

The Grand Entrance: A Faculty and Staff Housing Development

A Senior Project
presented to
the Faculty of the City and Regional Planning Department
California Polytechnic State University – San Luis Obispo

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science, City and Regional Planning

By

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June 2023

The Grand Entrance

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Executive Summary

The team chose this project because it is one of many upcoming projects detailed for California Polytechnic State University (University) in the 2035 Master plan. The University has a capacity of over 21,000 students and 3,000 employees, including 1,400 faculty. Many students and faculty from the University live within city limits, with students making up a majority of the rental market in the city. In a typical four-bedroom house, four students with four separate incomes can rent out a house together and pay a much higher rent than a faculty member with one to two incomes could. Additionally, The City of San Luis Obispo has reached a near-zero vacancy rate, with the average rent passing the average salary of a new University employee. As a result of this, many faculty members are forced to look for housing in the cities surround San Luis Obispo, creating longer and more inconvenient commutes.

The University is aware of increasing difficulties for faculty to reside in the area and is seeking a design proposal for a faculty housing development on the corner of Slack St and Grand Ave. The Request for Proposals (RFP), issued in June 2022, outlined the need for 150-220 new rental and for sale units, with a variety of unit types and floor plans. This report serves as the deliverable for the University's RFP, consisting of Site Analysis, Visioning, and Final Design.

Over the course of Spring Quarter 2023, the team conducted several research methods, including in person site visits, existing building tours, and data collection from various news sources. We compiled this information into the first chapter of this report: Site Context and Analysis. This chapter is organized into different types of data: Physical, Social, Regulatory, Cultural & Historical, and University. All data was summarized into the Strengths, Weaknesses, Opportunities, and Threats (SWOT) table and the Site Analysis Map.

Next, the team took all the Site Analysis data and used it to create a vision for the project. We began by establishing design principals to guide our inspiration for the project. Once principals were established, the team conducted case studies based on housing projects in San Luis Obispo as well as other Universities. Pulling inspiration from these studies, we developed Goals, Principals, and Design Ideas for our project. Keeping these goals in mind, we began the design phase with two preliminary concept diagrams and final concept for the project.

In the final few weeks of Spring Quarter, we began the Design Phase. Using SketchUp, Illustrator, and Photoshop, the team developed an illustrative site plan, a 3D model, and two perspective views of our final site. The Design chapter includes these deliverables as well as a project description and development table that connects our final design to the University's RFP.

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Chapter 1: Site and Context Assessment

Chapter 1: Site Context and Assessment

Introduction

This chapter details the research our team did in preparation for the visioning and design chapters of this report. Research is broken up into physical, social, regulatory, cultural, and university settings. The team conducted site visits on January 23rd, 2023, and April 17th, 2023, for firsthand research, while secondhand research was done using various sources such as the Environmental Impact Report for the University's 2035 Master plan, Mustang News, and various local news outlets.



View of Site from Slack Street from personal site visit 1/23/2023

1.1 The Physical Setting

Context and Boundaries

On January 23, 2023, the team visited the site on the corner of Slack and Grand. The site itself was fenced off, therefore all visual information and pictures received were from a distance. The team walked along both sides of Grand Avenue and Slack Street when visiting to see the site from several distances and to understand the context of the site better. The team also visited the Avila Residence on April 17, 2023, and were able to survey the inside and outside of the building.

Figure 1 shows the project area, adjacent land uses, existing streams on the site. The project area is located on the northeast corner of the intersection at Slack Street and Grand Avenue, the southern entrance to California Polytechnic State University. The total project area is over 1 million square feet, which is approximately 23 acres. Surrounding uses include student housing to the north and west, single family homes and educational facilities to the south, and open space to the east.

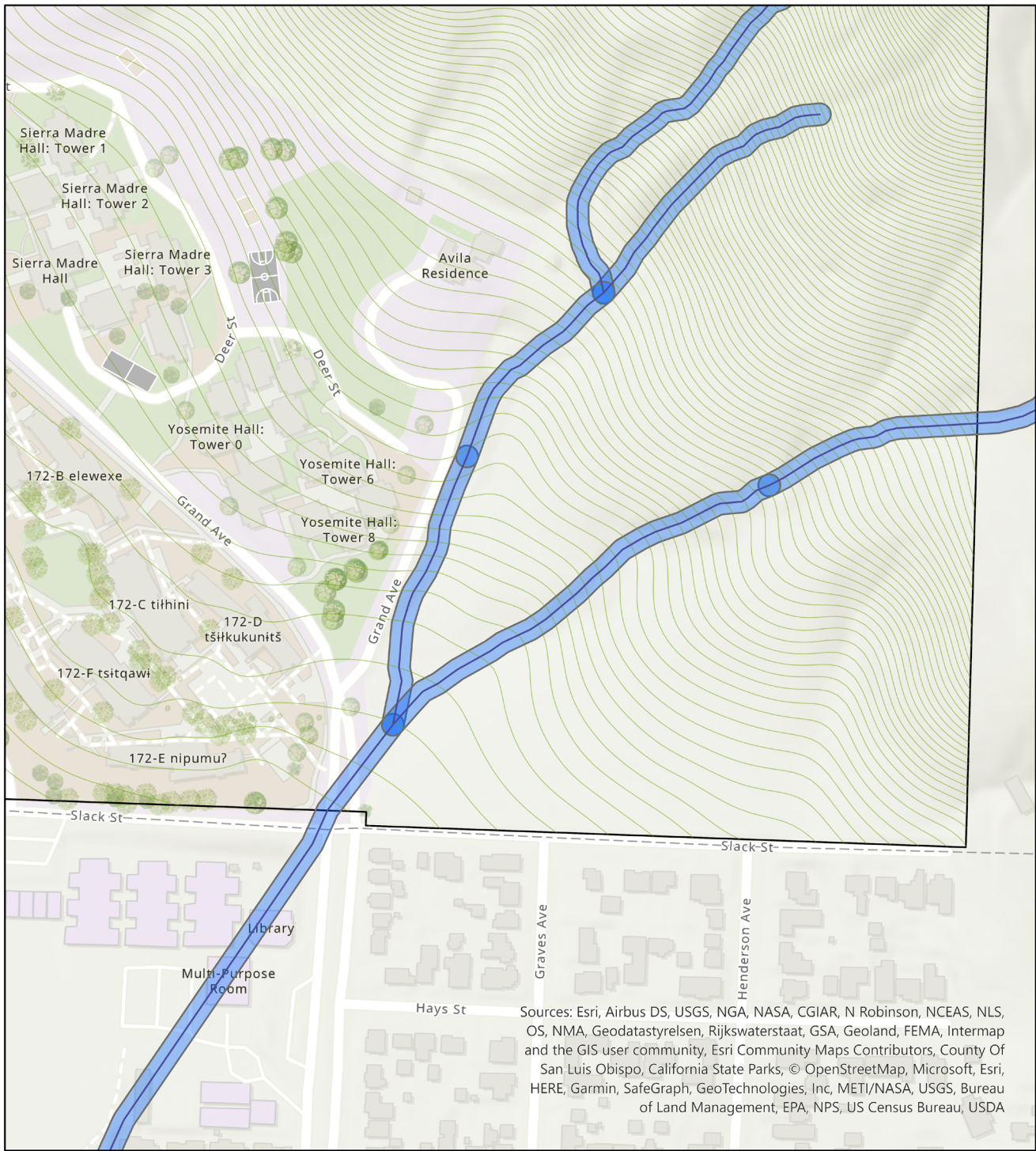
To the west of the project area is the most recently developed student housing on the university's campus, yakitutu. This development includes seven modern-looking buildings of student housing that accommodate over 1,400 students (Architecture Magazine, 2019). Each building stands between 3 and 5 stories, with amenities such as numerous open spaces, sports courts, study rooms, and a café. Just across Grand Avenue and to the north of the project areas lies Yosemite and Sierra Madre Halls, also known as "The Towers." The Towers consist of 16 brutalist style buildings, an architectural style that emerged during the 1950s in the United Kingdom characterized by minimalist construction that highlights bare building materials. These stand at three stories high each. Their amenities include community spaces on each floor of the halls as well as two larger community rooms and one basketball court.

South of the project site is a neighborhood comprised of twelve blocks of single-family housing. This neighborhood houses a variety of people, including community members, college students, and faculty. Tucked into this neighborhood is the SLO Classical Academy, a K-12 private school.

To the east of the site lies Poly Canyon. The University sits on a large amount of undeveloped land, much of which is used by faculty, students, and community members for recreational purposes. Trails within Poly Canyon include the "P," Serenity Swing, and Architecture Graveyard.



View of Site Topography from Grand Avenue from personal site
visit 1/23/2023



Legend

-  streams
-  5 foot contour lines
-  20 foot buffer
-  campus_boundary

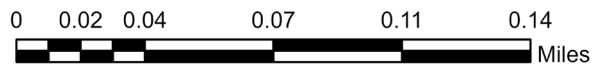


Figure 1: Topography and Hydrology Map

Topography

Figure 1 shows the five foot contours of the project area. The southwest corner of the project area is 377 feet above sea level and leads directly into Grand Avenue. On the south side of the site along Slack Street there is a steep slope that drops down from the project site into the public right of way. To the north and east of the project area, the slope begins to increase up into Poly Canyon and becomes very steep, 524 feet above sea level being the highest point in the project area. There is a creek and a ravine in the middle of the project area that directs drainage to the project's south and west boundaries.



View of Site Topography from Slack Street from personal site visit 1/23/2023



View of the creek running through the site as it goes below the ground from personal site visit 4/17/2023

Hydrology and Vegetation

As shown in Figure 1, two creeks run through the left most side and center of the site and drain to the western boundary on Grand Avenue. Figure 1 shows a 20' buffer on either side of the creeks. The purpose of this buffer is to protect the creek from excessive runoff and sediment caused by development. The creeks meet and run directly under the public right of way, completely cutting off the northern third of the project area from the rest of site. Multiple fully grown trees surround the creek bed extending from the top of the slope all the way to the drainage site at Grand Avenue. There are stand-alone trees in the ravine area as well, and more clusters of trees to the north of the site surrounding the Avila Residence and the road leading up to it. The remainder of the site is covered in long grass, which becomes swampy with heavy rain.

Circulation

The main intersection of the project area is Slack Street and Grand Avenue. This is also the southern entrance to the university. This intersection is regulated by a four way stop, with two lanes traveling east west on Slack Street and five lanes traveling north south on Grand Avenue. There is no signage or aid for pedestrians at this intersection. The closest signaled crosswalk is located up Grand Avenue in front of Sierra Madre Hall. Currently, there are no connections from Slack Street, as the only existing road in the project area is a private road that leads to the Avila Residence at the north end of the site.



Image of a crosswalk in Slack and Grand from personal site visit
4/17/23



Information Kiosk at Grand Avenue Entrance from Google Earth
View

Structures and Utilities

The project area is almost completely undeveloped. The only existing structures on the site are a telephone pole near the southern boundary that connects to the powerlines along Slack Street, a small information kiosk at the entrance to campus on Grand Avenue, and the Avila Residence, a private family home located toward the northern boundary. It is unknown where the source of water for the Avila Residence comes from.

1.2 The Social Setting

Campus Events

While there are few events planned specifically for the faculty on campus, there are many events that serve the larger community that the residents have easy access to with such close proximity to the University. Figure 2 shows all social hubs located within a 15-minute walking distance from the Slack and Grand Project Area. A third of a mile up Grand Avenue from the project site is the Performing Arts Center (PAC). The PAC hosts multiple events each year, ranging from student performances to professional stand-up comedians or musicals. There are also multiple sporting events that take place throughout the school year. Mott Gym, Spanos Stadium, and Baggett Stadium are located on campus and host a variety of sporting events such as basketball, volleyball, football, and baseball. Additionally, smaller events that the university hosts include art shows and club showcases.

As for events regarding faculty specifically, there is a Pride Faculty and Staff Association. PFSA is an organization that “provides a safe and welcoming environment to empower, attract, and retain Lesbian, Gay, Bisexual, Transgender, Queer and Questioning, Intersex, Asexual and Ally, and Pansexual (LGBTQIAP) faculty, staff, and graduate students.” (Pride Faculty Staff Association, n.d.).

Their goal is to provide a community for faculty and staff apart of the LGBTQ+ community and “offer professional development and social opportunities” (PFSA). They partner with Cal Poly Student Diversity & Belonging to put on events open to both students and faculty of all sexual orientation and gender identities.



Performing Arts Center, Cal Poly, 2023



Figure 2: 15 Minute Walking Radius Map created in Adobe Illustrator

Community Events

Outside of the University, there are plenty of community events hosted by the City of San Luis Obispo including live music, art festivals, culinary tastings, holiday festivals, and sporting events (SLO Events). One of the most popular events is the year-round Farmers' Market on Higuera Streets every Thursday night. Downtown is a short drive or public transit ride from the University and offers a variety of restaurants and shops daily in addition to the weekly Farmers' Market. Live music venues include the Fremont Theater, SLO Brew Rock, and a variety of hotels in the downtown area. The San Luis Obispo Museum of Art, also located downtown, hosts multiple events per month that are open to the community. San Luis Obispo is also nestled in wine country, with several renowned wineries such as Tolosa, Baileyana, Enda Valley, and more that offer tastings daily. The Mission Plaza in Downtown is also known to host pop ups with community activities such as roller-skating around holidays.



Farmers Market, California Polytechnic State University, 2023

1.3 The Regulatory Setting

University Regulations

Zoning: SP-2

No new buildings or permanent uses are allowed in this zone without the preparation of a specific plan. Cal Poly and the CSU discourage the use of pre-engineered buildings and as such they are not allowed within the campus core.



2035 Master Plan Illustrative Site Plan , Cal Poly, 2020



Core Campus Zoning Map and Design Guidelines, Cal Poly, 2020

Environmental Regulations

The Cal Poly 2035 Master Plan Environmental Impact Report Draft details mitigation measures for projects on campus through the year 2035. Included in this report is the project site, known as “Faculty and Staff Housing.” The following mitigation measures relate directly to this project:

Mitigation Measures

Mitigation Measure 3.1-1

“Mitigation Measure 3.1-1: Prepare and Implement Landscaping Plans for Farm Shop, University-Based Retirement Community, and Slack and Grand Projects Prior to implementation of the Farm Shop, University-Based Retirement Community Project, and Slack and Grand project, Cal Poly shall prepare site-specific landscaping plans for review and approval by the CSU. The plans shall be prepared by a licensed landscape architect and shall include specifications for plant and tree species, sizes, densities and planting locations that shall be implemented during construction of each project.

The objective of the landscaping plans shall be to provide visual screening of the projects from sensitive viewing locations and to reduce the impression of visual mass and structure.” (ES-7)

This is the landscaping mitigation referred to previously in Comment L8-3.

Mitigation Measure 3.1-3b

“Mitigation Measure 3.1-3b: Prepare and Implement Lighting Plans for Farm Shop, University-Based Retirement Community, and Slack and Grand Projects Prior to approval of development plans for the Farm Shop, University-Based Retirement Community Project, or Slack and Grand project, Cal Poly shall prepare comprehensive, and site-specific lighting plans for review and approval by the Division of the State Architect that shall be implemented as part of project construction/implementation. The lighting plans shall be prepared by a qualified engineer who is an active member of the Illuminating Engineering Society of North America (IESNA) using guidance and best practices endorsed by the International Dark Sky Association. The lighting plans shall address all aspects of the lighting, including but not limited to all buildings, infrastructure, parking lots, driveways, safety, and signage.

The lighting plans shall include the following, as feasible, in conjunction with other measures determined feasible by the illumination engineer:

- the point source of exterior lighting shall be shielded from off-site viewing locations;
- light trespass from exterior lights shall be minimized by directing light downward and using cutoff fixtures or shields;
- illumination from exterior lights shall be the lowest level necessary to provide adequate public safety;
- exterior lighting shall be designed to minimize illumination onto exterior walls; and
 - any signage visible from off-site shall not be internally illuminated.” (ES-8)
- This mitigation deals directly with Slack and Grand as well as other projects to mitigate light pollution.

San Luis Obispo City Regulations

The University is not required to follow city regulations because it is a state entity and outside of city limits. In public comments mentioned in the Political Setting Chapter, the University responded to public comments stating that the University would try to follow the following Municipal Code Section when possible and applicable.

San Luis Obispo Municipal Code Section 17.70.050, Edge Conditions. The purpose of this Municipal Code Section is “to support a buffer between low-density residential zones or open space areas and zones that permit development of higher intensity. Where multi-unit residential zones or commercial zones are adjacent to lower intensity residential or open space zones, development shall incorporate elements in the site design and building design to soften its impact and to result in a compatible transition to the sensitive zone” (City of San Luis Obispo, 2023)

The development the University has planned is bigger than what the City of SLO would theoretically propose and have apply to this standard, but it is something to keep in mind when designing next to a mostly single-story single-family neighborhood directly across the street. The University plans to incorporate lower density homes into this project to allow transition from neighborhood to campus be smoother.

City of San Luis Obispo General Plan Land Use Element

Adopted August 23, 1994 (Resolution No. 8332),
as amended through December 9, 2014 (Resolution No. 10586).

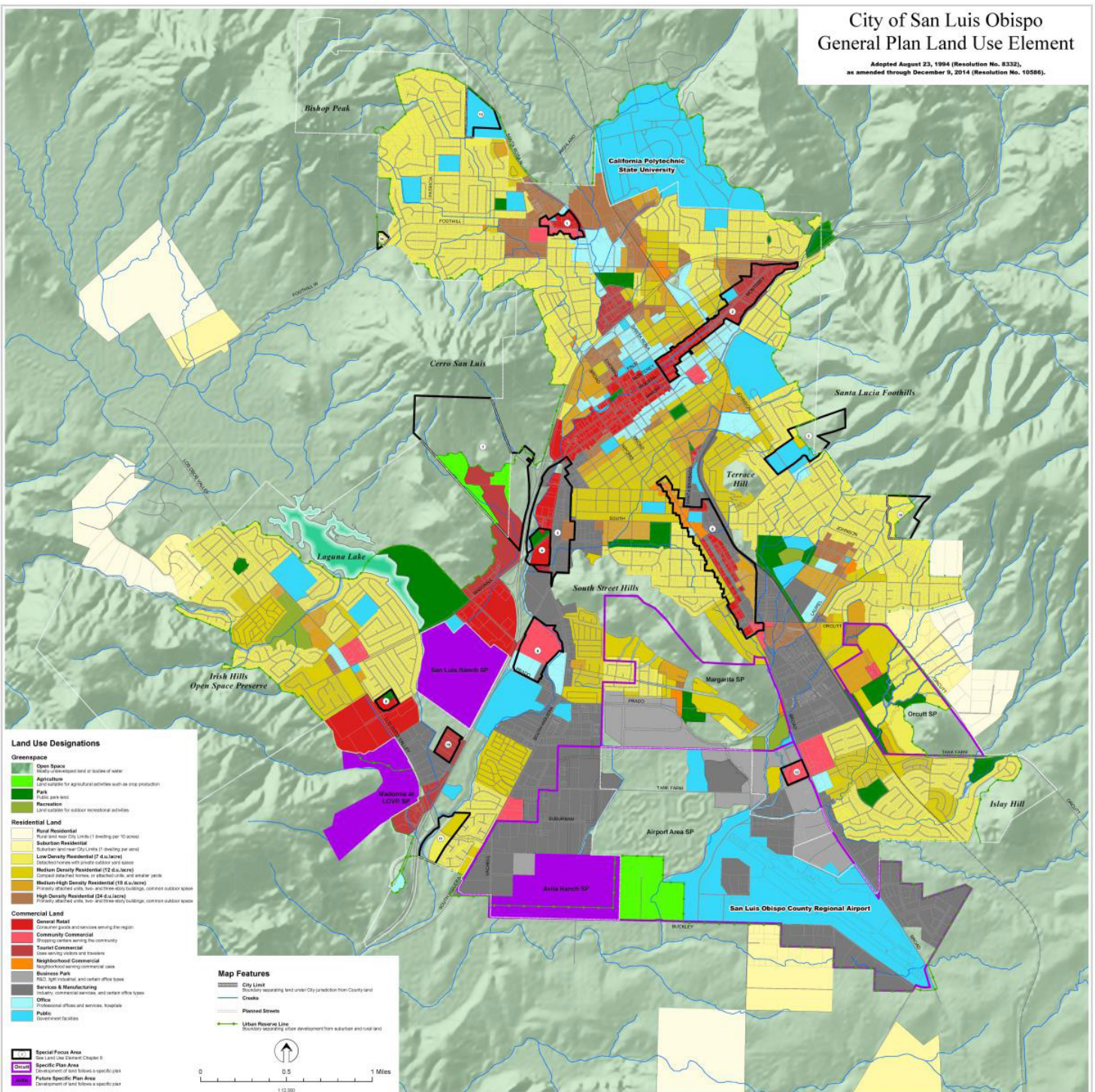


Figure 3: City of San Luis Obispo
General Plan Land Use Element

1.4 The Cultural and Historical Setting

Cal Poly's campus resides on Chumash lands, a very culturally sensitive and significant area. When designing the yakitutu student dorms across the street from the project site, the university and project designer collaborated with yakitutu people in the area. The yakitutu dorms were built in a way that highlighted the indigenous past of the area, through the placement of the buildings, the names of the buildings, and the indigenous plant life that was chosen for landscaping. Since Cal Poly has already connected with local indigenous yakitutu people in the area, the door for future collaboration has been opened.

Located in the Northwestern corner of the site is the Avila Residence. The Avila Residence has been in the Garcia family since 1925 and still remains private property. The original 1925 property spanned 125 acres and the lands have been slowly acquired by Cal Poly and left the private property as the home and the driveway up to it. With the passing of the matriarch of the Avila Residence, Josephine Avila, in 2017, this project would incorporate what is left of the Avila Residence into it (Wasserman, 2022).



View from Avila from Site Visit 4/17/23



Avila Residence from Site Visit 4/17/23

1.5 The Political Setting

Master Plan Environmental Impact Report

The Cal Poly 2035 Master Plan Environmental Impact Report Draft details public comments for projects on campus through the year 2035. Included in this report is the project site, known as “Faculty and Staff Housing.” The following comments relate directly to this project

Public Comments and Responses

Comment S3-2

“We appreciate the project is providing workforce housing to promote a jobs-housing balance. This will aid in accomplishing local and State goals and is consistent with the Caltrans’ Strategic Management Plan 2015-2020 and State planning priorities.

However, while the master plan does mention that faculty and staff would have priority over the public, there is no discussion of how this will be regulated.” (RTC-16)

The main concern of the public here is how the University will handle selection of residents for the housing development. This is addressed in the following response.

Response S3-2

“With respect to Slack and Grand housing project and with how the development would be managed, units would be offered first to faculty and staff; if faculty and staff do not occupy all the available units, vacant units would be made available to interested community members. This method is currently employed at the Bella Montaña development west of campus and is anticipated to be employed at the proposed Slack and Grand housing project.” (RTC-17)

In the response, the University explains the main priority for housing will be given to faculty and staff, and any remaining vacancies will then be opened to the community.

Response L4-3

“L-3 Balancing Jobs and Housing - The expansion of on-campus facilities would provide additional job opportunities while also providing additional on-campus student housing, housing intended



Cal Poly 2035 Master Plan Environmental Impact Report, Cal Poly, 2020

to primarily serve Cal Poly faculty and staff at Slack and Grand, and a retirement community intended to primarily serve retired faculty, staff and alumni. This additional housing would complement the additional academic facilities proposed in the project, alleviate some of the housing demand in the City of San Luis Obispo and improving the jobs-housing balance in the city and surrounding area. Further, and as explained on page 6-3 of the Draft EIR, the on-campus population growth may induce economic growth through an increased demand for goods and services, which could create new jobs in the area, including in the downtown area of the City of San Luis Obispo.” (RTC-35)

This response addresses concerns related to VMT and trip length expressed in a public comment regarding Impact 3.3-1: Conflict with or Obstruct Implementation of an Applicable Air Quality Plan. It directly mentions the Slack and Grand project, in addition to other projects, in order to address how the project will benefit the city by stimulating the economy and providing additional housing to take the pressure off the housing market.

Comment L8-3

“The Faculty and Staff Workforce Housing (Slack and Grand) project is identified as a near term project in Table 2-12. The proposed development is up to five stories in height which greatly exceeds that of the adjacent single-family residences along Slack Street. Although the DEIR identifies this as a significant and unavoidable impact, Mitigation Measure 3.1-1 relies only on landscaping to mitigate impacts and would not reduce impacts to the maximum extent feasible. Feasible mitigation could also include detailed architectural design to provide a more compatible transition to the surrounding neighborhoods, consistent with the City’s property development standards for Edge Conditions (SLOMC 17.70.050). The City believes that compliance with its standards for Edge Conditions would be feasible and effective mitigation for the project contemplated on the Slack and Grand site.” (RTC-76)

The main concern of the public in this comment is how the Slack and Grand project will affect the context of the surrounding neighborhoods. They request that in addition to the required landscaping mitigation proposed by the EIR, the University also consider the City’s Edge Conditions Standards.

Response L8-3

The University responded by saying they may take the Edge Condition Standards into consideration but are not required to follow city regulations given that the University is a state entity. They stated that following these standards does not seem feasible to incorporate the Edge Conditions Standards given that the University’s target unit number is 380 units. (RTC-77)

At the time there was no selected design for the project, and since adoption the concept for the has changed from a 5-story apartment style concept to a more single-family and low density multifamily style of development (cite Interview w Marco).

The main concerns of the public addressed in the Final Environmental Impact Report are how the

project fits into the context of the surrounding neighborhoods and how the university will handle selection of residents. These concerns were answered in the responses from the University itself but will also be taken into consideration in the design process.

The University has completed the Final Environmental Impact Report for the Slack and Grand Faculty and Staff Housing Project. Public comments have already been made and responses to them have been published. Adhering to the proposed mitigations and responses in the design process will be essential to ensure the project continues to run smoothly.

Bella Montana Litigation

In 2006, the University completed a development of 69 faculty and staff homes at a below market rate on Highland Road called Bella Montana. Prior to the construction of the development, The Neighbors North of Foothill Association (NNOF) took legal action against the University in 2001, citing their main concerns as increased traffic through Highland drive and the potential for student residents in the neighborhood (Jon, 2006). The NNOF sued the University on the ground that the Environmental Impact Report had been misconducted, specifically that the responses to public comments were “dismissive and unhelpful” (Jon, 2006). Although the court ruled in favor of the University, the construction of the project was delayed two years.

The University has completed the Final Environmental Impact Report for the Slack and Grand Faculty and Staff Housing Project. Public comments have already been made and responses to them have been published. Adhering to the proposed mitigations and responses in the design process will be essential to ensure the project continues to run smoothly.



Bella Montana, Cal Poly, 2023

1.6 The University Setting

When Cal Poly first opened as a state school in 1901, the original class enrollment was 20 students. Over 100 years later, the enrollment has significantly increased and the need to house both employees and students has increased as well. Today, California Polytechnic State University (University) has a capacity of over 21,000 students and 3,000 employees, including 1,400 faculty.

Many students and faculty from the University live within city limits, with students making up a majority of the rental market in the city. In a typical four-bedroom house, four students with four separate incomes can rent out a house together and pay a much higher rent than a faculty member with one to two incomes could.

Additionally, The City of San Luis Obispo has reached a near-zero vacancy rate, with the average rent passing the average salary of a new University employee. As a result of this, many faculty members are forced to look for housing in the cities surround San Luis Obispo, creating longer and more inconvenient commutes.

The University's original vision for the project site in the Masterplan was a very dense 380-unit plan, with 5 story buildings planned right next to the existing neighborhood within city limits. After listening to public comments from the EIR, the project has been scaled down to 200 units, incorporating single family homes to further blend within the neighborhood context. The University also wants several amenities on the site, like childcare and a grocery store.



View of Campus, Cal Poly, 2023

1.7 SWOT Analysis



View of Site Topography from Slack Street from personal site visit 1/23/2023

Physical

Strengths

- Flat topography on part of the site closest to street
- Opportunity to create access to hiking trails in poly canyon
- Entrance to Campus

Weaknesses

- Slope starts suddenly
- Creek directly through center of the site
- Creek restricts connectivity throughout the site
- Private property behind site – east side
- Have to design and build around trees
- Land gets swampy during rainy season because of the path of the creek and runoff overflow

Opportunities

- Bus Route nearby
- Close to highway 101 entrance on Grand Ave
- SLO Classical Academy across Slack on both sides of Grand Ave.

Threats

- No amenities nearby (e.g. grocery stores, retail, restaurants, etc.)
- Inaccessible circulation – neighbors do not want entrance leading into neighborhood and connecting by the Avila residence entrance creates awkward intersections
- Poor connectivity to the rest of town and vehicular connectivity to slack and grand

- Project boundaries are mainly defined by topography and physical characteristics on site.



1.7 SWOT Analysis

Week of Welcome, Cal Poly, 2023

Social

Strengths

- Opportunity to create access to hiking trails in poly canyon
- Opportunity to create new community on campus
- Close proximity to campus/community events

Weaknesses

- Hard to create connectivity within site

Opportunities

- Potential to create social/neighborhood culture for incoming faculty
- K-12 school across the street, faculty with families don't have to worry about transportation for their kids to/from school

Threats

- Neighbors don't want large development

1.7 SWOT Analysis



Grand Avenue Entrance, Cal Poly, 2023

University

Strengths

- Avila residence can be repurposed
- Redesigned entrance to campus

Weaknesses

- Construction will disrupt traffic entering campus

Opportunities

- Faculty need housing in SLO
- Need for more childcare on campus
- site is on campus – offers proximity to jobs

Threats

- Student Housing so close by might make it unappealing to faculty members with families

Regulatory

Strengths

- Little to no zoning/land use regulation because its located on campus

Weaknesses

Opportunities

- Only CEQA guidelines apply

Threats

- CEQA mandatory creek setback
- EIR will most likely be needed

1.7 SWOT Analysis

Cultural and Historical

Strengths

- Avila residence can be repurposed
- Opportunity to create new community on campus

Weaknesses

- Cultural evaluation will be needed, will postpone project

Opportunities

Threats

Political

Strengths

- Popular with staff and faculty

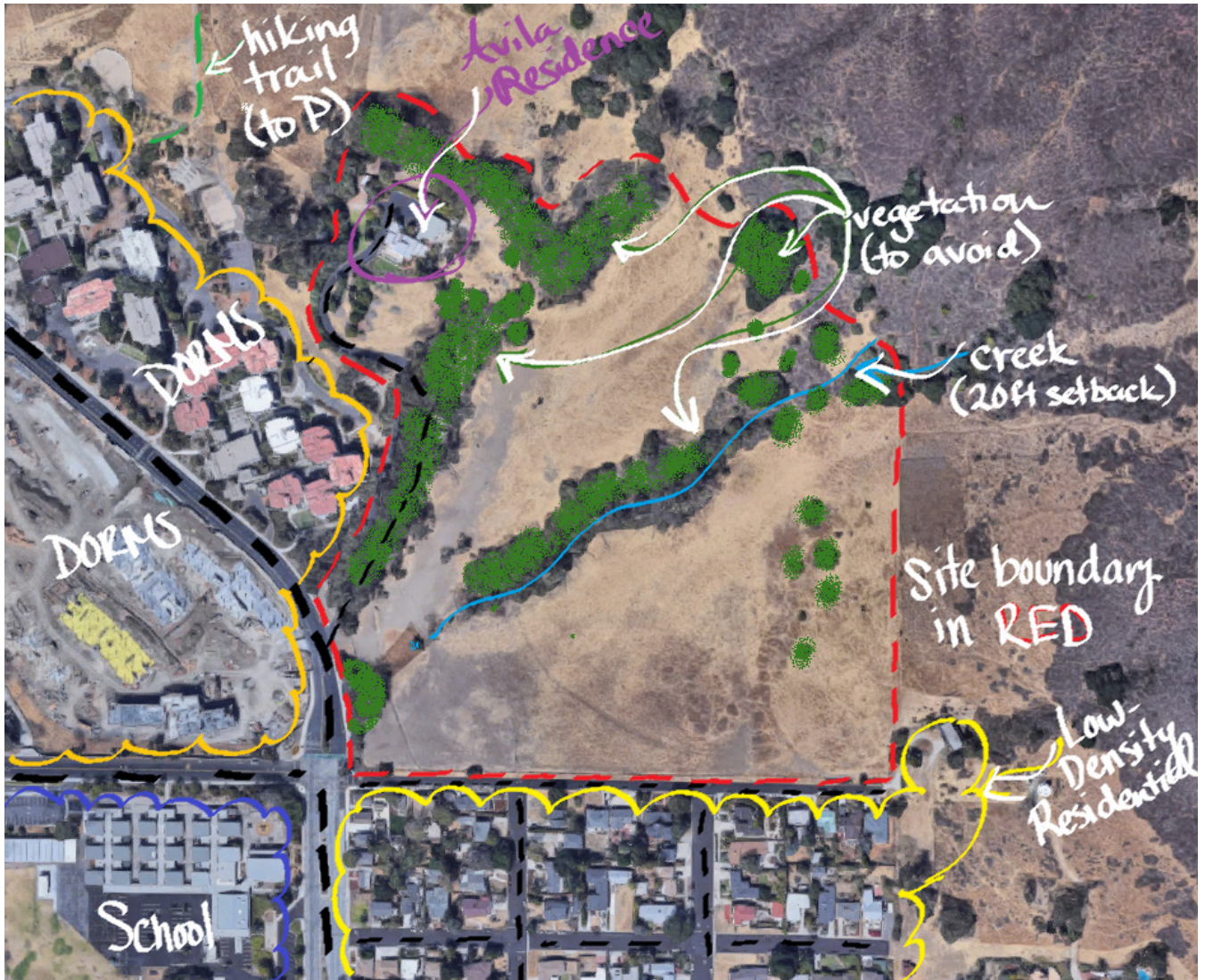
Weaknesses

Opportunities

Threats

- Neighbors concerned with context of the project fitting into the surrounding area – density, aesthetics, landscaping
- Potential for another lawsuit, like yakitutu

1.8 Site Analysis Map



Chapter 2: Visioning

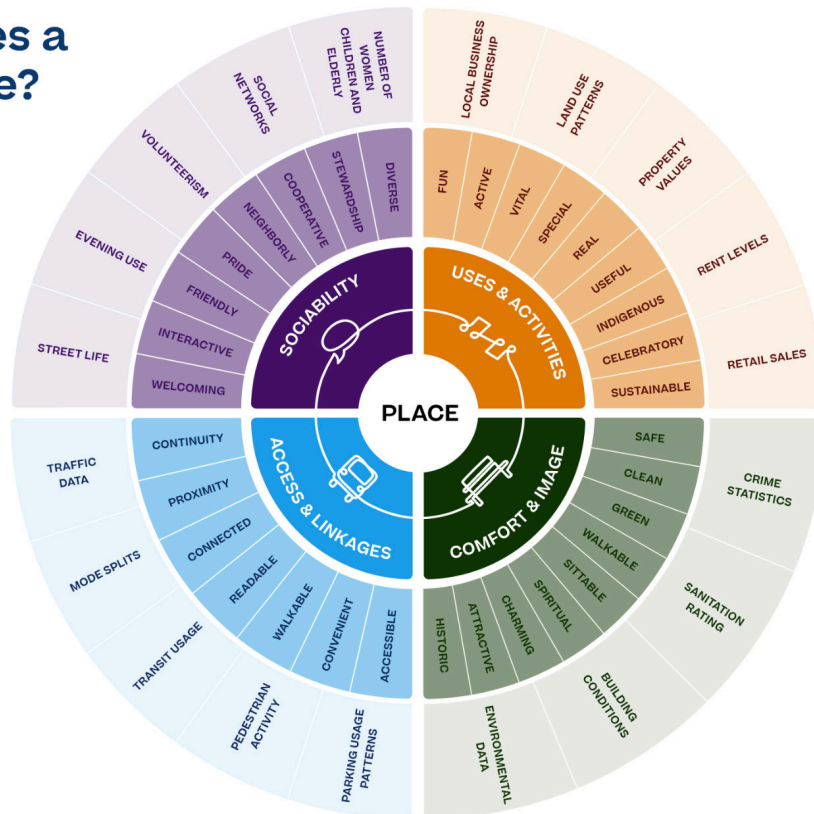
Chapter 2: Visioning

Introduction

This chapter details the vision for the project in preparation for the design section of this report. Visioning is broken up into design principles, case studies, goals objectives & design ideas, and preliminary concept designs. Our visioning is based on the Project for Public Spaces' article on "What Makes a Great Place?" All principles, goals, objectives, & ideas for this project are based around four main categories: sociability, uses & activities, comfort & image, and access & linkages. The sections of this chapter build off each other to reach the final concept for the project.

What Makes a Great Place?

Project
for Public
Spaces



Project for Public Spaces, 2020

2.1 Design Principles

Comfort

A good space is attractive, sittable, walkable, and safe (Project for Public Spaces, 2018). Designing our spaces to human scale is incredibly important to achieving these characteristics. The project for public spaces defines human scale as “making sure that the objects that we interact with every day are of a size and shape that is reasonable for an average person to use” (Burke, 2016). This involves designing our buildings with elements that break up large facades, such as building material, windows, and awnings. Human scale also pertains to block distance, the inclusion of street furniture, and the cleanliness of the space. Designing with these elements in mind will produce a place that is comfortable for those using it.



Good Human Scale, South Lake Mixed Use Development, Strong Towns, 2019

Social Interaction

Spaces should amplify the lives of those who use them every day. Social interaction is incredibly important to everyday life, and the spaces we live in should be friendly, interactive, and cooperative (Project for Public Spaces, 2018). When people feel safe enough to interact with their friends as well as strangers, they tend to create a stronger attachment between the space and their community (Project for Public Spaces, 2018). This can be achieved by implementing attractive land uses and streetscapes, creating a central gathering area, and providing spaces to sit and talk (Section 8. creating good places for interaction).

Executing these aspects well will bring the space to life by creating an environment where people want to linger and socialize.



Social Interaction, Speranza Architecture + Urban Design, 2017

Diverse Uses

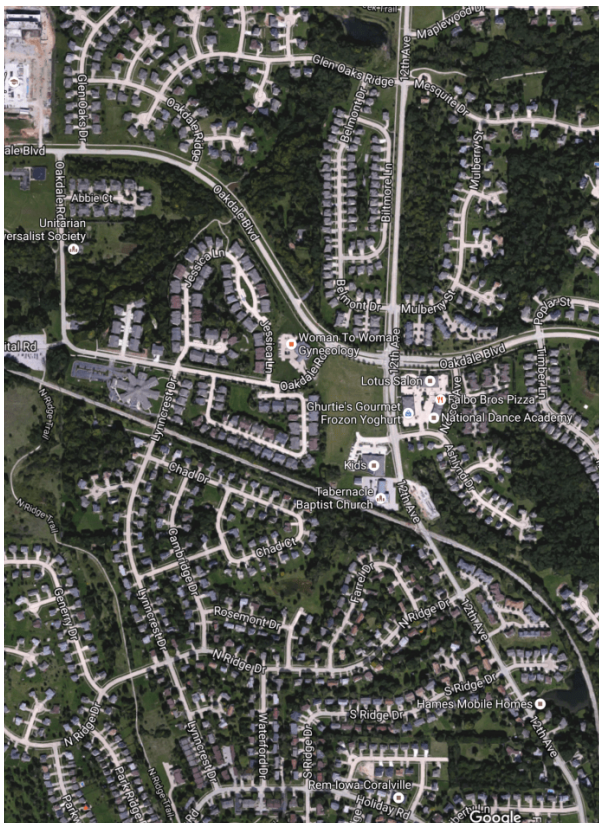
When creating a space for faculty on campus, surrounded by student housing, incorporating a variety of uses is very important to invite faculty in to live there. Creating a space with the intention of making it a standalone community where most needs can be met from within or directly surrounding the site is important for families or working professionals looking for a place to live. A variety of uses, like a grocery store or childcare, would make it more feasible for people to choose an on-campus location rather than somewhere else in the city. A variety of uses also attracts a variety of people to live at the site, like working professionals, young families, and older faculty members, who are all looking to be closer to campus.



Mixed Use Development, Design Everest, 2023

Connectivity

When incorporating a variety of uses in a small site, connectivity is key to ensure that every use is accessible to everyone occupying the site and that coming and going from the site is clear and easy. Having every amenity in the world on the site will do no good if people do not know how to access them; signage and clear paths are key to creating a cohesive and connected site that is inviting for those who live there want to use. Every aspect of a project, from the different uses to the different spaces needs to be connected in a way that encourages people to use the spaces but also allows them to feel safe in the spaces that have been created.



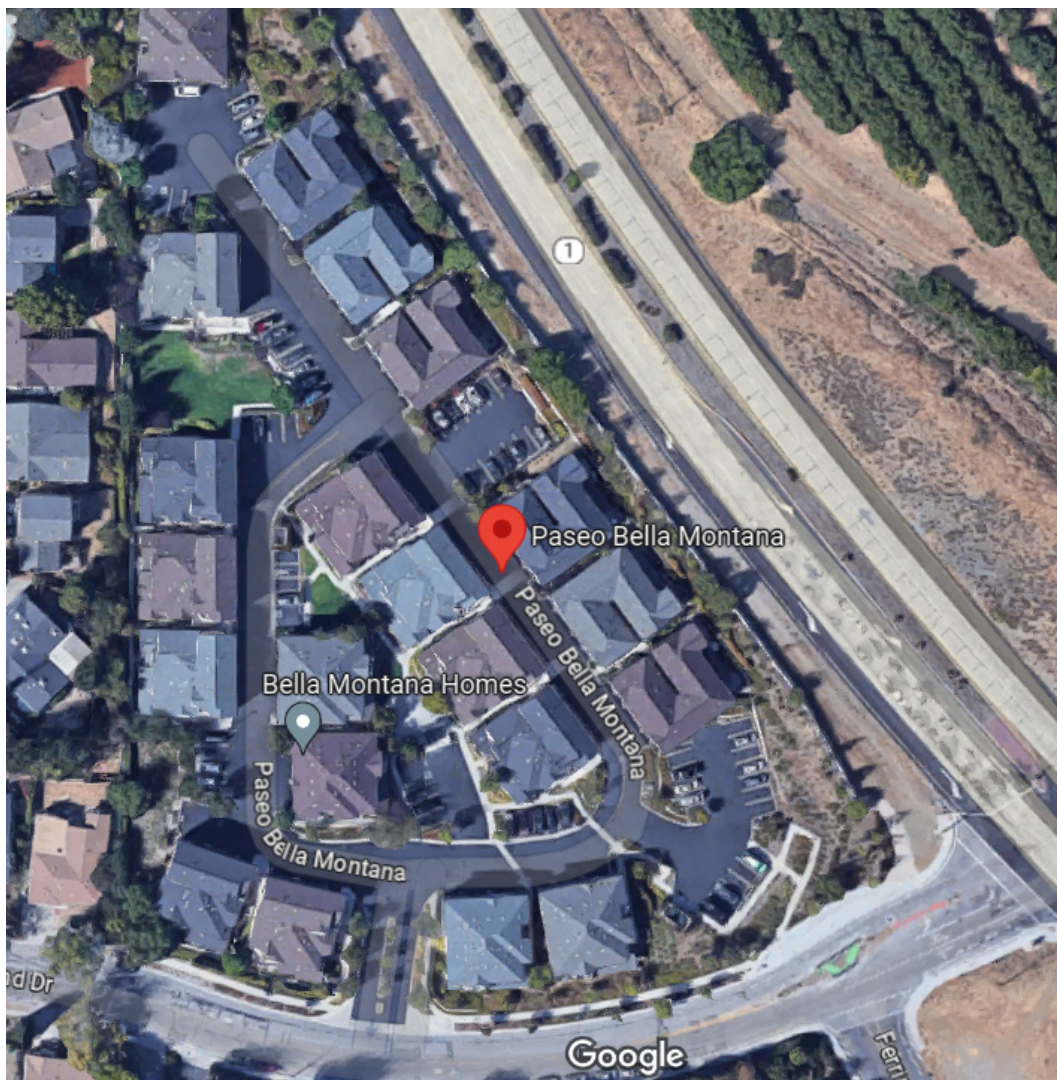
Connectivity in Cedar Rapids, Strong Towns, 2016

2.2 Case Studies

Faculty Housing – Bella Montana, Cal Poly

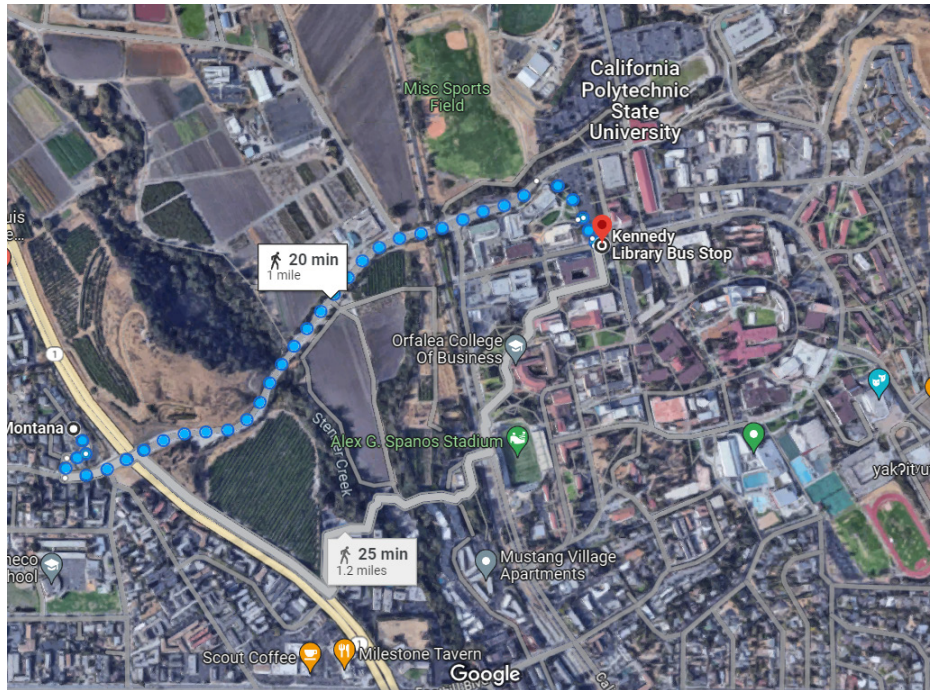
Bella Montana is a faculty housing site on the Northwest corner of Highland Drive and North Santa Rosa Street. The site has 70 homes with 10 different floor plans, along with a private pocket park. The homes are land leased sites, allowing them to be sold below market rate to provide affordable housing to faculty members close to campus.

North Santa Rosa Street turns into Highway 1 immediately after passing the site heading towards Morro Bay meaning that campus is most accessible from the site by bike or car. Walking is possible when needed; after crossing five to six lanes of traffic it is a mile to reach Robert E. Kennedy Library at the edge of campus, shown below.



Google Satellite View of Bella Montana Faculty Home Site, 2023

Several faculty members who previously lived in the Bella Montana site moved due to the disconnect between the site and campus. There have also been complaints about the project cutting corners when it came to the construction of the units and the lack of privacy due to the thinness of the walls. Using sturdy and high-quality materials could prevent this and increase the happiness of future residents.



Google maps walk from Bella Montana to Library, 2023

Lessons Learned

- Land leasing the homes allows for them to go below market rate.
- Connectivity may be forgone for the sake of privacy.

Campus Entrance – Gateway to the Future Arch, Purdue University

The Gateway to the Future Arch is located at the north entrance of Stadium Mall on W Stadium Avenue, which leads directly into Purdue Mall and the engineering campus. The arch accurately showcases the entrance to campus as a landmark with its display of university pride: “Purdue University” written in large letters across the top. The arch is held up by a cement pillar on either side with an old-fashioned lamp topping each one. The landmark invites passersby directly into the campus.



Gateway to the Future Arch, Home of Purdue, 2023

As you go past the Archway, you are immediately met with university buildings lining the open space of Stadium Mall. Pedestrians are guided through Stadium Mall by buildings that house the departments for multiple departments such as Civil Engineering, Pharmacy, Chemical Engineering, Materials Sciences & Electrical Engineering. These buildings activate the space by providing a sense of enclosure and comfort. This pathway leads directly into the larger Purdue Mall which is enclosed by the Mechanical Engineering Building. In the center of this Mall, there is a large fountain that serves as another landmark, anchoring both open spaces and providing a space for people to gather.



Purdue Mall, Purdue University, 2023

Both Stadium and Purdue Malls have plenty of urban furniture and landscaping, creating a comfortable and friendly environment. All pathways are well lit with pedestrian oriented lamps and have a variety of seating options. The landscaping is well kept with an assortment of trees whose canopies provide ample shade during the warmer months.



Purdue Mall, Purdue Life Sciences News, 2023

Lessons Learned:

- A landmark signifying the entrance to campus helps to bridge the gateway between community and university, while creating a distinct beginning to campus.
- The space directly behind the gateway should be activated by the buildings surrounding it, in terms of use and visuals. This will invite pedestrians into campus.
- Urban furniture and landscaping soften the space, creating a sense of comfort familiarity.

Mixed Use Development – San Luis Ranch

San Luis Ranch, currently under construction, is an example of how to connect different housing densities into one site along with other amenities. The site is 131 acres located in San Luis Obispo on the West side of Highway 101. This site previously was an agriculture field that significantly contributed to the city's picturesque views. The site is slowly being developed and the city has created a specific plan to ensure that San Luis Ranch develops in a way that is consistent with the City's General Plan and maintains the integrity of the site's history.



From San Luis Ranch Specific Plan, 2015

San Luis Ranch, currently under construction, is an example of how to connect different housing densities into one site along with other amenities. The site is 131 acres located in San Luis Obispo on the West side of Highway 101. This site previously was an agriculture field that significantly contributed to the city's picturesque views. The site is slowly being developed and the city has created a specific plan to ensure that San Luis Ranch develops in a way that is consistent with the City's General Plan and maintains the integrity of the site's history (City of San Luis Obispo, 2015).



San Luis Ranch Proposed Community Map, 2015

The plan incorporates 350-500 residential units, 50,000 to 200,000 sq ft of commercial space, and 50,000 to 150,000 sq ft of office space. 50 percent of the site will remain as open space and agriculture to honor the site's history and preserve the views it provides. The residential units will incorporate a variety of densities, from single-family homes to apartments. The commercial will be neighborhood commercial to incorporate the existing big box commercial to the North of the site, while providing needed amenities for the new development.

Lessons Learned

- Honor the history of a site by preserving the popular aspects of what it previously was.
- Incorporate pocket parks into residential neighborhoods.
- Create a mix of uses on site for all to enjoy.

2.3 Goals, Objectives, and Design Ideas

Goal 1 – A community that compliments the existing circulation system and that prioritizes pedestrian accessibility.

Objective 1 – Foster connection between the existing surrounding neighborhoods and the new development.

- Idea 1 – Continue the street grid from slack neighborhood into the site.
- Idea 2 – Incorporate existing driveway to Avila Residence as a vehicular access road.

Objective 2 – Prioritize pedestrian access and safety throughout the development.

- Idea 1 – Integrate pedestrian exclusive pathways, including creek access.
- Idea 2 – Create high visibility crosswalks.

Goal 2 – A development that connects university and community while fostering a sense of privacy.

Objective 1 – Create a stronger connection between Cal Poly campus and San Luis Obispo.

- Idea 1 – Create an entrance that invites the community into campus.
- Idea 2 – Maintain single to two-story single-family homes to parallel the existing neighborhood.

Objective 2 – Foster a sense of privacy and safety for faculty and family living in the community.

- Idea 1 – Transition the existing Avila Residence into a faculty clubhouse to provide a feeling of escape from campus hub for faculty and staff community members.
- Idea 2 – Design the street network in a way that discourages those travelling to campus from using the community as a short cut.

Goal 3 – A sustainable and healthy community.

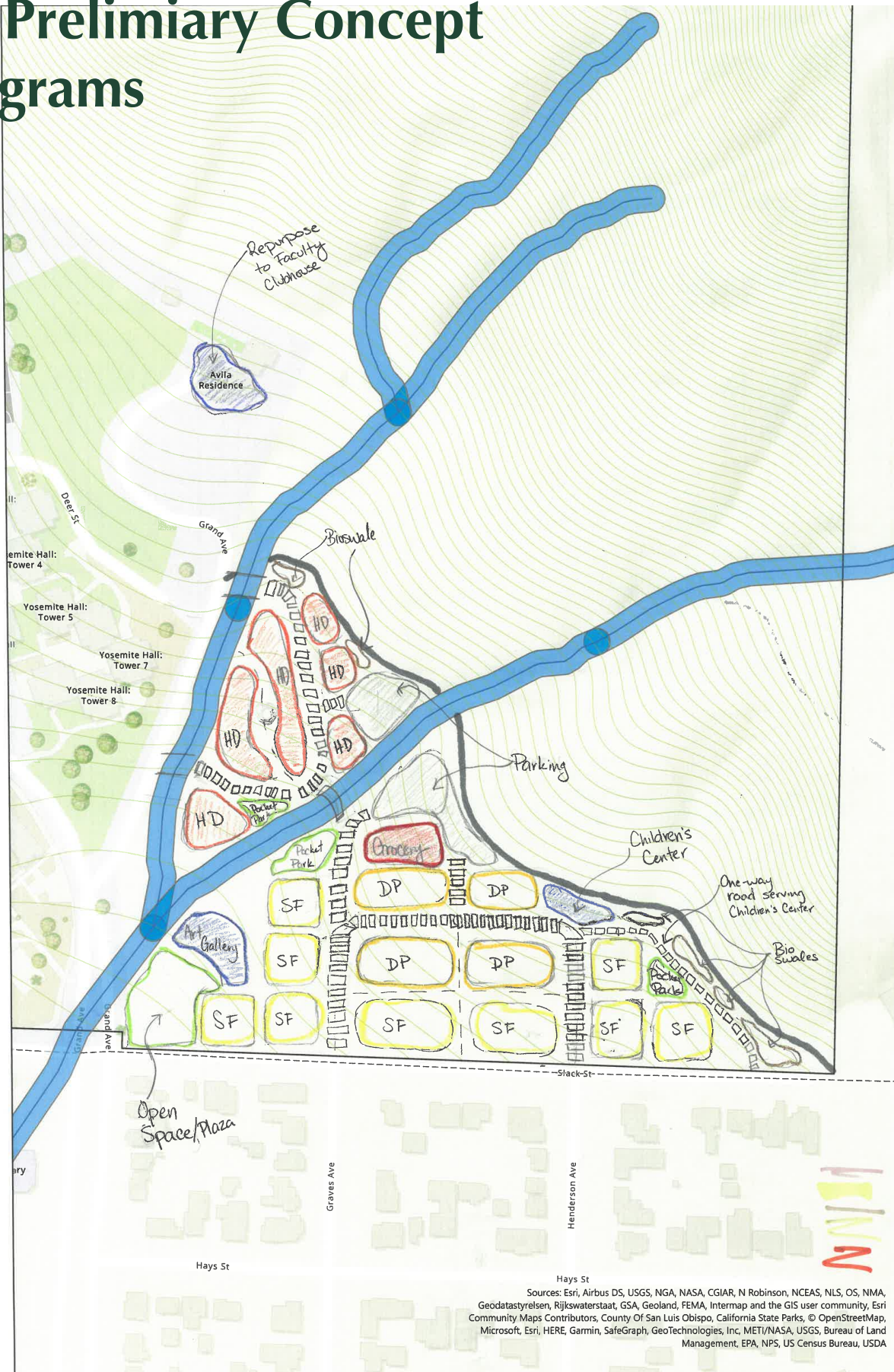
Objective 1 – Encourage wellness and an active lifestyle through community design.

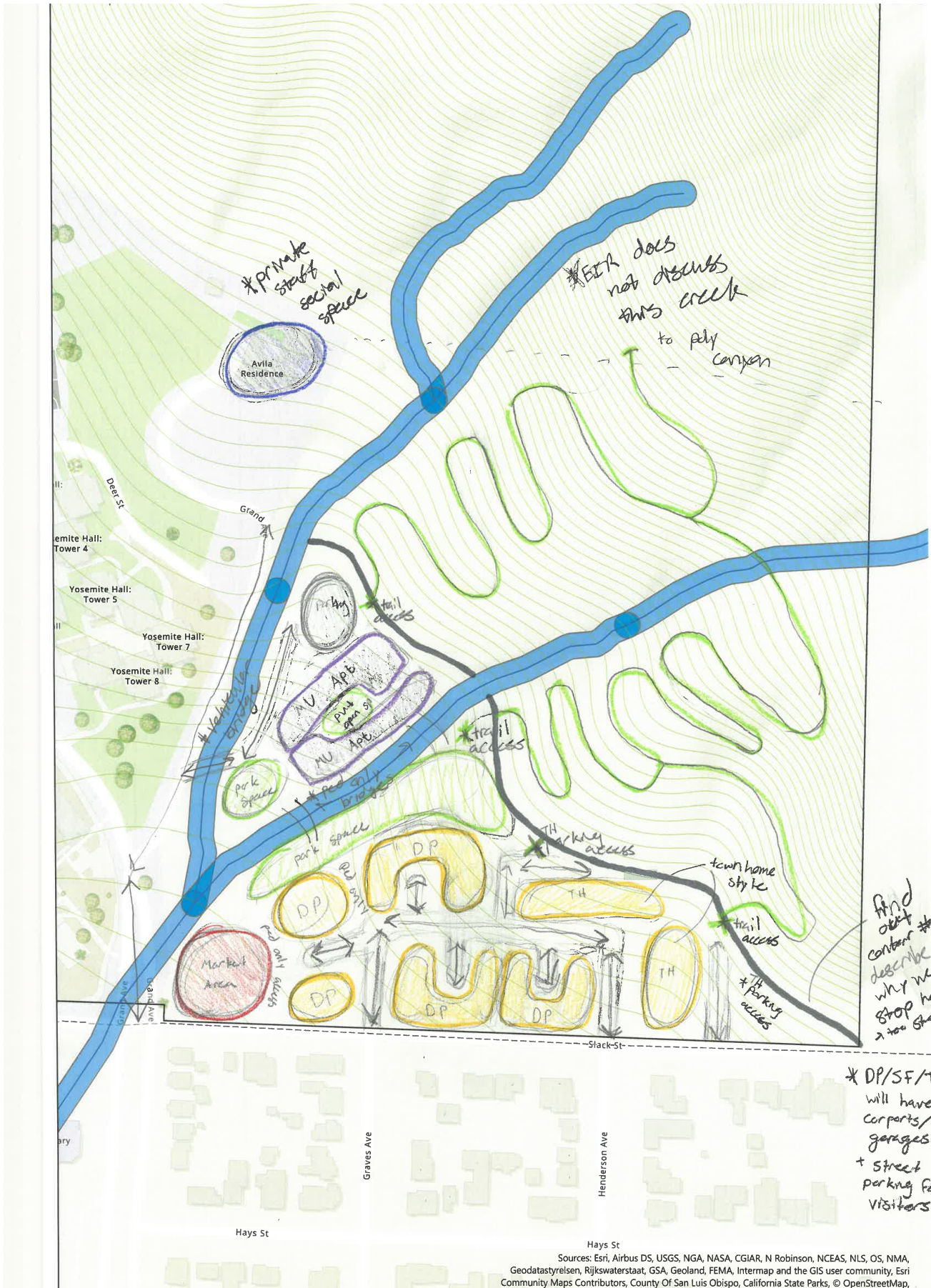
- Idea 1 – Incorporate a mix of uses on site for community members to reduce the need for travelling off site for smaller needs.
- Idea 2 – Promote walking and biking trails within the site to the surrounding natural beauty.

Objective 2 – Incorporate the development of public open space and recreation.

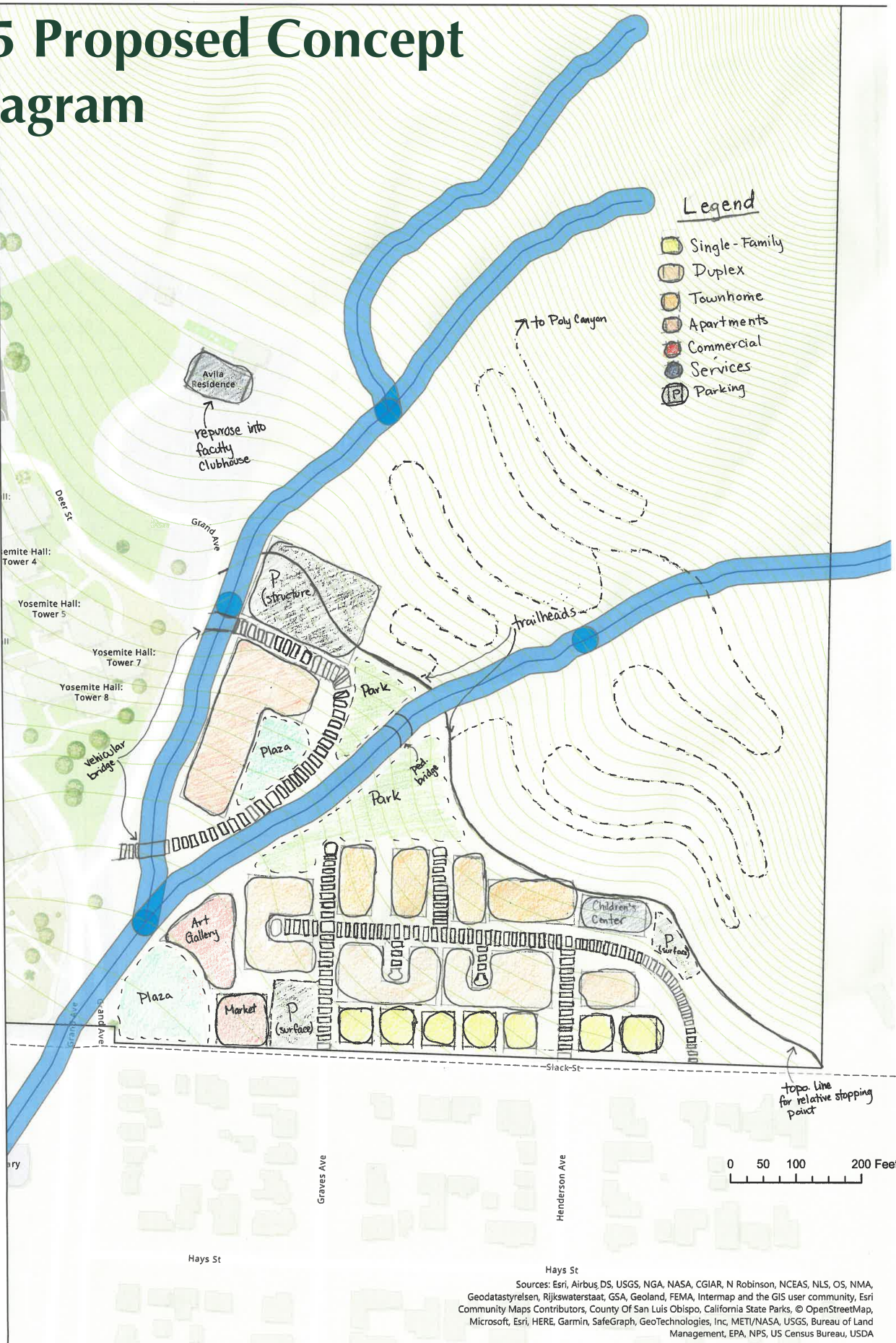
- Idea 1 – Include pocket parks near the single-family housing
- Idea 2 – Include a neighborhood park for the higher development housing

2.4 Preliminary Concept Diagrams





2.5 Proposed Concept Diagram



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatasstyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, County Of San Luis Obispo, California State Parks, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Chapter 3: Design

3.1 Project Description

For Sale

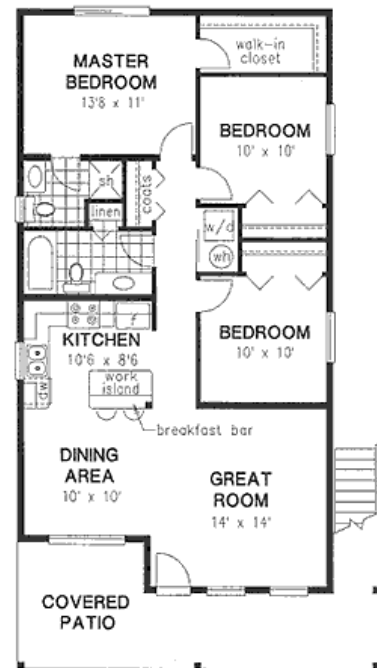
The inspiration for the duplexes was taken from several designs but most specifically from the one above with a footprint of 25 feet by 46 feet, the floor plans can be mirrored to best suit each lot. Each duplex will consist of 2 units, one on each story. Each unit will consist of 3 bedrooms and two bathrooms with a private, covered patio. Parking for the duplexes will either be in a garage or a carport, depending on which lot is purchased, ample street parking will also be available.

The single-story, single-family homes were inspired by the homes in the neighborhood adjacent to the project site. Three different floor plans are available contained in lots 50 feet by 50 feet, with the homes ranging from 1850 square feet to 2125 square feet. These homes would be the typical homes seen around San Luis Obispo to integrate the new development on the site with the existing neighborhood.

For Rent



Traditional Style Multi-Family, Cool House Plans, 2023



First Floor Layout Cool House Plans, 2023

There are five two-story townhome buildings on the site, south of the creek running through the middle of the site. Each building is 50 feet by 100 feet and will have 5 units, ranging from two to three bedrooms. Each unit will have a carport for two parking spaces.

At the northern end of the site, two buildings will house all 115 apartments. The apartments will range from studios to one-bedroom apartments dispersed evenly throughout both buildings. Parking for the apartments will be in the parking garage adjacent to the larger apartment building. The parking structure was modeled after the existing parking structure in San Luis Obispo on the corner of Palm and Morro. The parking structure would have approximately 200 parking spaces, enough for both apartments buildings.

Open Spaces

There are several open spaces on the site. The biggest is the park that runs along the side of the creek behind the townhomes. There is also another smaller park across the creek, connected by a pedestrian bridge, to serve the people living in the apartment buildings.

The southwest corner of the site, at the corner of Slack and Grand will have a large plaza enclosed by a neighborhood market and an art gallery. There will also be another plaza for the apartment buildings nestled in the L shaped apartment building.

During the heavy storms in early 2023, a majority of the site was flooded from all the runoff coming downhill. Another benefit to having open park space line the creek is that it would be able to absorb some of the runoff during a potential storm. Bioswales were also incorporated into the design to act as a buffer between the open space and development.

Services and Commercial

As mentioned previously, the site will have a market and an art gallery for the community and future residents of the site. To serve the residents of site, two of the services thought of for the site are a children's center and a faculty clubhouse.

The market would not accept dining dollars from Cal Poly to discourage use by students living on campus and would serve as a sort of corner store to provide a market in a part of town that does not have one nearby.

The vision for the art gallery would be to provide a space to display art and projects from students at the school and a potential space for community members to display their art as well to act as a bridge between the community and on-campus life.

The faculty clubhouse would be repurposed from the Avila Residence at the northeast corner of the site. This clubhouse would provide a space on campus for faculty to escape to. While on a site visit to the residence it felt hard to believe that the residence was still on campus with how secluded it felt. As a home almost 100 years old with so much history, it would be perfect for adaptive reuse.

The current children's center services on campus have a long waiting list, providing another center on campus would benefit the faculty and staff who need to provide childcare for their children. The waiting list is also opened to community members after the faculty members' children are all accounted for, expanding the childcare services in the university might benefit the community as well.

3.2 Development Table

Type of Development	Request	Proposed
For Sale Units	30-50 Units Attached &/or Detached 2 Story Various Plan Types with 2-3 bedrooms	Seven Detached Single Story Homes Three Different Plan Types with two-three bedrooms
		24 Attached Duplex Units 12 Two Story Buildings
Rental Units	120-170 Units Multi-Family 2 & 3 Story Multiple Plan Types (studio, 1-2 bedroom)	115 Apartments Three Stories Studio & One Bedroom
		25 Townhomes Two Stories Two-Three bedrooms
Commercial	Not Requested	6400 square feet of Grocery Store
		7000 square feet of Art Gallery
Services	Not Requested	9350 square feet for Children's Center
		3000 square feet for Faculty Clubhouse (repurposed Avila Residence)
Parking	Not Specified	Detached Single-Story Homes, Duplexes, Townhomes: Private Parking + Street Parking Available
		Apartments: 200 Spots in Parking Garage

Table 1: Development

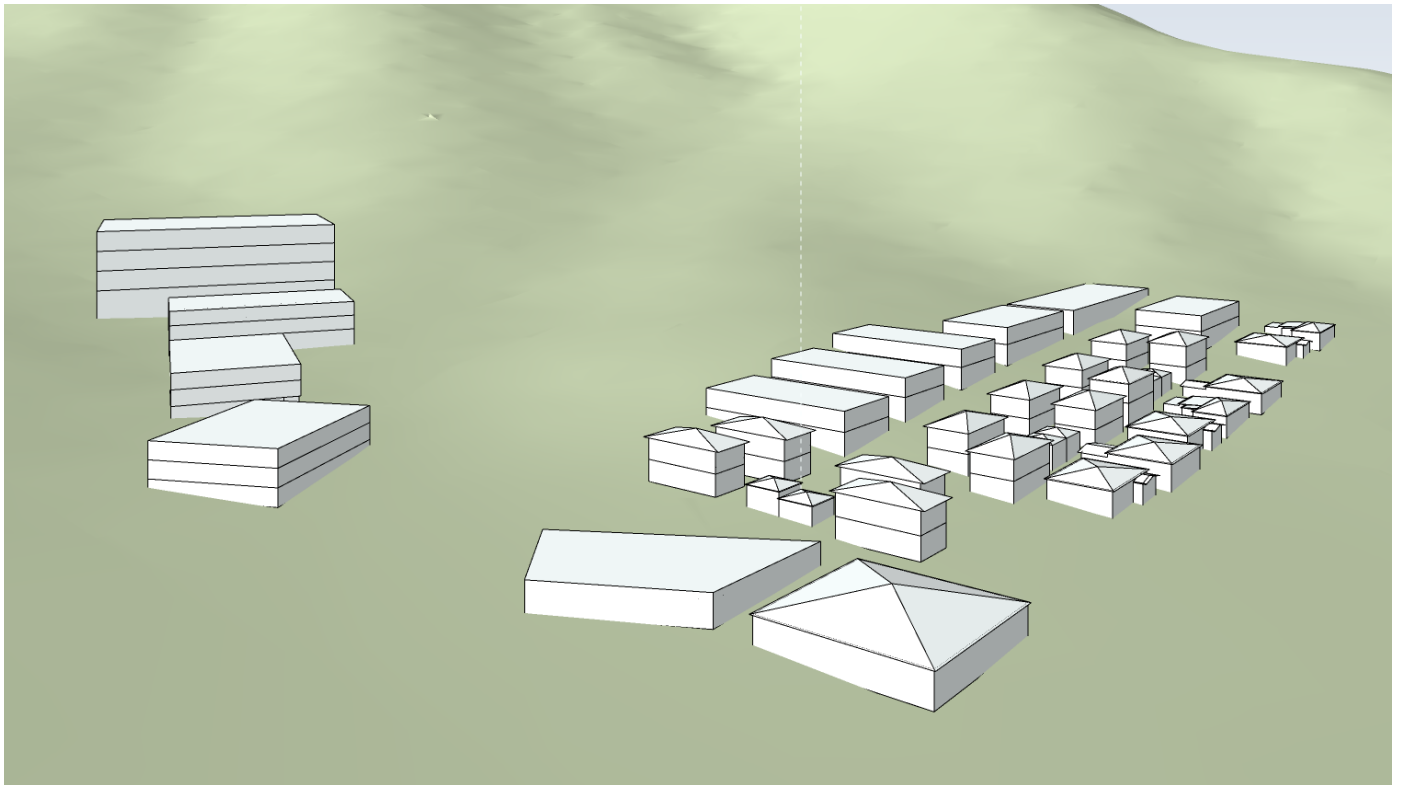
3.3 Illustrative Siteplan

Legend

- Proposed Buildings
- Plaza
- Park
- Open Space
- Streets/Parking
- Cars
- Bioswale
- Tree
- Playground
- Fountain
- Picnic Table
- Umbrella
- Site Boundary
- Trail
- Perspective View



3.3 Sketchup Model



Isometric view of the overall model in SketchUP

3.4 Perspective Views



Perspective A: View looking at the plaza space at the entrance of campus on the corner of Slack and Grand.



Perspective B: View of the apartment buildings on the north side of the creek.

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References

References

- About PFSA. Pride Faculty Staff Association. (n.d.). Retrieved February 23, 2023, from <https://pridefsa.calpoly.edu/about-pfsa>
- Burke, S. (2016). Placemaking and the Human Scale City. Project for Public Spaces. <https://www.pps.org/article/placemaking-and-the-human-scale-city#:~:text=In%20its%20simplest%20definition%2C%20creating,our%20doorways%20are%2080%20inches>
- Cal Poly yakitutu student housing . Architect Magazine. (2019). Retrieved February 23, 2023, from <https://www.architectmagazine.com/project-gallery/cal-poly-yak%CA%94it%CA%B8ut%CA%B8u-student-housing>
- “California Polytechnic State University.” Robert E. Kennedy Library, <https://lib.calpoly.edu/search-and-find/collections-and-archives/university-archives/timeline/cp-history/>.
- City of San Luis Obispo. (2023). 17.70.050 edge conditions. San Luis Obispo Municipal Code. <https://sanluisobispo.municipal.codes/Code/17.70.050>
- Coatsworth, S. (2020). Final Environmental Impact Report for the 2035 Master Plan. Sacramento; Ascent Environmental, Inc.
- Home. San Luis Ranch. (2023, March 9). <https://www.sanluisranch.com/>
- Jon. (2006, May 11). Locals battle Bella Montana. Mustang News. Retrieved February 23, 2023, from <https://mustangnews.net/localsbattlebellamontana/>
- San Luis Obispo County events: Festivals, sports, concerts. San Luis Obispo County Events | Festivals, Sports, Concerts. (n.d.). Retrieved February 23, 2023, from <https://www.slocal.com/events/>
- x San Luis Ranch. City of San Luis Obispo. (2015). <https://www.slocity.org/government/department-directory/community-development/planning-zoning/specific-area-plans/san-luis-ranch>
- Section 8. creating good places for interaction. Chapter 26. Changing the Physical and Social Environment | Section 8. Creating Good Places for Interaction | Main Section | Community Tool Box. (n.d.). <https://ctb.ku.edu/en/table-of-contents/implement/physical-social-environment/places-for-interaction/main>
- Wasserman, Elena. “Mrs. Avila: A Living Legend on Campus.” Mustang News, 30 Aug. 2022, <https://mustangnews.net/a-living-legend-on-campus/>.
- What makes a successful place?. Project for Public Spaces. (2018). <https://www.pps.org/article/grplacefeat>