STANFORD
SAN JUAN RESIDENTIAL DISTRICT

Building, Design, and ADU Manual

October 2022

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Acknowledgments

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01

Introduction

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Introduction

A. Purpose

This San Juan Residential District Building, Design, and Accessory Dwelling Unit (ADU) Manual provides residents, design professionals, and the University with a clear and common understanding of the process for proposed alterations to existing residential development, and intentions for the planning, design, and review of new development within the San Juan Residential District. Information within this document applies to all residential leaseholders and University-owned property within the District.

Figure 1.1: San Juan Residential District Neighborhoods

For additional information, please call Faculty Staff Housing at (650) 725-6893 or email FSHousing@stanford.edu

B. Organization

This Building, Design, and ADU Manual is organized with individual chapters containing easy-to-use directions. Chapter 2: Homeowner Guide defines which types of projects require review, overviews the Home Improvement Process and applicable Development Standards and Design Guidelines. The Development Standards and Design Guidelines guides development of future projects that promotes development that complements the existing neighborhood character, limits visual impact on neighboring properties, and preserves natural site features and established landscaping, where feasible. Chapter 3: Accessory Dwelling Unit (ADU) Development Standards provides homeowners with a guide to construct a new or legalize an existing ADU. Chapter 4: Glossary provides a glossary of terms frequently utilized within the Manual. Appendix A: Graywater Policy for Single-Family Residences outlines the application process for proposed graywater systems. Appendix B: Driveway Approach and Sidewalk Regulations defines standards for new driveways and sidewalks within the District. Appendix C: Curb Drain Detail includes details for curb drains proposed within the District.

C. Authority and Relationship to Other Documents

The San Juan Residential District Building, Design, and ADU Manual are separate and distinct from Santa Clara County's Zoning Ordinance. It is the responsibility of the Lessee and/or their representative to review and comply with all applicable Santa Clara County requirements, as well as all state and local building codes.

Subject to the Stanford Ground Lease, Stanford University, as landowner, has the authority to approve development and improvements on its lands. The area-specific regulations contained within this document, which, together with applicable Santa Clara County standards, are designed to ensure that a quality residential area is maintained for current and future residents. In the case of any conflict between these area-specific regulations and the County regulations, the more restrictive requirement shall apply.

For projects subject to these area-specific standards, a Stanford Home Improvement Project (HIP) Application is required to be reviewed and approved by Stanford's Office of Faculty Staff Housing (FSH) before an application can be submitted to the County. Refer to Chapter 2 - Section C: Homeowner Project Review Process, to guide you through this process.

In addition to this document, Lessees should refer to their Stanford Residential Ground Lease for specific provisions pertaining to their property. For homes in Peter Coutts and Pearce Mitchell, refer to the Covenants, Conditions, and Restrictions (CC&Rs) for additional rules and regulations. The "Hill Site Subdivision Guidelines" are superseded by this document and are no longer applicable.

02

Homeowner Guide

This handbook provides a guide to ensure home improvement project(s) prioritize safety, reflect high-quality design, and enrich the character of the San Juan Residential District.

05	A. Introduction
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08	C. Project Process
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Homeowner Guide

A. Introduction

This Chapter contains an overview of the process of obtaining project approval and includes development standards and design guidelines to ensure neighborhood compatibility and quality design.

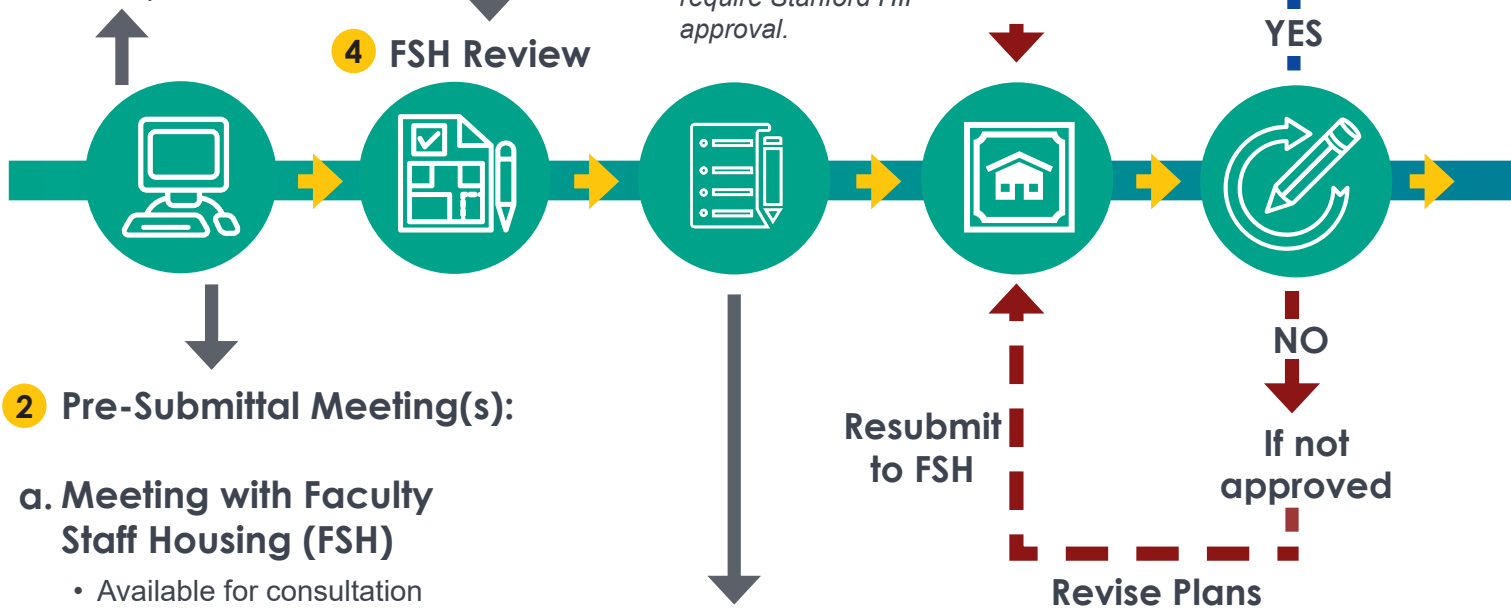
B. Projects Requiring a Home Improvement Project Approval Letter

The following list of projects require a Stanford Home Improvement Project (HIP) Application be reviewed and approved by Faculty Staff Housing (FSH) prior to submitting for a County permit:

- New construction or renovation of the existing building's exterior resulting in the enlargement, alteration, relocation, replacement, conversion, or demolition of a building or structure.
- Construction of a new detached accessory structure (garages, carport, storage buildings, greenhouse, etc.)
- Construction of any structure, pool, spa, or sport court outside of the defined buildable envelope.
- New or reconstructed fence or free-standing wall.
- All trees proposed for removal will require FSH review to determine if the tree is a Stanford Street Tree or the homeowner's tree. If the tree is a Stanford Street Tree, the request will be forwarded to Stanford Grounds and Maintenance.
- Accessory Dwelling Unit (ADU), as outlined in Chapter 03: ADU Development Standards.

The flowchart located on the following pages provides a summary illustrative of a typical project review process, which is described in more detail in the next section of this chapter.

Project Review Process Flow Chart



1 Review Applicable Documents:

- San Juan Residential District Building, Design, and ADU Manual; and
- Santa Clara County Zoning Code and Building Submittal Requirements.

2 Pre-Submittal Meeting(s):

a. Meeting with Faculty Staff Housing (FSH)

- Available for consultation
- Required if an Exception is requested

b. Pre-Screen meeting with County

- Applicant is encouraged to gain early County input

3 Home Improvement Project (HIP) Application Submittal*

- HIP Application, payment of fees
- Construction Notification,
- Plans, and
- Request for FSH Exception, if desired

**Refer to Section B for projects that require Stanford HIP approval.*

4 FSH Review

5

6 Supplemental Review (Refer to Section C.6)

- Tree Removal for Stanford Street Trees
- Historic Review
- Graywater Policy for FSH Single-Family Residences

Revise plans and schedule appointment with FSH for approval of County changes

Resubmit to FSH

Revise Plans

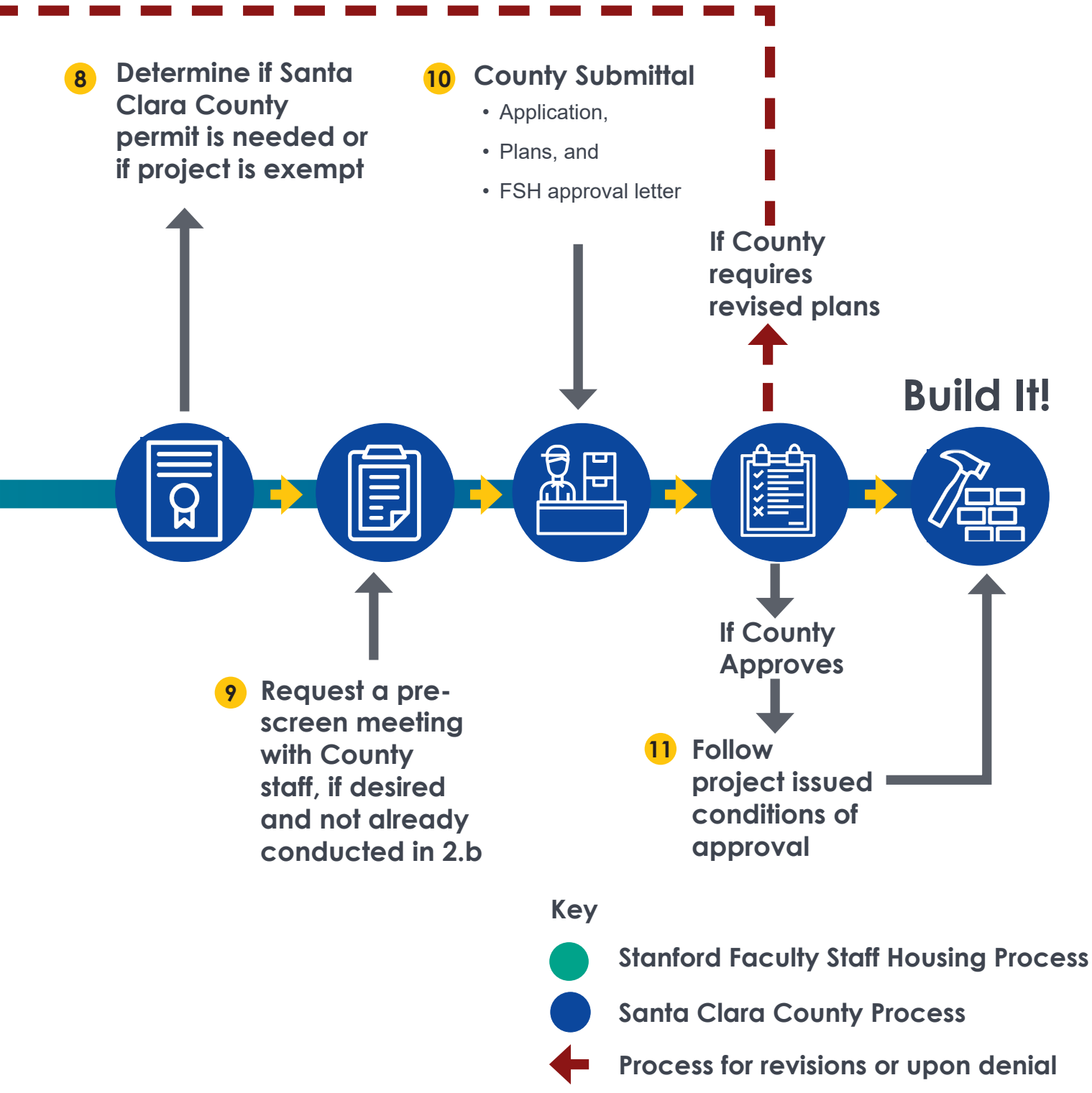
NO

If not approved

YES

7 If approved

- Receive FSH Approval Letter


8 Determine if Santa Clara County permit is needed or if project is exempt
10 County Submittal
• Application,
• Plans, and
• FSH approval letter
If County requires revised plans
Build It!
If County Approves
9 Request a pre-screen meeting with County staff, if desired and not already conducted in 2.b
11 Follow project issued conditions of approval
Key
Stanford Faculty Staff Housing Process
Santa Clara County Process
Process for revisions or upon denial

C. Homeowner Project Process

The following steps outline the process for Home Improvement Projects (HIP). Use the Homeowner Project Review Process Flow Chart, pages 6-7, to help guide you through approval and completion of your project!

1 Review Applicable Documents

a. San Juan Residential District Building, Design, and ADU Manual; and

b. Santa Clara County Zoning Code and Building Submittal Requirements.

2 Pre-Submittal Meeting(s):

a. Meeting with Faculty Staff Housing (FSH)

1. The Applicant is encouraged to contact FSH at *FSHousing@stanford.edu* to request a Pre-Submittal meeting to discuss the Project prior to developing plans.

2. If an FSH Exception (5) is requested as part of the HIP Application, a Pre-Consultation meeting is required.

b. Pre-Screen with Santa Clara County Department of Planning and Development

1. The Applicant is encouraged to apply for a Pre-Screen meeting with County Planning and/or Building Departments at this step to avoid surprises that may arise later in the process.

3 Home Improvement Project Application (HIP) Submittal

a. FSH purview is limited to reviewing a Project for compliance with this document.

b. Submit a Home Improvement Project (HIP) Application to FSH, including:

- Construction Notification (3.c),
- Electronically submit via email (large files may need to be uploaded to a file share for FSH to download) Project Plans and Specifications (3.d), and

Faculty Staff Housing Contact Info:

552 O'Connor Lane
Stanford, Ca
94305

Monday through Friday between 8:00 a.m. - 5:00 p.m.

Applications will be reviewed within 10 business days to determine if additional information is needed.

For further assistance, please call FSH at 650-725-6893 or send an e-mail to FSHousing@stanford.edu.

- Payment to FSH for the project application fee. (Please note: this fee is separate and in addition to Santa Clara County plan check and permit fees.)

c. Construction Notification*

1. Applicant shall notify immediately adjacent neighbors (properties with common property lines and located across streets or common areas).
2. Construction Notification shall include a brief description of the Application request (project description), address/location, estimated construction start date and duration, and contact information for the Applicant.
3. Construction Notification shall be distributed in person or by direct mailing or emailing.
4. Proof of Construction Notification shall be submitted with the Application request using the Construction Notification form including copies of email correspondences with neighbors if applicable.

Construction Notification is only required for projects with construction lasting longer than 30 days in duration.

d. Project Plans and Specifications

1. All plans shall be drawn to scale and include at a minimum:
   - Contact Information: Lessee's and the plan preparer's (architect, engineer, contractor, or designer) name(s), address, email, phone, and license number, if applicable.
   - Site Plan (Plot Map): A drawing showing the relation of new construction or renovations to all property lines, setbacks, (Stanford setbacks and County setbacks) and easements. Include: all structures on the lot, lot dimensions, streets, on-lot paving, location and height of all fences free-standing or retaining walls, existing trees, and a scale and north arrow.
   - Floor Plan: Drawings identifying the proposed improvements, labeling additions, and/or demolition areas.
   - Elevations: Elevations with height clearly illustrated.
   - Tree Removal Plan: Drawing showing the proposed location of existing trees and trees proposed for removal.

4 FSH Review

a. FSH has 10 business/working days to request additional information.

b. Once an Application is considered complete, FSH will review the submitted plans and approve or deny the Project.

c. Notice of FSH's action will be provided in writing to the Applicant within 30 days of a complete Application.

5 Exception Process

a. The purpose of granting an Exception is to ensure that no property, because of special circumstances specifically related to its size, shape, topography, location, or surroundings, shall be deprived of privileges commonly enjoyed by other properties in the same vicinity.

b. FSH may grant an Exception from any property development standard (including building envelope and setbacks, walls, fences, and other numerical standards) in this document, subject to the procedures set forth in this section.

c. Applicants shall submit with their HIP Application, additional information about the specific Exception, and special circumstances applicable to the property.

d. No Exceptions shall be approved unless FSH makes all of the following findings:

   1. There are special circumstances applicable to the property, including size, shape, topography, location, or surroundings, such that the strict application of development regulations contained within this document would deprive such property of privileges enjoyed by other properties in the vicinity and under identical land use classification.

   2. Granting of the Exception will not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity in which such property is situated.

   3. Granting of the Exception will not result in development, which is otherwise inconsistent with the provisions of the regulations contained within this document.

e. In approving an Exception, FSH may impose conditions of approval which it deems necessary to ensure: (i) the compatibility of the land use

or development with existing and proposed land uses on surrounding properties and (ii) consistency with the goals and policies of this document.

f. Refer to Chapter 03: ADU Development Standards for exemptions related to proposed ADUs.

6 Supplemental Review

The University will conduct supplemental review of Projects associated with the following conditions. All Supplemental Reviews shall be conducted within 30 days of a complete application.

a. Tree Removal for Stanford Street Trees

   1. All trees proposed for removal will require FSH review to determine if the tree is a Stanford Street Tree or the homeowner's tree. If the tree is a Stanford Street Tree, the request will be forwarded to Stanford Grounds and Maintenance.

   2. An Arborist Report may be required.

   3. Replacement trees may be required at a 2 to 1 replacement ratio.

b. Historic Review

   1. If a building was constructed prior to 1955 and exterior modifications are proposed, supplemental review shall be conducted by the University or their designated architect or representative.

   2. A Historic Resources report prepared by a qualified architectural historian may be required.

   3. Review Santa Clara County's historic review process, noted on page 21.

c. Graywater Policy for FSH Single-Family Residences

   1. Refer to Appendix A for the application process and standards for proposed graywater systems.

7 If Your Project is Approved

a. If approved, the Applicant and their contractor or architect will be notified. The FSH letter of approval, along with approved plans, will be emailed to the Applicant or available for pick at FSH. The FSH letter of approval and approved drawings will enable the Applicant to apply for County permits, if necessary.

Permit Process for Potentially Historic Buildings
Refer to the Supplemental Historic Review and Guidelines Section 2.D.2.C., included in this Manual. Refer to Santa Clara County's Permit Process for Potentially Historic Buildings at https://stgenpln.blob.core.windows.net/document/Stanford_SanJuan_PermitProcess.pdf

D. Development Standards and Design Guidelines

This Chapter is intended to guide development of any future project and contains Development Standards and Design Guidelines to promote development that complements the existing neighborhood character, limits visual impact on neighboring properties, and preserves natural site features and established landscaping, where feasible. All projects shall conform with the development standards and design guidelines contained within this Chapter.

The intent of the standards and guidelines is twofold: 1) to ensure that the design of any new home is compatible with the size, scale, and design of nearby existing residences and 2) to encourage high-quality contextually sensitive design. To this end, they strike a careful balance between control and flexibility. Height and bulk are restricted to ensure that new projects will be appropriately scaled for the neighborhood. At the same time, a wide variety of massing configurations and architectural styles is allowed to provide flexibility for building designers to utilize each lot's unique opportunities.

Applicants are required to adhere to these Development Standards and Design Guidelines as well as Santa Clara County standards. However, FSH will only review the Project for compliance with these Development Standards and Design Guidelines.

Standards are quantifiable and must be satisfied by all development to which the standards apply. Guidelines are not required but provide a set of design principles that provide direction on the more qualitative aspects of a development project and may be interpreted with some flexibility. The guidelines are utilized during the development review process (as outlined in the Homeowner Project Review Process Flow Chart) to encourage the highest level of design quality, while at the same time providing the flexibility necessary to encourage creativity by project designers. Some guidelines may not apply in every circumstance and, therefore, should not be interpreted to be “always required.”

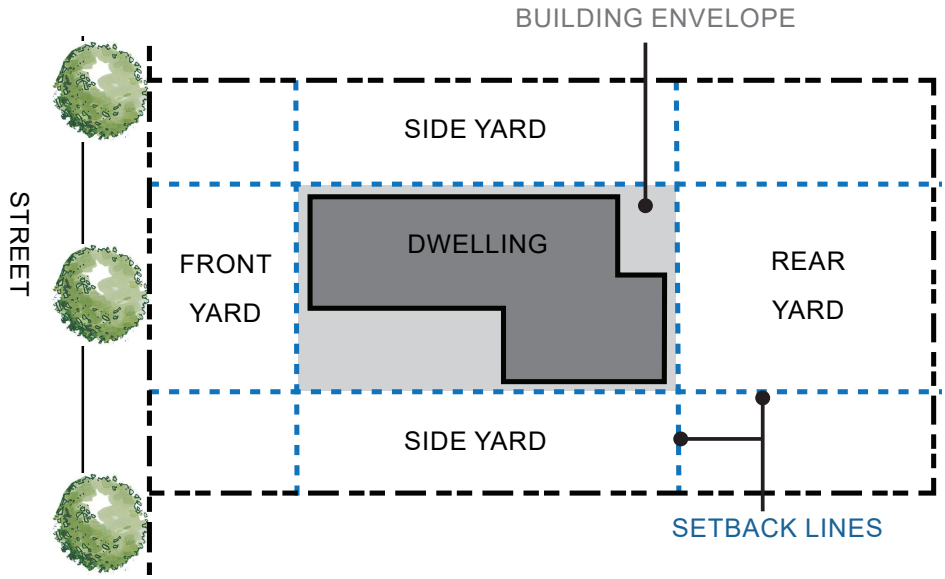
1. Development Standards

Development standards determine the form, shape, size, and location of potential improvements. Compliance with the following standards is required for all Home Improvement Projects (HIP).

A. Building Envelope and Setbacks

Each lot has a building envelope established by its maximum allowed height* and the front, rear, and side setbacks. This is a three-dimensional space within which a building or structure may be built. Building envelopes are established to assure that adequate spacing is maintained between a house and neighboring structures and rights of way.

Figure 2.1: Building Envelope and Setback Exhibit



A setback line is a line established to govern the placement of buildings and accessory structures with respect to parcel (or lease) lines on the site and which is established by measuring from the parcel lines on the site at an angle perpendicular to the lot line. The setback line is parallel to the lot line. Refer to Table 2-1: San Juan Residential Neighborhood Setbacks and the San Juan Residential District Neighborhood Map for your required setback, which is based upon the neighborhood you reside.

***Height**

The dimension measured by the vertical distance from the final grade to the top of the building or structure. On sloping lots or lots with irregular topography, height shall be measured vertically upward from a hypothetical surface representing the finished grade as projected through the structure site.

Table 2-1: San Juan Residential Neighborhood Setbacks

Zone	Neighborhood	Proposed			
		Front	*Rear*	*Side*	*Corner Lot: Exterior Side*
R1S Zone	Lower San Juan	25'	25'	5'	10'
	Upper San Juan	30'	30'	10'	10'
	Frenchman Hill	25'	25'	5'	10'
	Pine Hill I	25'	25'	5'	10'
	Pine Hill II	25'	25'	5'	10'
	Hill Site & Cabrillo/Dolores	30'	25'	5'	10'
	Ryan Court	10'	25'	5'	10'
R3S Zone	Peter Coutts Hill	Per County R3 Zone Standard			
	Pearce Mitchell				

Note: Parcels adjacent to Junipero Serra Blvd subject to 100' Scenic Road setback

1. **Setbacks:** Refer to Table 2-1: San Juan Residential Neighborhood Setbacks and the San Juan Residential District Neighborhood Map for the setbacks in each neighborhood.

   a. All homes and accessory structures shall be located within the buildable area, i.e., not in the front, rear, or side setback.

   b. Garages may be accessed and are permitted within the rear setback, consistent with neighboring properties, where properties back onto an alley/lane (Valpariso St., Lane B, Lane C) within the Lower San Juan neighborhood.

   c. Parcels adjacent to Junipero Serra Blvd are subject to a minimum 100-foot Scenic Road setback per the Santa Clara County Scenic Road Combining District in the County Zoning Ordinance. Refer to this ordinance for additional regulations applying to Junipero Serra Boulevard and when County design review is applicable.

   d. Parcels adjacent to Campus Drive are subject to a minimum 50-foot setback from face of curb to edge of building to maintain the existing street character.

2. **Subdivision:** Subdivision of lots by Lessees is not permitted.

3. **Lot Coverage:** The Upper San Juan Neighborhood shall have a maximum lot coverage of 20 percent.

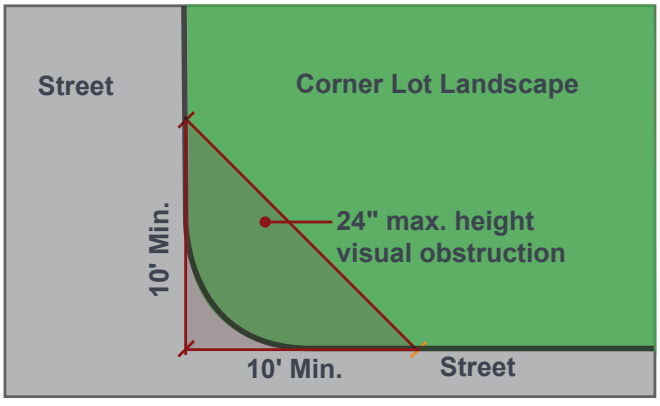
Corner Lot: Exterior Side

A corner lot exterior side yard/lot line is generally longer of the two lot lines abutting a street.

Figure 2.2: San Juan Residential District Neighborhoods Map

4. **Site preservation lines:** On corner lots, to preserve sight lines for motorist safety, a height restriction area shall be established by projecting the two curb lines to a point of intersection, then forming a triangle ten (10) feet on each curb side. Within this area, ground cover and shrubbery shall not exceed twenty-four (24) inches in height, and tree limbs shall be no lower than eight (8) feet.

Figure 2.3: Site Preservation Diagram



B. Density

Per County Code - 8 dwelling units per acre, maximum.

C. Swimming Pools, Spas, and Sport Courts

Swimming pools, spas, and sports courts shall conform to the following requirements:

1. Swimming pools, spas, equipment, and sports courts shall not be located in any front or side yard setback, but may encroach into a rear yard setback so long as they are no less than 10 feet from a rear property line.
2. All plans must show pool and spa accessory structures, fencing, and enclosures.

D. Fences and Freestanding Walls

All fences and freestanding walls shall conform to the following requirements:

1. A freestanding wall is a standalone wall that is not connected at either end to a building or other structure, and not restrained along the top. They are typically used to provide privacy or an enclosure within a parcel.
2. No fences, fence-like hedges, or freestanding walls are allowed within the front setback, unless approved by Stanford FSH.
3. Fences or freestanding walls are allowed in the side and rear setbacks to a maximum height of six (6) feet in height.
4. Fences or freestanding walls are allowed on the property line in the side and rear setbacks if they are not adjacent to a street.
5. Fences or freestanding walls on sloping sites should step down with the natural terrain. Any segment may have a maximum height of six feet six inches (6'6"), provided the average height of the segment is six (6) feet.
6. Chain link or woven wire fences are not allowed unless covered with vegetation. Barbed wire is prohibited.

E. Landscaping and Trees

Landscaping, mature trees, and the tree canopy contribute to the character of the neighborhood and streetscape. Maintaining a safe, healthy, and environmentally sustainable landscape is important. Landscaping shall conform to the following requirements:

1. Drought-tolerant, Mediterranean-climate plants should be considered to conserve water and energy.
2. Invasive plant species are prohibited. Refer to Table 2-2, Stanford Prohibited Plant List. Also, refer to the California Invasive Plant Council (Cal IPC) Inventory for invasive species. www.cal-ipc.org.

Table 2-2: Prohibited Plant List

Botanical Name	Common Name
Bamboo-all species	Bamboo - all species
Cortaderia selloana/jubata	Pampas grass
Cytisus-all species	e.g. Scotch broom
Foeniculum vulgare	Common fennel
Ligustrum-all except L. japonicum 'Texanum,' which shall be permitted	Privet
Populus-all except for sterile male clones	Poplar
Pyracantha-all species	e.g. 'Santa Cruz' pyracantha, Firethorn
Robinia - all species	e.g. Black Locust
Salix-all species	e.g. Weeping willow
Spartium-all species	e.g. Spanish broom
Vinca major	Periwinkle
These species are prohibited because of their likelihood to spread and to become difficult to eradicate.	

2. Design Guidelines

The Design Guidelines are utilized during the review process to encourage the highest level of design quality while providing the flexibility necessary to promote creativity on the part of project designers. Some Guidelines may not apply in every circumstance and, therefore, should not be interpreted to be "always required." Applicants are welcome to propose alternatives that meet the intent of an encouraged Design Guideline. All projects are evaluated on their adherence to the Standards and the degree to which substantial compliance with the intent of Design Guidelines is demonstrated.

A. Site Planning

1. Driveways should be no wider than necessary to provide for safe and efficient vehicular access to the property to minimize the need for excessive paving.
2. Common driveways are encouraged to minimize curb-cuts.
3. Garages should be utilized for storing vehicles as opposed to utilized for storage. Homeowners should park in their garages whenever possible, making their driveways available for guests, parcel delivery vehicles and emergency vehicles when necessary.
4. Landscaping should be provided to screen a second-story addition, accessory buildings, ADUs, and pools or sports courts to enhance neighboring properties' privacy.
5. Where a new building is located adjacent to an established residence, setbacks of similar size are encouraged along the mutual property line.
6. Side yard setbacks, beyond the minimum required, are encouraged when a new, two-story home is proposed adjacent to an existing one-story home.
7. All grading for building pads should preserve or restore the natural shape of the land as much as possible.
8. Construction of new homes adjacent to existing homes should consider the potential for impacts on the privacy of neighbors.

9. An effort should be made to minimize curb-cuts and to emulate the driveway pattern of the existing neighborhood. Where feasible, homes that are part of a new subdivision should take access off a common drive.

10. Where detached garages exist in a neighborhood, new homes should consider locating detached garages at the rear of the lot to reduce the mass and scale of the house along the street frontage.

B. Building Design

1. Where a new second-story home or addition is proposed within a predominately one-story neighborhood, second-story massing should be located to the rear or side of a home to minimize the appearance of the second story from the front or street-facing elevation.

2. Additions to existing homes should consider the potential for impacts on the privacy of neighbors.

3. Additions to existing homes or new accessory buildings/structures should be consistent with the architectural style and detailing of the home.

4. Additions, changes in footprints, rooflines, chimneys, flues, and other exterior changes should be designed to be consistent with the period in which the house was constructed.

5. Simple building massing and roof forms should be utilized to maintain traditional architectural styles and compatible with architectural style.

6. Traditional roof forms such as gables, hips, and dormers are encouraged. More severe roof forms such as domes, steep chalet gables, and flat roofs are generally discouraged.

7. Encouraged roof materials include concrete tile, two-piece barrel tile, and class A architectural dimension asphalt shingles. Discouraged materials include corrugated metal and fiberglass roofing panels.

8. Exterior walls should be comprised of in-kind materials, consistent with the period in which the house was constructed. Any deviation from in-kind, including material changes (e.g., from wood siding to stucco), is discouraged.

9. Architectural elements (porches, bays, overhangs, trellises) and details (moldings, trim, brackets, etc.) should be incorporated to provide visual relief and break up large volumes, reducing the apparent size.

10. Front entry doors and decorative elements such as roofs, moldings, columns, posts, lighting, benches, and planters should be architecturally compatible with the style of the house.

11. Window and door changes on existing homes should match the existing windows and doors' shape and style for architectural consistency.

12. Architectural detailing, material choices, and articulation should be consistent with the chosen architectural style of a residence. All façades should utilize the same material and color vocabulary. High-quality materials should be incorporated into roof materials, cladding, and fenestrations.

13. Material changes should occur in conjunction with changes in the plane of the façade to avoid a "tacked-on" appearance. Material changes should occur at inside corners of structures.

14. Street-facing facades on a corner lot should develop a strong street presence by continuing detailing and articulation found on the primary building façade to the side facade.

15. New development should avoid repeating building designs (i.e., avoid "cookie-cutter" designs).

16. Contemporary styles may be proposed but should consider contextual relationships to existing neighbors through use of massing, proportion, materials, and first and second-floor plate heights.

17. The garage façade should be set back from the front façade of the house to give visual prominence to the house over the garage.

C. Supplemental Historic Review and Design Guidelines

A residence built prior to 1955 or one that is designated as a historic resource by Santa Clara County will be subject to additional review conducted by Santa Clara County and Faculty Staff Housing or their designated Architect/ representative.

1. Supplemental Review Process and Authority:

    a. Review will be conducted within 30 days of a complete Application.

    b. The County has separate processes for Large Projects on homes built before 1955, Large Projects on homes built in 1955 or later, and Small Projects. Typically, Small Projects add less than 500 square feet. Please refer to Santa Clara County's Permit Process for Potentially Historic Buildings in the Stanford San Juan Residential District.

    c. The following items shall be exempt from review: paint colors and stains, routine maintenance and minor repairs, all interior alterations, flat concrete work (including driveways and walkways), rear yard walls and fences, and exterior lighting fixtures.

    d. Reviewing body shall apply the following guidelines and may apply additional Secretary of the Interior's Standards for Rehabilitation and the Illustrated Guidelines for Rehabilitating Historic Buildings (or when applicable the Secretary of the Interior's Standards for the Treatment of Historic Properties) to all reviews affecting historic properties.

2. Historic Guidelines

    Projects that encompass exterior modifications/improvements proposed as part of an existing residence or structure, constructed prior to 1955, will be evaluated on their adherence to the guidelines below.

    a. The design character of nearby historic properties should be respected by relating property improvements to the scale and setbacks of adjacent properties.

    b. Additions (detached or attached to the primary residence) should be compatible with the original building in scale, style, composition, and materials.

Permit Process for Potentially Historic Buildings

If your project includes exterior modifications to a building or structure constructed prior to 1955, refer to Santa Clara County's Permit Process for Potentially Historic Buildings at https://stgenpln.blob.core.windows.net/document/Stanford_SanJuan_PermitProcess.pdf

c. The historic character of the street-facing elevation should be maintained.

d. Retaining original and distinct materials, features, and finishes on the street facing façade is highly encouraged.

e. Key character-defining elements that are deteriorating should be repaired rather than replaced, where feasible. Only those elements that cannot be repaired should be replaced.

f. Original building materials deteriorated beyond repair should be replaced in-kind, matching the original composition, scale, texture, and finish.

g. When disassembly of a historic feature is necessary for restoration or repair, methods should be utilized that minimize damage to the original materials.

h. Unless research or other resources indicate otherwise, adding unnecessary ornamentation or other decorative elements to the street-facing elevation should be limited.

i. Historic materials and features should not be covered.

j. Materials, features, spaces, and finishes that characterize other historical periods different than the main historical period associated with the architectural style, should be removed from the building; however, should be recorded prior to alteration or removal.

k. Utilizing the historic color palette should be considered.

l. Historic windows, doors, and porch elements should be preserved to retain the structure's character. When new windows, doors, and/or porch features are proposed, they should complement and respect the original and maintain the same scale.

m. Roof features, such as form, materials, eaves, rafter tails, gutters, and other elements should be preserved to the maximum extent feasible.

n. A skylight or solar panel should be located away from the street-facing elevation.

o. Historic chimneys should be properly and regularly maintained and repaired. If replacement is necessary, the new chimney should be in the same historic style and scale.

p. Structures undergoing seismic retrofits should minimize negative impacts to historic features.

q. New sustainability treatments should be designed to have the least impact on the historic character.

r. Proposed improvements required to meet current code requirements should be performed with the greatest care, so not to obscure, damage, or destroy character-defining materials or features.

Stanford | Faculty Staff Housing

Owen House
552 O'Connor Lane
Stanford, CA 94305

650.725.6893

http://fsh.stanford.edu

Home Improvement Project Application Instructions

Home improvement projects for homes on a Stanford lease need to be reviewed and approved by Faculty Staff Housing (FSH) prior to work commencing. This is necessary in order to protect Stanford against mechanics' liens for non-payment of work by suppliers of labor, materials, and/or equipment. Please provide complete information in order to expedite the processing of your application.

1. Review Stanford University's Building Manual for your respective lease type. The manuals are available at FSH or online at: http://fsh.stanford.edu/homeowners/home-improvements.
2. Review the Home Improvement Projects Frequently Asked Questions (FAQ) which is available at FSH or online at: http://fsh.stanford.edu/homeowners/home-improvements.
3. Determine if you will need to apply for a building permit from your county or city's jurisdiction.
4. Complete Stanford's Home Improvement Project Application. Complete the Construction Notification form, obtain applicable neighbors' signatures and submit it with the Project Application (if required). The project application is available at FSH or online at: http://fsh.stanford.edu/homeowners/home-improvement.
5. Pay the project application fee by credit card or check made payable to Stanford University. Cash is not accepted..
6. Submit your Project Application, Construction Notification form (if required), payment, and plans/drawings* (if required) via email or shared file to fshousing@stanford.edu. Electronic versions will only be accepted.

Applications will be reviewed within 10 business days. You and/or your contractor will be notified by email of your project's approval or denial.

For further assistance, please call FSH at 650-725-6893 or send an e-mail to fshousing@stanford.edu.

* Please see FAQ and Building Manual for information on which projects require drawings.

Stanford | Faculty Staff Housing

Owen House
552 O'Connor Lane
Stanford, CA 94305

650.725.6893

http://fsh.stanford.edu

Home Improvement Project Application

THIS FORM IS TO BE COMPLETED AND SUBMITTED TO FACULTY STAFF HOUSING PRIOR TO THE COMMENCEMENT OF WORK.

Date:	Lessee's Name:
Project Address:	
Lessee's Email:	Phone:
Contractor/Architect Company:	
Contractor/Architect Mailing Address:	
Contractor/Architect Contact Name:	
Contractor/Architect Contact Email:	Phone:
Estimated Project Start Date:	Estimated Project Stop Date:
Estimated Cost of Project(s):	
Type of Improvement(s): Attach electronic versions of plans, drawings, reports, and/or spec sheets.	

Fees:
Project Application - Drawings Not Required - **$225.00**
Project Application - Drawings Required - **$325.00**
(Above fees include the $75.00 Affordable Housing Fee collected by the County per the Building Homes and Jobs Act effective January 1, 2018)
Payment by credit card is preferred. Checks accepted made payable to Stanford University. Cash is not accepted.

Contact to return approval documents:

Name: _____ Phone: _____

Email: _____

If you have any questions regarding this process, please contact Faculty Staff Housing at 650-725-6893 or email fshousing@stanford.edu.

OFFICE USE ONLY - OFFICE USE ONLY - OFFICE USE ONLY - OFFICE USE ONLY

Project Application Fee Amount Paid: $ _____		Notice Required: ☐ Yes ☐ No ☐ N/A	
Approval Date:	Denied Date:	Filed at Maps and Records:	Approved By:

Stanford | Faculty Staff Housing

Owen House
552 O'Connor Lane
Stanford, CA 94305

650.725.6893

http://fsh.stanford.edu

Home Improvement Project Construction Notification

For projects that impact the Stanford campus residential neighborhood as determined by Faculty Staff Housing, this form must be signed by all neighbors identified by Faculty Staff Housing and submitted with your Home Improvement Project Application as a condition of Stanford's approval of your project.

Owner Name: _____

Address: _____

Description of Project: _____

_____

Estimated Start and Stop Dates of Construction: _____

Estimated Project Duration: _____

The following neighbors have been notified of the impending home improvement project. This notification is for information purposes only and is not intended for project approval or denial.

Address/ Name	Date	Signature*

*Copies of email responses are also accepted.
Prior to construction, each neighbor will be notified with a more accurate start date.

_____ _____
Owner's Signature Date

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03

Accessory Dwelling Unit (ADU) Development Standards

This manual provides homeowners with a guide to construct a new or legalize an existing ADU.

27 | *A. Introduction to ADUs*

32 | *B. Building an ADU*

48 | *C. Resources for ADUs*

ADU Development Standards

A. Introduction to ADUs

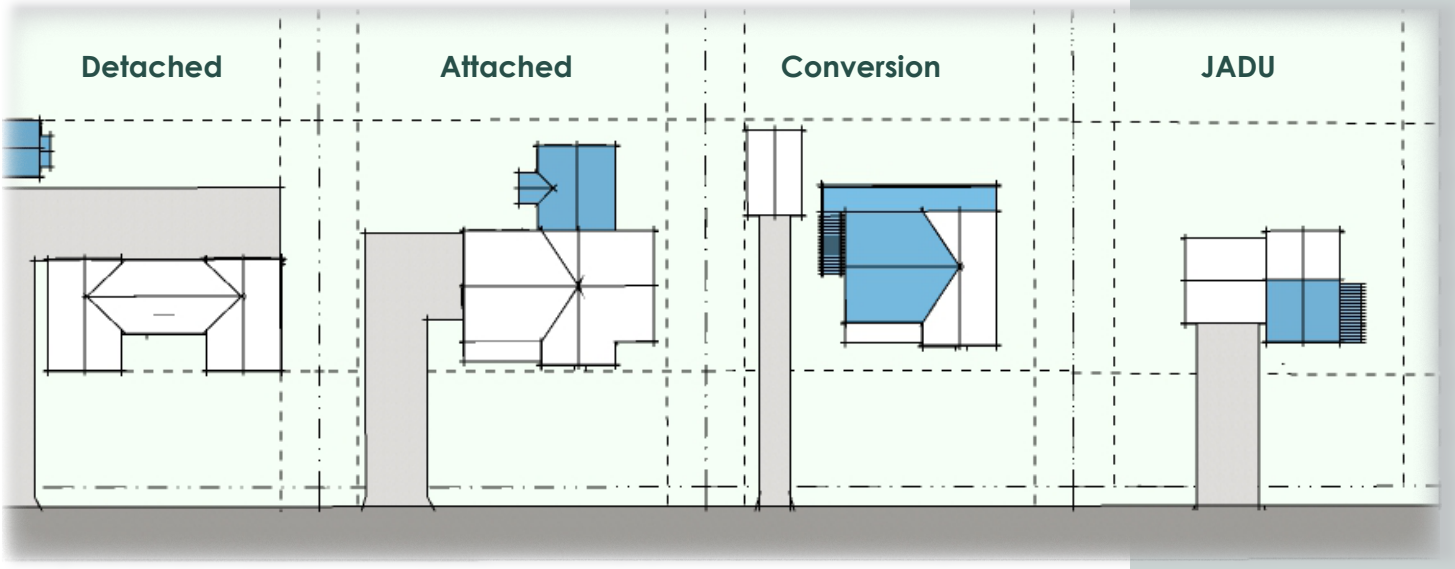
1. Purpose/How to Use this Manual

This Chapter is intended to provide accessory dwelling unit (ADU) development standards and is organized into the following subsections: Introduction to ADUs, Building an ADU, Resources for Homeowners.

2. What is an ADU?

An ADU is a residential unit that provides independent living facilities for one or more persons and includes separate kitchen, sleeping, and bathroom facilities. An accessory dwelling unit may be a part of, attached to, or detached from, a single-family, two-family, or multi-family residence and is secondary to the principal residence. Also included: efficiency unit as defined in Section 17958.1 of the Health and Safety Code, and a manufactured home as defined in Section 18007 of the Health and Safety Code. ADUs are allowed on any property within a residential zoning district and are considered an accessory to the principal residence.

Figure 3.1: Accessory Dwelling Unit Plan View Concepts



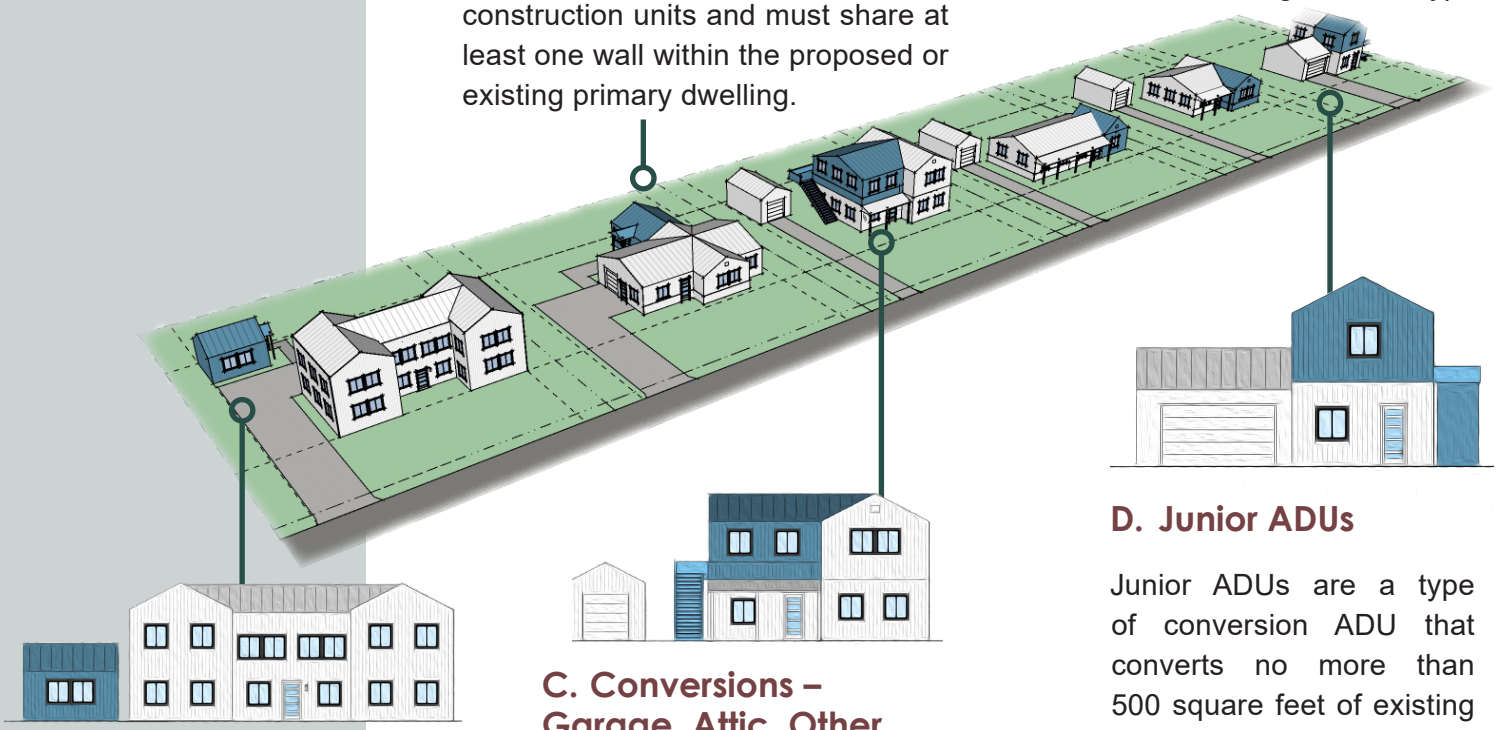
3. Types of ADUs

You can find the specific ADU Design and Building Standards in this Manual under Section 2: Building an ADU. The standards highlight the criteria for design, compatibility, and development standards.

B. Attached ADUs/Additions

Attached or addition ADUs are new construction units and must share at least one wall within the proposed or existing primary dwelling.

Figure 3.2: Overall Graphic Showing All ADU Types



D. Junior ADUs

Junior ADUs are a type of conversion ADU that converts no more than 500 square feet of existing square footage of a single-family residence.

C. Conversions – Garage, Attic, Other Structures

Conversion ADUs are established by converting an existing space within a single-family residence (e.g., garage, pool house, or basement) or a detached accessory structure.

A. Detached ADUs

Detached ADU's are free-standing buildings that are unattached to a proposed or existing primary dwelling with full amenities for the resident.

4. Stanford Residential Properties and Applicability

This Manual provides ADU standards and procedures applicable to properties subject to a Stanford University residential ground lease within the unincorporated areas of Santa Clara County. These lands are subject to the land use jurisdiction and regulatory authority of the County; however, because individual lots are subject to the Stanford Residential Ground Lease, Stanford University, as landowner, has the authority to approve development on its lands. Development proposals for ADU's will be reviewed and approved by Faculty Staff Housing and will follow the Home Improvement Projects' process described in the Chapter 02 (Homeowner Guide).

The University has established area specific regulations contained within this document for setbacks and design compatibility, which, together with applicable Santa Clara County standards, are designed to ensure that a quality residential area is maintained for current and future residents. In the case of any conflict between these area specific regulations and the County regulations, the more restrictive requirement shall apply.

5. Who can live in my ADU?

ADUs are part of the premises covered by the Stanford University residential ground lease, and therefore are subject to the same eligibility requirements as the primary residence. A Stanford-affiliated individual includes current leaseholders, faculty, students enrolled at Stanford, other eligible persons as defined by FSH, caregivers to an eligible person, or a family member to the lessee.

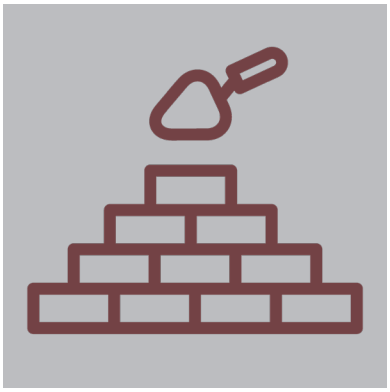
Detached ADU

B. Building an ADU

1. Where to Start

A. ADU Options

There are three different opportunities to build an ADU on a property which include: constructing a new ADU, converting existing square footage into an ADU, and/or legalizing an existing un-permitted dwelling unit that has already been established on your property.



New Construction: New construction consists of building a new structure or adding square footage onto the existing structure on your property.

- New Detached ADUs
- New Attached ADUs

Conversion: Conversions involve renovating or converting existing square footage of the primary residence, and typically encompasses a garage or other existing permitted accessory structure. Additions to a structure greater than 150 sf to accommodate ingress/egress would be considered a new construction ADU.

- Detached Conversion ADUs
- Attached Conversion ADUs
- Junior ADUs (JADU)

Legalize Existing Un-permitted Dwelling Unit: If you have an existing un-permitted dwelling unit on your property and would like to legalize it, the dwelling unit would be required to comply with the standards outlined in this Section.

B. ADU Approval Process

Stanford approval is required before securing a building permit from the County of Santa Clara. Refer to the Homeowner Project Review Process Flowchart in Chapter 2 (Homeowner Guide).

C. ADU Design and Building Standards

The San Juan Residential District is composed of an eclectic mix of architectural styles developed over time. The following section contains design and building standards for each type of accessory dwelling units, as described in Section 1 (Introduction to ADUs).

1. Design Compatibility Standards

ADUs are intended to be secondary to a primary residence. ADUs should maintain and build upon a primary residence's existing character. The following Design Compatibility Standards apply universally to all ADU types described in this manual.

a. Architectural Style

- Architectural materials and exterior finishes shall be the same or similar to the type, quality, and colors as the primary residence.
- Roof forms shall be designed and constructed with the same pitch, eave detail, and materials as the primary residence. For primary residences with multiple roof pitches, the ADU shall have the same roof pitch as that of the largest portion of the roof, or the dominant roof slope.
- Windows and doors shall be of the same type and quality of the primary residence.

b. Site Circulation

- ADUs must provide a separate, independent, exterior entrance from the primary residence. The entrance to the ADU cannot face the street unless the ADU is setback from the existing primary residence and sliding doors are not allowed as main ADU entrance.
- The ADU and primary residence shall utilize the same driveway to access the street unless otherwise directed by Santa Clara County Fire Department.

c. Exterior Lighting

- All exterior lighting shall be full cutoff fixtures and oriented downward facing, in order to prevent light trespass or glare onto adjacent properties.
- All exterior lighting shall be motion sensor operated.

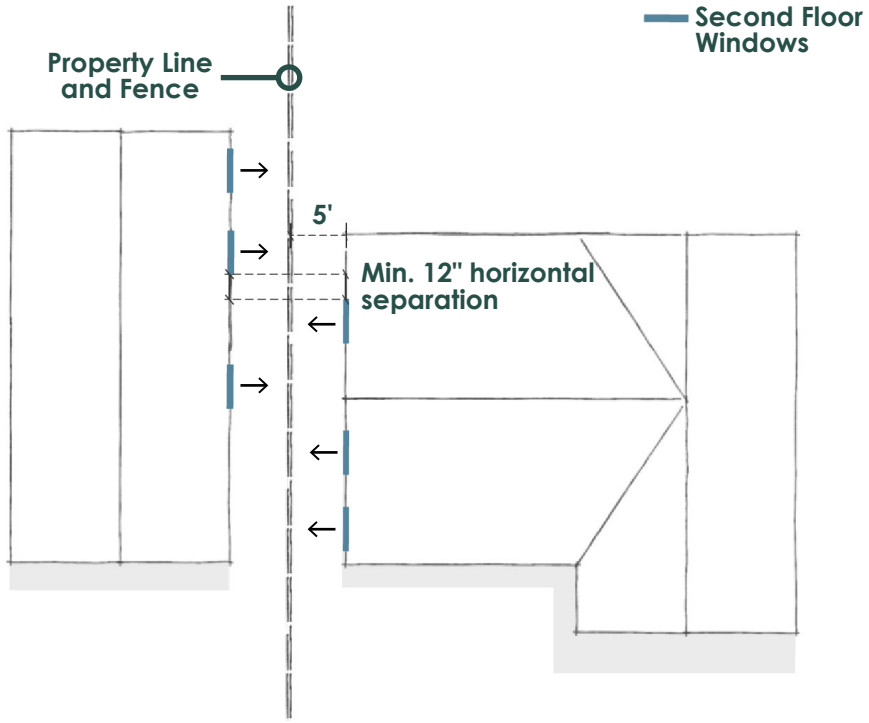
d. Landscaping / Screening

- Where an ADU is proposed to be built within 10 feet of the rear or side property line, vertical screening trees at least 8 feet tall at maturity shall be planted and maintained between an ADU and adjacent properties.

e. Privacy / Good Neighbor

- Windows located above the ground floor 5 feet or less from a neighboring property shall be offset horizontally from any windows in neighboring properties by at least 12 inches (edge to edge), so as to not have a direct line-of-sight into adjacent structures.

Figure 3.3: Good Neighbor Window Compatibility



2. Detached ADUs

   a. Detached ADUs are new construction ADUs that are physically separated from the primary residence.

Table 4-1: Detached ADU Standards

Standard	Stanford Standard
Building Size	Refer to Santa Clara County Zoning Ordinance. **Minimum Building Size** • 220 sf (efficiency unit, as defined in the Glossary) **Maximum Building Size** • Up to 1,200 sf
Setbacks	**Front**: same as required in Table 2-1, or no closer to the front property line than the primary residence, whichever is greater. **Corner Lot Exterior Side**: same as required in Table 2-1, or no closer to the corner street side property line than the primary residence, whichever is greater. **Side**: same as required in Table 2-1, except where following Table 2-1 limits the construction of an 800 square foot ADU. In no case shall the side setback be less than 5 feet. **Rear**: same as required in Table 2-1, except where following Table 2-1 limits the construction of an 800 square foot ADU. In no case shall the rear setback be less than 5 feet.
Height	Refer to Table 2-1 for setback requirements for single-family residences. • 16 feet, if the ADU does not comply with the setback limitations for a single-family residence • If the ADU complies with the setback limitations for a single-family residence, the ADU shall be subject to the same height limitations as the base zoning district* *Detached ADUs exceeding 16 feet shall incorporate a hip, gable, or other similar styled roof design. The measurement of height is defined in Chapter 04: Glossary.

Table 4-1: Detached ADU Standards	
Standard	**Stanford Standard**
Parking	• One Off-Street Parking Space Required Per ADU • Exemptions per State law apply; refer to Section C.6 for Parking Requirements and Special Conditions.
Design Compatibility Standards	Refer to Section C.1 for Design Compatibility Standards.

Figure 3.4: Detached ADU Perspective

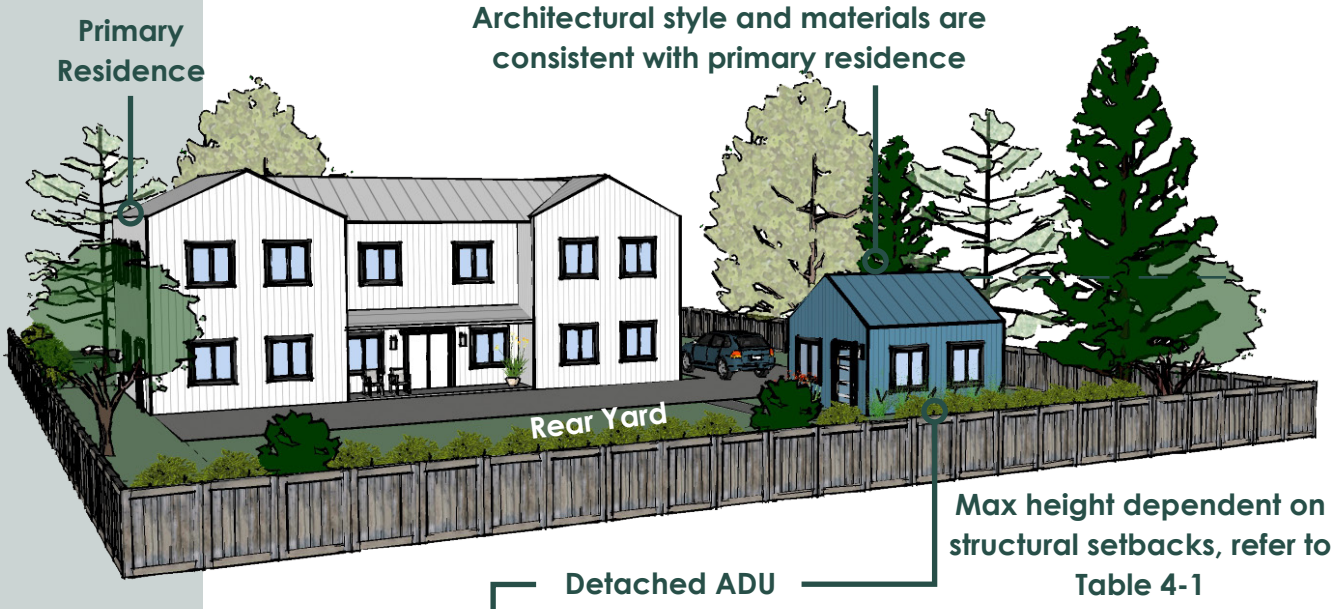


Figure 3.5: Detached ADU Perspective

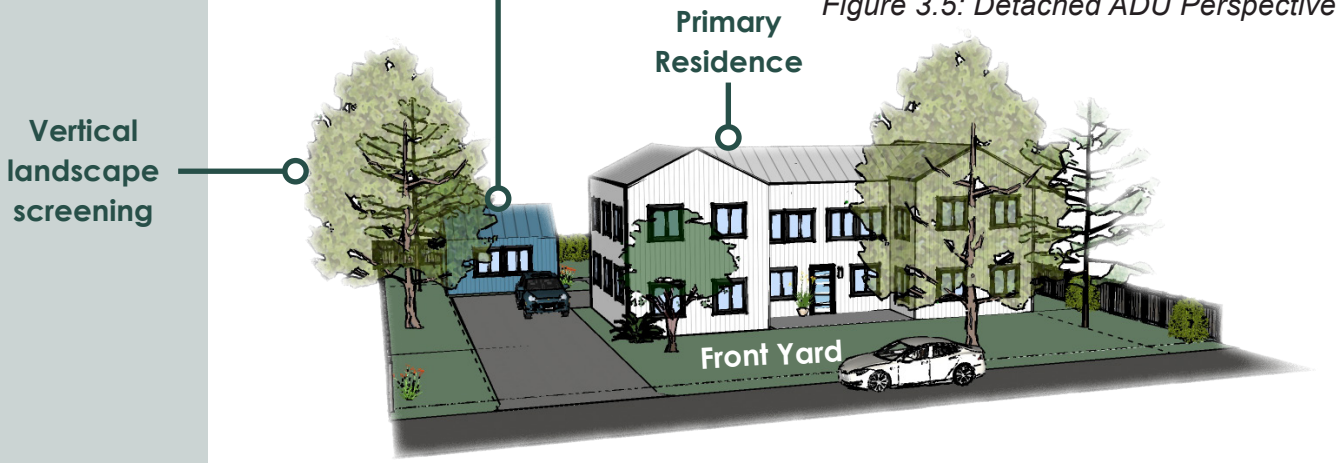
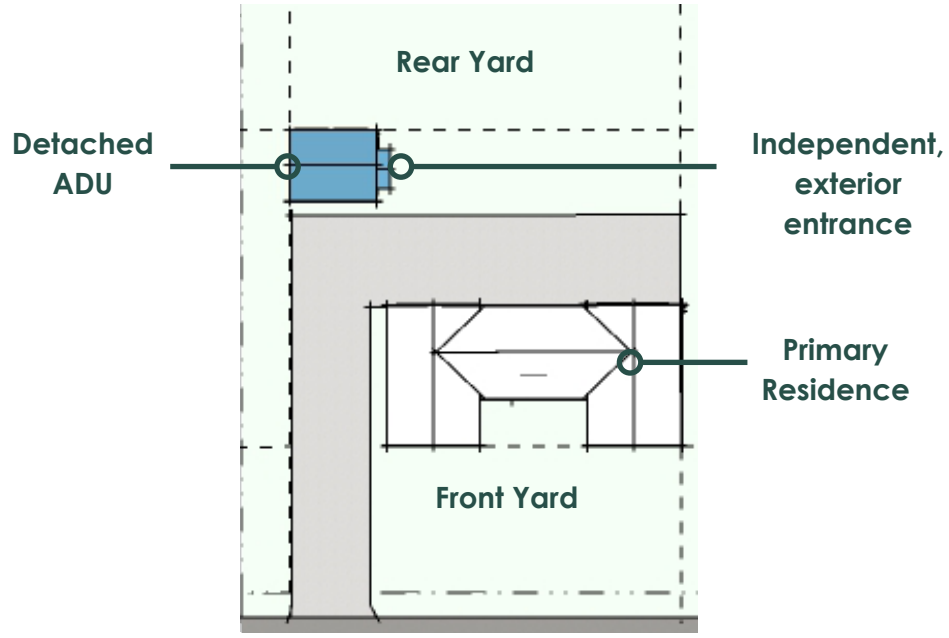


Figure 3.6: Detached ADU Plan View



Separate exterior entrance

Full cutoff lighting fixture

3. Attached ADUs/Additions

   a. Attached ADUs are new construction ADUs that share at least one wall with the primary residence and add more than 150 sf to the existing structure. These units are also called “Addition ADUs.”

Table 4-2: Attached/Addition ADU Standards

Standard	Stanford Standard	
Building Size	Refer to Santa Clara County Zoning Ordinance. **Minimum Building Size** • 220 sf (efficiency unit, as defined in the Glossary) **Maximum Building Size** The maximum building size of the ADU is dependent of the size of the primary residence..	
	1,600 sf or less	• ADU shall be no greater than 800 sf
	1,601 – 2,400 sf	• ADU shall be no greater than 50% of the legal established primary residence
	2,400 sf+	• ADU shall be no greater than 1,200 sf
Setbacks	**Front**: same as required in Table 2-1, or no closer to the front property line than the primary residence, whichever is greater. **Corner Lot Exterior Side**: same as required in Table 2-1, or no closer to the corner street side property line than the primary residence, whichever is greater. **Side**: same as required in Table 2-1, except where following Table 2-1 limits the construction of an 800 square foot ADU. In no case shall the side setback be less than 5 feet. **Rear**: same as required in Table 2-1, except where following Table 2-1 limits the construction of an 800 square foot ADU. In no case shall the rear setback be less than 5 feet.	

Table 4-2: Attached/Addition ADU Standards

Standard	Stanford Standard
Height	Refer to Table 2-1 for setback requirements for single-family residences. • 16 feet, if the ADU does not comply with the setback limitations for a single-family residence • If the ADU complies with the setback limitations for a single-family residence, the ADU shall be subject to the same height limitations as the base zoning district The measurement of height is defined in Chapter 04: Glossary.
Parking	• One Off-Street Parking Space Required Per ADU • Exemptions per State law apply; refer to Section C.6 for Parking Requirements and Special Conditions.
Design Compatibility Standards	Refer to Section C.1 for Design Compatibility Standards.
Note that these types of ADUs on properties built before 1955 must follow Santa Clara County's Process for Potential Historic Buildings in the Stanford San Juan Residential District.	

Figure 3.7: Attached ADU Plan View

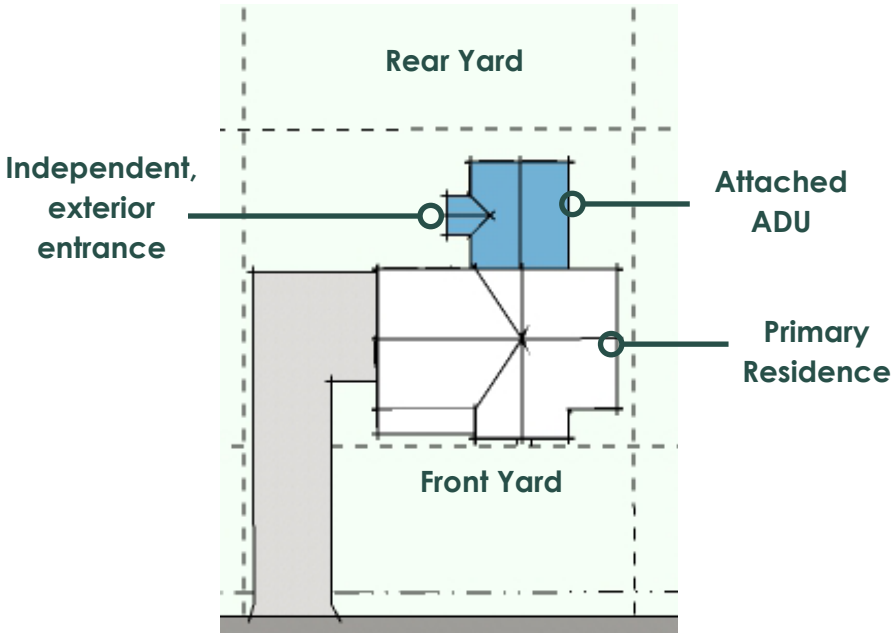
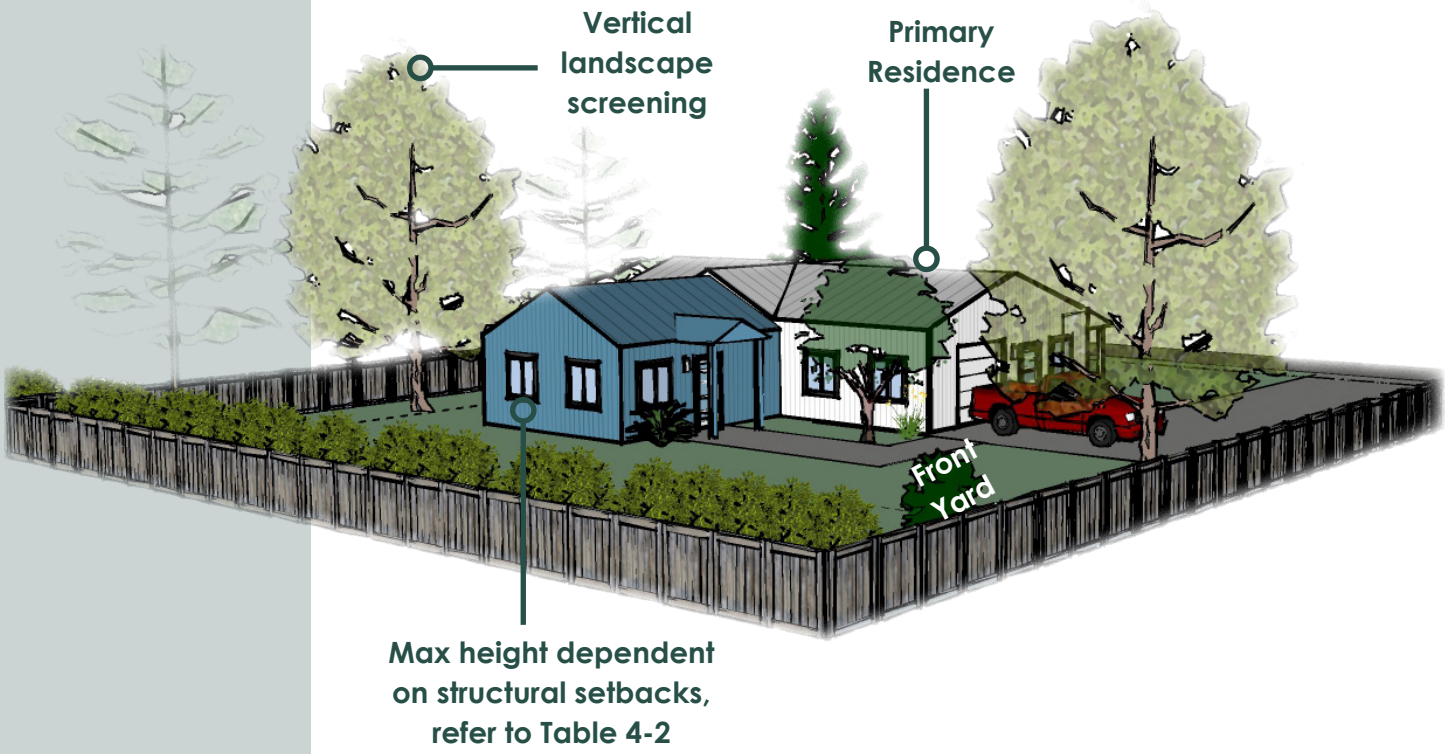


Figure 3.8: Attached ADU Perspective



4. Conversions

    a. Conversion ADUs re-purpose existing and legally permitted detached structures, or conversions of floor area within an existing primary residence. (e.g., garages, pool house/cabanas). Conversion ADUs are limited to an expansion of no more than 150 sf addition to accommodate ingress/egress.

Table 4-3: Conversion ADU Standards

<table>
<tr><th>Standard</th><th colspan="2">Stanford Standard</th></tr>
<tr><td rowspan="5">Building Size</td><td colspan="2">Refer to Santa Clara County Zoning Ordinance.
<u>Minimum Building Size</u>
• 220 sf (efficiency unit, as defined in the Glossary)
<u>Maximum Building Size for Detached Conversion ADUs</u>
• Detached conversion ADUs are limited to the size of the legally permitted footprint and floor area of the structure being converted. An addition of no more than 150 sf to accommodate ingress/egress is permitted, so long as the expansion does not result in a new or increased setback encroachment.
<u>Maximum Building Size for Attached Conversion ADUs</u>
The maximum building size of the ADU is dependent of the size of the primary residence.</td></tr>
<tr><td>1,600 sf or less</td><td>• ADU shall be no greater than 800 sf</td></tr>
<tr><td>1,601 – 2,400 sf</td><td>• ADU shall be no greater than 50% of the legal established primary residence</td></tr>
<tr><td>2,400 sf+</td><td>• ADU shall be no greater than 1,200 sf</td></tr>
<tr><td colspan="2">• An addition of no more than 150 sf to accommodate ingress/egress is permitted, so long as the expansion does not result in a new or increased setback encroachment.</td></tr>
</table>

Table 4-3: Conversion ADU Standards

Standard	Stanford Standard
Setbacks	Same as required in Table 2-1; see also Building Size for applicable non-conforming structures • Conversion ADU's are permitted wholly within the footprint of existing legally permitted structures. An existing attached or detached structure may be expanded by up to 150 square feet to accommodate ingress/egress for the accessory dwelling unit, so long as the expansion does not result in a new or greater setback encroachment.
Height	Refer to Table 2-1 for setback requirements for single-family residences. The ADU shall not be taller than the existing legally permitted structure being converted. • 16 feet, if the ADU does not comply with the setback limitations for a single-family residence • If the ADU complies with the setback limitations for a single-family residence, the ADU shall be subject to the same height limitations as the base zoning district The measurement of height is defined in Chapter 04: Glossary.
Parking	• One Off-Street Parking Space Required Per ADU • Exemptions per State law apply; refer to Section C.6 for Parking Requirements and Special Conditions.
Design Compatibility Standards	Refer to Section C.1 for Design Compatibility Standards.
Note: Attached Conversion ADUs on properties built before 1955 must follow Santa Clara County's Process for Potential Historic Buildings in the Stanford San Juan Residential District, as referenced on page 21 of this Manual.	

Figure 3.9: Conversion ADU Plan View

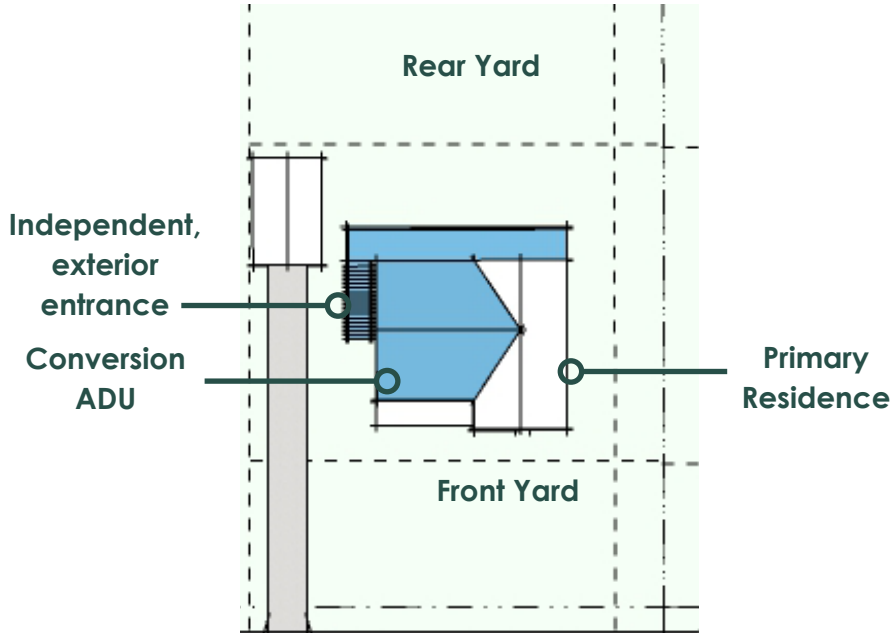
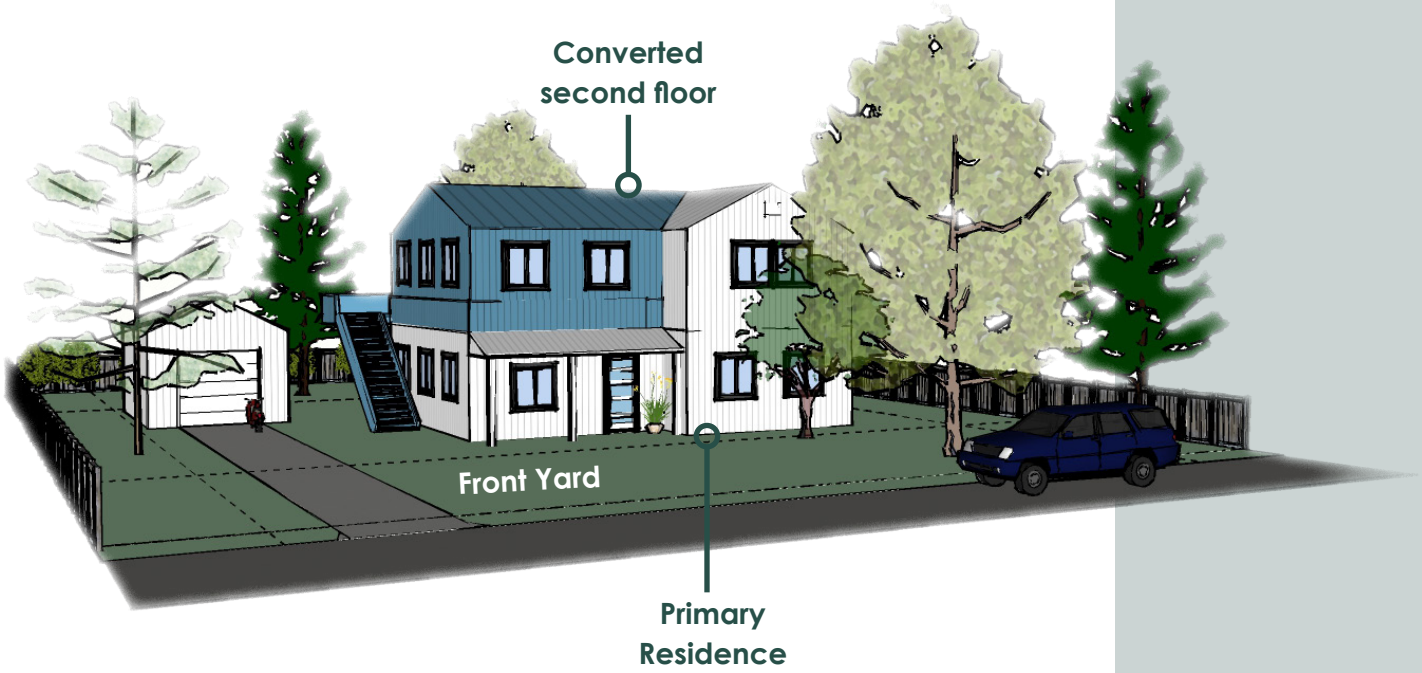


Figure 3.10: Conversion ADU Perspective



5. Junior ADUs

    a. A Junior Accessory Dwelling Unit (JADU) is a unit that does not exceed 500 square feet in size and is contained entirely within the walls of an existing single-family residence, including attached garages and has a separate entrance. At a minimum, a JADU shall include an efficiency kitchen with a food preparation counter, cooking facility with appliances and storage cabinets, and may include separate sanitation facilities or may share sanitation facilities within the existing single-family residence.

Table 4-4: Junior ADU Standards

Standard	Stanford Standard
Building Size	Refer to Santa Clara County Zoning Ordinance. **Minimum Building Size** • 220 sf (efficiency unit, as defined in the Glossary) **Maximum Building Size** • 500 sf
Setbacks	Refer to Table 2-1. Setbacks may be increased for safety and environmental requirements.
Height	Refer to Table 2-1. Same as primary dwelling if JADU complies with residential setbacks, or 16 feet otherwise. The measurement of height is defined in Chapter 04: Glossary.
Parking	No parking required.
Design Compatibility Standards	Refer to Section C.1 for Design Compatibility Standards.

Figure 3.11: Junior ADU Plan View

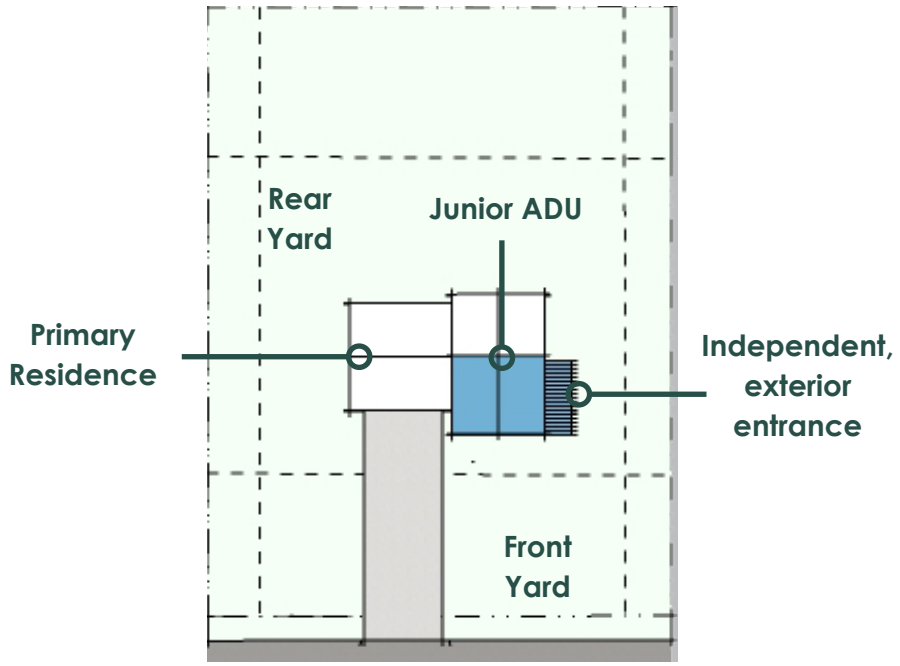
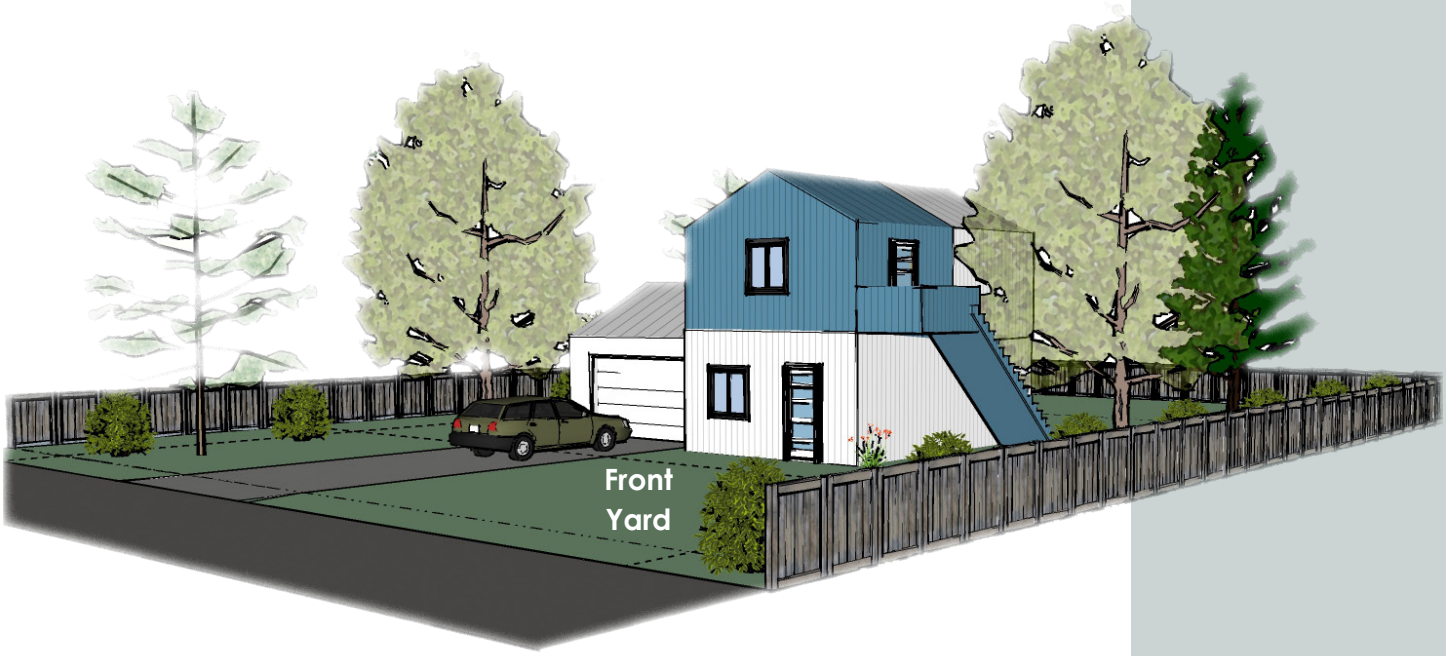


Figure 3.12: Junior ADU Perspective



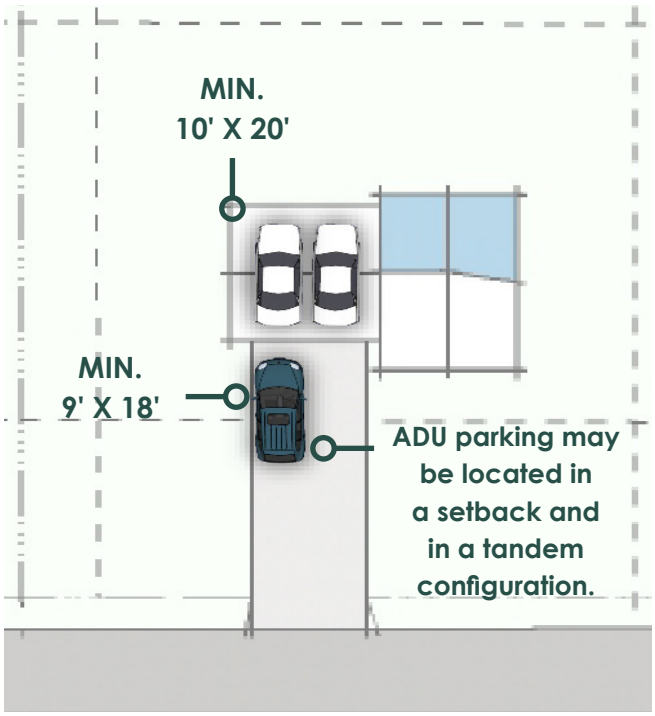
6. Parking Requirements

   a. An ADU shall be provided with one (1) off-street parking space per unit. Parking may be covered, uncovered, and/or provided in a tandem configuration, as well as located within any setback area. Each unenclosed parking space shall be at least 9 feet wide and 18 feet long. Parking spaces within enclosed garage configurations shall be at least 10 feet wide and 20 feet long. When a garage, carport, or covered parking structure is converted to an ADU or demolished in conjunction with the construction of an ADU, the off-street parking space or spaces are not required to be replaced.

   b. Special Conditions and Exemptions

      - If one of the following conditions apply to your property and proposed ADU, the parking requirement of one off-street parking space per ADU is eliminated.
      - ADU is located within ½ mile walking distance of public transit, as defined in 6.d.
      - ADU is located in an architecturally or historically significant district.

Figure 3.13: Tandem Parking Configuration



- On-street parking permits are required but not offered to the ADU resident.
- An established car share vehicle stop is located within one block of the ADU.

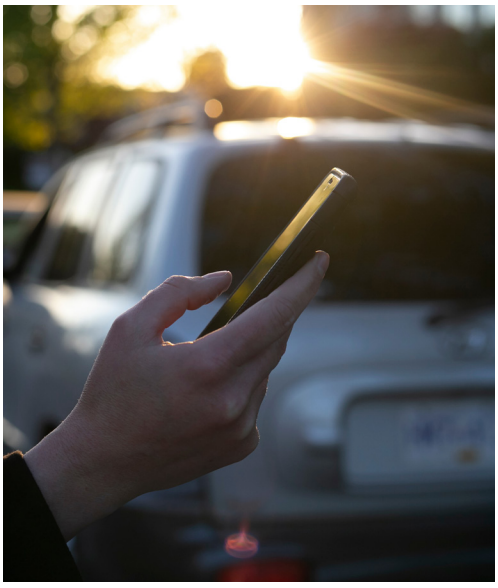
c. Tandem Parking

- Tandem parking involves two or more automobiles are parked on a driveway or in any other location on a property, lined up behind one another. Refer to Figure 3.13 for tandem parking configuration.

d. Public Transit

- Public transit means a location, including, but not limited to, a bus stop or train station, where the public may access buses, trains, subways, and other forms of transportation that charge set fares, run on fixed routes, and are available to the public.

Bus shelter



Car-sharing program

C. Resources for ADUs

1. Refer to Chapter 04 (Glossary) for definitions of frequently defined terms in this Manual.
2. Quick References
   a. County of Santa Clara – ADU Ordinance
      - County webpage linked here
   b. California Housing and Community Development (HCD) Resources
      - ADU Handbook
   c. Stanford Faculty and Staff Housing
      - For further assistance, please contact FSH at 650-725-6893 or send an email to FSHousing@stanford.edu.

Attached second story ADU

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04

Glossary

This glossary provides definitions for common terms utilized in this Building, Design, and ADU Manual for the Stanford San Juan Residential District.

51 | A. Definition of Terms

Glossary

A. Definition of Terms

1. Corner Lot: Exterior Side
    a. A corner lot exterior side yard/lot line is generally the longer of the two lot lines abutting a street.
2. Efficiency Unit
    a. The Health and Safety Code Section 17958.1 refers to the International Building Code of the International Code Council, which defines an efficiency unit as follows:
        - The unit shall have a living room of not less than 220 square feet.
        - An additional 100 square feet of floor area shall be provided for each occupant more than two.
        - The unit shall be provided with a separate closet.
        - The unit shall be provided with a kitchen sink, cooking appliance and refrigeration facilities, each having a clear working space of not less than 30 inches in front.
        - The unit shall be provided with a separate bathroom containing a water closet, lavatory and bathtub or shower. (International Building code Section 1208.4).
3. Footprint
    a. The area of a building on a site, in square feet, defined by the perimeter of a building plan.
4. Habitable Space
    a. An area within a building used for living, sleeping, eating, or cooking.

5. Height

    a. The dimension measured by the vertical distance from the final grade to the top of the building or structure. On sloping lots or lots with irregular topography, height shall be measured vertically upward from a hypothetical surface representing the finished grade as projected through the structure site. Refer to the Santa Clara County Zoning Ordinance for figures to depict the measurement of height.

6. Owner Occupancy

    a. The leaseholder of the property must use either the primary residence or the ADU as their main residence.

7. Primary Residence

    a. A building or structure being occupied by the principal use on a site. In any residential zoning district, any dwelling shall be considered a principal building on a site.

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A Graywater Policy for Faculty & Staff Housing Single-Family Residences

Stanford University - Land Buildings and Real Estate
Water Resources & Civil Infrastructure Group

Graywater Policy for Faculty & Staff Housing Single Family Residences

April 18, 2022

I. Purpose

Stanford University is dedicated to water efficiency and conservation and is implementing this policy to provide a process of review and approval for faculty and staff lessees to install graywater systems. Stanford University is the landowner of the faculty and staff housing areas of campus and neighboring communities (including Menlo Park and Palo Alto), and all of the campus faculty and staff housing areas overlay groundwater basins that comprise Stanford's (and other neighboring communities') back-up potable water supply; therefore, any such systems will need to be implemented incorporating appropriate protections of certain subjects, including without limitation, public health, Stanford owned land, health of vegetation and trees, native species habitat, soils, groundwater, and surface water.

This policy has been developed in close consultation with the Faculty & Staff Housing Office, Land, Buildings, & Real Estate (LBRE), Environmental Health and Safety, and the Office of the General Counsel, and is subject to periodic review and revision. The policy will be administered jointly by the Faculty/Staff Housing Office and the Water Resources and Civil Infrastructure Group in LBRE.

II. Definition

Graywater is untreated household wastewater which has not come into contact with potentially infectious waste such as toilet or kitchen waste. Graywater includes only used water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines and laundry tubs. It shall not include wastewater from kitchen sinks, dishwashers, or toilets.

Graywater systems can be classified into three different types: clothes washer, simple, and complex. Clothes washer graywater systems are those that consist of only laundry wastewater discharged (i.e., released for landscape irrigation) to landscape and typically do not require a construction permit. Simple systems consist of additional sources of graywater (e.g., showers, tubs, and washbasins) but must total less than 250 gallons per day and used for landscape irrigation. Complex graywater systems exceed the clothes washer and simple systems in terms of quantity, and uses could include toilets. Complex systems can be used for landscape irrigation and/or toilet flushing, with

appropriate treatment. Graywater irrigation includes clothes washer, simple, or complex systems which are used for irrigation of plants and trees. Systems of any kind discharging graywater to a disposal field (i.e., discharge of graywater for the sole purpose of percolation without irrigating landscape) are not allowed on Stanford owned land.

III. Regulatory Considerations

All features of the system design, installation, and operation shall conform at a minimum to California Plumbing Code (CPC) Chapter 15: Alternate Water Sources for Nonpotable Applications and Santa Clara County or any other agency with regulatory jurisdiction.

The entire faculty and staff housing area of the main campus (unincorporated Santa Clara County) is within the boundaries of Stanford's Federal and State Incidental Take Permit, which places constraints on the activities that could contribute to detrimental impacts on listed species (endangered, threatened, etc.). See siting restrictions below.

IV. Use and Siting Restrictions

Graywater irrigation shall be applied in a manner that prevents resurfacing or runoff (due to lack of percolation or subsurface conveyance to a drainage feature). Graywater system outlets for irrigation must be at least 100 feet away from streams, lakes, drainage ditches, or other water bodies, and shall not be installed in areas where depth-to-groundwater is less than five feet.

Graywater irrigation will not be allowed within the California Tiger Salamander (CTS) habitat zone. The attached figure, Graywater Siting Restrictions, shows the water features and drainage as well as the CTS habitat zone.

Prior to application for any graywater irrigation system, a percolation test and/or subsurface investigation to determine soil type is required. The application must include documentation of the test/investigation and support the requirements stated above.

The minimum setback for graywater irrigation systems, piping, and storage must be consistent with plumbing code (CPC 1503.4, including to property lines and domestic water service lines).

If the graywater is used for irrigation, the wastewater within the residence that contributes to the graywater system shall only include products that will not deteriorate

plant health or soil and groundwater quality. Guides for acceptable graywater products can be found online[1] and must be free of the following:

- Sodium Salts
- Boron/Borax
- Chlorine-containing bleach products
- Peroxygen; typically found in disinfectants
- Sodium Perborate
- Sodium Trypochlorite
- Petroleum distillate such as lubricating oils
- Alkylbenzene
- "whiteners"
- "softeners"
- "enzymatic" components
- Dyes
- Antibacterial soaps and cleaners
- Products that would require hazardous waste disposal (e.g., petroleum products, paints, solvents, etc.)

If products from the list above are needed to be used for cleaning, laundry, or personal care, the diverter valve shall be operated to direct the wastewater to flow to sanitary sewer. Additionally, if diapers or similarly soiled or infectious garments are to be laundered the diverter valve shall be operated and prevent discharges, so that wastewater flows to the sanitary sewer.

For irrigation using graywater, if the home also has a water softening system, the system must use potassium chloride rather than sodium chloride. A water softening system of any kind will likely result in an elevated pH of the graywater, which could be harmful to some landscapes. For ideal plant health, the pH of products may also need to be considered (particularly for ornamental landscapes, with a neutral pH, 7.0, being the goal).

Graywater shall not be used for irrigation of edible plants that come in direct contact with graywater or the soil surface.

[1] Greywater Action Website: https://greywateraction.org/faq/what-soaps-and-products-can-i-use-with-my-greywater-system/
Greywater Compatible Soap & Detergent Info: https://www.harvestingrainwater.com/resource/greywater-compatible-soap-detergent-info/

V. Design and Installation Requirements

Design and installation shall be conducted by the lessee and shall comply CPC and the following:

- Graywater systems shall have no connection to any potable water system.
- Graywater systems' discharge shall not result in any runoff, ponding, or resurfacing of the percolated graywater applied for irrigation.
- The applicability, type, and size of system shall be restricted based on the location, soil type, and groundwater level.
- No graywater system, or part thereof, shall be located on any lot other than the lot which is the site of the building or structure generating the graywater.
- No graywater system or part thereof (including irrigation emitters) shall be located at any point having less than the minimum distance/clearance of 5 feet from the property line, 5 feet from water service and 100 feet from streams, lakes, drainage ditches, or surface water conveyance (Graywater Siting Restrictions figure).
- No graywater system used for irrigation or part thereof (including irrigation emitters) shall be located within the California Tiger Salamander habitat zone (Graywater Siting Restrictions figure).
- No excavation for an irrigation emitter or drip system shall extend within 5 vertical feet of the highest known seasonal groundwater; or to a depth where graywater may contaminate the groundwater.
- No graywater system shall be permitted if a percolation test shows the absorption capacity of the soil is unable to accommodate the intended discharge of the proposed graywater system.
- Graywater shall not be discharged to a discharge field for the sole purpose of percolation.
- All graywater piping shall be marked or have a continuous tape marked with the words "DANGER - NON-POTABLE WATER."
- Each holding tank shall have its rated capacity permanently marked on the unit and a sign stating "GRAYWATER SYSTEM, DANGER - NON-POTABLE WATER"
- Holding tanks that are above ground shall be installed on level concrete slab three (3) inches above grade and anchored against overturning.
- Holding tanks are preferred to be installed aboveground, but if underground, holding tanks shall be installed on dry, level, well-compacted soil.
- Holding tanks shall be filled with water to the overflow line prior to and during inspection with all seams and joints to be left exposed.
- A flow test though the system to the point of graywater discharge must be conducted with all lines to be water-tight.

- A reduced pressure principle backflow preventer assembly (RP), that complies with Stanford University Facility Design Guidelines (FDG) Section 33 10 01, must be installed on the residence's domestic water service for a simple or complex graywater system. Specify and identify the location of the RP on plans. The installation will be inspected by WRCI for conformance with the FDG. The lessee shall hire an AWWA certified backflow prevention tester after the RP is installed and submit certified results before the system may be activated. Once the home's water service becomes closed to flow back to the main with the installation of the RP, the code (CPC 608.3) requires the installation of a pressure relief valve on the home's side of the RP or an expansion tank(s) installed on all water heaters/ boilers.
- Before a simple or complex graywater system may be activated, an initial cross-connection test shall be conducted in accordance with the CPC with results submitted to and approved by WRCI.

VI. Application Process

Proposed installation of any graywater system by a lessee is subject to an application process to Stanford Faculty/Staff Housing, for review and approval by Faculty/Staff Housing and Stanford Water Resources and Civil Infrastructure before installation. If Stanford approves the application, the applicant shall also seek approval for the proposed graywater system from Santa Clara County and/or any other regulatory agency with jurisdiction over this activity.

The application for a proposed graywater system consists of a letter to the Faculty/Staff Housing Office including:

1) The location and overview of the proposed system,
2) Drawings prepared by a qualified professional architect/engineer,
3) Plans for these systems shall meet the requirements of the California Plumbing Code and Santa Clara County (or appropriate local agency) as well as the Design and Installation Requirements above,
4) The Operations and Maintenance Manual for the designed graywater system, which addresses the requirements listed herein,
5) For graywater irrigation applications, documentation of a subsurface investigation or percolation test performed under the supervision of a qualified geologist or engineer which includes the soil type and/or percolation rate for determination of the irrigation design, and
6) The signed acknowledgement included here as Attachment A.

Upon application approval by Stanford, the applicant shall provide copies of all other required permit(s), including the appropriate County (or appropriate local agency)

permit, and the schedule for the installation of the system to Faculty/Staff Housing Office (FSH) and the Water Resources and Civil Infrastructure Group (WRCI) for site coordination and inspection. Installation can only proceed in accordance with the approved plans, permit(s), and the CPC.

VII. Routine Maintenance and Annual Inspection

The graywater system must be maintained as indicated by the manufacturer and designer. Graywater systems will require maintenance of the filtration and pump systems, and is the sole responsibility of the lessee. The lessee must ensure compliance by sublessees, renters, or residents. The lessee shall check tank(s) for leakage at least annually, and repair if needed. Any repairs or replacement to the system are the sole responsibility of the lessee. If graywater is observed running off the property, or other nuisance observation related to the graywater system is observed, WRCI or FSH staff will request access with two business days written notice to inspect the graywater system. If the lessee fails to provide access within ten business days of a written notice, the graywater system will be required to be disconnected and diverter valve operated to allow all waste from the home to route directly to sewer.

If the system is found to need repair, the lessee will be notified in writing and have ten business days to initiate the repair with a qualified vendor. If the repair is not in progress or completed within 10 business days, the graywater system will be required to be disconnected and diverter valve operated to allow all waste from the home to route directly to sewer.

For graywater installations in unincorporated Santa Clara County, main Stanford campus, upon initial installation and at least annually thereafter, the lessee of a graywater system shall allow access to Stanford Water Resources & Civil Infrastructure staff or Faculty Staff Housing staff with two business days written notice. The staff shall be allowed access to perform testing or to generally inspect the graywater system, tanks, and discharge points. The reduced pressure principle backflow prevention assembly at the domestic water connection for the home will be tested annually by WRCI. If the lessee fails to provide access within ten business days of a written notice, the backflow test will be conducted without approval of the lessee (resulting in a one-hour interruption of domestic water service).

For graywater installations on Stanford owned land in the incorporated areas of Palo Alto, Menlo Park, or other municipality, the lessee will follow local ordinance requirements related to the testing of backflow prevention devices and the inspection

VIII. Renewal and Transfer Requirements

The acceptable operation of a simple graywater system will be allowed so long as the design requirements are maintained. The acceptable operation of a complex system will be allowed so long as the design requirements are maintained, and the annual cross connection control test and backflow testing are complete and acceptable within the last 12 months.

When a home with any type of graywater system is sold or rented/leased, the existence of the graywater system shall be disclosed and a copy of the most current version of this policy, the Operations and Maintenance Manual, and the records of the cross-connection control and backflow testing shall be provided to the new lessee.

IX. Applicant or Transfer Acknowledgement

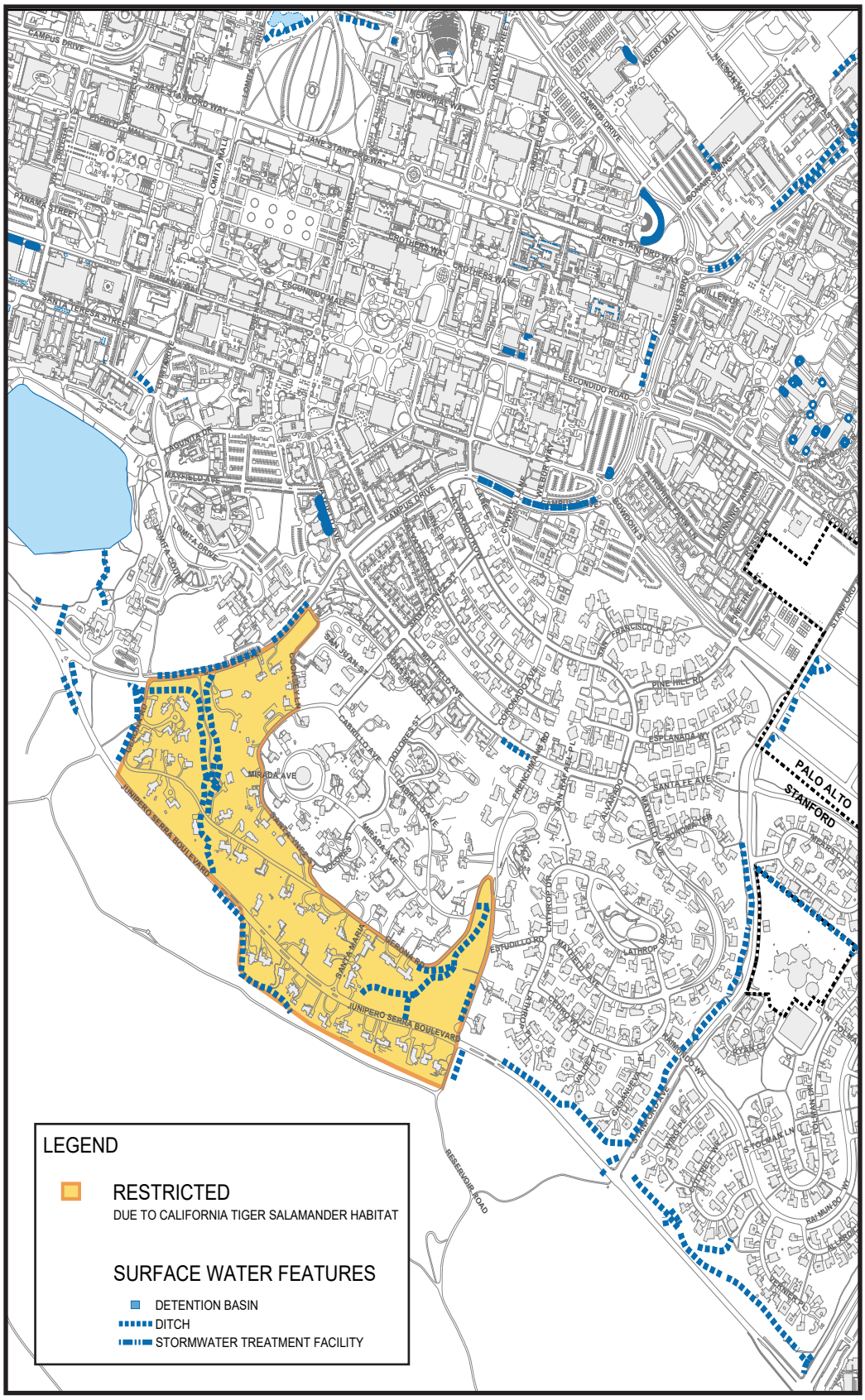
At the time of application and transfer of ownership and/or operation, the lessee must submit a signed copy of the *Graywater Policy for Faculty & Staff Housing Single Family Residences* acknowledgement included as Attachment A.

Attachment A: Acknowledgement

I, _____, lessee of the residence located at _____ (the "Property"), have reviewed the *Graywater Policy for Faculty & Staff Housing Single Family Residences* and Operations and Maintenance Manual and agree to comply with all of the terms and conditions of such policy and manual. I will notify Stanford University ahead of installation, decommissioning, and/or changes to the graywater system and will disclose the system to future residents of the home (whether they be residing within, renting, or purchasing the home).

Signed_____ Date_____

Graywater Siting Restrictions



B

Driveway Approach & Sidewalk Regulations

DRIVEWAY APPROACH & SIDEWALK REGULATIONS

Effective March 24, 2006

1. New sidewalks and repairs to existing sidewalks shall be constructed in accordance with the requirements of the Stanford University Residential Subdivision Asphalt Sidewalk Detail or Concrete Sidewalk Detail, whichever is appropriate.

2. New driveway approaches and repairs to existing driveway approaches shall be constructed in accordance with the requirements of the Stanford University Residential Subdivision Standard Driveway Approach Detail.

3. A driveway surfaced with a material other than concrete or asphalt shall not cross the sidewalk. The sidewalk area must be concrete or asphalt in accordance with the Asphalt Sidewalk Detail or Concrete Sidewalk Detail. For example, a driveway constructed with pavers shall not be constructed across the sidewalk (which shall be asphalt or concrete, whichever matches the existing sidewalk). The driveway approach shall be constructed of asphalt or concrete per the detail. If there is no existing sidewalk, the pavers may extend continuously to the street. This regulation also applies to walkways which cross the sidewalk and extend to the street.

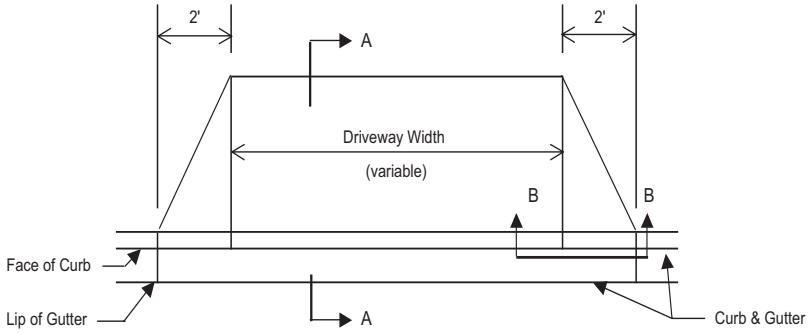
4. All new sidewalks and driveway approaches shall be constructed or transitioned to match existing sidewalk, driveway and curb elevations without horizontal gaps between the new construction and existing improvements.

5. New sidewalk shall match the color of existing adjacent sidewalk as closely as possible. The standard mix for concrete sidewalk is Class A (6 sack) concrete with 1 pint of lamp black. The standard for asphalt sidewalk is Type 2 Medium grade asphalt (colored asphalt is not allowed).

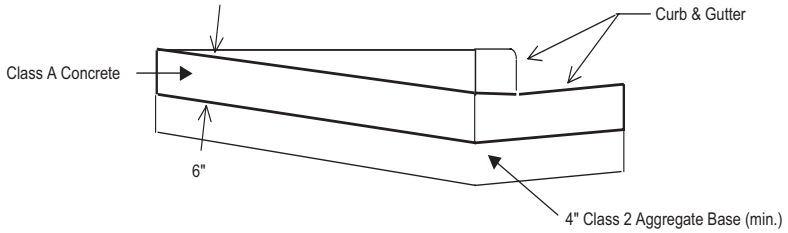
6. The standard height for new concrete curb along the street is 6". All new concrete curb and gutter shall be constructed or transitioned to match the existing curb and gutter along the street. The curb and gutter shall be constructed to collect runoff from the street and provide positive flow in the gutter (no ponding).

STANFORD UNIVERSITY
RESIDENTIAL SUBDIVISION

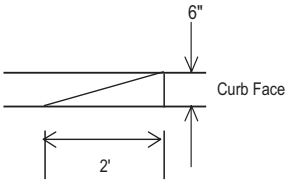
STANDARD DRIVEWAY APPROACH



PLAN



SECTION A - A



ELEVATION B - B

Notes:

1. Existing sidewalk or curb & gutter shall be sawcut prior to removal
2. Subgrade and aggregate base shall be compacted to 95%
3. Pavement section for asphalt driveways shall be 4" AC over 6" Class 2 AB
4. A minimum of 6 feet of concrete or asphalt is required between a rock/gravel driveway and the street

10/09/06 TL

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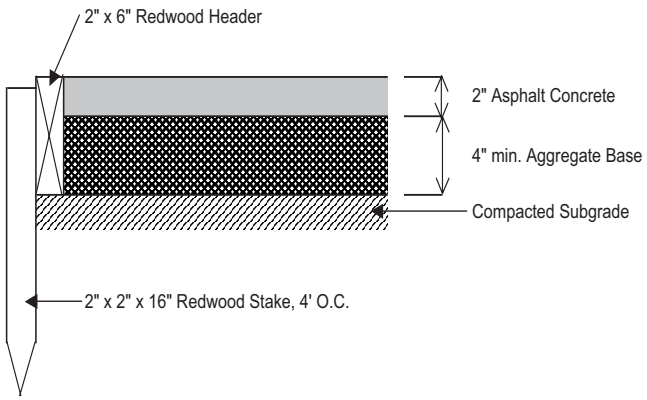

ASPHALT SIDEWALK DETAIL

Notes:

1. Sidewalk repair - area to be replaced shall be saw cut prior to removal
2. Subgrade and aggregate base shall be compacted to 95%
3. Asphalt concrete shall be Type 2 Medium (cutback not acceptable)
4. Aggregate base shall be Class 2
5. Redwood headers are required on both sides of the sidewalk, unless one side is against the concrete curb
6. Match width of existing sidewalk (minimum 4')
7. Typical sidewalk cross-slope is 2% towards the street
8. Cracks in sidewalk may be filled and sealed (rather than removed and replaced) if the vertical displacement is less than 1/4" (crack sealer shall be a commercial rubberized asphalt or a liquid asphalt)

03/23/06 TL

Stanford | Faculty Staff Housing

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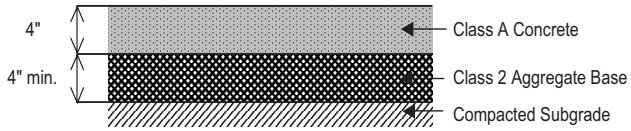
RESIDENTIAL SUBDIVISION



CONCRETE SIDEWALK DETAIL

Notes:

1. Sidewalk repair - removal and replacement shall be between expansion/construction joints (area to be removed shall be sawcut)
2. Subgrade and aggregate base shall be compacted to 95%
3. Spacing for expansion/construction joints and scoring shall match existing sidewalk spacing
4. Match width of existing sidewalk (minimum 4')
5. Typical sidewalk cross-slope is 2% towards the street

02/24/06 TL

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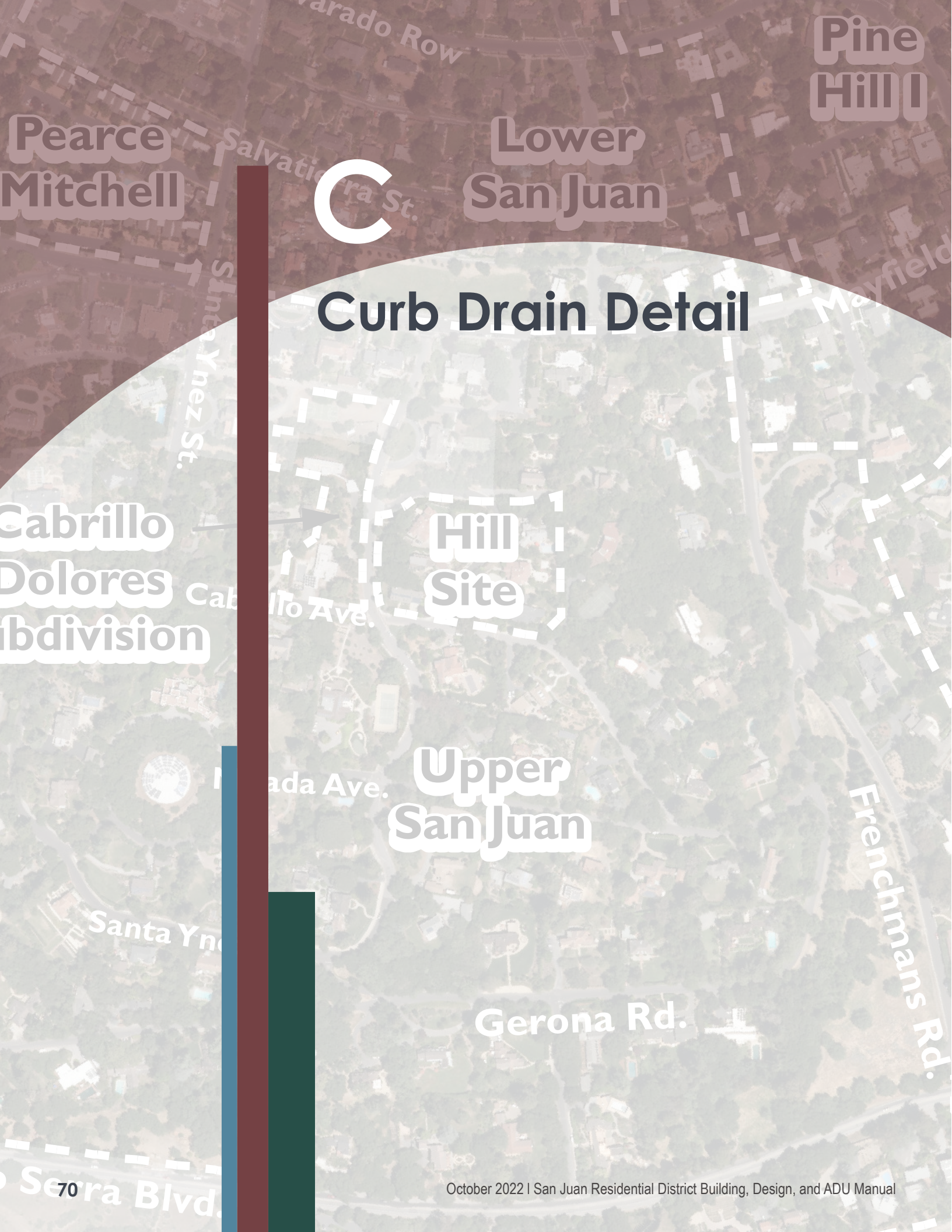
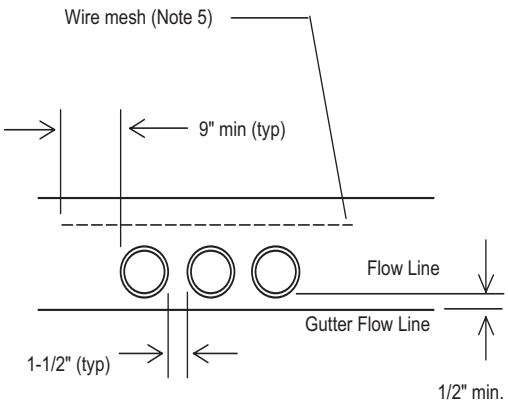
C

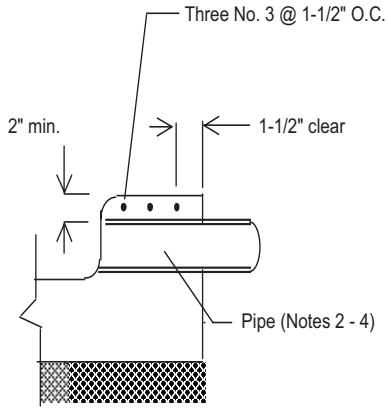
Curb Drain Detail



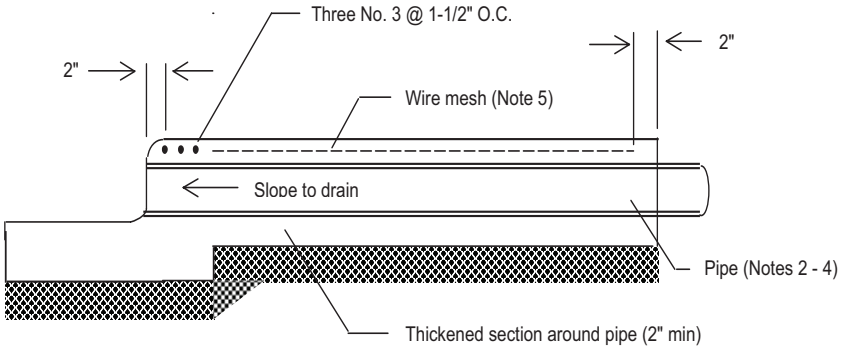
Curb Drain Detail



FACE OF CURB



CURB ONLY



CURB AND SIDEWALK

NOTES

1. 1/2" minimum between pipe flowline and gutter flowline
2. 3" diameter maximum pipe size
3. Maximum of 3 pipes. A rectangular duct with maximum 3" height may be used to meet flow capacity requirements
4. Thin wall cast iron or ductile iron pipe only
5. 4" x 4" x 10 gauge wire mesh in concrete sidewalk area only (extend 9" on each side of pipe)

STANFORD SAN JUAN RESIDENTIAL DISTRICT

Building, Design, and ADU Manual

October 2022