C4
CVA Campus Village A	D4
CVB Campus Village B	D4
CVC Campus Village C	D4
CV2 Campus Village 2	D4
CYA Corporation Yard A	B4
CYB Corporation Yard B	B4
DC Dining Commons	D3
DH Duncan Hall	D1
DMH Dudley Moorhead Hall	B2
DBH Dwight Bentel Hall	C2
EC Event Center	C3
ENG Engineering Building	B3
FOB Faculty Offices	C2
HB Health Building	C4
HGH Hugh Gillis Hall	B1
IRC Instructional Resource Center	B2
IS Industrial Studies	B4
JWH Joe West Hall	D4
KING Dr. Martin Luther King, Jr. Library	B1
MH MacQuarrie Hall	D
MD Morris Dailey Auditorium	B2
MOD F Modular	B4
100A Modular	B4
100B Modular	B4
MUS Music Building	C3
SCI Science Building	C1
SH Sweeney Hall	D2
SPM Spartan Memorial	C1
SPXC Spartan Complex Central	C2
SPXE Spartan Complex East	C2
SRAC Student Recreation and Aquatic Center	D3
SSC Student Services Center	A4
SWC Student Wellness Center	C2
SU Diaz Compean Student Union	B3
TH Tower Hall	B2
UPD University Police Department	D2
UT University Theatre	B1
WSH Washburn Hall	D3
WSQ Washington Square Hall	C1
YUH Yoshihiro Uchida Hall	C1

Parking Garages

North at Tenth Street	A4
West at Fourth Street	D1
South at Seventh Street	D2

Food/Coffee

CVB	D4
KING	B1
MH	D2
SU	B3

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